Windsor BOE Curriculum Committee Meeting

Wednesday, June 5, 2013 4:30 PM
Curriculum Committee, L.P. Wilson Community Center, Room 17, 601 Matianuck Avenue, Windsor, CT 06095

1. **Call to Order, Pledge of Allegiance, Moment of Silence**
2. **Audience to Visitors**
3. **Anatomy/Physiology Curriculum**
4. **Language Arts Curricula--Grades 2,3,4**
5. **Introduction to Spanish Curriculum**
6. **Spanish 4 Curriculum**
7. **Conversational Spanish (Semester 1) Curriculum**
8. **Military History Curriculum**
9. **Fashion Merchandising Curriculum**
10. **CAD/CAM Curriculum**
11. **Young Adult Literature Curriculum**
12. **Math-Grade 6 Curriculum**
13. **Geometry Curriculum**
14. **Algebra II Curriculum**
15. **Adjournment**

Windsor Public Schools
Curriculum Map
Human Anatomy and Physiology

Purpose of the Course:
This course examines the human body systems, the form in which they exist, and how they function and interact with one another. Topics include exploration of each body system structure and function, including protection and thermoregulation, support and movement, communication, control and integration, transportation and defense, environmental exchange, and reproduction. Dissections, demonstrations and outside reading are integral parts of the course.

Name of the Unit: The Human Body: An Orientation – Unit 1	Length of the unit: 8 Blocks (84-minutes each)
Purpose of the Unit: Students will gain an understanding of what anatomy and physiology are as these terms pertain to the human body. They will explore the hierarchy of organization of the body and identify anatomical directions in order to determine location of specific body organs and features. Students will survey each of the body systems and their functions. Students will also be able to describe the basic tissues of the body and their location and explain their functions.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)
CT Science Frameworks – Enrichment Standard: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable despite changes in the outside environment. NGSS: HS-LS1-2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. College and Career Ready Attributes: Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, comprehend as well as critique, value evidence, and use technology and digital media strategically and capably.

Big Ideas:	Essential Questions:
• Understanding the behavior of organ systems requires understanding the relationship between structure and function • The cell is the basic unit of life within many different levels of organization in order to	• Why is anatomical terminology used to describe the human body? • How are structure and function related in the human body? • How do the levels of organization of the

build an organism	human body interact to form a whole?
Students will know: • Anatomical terms • The relationship between the form and function of the body • Various levels of structural organization within human body and their relationship • The general location, structure, and function of each of the ten body systems • The four major tissue types of the human body and their basic locations and functions	Students will be able to: • Define anatomy and physiology and explain their relationship • Use anatomical terms appropriately to describe the human body • Describe, in order from simplest to most complex, the major levels of organization in humans and provide examples at each level • Use proper anatomical terminology to describe directional terms, body regions, planes of reference, and body cavities • Describe the basic components of each of the ten body systems • Compare and contrast each of the four major tissue types in terms of microscopic anatomy, location, and functional roles • Classify the different types of tissues based on distinguishing structural characteristics • Utilize a microscope to explore tissue types

Significant task 1: Body System Survey

Students will define *anatomy & physiology* in a whole group brainstorm. A graphic organizer, such as a concept map, will be utilized by the students to record their understanding. In small groups, students will be assigned specific roles, such as facilitator, data collectors, recorder and reporter and will identify at least 10 body systems and their functions presenting the information to the class (using mini-white boards, flip chart paper, etc.). Following the presentations, each group will be assigned an anatomical directional term and will explain this term to class members using a jigsaw strategy and anatomical models.
Students will be instructed to outline an injury or illness they or someone they know has experienced. Each student will describe in writing the symptoms and the circumstances of how this injury or illness was diagnosed. Students then will pair and explain what they have written to each other and then pairs will share each other's illness or injury with the entire class. After each pair shares, whole class brainstorms which body system or systems is most affected by that particular illness or injury. Whole class/teacher interaction continues until each of these of identified systems has been shown to have a direct connection to the nervous system.

Timeline: 2 Blocks
Key vocabulary: Anatomy, Physiology, Cardiovascular, Muscular, Skeletal, Nervous, Endocrine, Reproductive, Excretory, Integumentary, Respiratory, Immune, Digestive, anterior, posterior, dorsal, ventral, proximal, distal, medial, lateral
Resources: Textbook, handouts, anatomical directions website, mini-white boards, poster board, graphic organizers, overhead projections of body systems

Significant task 2: Hierarchy and Organization

In a think/pair/share exercise, students will explore the scale entities of the human body. Individuals will first think about a list of 20 things that make up the body. Then pairs of students will share their answers with each other. Then the pairs of students will enter these entities in a nested scale hierarchy. The entire class will come together in a whole group discussion and share their hierarchies with the class. Students will engage in discussion to analyze and critique the placement of the entities. Students will write a summary integrating placement of entities in the human body, making connections between cellular, tissue and organ structure. Students will exchange assessments with a partner and discuss and review the written piece with the graphic organizers.
Using the nervous system as the central organizing system of the body, students will begin to connect each body system and its parts to the nervous system using Inspiration concept mapping software. This will be the start of each student's year-long body system portfolio. Teacher will instruct students both in becoming familiar with the software and the expectations of how to connect the systems. Students will be assessed today on completion, clarity, and at least one way that each system is influenced or controlled by the nervous system. (Students will reassess their concept map at the end of the year, and use their new knowledge to produce a considerably more detailed and comprehensive product.)

Timeline: 2 Blocks
Key vocabulary: subatomic particle, atom, molecule, organelle, cell, tissue, organ, organ system, organism
Resources: notebooks, computer lab, *Inspiration* concept mapping software, graphic organizers, Discovery Education video, anatomical models, prior knowledge, School-wide rubrics #1 and #4, text sets

Significant task 3: Tissues

From a variety of resources (such as text sets, text notes retrieved online, illustrated handouts), students will read about the four body tissues and their functions. A lab practical using microscopes will allow students to demonstrate their ability to compare and contrast the tissue types and identify organelle structures which play major roles in cellular and tissue function. The teacher will individually instruct students in the use and care of the microscopes, while helping them to describe and illustrate the features of the tissues that are the most diagnostic of that tissue type.
Students will take individual responsibility for observational notes, labeling identifiable structures, and making higher level comparisons of certain tissues and their specific function and location (i.e. more mitochondria in muscle tissue). Students work in pairs to generate higher level questions which will be used to assimilate a short exit quiz on tissue type and function.

Timeline: 3 Blocks
Key vocabulary: connective tissue, muscle tissue (3 types of muscular), epithelial tissue, nervous tissue
Resources: text sets and resource articles, microscope, slides, higher level question stems

Common learning experiences:

- Do Nows

- Video clips and animated demos
- Higher Order Thinking Question Synthesis
- Microscope work
- Demonstration of Anatomical Position
- Large, small, and paired collaboration
- Independent writing
- Notebooking
- Use of anatomical models
- Current events in medicine, health and biotechnology
- Student portfolios

Common assessments including the end of unit summative assessment:

- Systems and directional terms formative assessment
- Schoolwide Rubric #3 will be used to assess effective communication of understanding.
- Peer critique with immediate feedback
- Lab report for microscope lab
- Kinesthetic demonstrations for anatomical directions
- Tissue identification Quiz
- Year-long Portfolio

Teacher notes:
Year-long portfolio is a collection of student-selected artifacts that demonstrate mastery of selected big ideas and essential questions.

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Name of the Unit: Protection and Thermoregulation – Unit 2	Length of the unit: 10 Blocks (84-minutes each)
Purpose of the Unit: Students will gain an understanding of homeostasis and how homeostatic mechanisms apply to body systems. They will conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis in the human body. Students will also be able to identify and describe the major gross and microscopic anatomical components of the integumentary system and describe the functions of the system.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)
CT Science Frameworks – Enrichment Standard: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable despite changes in the outside environment. NGSS: HS-LS1-3: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. College and Career Ready Attributes: Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, comprehend as well as critique, value evidence, and use technology and digital media strategically and capably.

Big Ideas:	Essential Questions:
• Homeostatic mechanisms allow the human body to maintain internal stability independent of external body conditions • The skin and body membranes of the	• How do homeostatic mechanisms allow the body to maintain internal stability? • How do positive and negative feedback loops compare in the functioning of the human

integumentary system are essential in maintaining homeostasis	body? • How does the structure and function of the skin contribute to the protection and thermoregulation of the human body?
Students will know: • The general types of homeostatic mechanisms • The general functions of the skin and its layers • The anatomy and functional roles of accessory structures in the integumentary system	Students will be able to: • Provide examples of to demonstrate how organ systems respond to maintain homeostasis • Compare and contrast positive and negative feedback in terms of the relationship between stimulus and response • Make predictions related to homeostatic imbalance, including diseases and disorders • Describe the roles of layers of the skin • Explain how the skin regulates body temperature • Describe the events of wound healing • Describe some common skin disorders

Significant task 1: Homeostasis in the Human Body

After a brief teacher introduction to the concept of homeostasis, students will use project-based learning in an interactive web activity to explore ways that the body maintains homeostasis. These ways include the control of heart rate, respiration rate, blood sugar levels and blood pressure. Continuing to use multimedia technology and real-world applications, students will discover how infection can disrupt homeostasis and how the immune system is triggered by infection. Finally, students will explore how the body maintains homeostasis in extreme environments.
Students will use lab materials to record homeostatic parameters as well as graphically assimilate and analyze class data. Students will be assessed on the correctness of the answers to a variety of scaffolded questions, as well as their explanation of a regulatory problem that they or someone they know has experienced and how their body reacted. This explanation has to include the role that the nervous system played in this response.

Timeline: 3 Blocks
Key vocabulary: homeostasis, infection, immune response, extreme environment, regulation, heart rate, respiration, blood sugar, blood pressure, body temperature
Resources: computer lab, Quick-Time video, JPEG images, Flash interactive, Shockwave interactive, HTML interactive, laboratory supplies

Significant task 2: Homeostatic Feedback Loops and body system regulation

Teacher will instruct students on the differences between negative and positive feedback loops. Function and components of feedback loops will be listed by students and then in a think/pair/share students will compare and contrast positive and negative feedback in terms of the relationship between

stimulus and response. In small groups, students will provide an example of both a negative feedback loop and a positive feedback loop that utilizes the nervous system to relay information. Students will describe the specific organs, tissues and cells that are influenced and/or controlled by those feedback loops.
Students will generate a poster presentation with an annotated one-page explaining why negative feedback is the most commonly used mechanism to maintain homeostasis.

Timeline: 2 Blocks
Key vocabulary: homeostasis, feedback loop, control, stimulus, response, nervous system
Resources: text sets, teacher handouts, multimedia presentations

Significant task 3: Skin Form and Function

The teacher will introduce the gross and microscopic layers of the skin through multimedia presentations and microscope work. Students will observe, sketch, and identify form and function of various skin tissue samples in the lab. Assessment will be based on lab data and correct identification. Students will investigate how the skin and nervous system work together to send messages to the brain in order to maintain homeostasis. By mapping the touch receptors in the skin and comparing class-wide data, students will investigate the differences in form and function in a population of humans. Teacher will describe how the skin, the nervous system and the hypothalamus work together to regulate body temperature. Students will be assessed with a quick-look up homework assignment in which they find a specific example of the skin's role in thermoregulation. Each student will share their example at the start of next class.

Timeline: 2 Blocks
Key vocabulary: integumentary system, skin, subcutaneous, epithelium, epidermis, dermis, hypodermis, hypothalamus
Resources: Skin Disorder rubric for presentation, text sets, internet research, PPT, text notes handouts

Significant Task 4: Skin Diseases and Disorders

Students will individually research and present a multimedia presentation (student choice of how this presentation will be designed- poster, PPT presentation, brochure, create a video) of skin disorders, diseases, or trauma (burns/cuts). As each student reports out to the class, students will record data in a presentation spreadsheet that includes name of disease, cause, signs and symptoms, treatments, cures, prevention. Student projects and data collection sheet will be submitted for assessment.

Timeline: 2 Blocks
Key Vocabulary: integumentary system, skin, skin disorders/diseases such as acne, cancer, shingles, scabies, etc.
Resources: Skin Disorder rubric, text sets, internet research, text notes, schoolwide rubric #1, #3

Common learning experiences:

Microscope work
Multimedia research
Multimedia presentations

Internet Research Real life connections Oral and written Communication Do Nows Video clips and animated demos Higher Order Thinking Question Synthesis
Common assessments including the end of unit summative assessment: Multimedia and Poster presentations Schoolwide rubrics Lab Inquiry Presentation Spreadsheet Question and Answer Written Summary Portfolio Quiz Test

Teacher notes: Students will choose 1 artifact to include in their portfolio that demonstrates mastery of the big idea or one essential question.

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Curriculum Map
Human Anatomy and Physiology

Purpose of the Course:
This course examines the human body systems, the form in which they exist, and how they function and interact with one another. Topics include exploration of each body system structure and function, including protection and thermoregulation, support and movement, communication, control and integration, transportation and defense, environmental exchange, and reproduction. Dissections, demonstrations and outside reading are integral parts of the course.

Name of the Unit: Support and Movement – Unit 3	Length of the unit: 10 Blocks (84-minutes each)
Purpose of the Unit: Students will be able to identify and describe the major gross and microscopic anatomical components of the skeletal and muscular systems by the conclusion of the unit. They will also be able to explain the functional roles of the skeletal system in osteogenesis, repair, and body movement, and the functional roles of the muscular system in body movement, maintenance of posture, and heat production. Students will make predictions related to homeostatic imbalances in the skeletal and muscular systems, including disease states and disorders.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.) CT Science Frameworks – Enrichment Standard: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable despite changes in the outside environment. College and Career Ready Attributes: Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, comprehend as well as critique, value evidence, and use technology and digital media strategically and capably.

Big Ideas:	Essential Questions:
• Bones provide support for the human body and muscles provide for movement • Bone is a living tissue that constantly undergoes proliferation of various cell types • Muscles increase in mass by adding mass to	• How do the skeletal and muscular systems work together to support and produce movement of the body? • What is the structure and function of bone tissue and the dynamics of its formation and

each fiber, and not by increasing the number of fibers	remodeling throughout life? • How do the bones, joints, and ligaments function to permit movement and mobility in the skeleton? • What are the distinguishing functional characteristics of the muscular system?
Students will know: • The general functions of bone and the skeletal system • Structural (gross and microscopic) components of the skeletal system • The physiology of bone formation • The physiology of bone growth, repair, and remodeling • The classification, structure and function of articulations • How diseases and disorders of the skeletal system contribute to homeostatic imbalance • The general functions of muscle tissue • The identification, location and characteristics of skeletal, smooth, and cardiac muscle tissue • The gross and microscopic anatomy of skeletal muscle as well as nomenclature, location, and function • The physiology of muscle contraction • How diseases and disorders of the muscular system contribute to homeostatic imbalance	Students will be able to: • Describe the structure (gross and microscopic) of bone and list its functional parts • Discuss the major functions of bones • Distinguish between the axial and appendicular skeletons and name the major parts of each • Identify the major features of bones • List and name several different types of joints in the body • Compare the types of muscle tissue in the body • Identify the major features of muscles • Explain the major events of skeletal muscle contraction • Predict the types of problems that can occur in the body if the skeletal and/or muscular systems could not maintain homeostasis • Explain how diseases and disorders of the skeletal and muscular systems contribute to homeostatic imbalance

Significant task 1: X-Ray Jigsaw

The teacher will introduce the skeletal/muscular structure with a real life scenario through a multimedia video, “The Human Body: Pushing the Limits”. This video introduces students to various case studies where the skeletal and muscular systems of people in life threatening scenarios are able to defy death with an explicit neurological response through their skeletal/muscular systems. The teacher will pause after each scenario and students will ponder the situation and respond in their organizer. The entire class will discuss each scenario and its connection to the nervous system. Students are assessed on the depth and breadth of their written answers.
Students will then be assigned into small groups and given a series of x-rays from a complete set of x-rays of a human skeleton. They must assemble their section of the skeleton system on a poster, label significant bones and joints associated with their section. They must relate the name of the joints to the movement and modality of the bones in relation to the joint. Students must discuss the kind of motion

that is specific to their assigned section. Groups must identify and present a minimum of two diseases or injuries that affect bone and joint structure and modality which includes identification, cause, treatment and prevention. The class will record data on each presentation in a generated graphic organizer. The teacher will provide feedback and guided questioning during the presentation if there are specific gaps.

Timeline: 3 Blocks
Key vocabulary: scapula, rib cage, sternum, humerus, phalanges, neck vertebrae, spinal vertebrae, skull, ulna, tibia, clavicle, patella, carpus, femur, radius, fibula, pelvis, teeth, diseases (various), injuries (various), ball and socket joint, rotating joint, gliding joint, hinge joint.
Resources: Schoolwide rubrics #2 and #3, internet research, text sets, x-rays of human skeleton, personal x-rays featuring injuries (if available), project rubric

Significant task 2: Muscles fatigue experimental design

Students will design and carry out an experimental protocol based on a case of industrial muscle fatigue. Students will receive a letter from the owner of a bakery addressed to an occupational therapist, the role of which will be played by groups of 3 students. The letter details the problems that cake decorators are experiencing at the bakery with chronic muscle fatigue. The letter asks the therapist to research the situation, and provide data and recommendations about how to reduce muscle fatigue and prevent the injury of her employees.
After reading the letter to themselves, students will then read and discuss the assignment, which is detailed on the next page of the handout. Students will come up with a proposal for alleviating the problem using the proposal checklist. Each student in the group must agree to the proposal before the group begins its procedure. The proposal checklist includes: a question, the variables of the experiment, the procedure and a data table. The assignment has suggestions for which equipment is available for students to use in their project.
After the teacher approves the written proposal, students will carry out their study. Finally, students will write a report of their study using the report procedure guidelines that are detailed in the handout. This report must include the question, variables, procedure, data table, conclusions and a statement about the study's validity.

Timeline: 3 Blocks
Key vocabulary: skeletal muscle, contraction, muscle tone, flaccid, muscle fiber, ATP, Myoglobin, prime mover, antagonist
Resources: http://www.muscleandstrength.com/articles/understanding-muscular-fitness.html, http://muscle.ucsd.edu/musintro/over.shtml

Significant task 3: Case Study of muscular-skeletal injuries

Using the website cited under resources, students will investigate case studies of muscular-skeletal abnormalities. Students will be introduced to the first case study using multimedia resources within the classroom to provide context through a discovery education video clip (or comparable). With a whole-class discussion and the first case study projected, the teacher will use guided instruction to familiarize students with format and critical thinking and problem solving skills. After completing the Muscular Dystrophy case study, students will collaborate in small groups and will then continue to work on 2 other case studies, one muscular and one skeletal. The teacher will facilitate student's selection of one

of their studies to present to the class using school wide rubric #2 and #3 as assessment tools.
Once these evaluations are complete, and students have had an opportunity to improve their case study answers, students will move to the computer lab and begin researching and designing their own muscular-skeletal abnormality case study using the assignment sheet handout. This student-generated case study and student generated answer key will be the assessment for this significant task.

Timeline: 3 Blocks
Key vocabulary: Fractured Leg, Osteoporosis, Muscle Weakness, Duchenne Muscular Dystrophy
Spinal Cord Injury
Resources: schoolwide rubric #1 and #4, http://www.mhhe.com/biosci/ap/ap_casestudies/index.html

Common learning experiences:

"Pushing the Limits" video
X-Ray Jigsaw Presentation
Skeletal Disease and Injury Investigation
Creating a Case Study
Group presentation
Skeletal/Muscle disorder/disease
Do Now's
Video clips and animated demos
Higher Order Thinking Question Synthesis

Common assessments including the end of unit summative assessment:

Graded Graphic Organizers
Jigsaw Poster Presentation
Schoolwide rubrics #1-4
Group presentation
Scientific Inquiry and Lab procedure write-up
Quiz
Test
Portfolio

Teacher notes:
Students will choose 1 artifact to include in their portfolio that demonstrates mastery of one big idea or one essential question.

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Name of the Unit: Communication, Control, and Integration – Unit 4	Length of the unit: 12 blocks (84-minutes each)
Purpose of the Unit: Students will be able to identify and describe the major gross and microscopic anatomical components of the nervous and endocrine systems, and explain their functional roles in communication, control, and integration, including hormone functions. Students will also describe the major gross and microscopic anatomical components of the eye and ear and explain their functional roles in vision, hearing, and equilibrium. They will be able to identify and locate receptors responsible for olfaction and gestation and describe the physiology of smell and taste.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)
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College and Career Ready Attributes: Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, comprehend as well as critique, value evidence, and use technology and digital media strategically and capably.

Big Ideas:	Essential Questions:
• The nervous and endocrine system are the "command" centers of the human body • The nervous system has voluntary and involuntary responses to stimuli • The endocrine system can and will vary in an	• How does the nervous system act as the master system in controlling and communicating within the body? • How does the endocrine system interact with the nervous system to coordinate and

organism in its lifetime.	integrate activity of body cells? • How do the senses integrate with the nervous system to maintain homeostasis?
Students will know: • The general functions of the nervous system and its organization • The gross and microscopic anatomy of the nervous system • Mechanisms of resting membrane potential, production of action potentials and impulse transmission • Neurotransmitters and their roles • General structure of the brain and nerves • Functions of the autonomic and somatic nervous systems • How diseases and disorders of the nervous system contribute to homeostatic imbalance • Anatomy and function of the eye and ear • How olfactory and gustatory receptors contribute to smell and taste • The general functions of the endocrine system • Classification of hormones, control of hormonal secretion and functions of hormones • Structures of the endocrine system • Hormonal response to stress • How diseases and disorders of the nervous system contribute to homeostatic imbalance	Students will be able to: • Explain the general functions of the nervous system • Describe the general structure of a neuron • Describe the events that lead to the conduction of a nerve impulse and how information passes from one neuron to another • Name the major parts and functions of the brain • Describe the functions of the autonomic nervous system • Distinguish between the sympathetic and parasympathetic divisions of the autonomic nervous system • Describe somatic senses • Describe the receptors associated with the senses of touch, pressure, temperature, and pain • Explain the relationship between the sense of smell and taste • Name the parts of the ear and explain the function of each part • Name the parts of the eye and explain the function of each part • Describe the visual nerve pathway • Distinguish between endocrine and exocrine glands • Discuss how negative feedback mechanisms regulate hormonal secretions • Name and describe the major endocrine glands, and the hormones they secrete • Explain how the secretion of hormones is regulated • Define stress and describe how the body responds to it

Significant task 1: Neurological Form and Function Students will be introduced to the events leading to conduction of a nerve impulse and information

transfer while connections are also being made to the somatic nervous system, receptors, and stress response through a case study video, "Human Body: Pushing the Limits: Brainpower". Students will take notes on a graphic organizer detailing each case study in terms of the situation and nervous response. The teacher will distribute a graphic organizer for "Mouse Party" to students which they must complete with data and illustrations to use in conjunction with the interactive online activity of drug abuse and how recreational drugs disrupt the natural action of neurotransmitters at the synapse. (This is an interactive hook and makes connections to students' real lives and the dangers of drug and alcohol abuse).
The teacher will review the case study, "I've Fallen Over and I Can't Get Up" with the whole class. Students will be broken into five small groups and assigned one component of the subject's case given the background and specific symptoms and methods of diagnosis. They will develop a report on their component in a medical records format which describes symptoms, nervous system tissues and organs involved (functions of autonomic nervous system, sympathic and /or parasympathetic divisions involved, receptors in use, etc.). Students must differentiate between head trauma and fainting as they work their way through this interrupted case study, which is complicated by the subject's medical history. Students use their research of the control of blood pressure (homeostatis) and by the autonomic nervous system to determine what is wrong with the subject.

Timeline: 4 Blocks
Key vocabulary: Fainting; dehydration; blood pressure; baroreceptor reflex; autonomic nervous system; parasympathetic nervous system; sympathetic nervous system; concussion; familial dysautonomia
Resources: http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=623&id=623, http://gslc.genetics.utah.edu, text sets, PPT, Human Body: Pushing the Limits: Brainpower, schoolwide rubric #3 and #5, medical record rubric

Significant task 2: Somatic Senses Station Lab

Students are introduced to the specific somatic senses, receptors for touch, pressure, temperature and pain, smell and taste relationships, and form and function of the human eye and ear by the teacher with an in depth PPT. Students will take structured notes as the discussion leads them through the senses, organs, form and function. Next, students are to progress through a somatic and special senses station lab. The lab will bring students through the experiences of visual perception, depth perception, hand-eye coordination, peripheral vision, afterimages, and understanding sound and hearing. As they complete each station, students will complete a personal data sheet and upon completion, will answer comprehension questions related to the essential question and a reflection of their learning.

Timeline: 2 Blocks
Key vocabulary: depth perception, hand-eye coordination, peripheral vision, afterimages, sound, hearing, visual nerve pathway, receptors
Resources: Somatic and Special Senses PPT, Flinn Scientific Laboratory materials

Significant task 3: Visual Pathways Interactive Lab Quest

As a class, the students and teacher will review graded comprehension questions and students will individually "share out" their reflection of the Somatic Senses Station reflection question. The teacher will distribute the data sheets for the Visual pathways interactive Lab Quest. In the computer lab, students will log in to http://virtuallabs.stanford.edu and enter the visual pathways virtual lab where they will explore and scaffold their learning of the previous class. They will travel through in depth interactive guided and exploratory lessons. They will then participate in a virtual scientific dissection and

tracking of visual pathways and perception.

Timeline: 3 blocks
Key vocabulary:
Resources: http://virtuallabs.stanford.edu, computer lab, schoolwide rubric #1 and #2

Significant task 4: Negative Feedback and Hormones regulation

Students will begin with a text reading of Negative Feedback Regulation of Hormone Release. This will be completed using annotation strategies and each student will generate two higher order question to "pair and share" with a partner. The partner will try to answer these questions using the text and their partner will correct it as they discuss. The class will come together and share out one question per person.
The teacher will assign a research project and assign pairs with an organ from the endocrine system. Students must identify the form and function of the organ including where in the body and what other organ system they may also be a part of, which hormone the organ produces and the hormone's function, and stress response. Students will create an illustrated poster presentation not more than 5 minutes for the class. The class will record information on each organ and associated hormone on a graphic organizer.

Time: 3 Blocks
Key Vocabulary: Pituitary Gland, Hypothalamus, Thymus, Pineal Gland, Testes, Ovaries, Thyroid, Adrenal Glands, Parathyroid, Pancreas

Resources: Negative Feedback Regulation of Hormone Release Article, Higher Order Thinking Stems (teacher generated and posted), internet/computer lab, schoolwide rubric #3, poster rubric

Common learning experiences:

PPT and structured notes for somatic senses and eye and ear function
Case Study and Medical Record Report
Somatic Senses Station Lab
Virtual Pathways Interactive Web Quest
Human Body: Pushing the Limits: Brainpower Case Study Video and graphic organizer
Poster project
Do Now's
Video clips and animated demos
Higher Order Thinking Question Synthesis

Common assessments including the end of unit summative assessment:

Medical Records Report (Significant Task #1)
Human Body: Pushing the Limits: Brainpower graphic organizer
Virtual Pathway Lab Quest data Sheet
Somatic Senses Station Comprehension Questions
2 selected artifacts for portfolio
Poster Project

Test

Teacher notes: Students will choose 1 artifact to include in their portfolio that demonstrates mastery of one big idea or one essential question.

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Name of the Unit: Transportation and Defense – Unit 5	Length of the unit: 12 Blocks (84-minutes each)
Purpose of the Unit: At the conclusion of this unit, students will be able to identify and describe the major gross and microscopic components of the cardiovascular and lymphatic systems. Students will also be able to explain the roles of these systems in transport, hemodynamics, fluid dynamics and immunity. Students will gain an understanding of the composition of blood plasma and compare ABO and Rh blood groupings.	

Common Core State Standards Addressed in the unit:
CT Science Frameworks – Enrichment Standard: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable despite changes in the outside environment. Physiology: Organisms have a variety of mechanisms to combat disease. College and Career Ready Attributes: Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, comprehend as well as critique, value evidence, and use technology and digital media strategically and capably.

Big Ideas:	Essential Questions:
• The cardiovascular system plays a key role in transport of materials throughout the human body and in hemodynamics • The lymphatic system's main role in the body is immunity	• How does the cardiovascular system function in transport and hemodynamics? • What role does blood play in the overall functioning of the cardiovascular system? • How does the lymphatic system function in

	immunity?
Students will know: • The general functions of the cardiovascular system • The composition of blood plasma • Hemostasis • ABO and Rh blood groupings • The gross and microscopic anatomy of the heart and major blood vessels • The path of blood flow through the heart • How diseases and disorders of the cardiovascular system contribute to homeostatic imbalance • The general functions of the lymphatic system • Lymph and lymphatic vessels, cells, tissues, and organs • Nonspecific and specific defenses • Antigens and antigen processing • Lymphocytes and their role in immunity • Antibodies and their role in immunity • How diseases and disorders of the lymphatic system contribute to homeostatic imbalance	Students will be able to: • Describe the functions of the cardiovascular system • Describe the composition of blood plasma, including the major types of plasma proteins, their functions, and where in the body they are produced • Compare and contrast erythrocytes and leukocytes • Explain how platelets differ structurally from the other formed elements of the blood • Discuss the functions of red blood cells, hemoglobin, leukocytes, and platelets • Compare and contrast blood types • Identify and describe the anatomy of the heart • Diagram the path of blood flow through the heart • Predict factors or situations affecting the cardiovascular system that could disrupt homeostasis • Describe the major functions of the lymphatic system • Compare and contrast interstitial fluid and lymph • Compare and contrast lymphatic vessels and blood vessels in terms of structure and function • Identify and describe the organs and tissues of the lymphatic system • Compare and contrast specific and nonspecific defenses • Describe antigens and antigen processing • Explain the role of lymphocytes and their role in adaptive immunity • Describe the role that antibodies play in adaptive immunity • Predict the types of problems that would occur in the body if the lymphatic and immune systems could not maintain homeostasis
Significant task 1: Blood Composition and Blood Typing Students will begin with a think/pair/share brainstorm about the functions of blood in the body. Then students will list all of the components in a pre-knowledge graphic organizer that they believe are in blood. Students are then instructed to move through the stations, where one of their assessments will	

be to check their pre-knowledge against their post-knowledge. Students will move through various stations at their own pace, being checked off by the teacher as they complete them. Activity stations will address the composition of blood, the functions of blood components, blood types and compatibility, and hands-on use of technology in addressing the analysis of blood. Specific activities: separating the components of simulated blood in order to measure hematocrit; using visual and kinesthetic student-created models to demonstrate understanding of red and white blood cells and platelets; simulated blood-typing activity. Assessment will include a station where students demonstrate their practical application of using blood typing in order to figure out which blood types can be transfused into particular 'patients' in need of blood.

Timeline: 4 Blocks
Key vocabulary: red blood cells, erythrocytes, leukocytes, ABO blood group, Rh blood group, plasma, platelets
Resources: http://teachhealthk-12.uthscsa.edu/ : Lesson 1: Blood: What Is It?, Lesson 3: I Want Your Blood: Blood Transfusions , centrifuge, simulated blood typing kits;

Significant task 2: How blood travels through the heart and the body (circulation of blood through the cardiovascular system)
Students will read a current event associated with the cardiovascular system, such as heart disease or other cardiovascular disorder. Students will annotate using their meta-cognitive bookmarks to generate 2 higher-order questions and then will think/pair/share with a partner. Students will be introduced to the anatomy of the cardiovascular system through teacher led PowerPoint and whole-group discussion. Guided note-taking and teacher generated questions will be used to assess student understanding. Students will be using prepared microscope slides to investigate the microanatomy of cardiovascular system. Students will make detailed drawings and label the structures of veins, arteries and capillaries. Students will review the path of blood through the heart and then proceed to dissect sheep hearts, using a printed guide and teacher's oral instructions. Students will sketch and label the chambers, major blood vessels, and valves. This page will be placed in their portfolio.

Timeline: 4 Blocks
Key vocabulary: veins, arteries, capillaries, atrium, ventricle, vena cava, aorta, tricuspid valve, mitral valve, pulmonic valve, aortic valve
Resources: http://anatomyarcade.com/index.html, microscopes and slides, sheep hearts and dissection tools, computer lab,

Significant task 3: Immune System Function and Structure

Students will begin by engaging in Activity 1B: Gammagauntlet: Fighting Infection from the UT Health website. Student teams will race to fight, and ultimately resolve, infections in a human body model by playing out the roles of various immune cells and antibodies, then constructing antigen/antibody complexes. They will discriminate between specific and non-specific defenses. The teacher will direct the simulation by reading 'pathogen cards' aloud as students move through the investigation. Students will record data in graphic organizers and provide performance examples of the first line of human immune defense between invaders and macrophages, and roles of T-cells and B-cells in acquired immune response. Students will demonstrate how antibodies recognize antigens and signal cells to attack pathogens. Students will be assessed with the completion and understanding of their concept

map and higher-order comprehension questions.

Timeline: 3 Blocks
Key vocabulary: antibody, antigen, cell-mediated immunity, innate immunity, lymphocytes, macrophages, humoral-mediated immunity
Resources: http://teachhealthk-12.uthscsa.edu/, text sets

Common learning experiences:

Station work.
Completing graphic organizers
Problem solving
Use of laboratory equipment
Dissection of sheep hearts
Microscopic illustration of cardiovascular tissue
Power point presentation
Gammagauntlet activity

Common assessments including the end of unit summative assessment:

Submission of blood activities station data using graphic organizers and comprehension questions.
Analysis of 'patient' blood transfusion results case study.
Use of school-wide 21st Century skills rubrics #2,3,5
Student-generated PowerPoint presentation detailing the path of blood through the heart and the functions of the blood vessels.
Student portfolio.
Test
Comprehension questions
Written reflection on the effectiveness of cardiovascular learning models

Teacher notes:
Students will choose 1 artifact to include in their portfolio that demonstrates mastery of one big idea or one essential question.

Windsor Public Schools
Curriculum Map
Human Anatomy and Physiology

Purpose of the Course:
This course examines the human body systems, the form in which they exist, and how they function and interact with one another. Topics include exploration of each body system structure and function, including protection and thermoregulation, support and movement, communication, control and integration, transportation and defense, environmental exchange, and reproduction. Dissections, demonstrations and outside reading are integral parts of the course.

Name of the Unit: Environmental Exchange – Unit 6	Length of the unit: 12 Blocks (84-minutes each)
Purpose of the Unit: Students will be able to identify and describe the major gross and microscopic anatomical components of the respiratory system and explain their functional roles in breathing/ventilation and in the processes of external and internal respiration. They will also be able to identify and describe the major gross and microscopic anatomical components of the digestive system and explain their functional roles in digestion, absorption, excretion and elimination. Students will also understand the mechanisms by which metabolism is regulated within the body. Finally, students will be able to identify and describe the major gross and microscopic anatomical components of the urinary system and explain their roles.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)
CT Science Frameworks – Enrichment Standard: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable despite changes in the outside environment. College and Career Ready Attributes: Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, comprehend as well as critique, value evidence, and use technology and digital media strategically and capably.

Big Ideas:	Essential Questions:
• The respiratory system is responsible for taking in oxygen and releasing carbon dioxide • The organs of the digestive system play key roles in digestion, absorption, excretion, and elimination	• How do the structures of the respiratory system contribute to breathing and the processes of external and internal respiration? • What role do the components of the digestive system play in digestion, absorption,

• Nutrition plays a role in the mechanisms by which metabolic rate is regulated in the body • The urinary system's major functions within the body are filtration, reabsorption, secretion, and excretion	excretion, elimination and metabolism? • How does the urinary system help the body to regulate and maintain homeostatic balance?
Students will know: • General structure and functions of the respiratory system • Mechanisms of gas exchange in the lungs and tissues • How pulmonary ventilation is controlled • General structure and functions of the digestive system • Mechanical and chemical processes of digestion • Processes of absorption • Metabolic roles of body organs • General structure and functions of the urinary system • Processes of urine formation, including filtration, reabsorption, secretion, and excretion • How diseases and disorders of the respiratory, digestive and urinary systems contribute to homeostatic imbalance	Students will be able to: • Describe the major functions of the respiratory system • Describe and distinguish between the upper and lower respiratory tracts • List, in order, the respiratory structures that air passes through during inspiration • Define pulmonary ventilation, inspiration, and expiration • Compare and contrast oxygen and carbon dioxide concentration gradients in the body • Predict the types of problems that would occur in the body if the respiratory system could not maintain homeostasis • Describe the major functions of the digestive system • Identify and describe the wall of the alimentary canal, oral cavity, esophagus, stomach, small intestine and large intestine as well as salivary glands, liver, and pancreas • Compare and contrast mechanical and chemical processes of digestion • Predict the types of problems that would occur in the body of the digestive system could not maintain homeostasis • Describe the metabolism of carbohydrates, lipids, and proteins • Provide specific examples to demonstrate how metabolic processes respond to maintain homeostasis in the body • Describe the major functions of the urinary system • Trace the path of blood through the kidney • Describe the structure of the kidney, ureters, urinary bladder and urethra • Compare and contrast male and female urethras • Trace the path of filtrate/urine from the kidney to the urethra • Describe the processes of urine formation, filtration, reabsorption, and secretion

	• Explain how the urinary system relates to other body systems to maintain homeostasis • Predict factors or situations affecting the urinary system that could disrupt homeostasis • Predict the types of problems that would occur in the body if the urinary system could not maintain homeostasis

Significant task 1: Respiratory System 3-D Poster and Presentation Students will be introduced to the respiratory system with a teacher-directed PowerPoint and guided note-taking. After viewing a short video that details the basic structures and functions of the respiratory system (http://www.youtube.com/watch?v=hc1YtXc_84A), groups of 3 students will create a three-dimensional model poster illustrating a diseased lung, with one group assigned to illustrate a healthy lung. Each group must give a 5-minute presentation that describes how the disease disrupts the homeostasis of the respiratory system and treatment and prevention options for the disease. Disease choices include: lung cancer, tuberculosis, pneumonia, smoker's lung, acute smoke inhalation, cystic fibrosis and others subject to teacher approval. Students will see examples of previous work in order to focus their plan. Timeline: 3 Blocks Key vocabulary: lung, trachea, bronchi, diaphragm, gas exchange, pharynx, epiglottis Resources: modeling materials, http://www.youtube.com/watch?v=hc1YtXc_84A, School-wide rubrics #2 and #3, text sets, internet research
Significant task 2: Digestive System Organ Jigsaw Students will trace the path of food through the digestive tract from mouth to anus using an interactive video guide. Student groups will then be assigned an organ of the digestive system (teeth and tongue, esophagus, stomach, small intestine, large intestine, rectum, gall bladder, liver, pancreas). Students will be responsible for presenting the form, function, disease disorders, healthy maintenance of their organ, as well as prevention and treatment of a specific disease or disorder associated with their organ. Students will be assessed with a presentation rubric and students in the audience will fill in a graphic organizer with information from the other presentations. Timeline: 3 Blocks Key vocabulary: teeth and tongue, esophagus, stomach, small intestine, large intestine, rectum, gall bladder, liver, pancreas, diarrhea, constipation, Crohn's disease, stomach cancer, IBS, obesity Resources: text sets, internet research, interactive video guides
Significant task 3: Urinary System Students will view a short video that details the basic structures and functions of the urinary system at home (http://www.youtube.com/watch?v=3KoJ7n2xbB4) and they will take notes on a teacher-provided graphic organizer. Students will take a short CFA the day they return with their video notes to test for understanding. Students will model the filtration of blood by the kidney using simulated blood, dialysis tubing, and beakers of water. Students will design an investigation which includes a hypothesis, action plan, collection of qualitative data and a summary of how the simulation is related to true kidney

function.
Students will carry out a simulated urinalysis exercise to test for a variety of kidney and urinary tract disorders. After testing a variety of simulated urine and collecting data on the various symptoms, students will loop back and identify which homeostatic disruptions have occurred in the body to cause these physiological problems. The assessment is a written summary of the lab exercises, including data and conclusions, and a written description of how the disorders tested for in the urinalysis are associated with malfunctioning organs and systems. Finally, students will produce a diagram of kidney structure and function.

Timeline: 3 Blocks
Key vocabulary: kidney, nephron, filtration, excretion, reabsorption, ions, dialysis, urinalysis,
Resources: http://www.youtube.com/watch?v=3KoJ7n2xbB4,

Significant task 4: Case Study: Environmental Exchange Disorder

Students will use the Rashi medical diagnosis applet to screen and diagnose one individual's physiological disorder based on environmental exchange.
Students will then investigate A Case of Diabetes Insipidus, in which a 20-year-old junior in college has been having some health questions. For about a month, she has been waking up frequently at night to go to the bathroom. Most recently, she has noticed that she needs to go to the bathroom during the day more often, almost hourly. Students read about these symptoms and then answer a set of directed questions designed to teach facts and principles of physiology using reference books, text sets, the Internet, and each other as sources of information. Students will think/pair/share, then the whole class will come together and watch a video clip on diabetes and one other disorder and students will have to figure out which disorder the student has.

Timeline: 2 Blocks
Key vocabulary: diagnosis, disorder, disease
Resources: http://rashi.cs.umass.edu/,
http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=321&id=321,

Common learning experiences:

Respiratory poster building
Respiratory poster presentation
PowerPoint
Videos
Lab Write-up
Flipped class homework assignment
CFA
Inquiry Labs

Common assessments including the end of unit summative assessment:

Lab Write-up
Portfolio selection
Test

CFA
Student-generated diagram of kidney function

Teacher notes:
Students will choose 1 artifact to include in their portfolio that demonstrates mastery of one big idea or one essential question.

Windsor Public Schools
Curriculum Map
Human Anatomy and Physiology

Purpose of the Course:
This course examines the human body systems, the form in which they exist, and how they function and interact with one another. Topics include exploration of each body system structure and function, including protection and thermoregulation, support and movement, communication, control and integration, transportation and defense, environmental exchange, and reproduction. Dissections, demonstrations and outside reading are integral parts of the course.

Name of the Unit: Reproduction – Unit 7	Length of the unit: 8 Blocks (84-minutes each)
Purpose of the Unit: Students will be able to identify and describe the major gross and microscopic anatomical components of the reproductive systems and explain their functional roles in reproduction and inheritance. They will compare male and female reproductive systems and describe conception, pregnancy, and embryological and fetal development.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)
CT Science Frameworks – Enrichment Standard: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable despite changes in the outside environment. Cell Biology: Mutation and sexual reproduction lead to genetic variation in a population. Cell Biology: A multicellular organism develops from a single zygote, and its phenotype depends on its genotype, which is established at fertilization. College and Career Ready Attributes: Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, comprehend as well as critique, value evidence, and use technology and digital media strategically and capably.

Big Ideas:	Essential Questions:
• The male and female reproductive systems develop and function differently • The reproductive system is a system that can be removed without fully disrupting the organism • Birth is one of the few positive feedback mechanisms that maintain homeostasis	• How do male and female reproductive systems develop and function differently? • How do the events of the ovarian cycle compare to the events of the uterine cycle in a female's body? • What are the major events of embryonic and fetal development?

	• How is birth a positive feedback mechanism?
Students will know: • General functions of the male and female reproductive systems • Gross and microscopic anatomy of the male and female reproductive systems • How gametes are formed • How reproductive functions are regulated • Processes associated with conception and pregnancy	Students will be able to: • Describe the major functions of the male and female reproductive systems • Identify and describe the anatomy of the male and female reproductive systems, including gonads, ducts, accessory glands, support structures, external genitalia, sperm and eggs • Relate and contrast the general stages of meiosis to the specific processes of spermatogenesis and oogenesis • Describe the ovarian and uterine cycle • Provide examples of how birth control methods relate to normal reproductive function • Discuss the relationship between the location of the testes and sperm production • Describe the pathway of sperm from the seminiferous tubules to the external urethral orifice of the penis • Describe the organs involved in semen production • Compare and contrast endocrine regulation of spermatogenesis, oogenesis and puberty • Describe conception and fertilization • Describe the various hormones in both male and female reproductive systems • Describe the hormonal changes during pregnancy and the effect of these hormones • Predict factors, problems, and situations affecting the reproductive system that could disrupt homeostasis

Significant task 1: Female and Male Reproductive System Comparison Project Students will view the Human Body video. They will answer comprehension questions targeted to the reproductive system. Students in small groups will design and implement, with teacher approval, a method of visually representing (student option of poster, PowerPoint, or other multimedia venue that is teacher approved) a study of either the male or the female reproductive systems both internally and externally. Students must describe the differences between the gross internal and external anatomy of males or females as well as the formation of eggs or sperm. Within each group of 4, each group member will be responsible for specific components of each system (ex: internal female anatomy form and function, external female anatomy form and function, external male anatomy form and function, internal male anatomy form and function, production of egg or sperm, hormone regulation of pubescent

development). Students will complete a comprehensive Venn diagram or table on both systems based on being paired with the opposite sexed group. Both male and female groups that are paired up will collectively detail random fertilization and formation of a zygote in the appropriate section of their graphic organizer. For homework, students will generate three higher order questions using sentence stems and our metacognitive bookmarks. The "Do Now" for block for is a "Think, Pair, Share" answering and scoring with CAPT open-ended rubric.

Timeline: 4 Blocks
Key vocabulary: breasts, vagina, cervix, uterus, fallopian tubes, ovaries, gamete, chromosomes, penis, testicles, vas deferens, prostate gland, estrogen, testosterone, progesterone, urethra
Resources: Salt-n-Peppa, ***The Human Body,*** internet, text sets, metacognition bookmark, higher order sentence stems and key words, school wide rubric # 1 and #2

Significant task 2: Birth Control and Safe Sex Pamphlet

The teacher will show a short multimedia clip featuring various birth control commercials they see on television. They will record at least one type of product advertised and the possible side effects of the drug or method. The class will discuss the types of birth control and side effects students recorded. Students in pairs will design and implement 2 high quality, computer-generated brochures of the kind found in a doctor's office or health clinic. The first pamphlet will describe and explain an assigned method of birth control the consequences of not practicing safe-sex. Each pair, students will present to the class their method of birth control, its effectiveness, availability, proper use, risks and benefits, and resources on how to obtain it. For the second brochure, students will choose and describe one STI, focusing on the causative agents, the mode of transmission, prevention, and treatment. They will specify how the disease disrupts the homeostasis of various body systems.

Timeline: 4 Blocks
Key vocabulary: Condoms, IUD- Mirena and Paraguard, Nova Ring, Natural Method, Provera shot, birth control pills, morning after pill, chlamydia, gonorrhea, HIV, BV, yeast infection, HPV, Herpes, Trichomonas, polyps, syphilis,
Resources: Commercial clips, internet, text sets, school-wide rubric #1 and #2

Common learning experiences:

Vocabulary journal
Computer brochure generation
Internet research
Presentation
Group collaboration
Peer teaching

Common assessments including the end of unit summative assessment:
(Provide link to assessments and rubrics.)

Vocabulary journal
Portfolio
CFA
Test

Reproductive brochure
STI brochure

Teacher notes:
Students will choose 1 artifact to include in their portfolio that demonstrates mastery of one big idea or one essential question.

Windsor Public Schools
Curriculum Map
Human Anatomy and Physiology

Purpose of the Course:
This course examines the human body systems, the form in which they exist, and how they function and interact with one another. Topics include exploration of each body system structure and function, including protection and thermoregulation, support and movement, communication, control and integration, transportation and defense, environmental exchange, and reproduction. Dissections, demonstrations and outside reading are integral parts of the course.

Name of the Unit: Fetal Pig Dissection	Length of the unit: 3 Blocks (84-minutes each)
Purpose of the Unit: Students will gain will expand and demonstrate the skills and knowledge gained through the entire Anatomy and Physiology course. They will identify and explain the encompassing body systems in a comprehensive dissection lab of a fetal pig. Students will also be able to identify and describe the major gross anatomical components of the body systems and describe the functions of the systems.	

Common Core State Standards Addressed in the unit:
CT Science Frameworks – Enrichment Standard: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable despite changes in the outside environment. College and Career Ready Attributes: Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, comprehend as well as critique, value evidence, and use scientific tools to facilitate a fetal pig dissection.

Big Ideas:	Essential Questions:
• The body's organ systems work and support each other to maintain homeostasis in living organisms.	• How do specific organs and organ systems relate to one another within an organism? • How do organ system organization in different organisms compare?
Students will know: • Correct dissection techniques for a comprehensive examination of a mammalian	Students will be able to: • Provide examples of to demonstrate how organ systems respond to maintain

specimen. • How to identify specific organs and organ systems which support homeostasis in organisms.	homeostasis • Make predictions related to homeostatic imbalance, including diseases and disorders • Demonstrate knowledge of a specific organ system and discuss distinguishing characteristics. • Identify diseases and/or disorders of a specific organ and/or organ system and present their findings.

Significant task 1: Pig Dissection and Concept Map

As the culminating activity to the study of mammalian organs and systems, students will perform a comprehensive fetal pig dissection. Student groups will be assigned organs and systems from each one studied throughout the course. Through use of a dissection guide and teacher direction, students will exhume and examine each of the body systems studied in units 1-7. Students will take careful notes and illustrations in their vocabulary journals as well as collect evidence for their specific system presentation. The last activity will be student group presentations for the class on their assigned organ system. They will discuss specific diseases and disorders associated with their task as they project their dissection on the board. Students will elicit questions from the audience with a minimum of 3 higher order questions associated with composition, disorder/disease or other pertinent data associated with their system. Both group presenters and student audience will be assessed using school-wide rubric #3 and #4 their higher order questions. Students in the audience will be awarded merit credit for correctly and insightfully answering presenter questions.

Timeline: 3 Blocks
Key vocabulary: homeostasis, infection, Units 1 through 7 vocabulary as needed
Resources: fetal pig, dissection and safety equipment, ELMO camera and projector, computer, school-wide rubric #3 and #4

Common learning experiences:

Multimedia presentations
Internet Research
Real life connections
Oral and written Communication
Higher Order Thinking Question Synthesis

Common assessments including the end of unit summative assessment:

Multimedia and Poster presentations
School-wide rubrics #3 and #4
Lab Inquiry
Lab Practical Packet
Question and Answer

Portfolio

Teacher notes: A virtual dissection will be an available option for any student who wishes to be exempt from a traditional dissection. Students will choose 1 artifact to include in their portfolio that demonstrates mastery of one big idea or one essential question.

Grade: 2 **Unit 1**	**Genre: Realistic Fiction** **Theme: Taking Charge of Reading**
Big Ideas	**Essential Questions**
▪ Reading comprehension strategies develop thinking while reading (reading is thinking) ▪ Readers read and talk about books with partners	How do readers make become independent, lifelong readers? What do readers do before, during, and after reading? How do readers become independent problem solvers? How do readers share what they've read with others?

Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will <u>know</u> and be able to <u>do</u>:**
Participate in collaborative conversations with diverse partners about grade 2 topics with peers and adults in small and larger groups. (2.SL.1)	• Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). • Build on others' talk in conversations by linking their comments to the remarks of others. • Listen carefully to everything our partners says to help react or respond to whatever the partner tells them • Reading partners discuss/recommend books to each other
Recount or add key ideas or details from a text read aloud or information presented orally or through other media. (2. SL.2)	• Predict and recall story and events • Suggest solutions and explanations for story problems
Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. (2.SL.3)	• Ask and answer questions for clarity to gather information • Ask for clarification and further explanation as needed about the topics and texts under discussion.
Tell a story or recount a story with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences (2.SL.4)	• Use language from stories and informational text when retelling stories or a topic
Use knowledge of language and its conventions when writing, speaking, reading, or listening. (2.L.3)	• Listen to and build on the discussion of others • Actively engage in routines (turn and talk)

	• Listen attentively to the opinions of others about ideas e.g., does not interrupt, faces speaker and asks questions. • Listen to obtain information and solve problems.
Use words and phrases acquired through conversation, reading and being read to, and responding to texts, including using adjectives and adverbs to describe. (2.L.6)	• Use context to confirm or self-correct word recognition and understanding, rereading as necessary. • Read grade-level text with purpose and understanding.
Standards addressed in this unit: **(Reading for Literature/Informational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
Ask and answer such questions as who, what, where, when, why and how to demonstrate understanding of key details in a text.(2.RL.1)	• Explain the elements of a fiction story using graphic organizer (hand organizer) for the book he/she is reading
Use information gained from illustrations and words in print or digital text to demonstrate understanding of its characters, setting or plot (2.RL.7)	• Use both the text and illustrations to determine the meaning of a story
By the end of the year, read and comprehend literature, including stories and poetry, in grades 2-3 text complexity band proficiently, with scaffolding as needed at the end of the range (2. RL.10)	• Sustain reading for 30 minutes in school and at home • Set goals for the volume of reading they need to for the unit • Push themselves to read more and more books • Make decisions on how they want their reading life to go • Always thinking before, during and after reading the book • Prepare and plan for partner reading time • Readers help themselves in many ways when reading • Make decisions on how their reading lives will go • Decide whether a book is just right and whether they are going to write their ideas on post-it's or not • Choose just right books using the 5-finger rule
Standards addressed in this unit: **(Reading Foundational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**

Know and apply grade level phonics and word analysis skills in decoding words. (2.RFS.3)	• Isolate and pronounce initial, medial and final sounds (phonemes) in spoken single syllable words. • Segment spoken single syllable words into their complete sequence of individual sounds (phonemes) • Distinguish long from short vowel sounds in spoken single syllable words. • Distinguish long and short vowels when reading regularly spelled one syllable words. • Know spelling sound correspondences for additional common vowel teams. • Know final e and common vowel team conventions for representing long vowel sounds. • Decode words with common prefixes and suffixes. • Read words with inflectional endings. • Decode two syllable words following basic patterns by breaking the word into syllables e.g., V/C=su/per, VC/CV=sup/per • Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. • Decode regularly spelled two syllable words with long vowels. • Know the spelling sound correspondences for common consonant diagraphs (two letters that represent 1 sound). • Identify sounds for common vowel-r patterns, e.g., ar, er, ir, or, ur, and for letter patterns found in multisyllabic words, such as very common prefixes and suffixes that reoccur in second grade text, e.g., -ful, -ness, and dis-, in-.

Read with sufficient accuracy and fluency to support comprehension. (2.RFS.4)	• When something doesn't make sense we stop and ask ourselves what could I do to fix this part • Use more than one strategy (use phonetic, structural, syntactical and contextual clues) to read and understand unfamiliar words in grade level texts • Read grade-level text with purpose and understanding (ie. Answering questions such as who, what, when, where, why, how based on text). • Read grade-level text orally with accuracy, appropriate rate, and expression.' • Use context to confirm or self-correct word recognition and understanding, rereading as necessary. • Reread books over and over again to become more smoothly, quickly and with more understanding • Read and demonstrate understanding of grade level text (see District Benchmark) • Read at least 200 high frequency words • Read aloud informational text and literacy/narrative text, attending to intonation • Read aloud, while comprehending, unpracticed text with fluency at 90-100+ words correct per minute

Significant Task
Significant Task 1 *Big Idea: Establish routines, procedures and expectations for Readers Workshop* *Essential Question: How do readers make decisions to become independent lifelong readers?* Students work with the teacher to create Reader's Workshop guidelines and responsibilities to build a strong reading community. Daily students practice rituals and routines assessing individual and whole class progress. Students discuss

as a whole class areas where the class is being successful and areas that they need to work on. Areas of focus include expectations with mini lesson, independent reading and partner work as well as small group work. With partners they generate a list of solutions or strategies to workshop challenges. Students help in creating various signs, using pictures and words, or class criteria charts to help support a successful Reader's Workshop.

Timeline: 10-15 days
Resources: RW rituals and routines
Vocabulary: ritual, routine, progress, challenge, guideline, responsibility

Significant Task 2
Big Idea: Identify reading comprehension strategies to develop thinking while reading (reading is thinking)
Essential Question: How do readers think about before, during, and after reading?
How do readers become independent problem solvers?

Students participate in whole class discussion about the behaviors of good readers. Daily during independent practice students select a before, during and after reading strategy to complete a reading is thinking template. In small groups and in individual reading conferences students are assessed and receive additional instruction when necessary in the application of strategic comprehension work. As a whole class students discuss how reading is thinking. Individually, students turn in Reading is Thinking templates. Student utilize comprehension strategies to demonstrate understanding of basic story elements and answer basic who, what, where, when, why and how questions to demonstrate understanding of key details in a text.

Timeline: 4 weeks
Vocabulary: strategies, thinking, questioning, wondering, predicting,
Resources: reading is thinking template

Common Learning Experiences

Reading Foundational Skills
****Lesson ideas are in no particular order – use as needed for your class after giving pre-assessment****
Phonics Lessons (*Recognizing Syllables in Words*) Page 327

- **Phonetic Jingles:** Teacher will introduce jingles appropriate to class needs (see attached jingles and links to Youtube: http://www.youtube.com/watch?v=JHO1aJyxWIE&feature=related&safety_mode=true&persist_safety_mode=1&safe=active); **http://www.youtube.com/watch?v=7fb3Pdt8kxg&safety_mode=true&persist_safety_mode=1&safe=active**; http://www.youtube.com/watch?v=EsWtEYF3HCY&safety_mode=true&persist_safety_mode=1&safe=active

- **Words Contain Parts that Change the Meaning of the Base Word**: Teacher will introduce the following prefixes and suffixes: un-, re-, dis-,in-,-est, -ful, -ness-, -ble and include their meanings

- **What is a Syllable**: Phonics Lessons (*Recognizing and Using Syllables*) Page 437

- **How to Read Two-Syllable Words with Short Vowels:** Phonics Lesson (*Recognizing Closed Syllables)* page 403

- **How to Read Two-Syllable Words with Long Vowels:** Phonics Lesson *(Recognizing Open Syllables)* Page 407.
  Florida Center for Reading Research: map and swoop (p.033.ssib) open and VCE syllables and vowel pair syllables

- **How to Read Consonant Digraphs**: Teachers will introduce digraphs: gh, ph, gn, wr, kn. Teachers will model how to read words and provide guided practice.

- **Phonetic Jingles:** Teacher will introduce jingles appropriate to class needs (see attached jingles and links to Youtube:
  http://www.youtube.com/watch?v=JHO1aJyxWIE&feature=related&safety_mode=true&persist_safety_mode=1&safe=active);
  http://www.youtube.com/watch?v=7fb3Pdt8kxg&safety_mode=true&persist_safety_mode=1&safe=active;
  http://www.youtube.com/watch?v=EsWtEYF3HCY&safety_mode=true&persist_safety_mode=1&safe=active

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- **How to Read Consonant Digraphs**: Teachers will introduce digraphs: gh, ph, gn, wr, kn. Teachers will model how to read words and provide guided practice.

Speaking & Listening/Language

Reading for Literature/Information Skills

Picture and Print Connection: Teacher will explain the importance of using both the text and illustrations to uncover meaning of story. Teacher will model how to use both and provide guided and independent practice for students.

Reading and thinking about a Story's Elements: Teacher will explain what the elements of a fiction story are. Teacher will model how to think about these elements as he/she reads using the Hand organizer. (see link below for organizer)
http://media.photobucket.com/image/hand%20graphic%20organzier/morozcob/GRAPHIC%2520ORGANIZERS/mainidea4.jpg

Common Assessments

- fiction/nonfiction CFA
- monthly running records (fluency passages/cards)*
- authentic assessment (i.e. student created brochure, poster, checklist)
- Recognizing Syllables in Words (Pre/Post)
- One syllable phonics word sort
- Phonics Screener
- DSA (Direct Spelling Assessment)
- Compound Word List
- EPS List

Teacher Notes

- **Review district reading strategy chart**

Grade: 2 **Unit 2**	**Genre: Folktales** **Theme: Reading with Purpose**
Big Ideas	**Essential Questions**
▪ Readers read with purpose to understand folktales. ▪ Readers explore characters to deepen understanding ▪ Readers explore author's point of view to deepen understanding	▪ Why do people read folktales? ▪ How do readers understand characters? ▪ How do readers recognize the author's purpose?

Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Participate in collaborative conversations with diverse partners about grade 2 topics with peers and adults in small and larger groups. (2.SL.1)	• Listen with attention during lessons and respond with statements and questions • Listen attentively to the opinions of others, e.g., does not interrupt, faces speaker and asks questions. • Listen to obtain information and solve problems. • Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). • Build on others' talk in conversations by linking their comments to the remarks of others.
2. Recount or add key ideas or details from a text read aloud or information presented orally or through other media. (2. SL.2)	• Engage in role playing of characters or events in folktales
3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. (2.SL.3)	• Ask for clarification and explanation of ideas. • Ask clear questions during small-group and whole-class discussions
4. Tell a story or recount a story with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences (2.SL.4)	• Use grade level appropriate specific vocabulary when talking about the text
5. Produce complete sentences when appropriate to tasks and situations in order to provide requested detail or clarification. (2.SL.6)	• Pronounce all words correctly excluding new content words
6. Use knowledge of language and its conventions	• Listen to and build on the discussion of others

when writing, speaking, reading, or listening. (2.L.3)	• Actively engage in routines (turn and talk) • Listen attentively to the opinions of others about ideas e.g., does not interrupt, faces speaker and asks questions. • Listen to obtain information and solve problems.
7. Use words and phrases acquired through conversation, reading and being read to, and responding to texts, including using adjectives and adverbs to describe. (2.L.6)	• Read grade-level text with purpose and understanding.
Standards addressed in this unit: **(Reading for Literature/Informational Text)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Describe how characters in a story respond to major events and challenges. (2.RL.3)	• Use character reactions to determine the character's traits and feelings • Reread stories to find places where something big happens (character has/solved problems; strong feelings; something funny or surprising) • Pay attention not only to what character does, but how the character does these things • Use post-it's on places in the story where characters have changed
2. Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action. (2. RL.5)	• Use story map to recount the folktale • Act out part of their books in small groups in a readers' theater • Prepare and practice for performances • Perform for others
3. Acknowledge differences in the points of view of characters, including speaking in a different voice for each character when reading dialogue. (2. RL.6)	• Use two versions of a similar folktale that expresses a change in point of view to highlight the importance of speaking in a different voice (The True Story of the Three Little Pigs vs. Three Little Pigs) • Change their voice to match the character they are portraying in readers' theater
4. Compare and contrast two or more versions of the same story. (2. RL.9)	• Using two folktales where characters have opposing traits, the students will be able to compare how the characters responded to the major events and challenges.
5. By the end of the year, read and comprehend literature, including stories and poetry, in grades 2-3 text complexity band proficiently, with scaffolding as needed at the end of the range (2.	• Sustain reading for 30 minutes in school and at home • Set goals for the volume of reading they need to for the unit

RL.10)	• Push themselves to read more and more books • Make decisions on how they want their reading life to go • Always thinking before, during and after reading the book • Readers help themselves in many ways when reading • Decide whether a book is just right and whether they are going to write their ideas on post-it's or not • Choose just right books using the 5-finger rule • Read significant parts of a story to their partners to make sure they are reflecting how the character feels • Read a story closely enough to see what is happening in their minds
Standards addressed in this unit: **(Reading Foundational)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Know and apply grade level phonics and word analysis skills in decoding words. (2.RFS.3)	• Isolate and pronounce initial, medial and final sounds (phonemes) in spoken single syllable words. • Segment spoken single syllable words into their complete sequence of individual sounds (phonemes) • Distinguish long from short vowel sounds in spoken single syllable words. • Distinguish long and short vowels when reading regularly spelled one syllable words. • Know spelling sound correspondences for additional common vowel teams. • Know final e and common vowel team conventions for representing long vowel sounds. • Decode words with common prefixes and suffixes. • Decode two syllable words following basic patterns by breaking the word into syllables. • Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. • Decode regularly spelled two syllable words with long vowels. • Know the spelling sound correspondences for common consonant diagraphs (two letters that represent 1 sound).

2. Read with sufficient accuracy and fluency to support comprehension. (2.RFS.4)	• Read grade-level text with purpose and understanding. • Read grade-level text orally with accuracy, appropriate rate, and expression. • Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Significant Tasks

Significant Task 1

Big Idea: Readers read with purpose to understand folktales.
Essential Question: Why do people read folktales?
Students and teachers will read various folktales paying attention to character actions and reactions in order to understand the purpose of the folktale. Students will develop their comprehension skills, critiquing and analyzing multiple perspectives, compare and contrasting characters, story lines, morals, and lessons. Students and teachers will use story maps to read and understand two versions of a folktale in order to complete a story matrix by different authors or different cultures (e.g. Cinderella stories). At the end of this task students create book baskets based on the lessons and morals the books convey. Working with partners they discuss how books with similar lessons are the same and different. Partners can defend their ideas based on the evidence they gathered in their books.

Timeline: 2 weeks
Resources: Gerald McDermott Books
Anansi Books
Vocabulary: folktale, moral, lesson

Significant Task 2

Big Idea: Readers explore characters to deepen understanding
Essential Question: How do readers understand characters?
In this section students will pay attention to the characters in their books. They can think about the role the character plays to predict what is going to happen. To encourage students to explore characters they can act out parts of their books in a readers' theater. Students are encouraged to change their voice to match the character they are portraying. While reading students will determine the character traits by how the character reacts. Readers place post-its on places in their stories where characters have strong feelings. Students will reread significant parts of the story to their partners to reflect how the character feels. Readers pay attention not only to what the character does, but also how the character does these things. Sometimes readers use the pictures to get ideas about their characters (model looking at pictures and saying, I notice…I think…I could. Add characters to the story matrix previously developed. Students will fill-out their own story matrix for a book of their choice.
Timeline: 5-8 days
Resources: The Fortune Tellers
The Tricksters Tales: The Rabbit, The Coyote and The Raven
Vocabulary: villain, hero
Character traits : boastful, clever, tricky, determined, stubborn, helpful, caring, greedy, selfish,

Significant Task 3
Big Idea: Readers explore author's point of view to deepen understanding
Essential Question How do readers recognize the author's purpose?
Students will continue to read their fiction books thinking about the lessons they are learning. Students are to be reminded that all stories contain lessons. Students can think about the lesson they think the author is trying to teach them and ask themselves, "Was that the best way to teach the lesson?" Students will pick their favorite folktale and determine the author's lesson/message. They will develop a new title that fits the text.

Timeline: 5-8 days
Resources: Borreguita and the Coyote, Bringing the Rain to Kapiti Plain, Flossie and the Fox, The Hunterman and the Crocodile, The Legend of the Indian Paintbrush, Lon Po Po: A Red-Riding Hood Story From China, Ming Lo Moves the Mountain, Mufaro's Beautiful Daughters, Sam and the Tigers, So Say the Little Monkeys, The Three Little Javelinas, Tikki Tikki Tembo, Why Mosquitoes Buzz in People's Ears, The Woman Who Outshone the Sun

Vocabulary: point of view, message, value or belief

Common Learning Experiences

Reading Foundational Skills
****Lesson ideas are in no particular order – use as needed for your class after giving pre-assessment****
Phonics Lessons (*Recognizing Syllables in Words*) Page 327

1. **Phonetic Jingles:** Teacher will introduce jingles appropriate to class needs (see attached jingles and links to Youtube: http://www.youtube.com/watch?v=JHO1aJyxWIE&feature=related&safety_mode=true&persist_safety_mode=1&safe=active); **http://www.youtube.com/watch?v=7fb3Pdt8kxg&safety_mode=true&persist_safety_mode=1&safe=active**; http://www.youtube.com/watch?v=EsWtEYF3HCY&safety_mode=true&persist_safety_mode=1&safe=active

2. **Words Contain Parts that Change the Meaning of the Base Word**: Teacher will introduce the following prefixes and suffixes: un-, re-, dis-,in-,-est, -ful, -ness-, -ble and include their meanings

3. **What is a Syllable**: Phonics Lessons (*Recognizing and Using Syllables*) Page 437

4. **How to Read Two-Syllable Words with Short Vowels:** Phonics Lesson (*Recognizing Closed Syllables)* page 403

5. **How to Read Two-Syllable Words with Long Vowels:** Phonics Lesson *(Recognizing Open Syllables)* Page 407. Florida Center for Reading Research: map and swoop (p.033.ssib) open and VCE syllables and vowel pair syllables

6. **How to Read Consonant Digraphs**: Teachers will introduce digraphs: gh, ph, gn, wr, kn. Teachers will model how to read

words and provide guided practice.

7. **Phonetic Jingles:** Teacher will introduce jingles appropriate to class needs (see attached jingles and links to Youtube: http://www.youtube.com/watch?v=JHO1aJyxWIE&feature=related&safety_mode=true&persist_safety_mode=1&safe=active); **http://www.youtube.com/watch?v=7fb3Pdt8kxg&safety_mode=true&persist_safety_mode=1&safe=active**; http://www.youtube.com/watch?v=EsWtEYF3HCY&safety_mode=true&persist_safety_mode=1&safe=active

8. **Words Contain Parts that Change the Meaning of the Base Word**: Teacher will introduce the following prefixes and suffixes: un-, re-, dis-,in-,-est, -ful, -ness-, -ble and include their meanings

9. **What is a Syllable**: Phonics Lessons (*Recognizing and Using Syllables*) Page 437

10. **How to Read Two-Syllable Words with Short Vowels:** Phonics Lesson (*Recognizing Closed Syllables)* page 403

11. **How to Read Two-Syllable Words with Long Vowels:** Phonics Lesson *(Recognizing Open Syllables)* Page 407. Florida Center for Reading Research: map and swoop (p.033.ssib) open and VCE syllables and vowel pair syllables

12. **How to Read Consonant Digraphs**: Teachers will introduce digraphs: gh, ph, gn, wr, kn. Teachers will model how to read words and provide guided practice.

Speaking & Listening/Language

Morning Meeting activities (See Morning Meeting Book)

- Ball Toss Greeting (p.159)
- Cross Circle Greeting (p.162)
- Different Language Greeting (p. 162)

Reading for Literature/Information Skills

1. Teachers will introduce character traits and feelings. Teachers will explain that a reader uses characters reactions to determine his/her traits and feelings.
2. Teachers will introduce and model the structure of a Story Map. Teacher will provide guided and independent practice with various folktales.
3. Teachers will model how a reader's voice changes to match the character they are portraying in Readers Theater.
4. Use two versions of a similar folktale that expresses a change in point of view to highlight the importance of speaking in a different voice (The True Story of the Three Little Pigs vs. Three Little Pigs)
5. Teacher reintroduces the hand summary, models and provides guided practice with various folktales.
6. Using two folktales where characters have opposing traits, the students will be able to compare how the characters responded to the major events and challenges.
7. Build a Story Matrix using information from Story Map (above). Must have more than one story map filled out in order to build the matrix.

Common Assessments

- Folktale CFA**
- monthly running records (fluency passages/cards)*
- authentic assessment (i.e. student created brochure, poster, checklist)
- Recognizing Syllables in Words (Pre/Post)
- One syllable phonics word sort
- Phonics Screener
- DSA (Direct Spelling Assessment)
- Compound Word List
- EPS List

Teacher Notes

Resources

- Character Map
- *Phonics Lessons (Fountas & Pinnell)*
- Florida Center for Reading Research
- Phonics Jingles (as needed)
- Word Journeys (Kathy Ganske)
- Diphthongs, Modified Vowels and Vowel Diagraphs
- 2nd Grade Prefix and Suffix List
- 2nd Grade VC/CV Word List
- Syllabication Rules (use rules that apply)
- Prefix and Suffix Word List
- Phonics Screener
- The Continuum of Literacy Learning *Fountas & Pinnell*
- *Phonics Lessons Grade 2 Fountas and Pinnell*
- *A Curricular Plan for the Reading Workshop, Grade 2*
- *Summit Public Schools Second Grade Content Area*

Grade: 2 **Unit 3**	**Genre: Nonfiction** **Theme: Understanding Nonfiction Topics/Solids, Liquids, and Gases**
Big Ideas	**Essential Questions**
• Readers read nonfiction texts purposefully • Readers read nonfiction texts strategically • Readers compare information learned from more than one text	▪ How is reading nonfiction similar to and different from reading fiction? ▪ How do readers think as they read nonfiction? ▪ How do nonfiction readers tackle tricky words in their books? ▪ What do readers do to get and keep information from the nonfiction books they read? ▪ How do nonfiction readers accumulate information than seeing more than just the text on the page? ▪ How do nonfiction readers read more than one book about a topic to compare and contrast?

Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Participate in collaborative conversations with diverse partners about grade 2 topics with peers and adults in small and larger groups. (2.SL.1)	▪ Initiate communication. ▪ Plan and practice conversations. ▪ Work in cooperative groups. ▪ Confer with peers to solve problems and make decisions. ▪ Take turns when speaking. ▪ Join in group response at appropriate times. ▪ Listen to and respect the opinions of others. ▪ Respond to basic feedback appropriately. ▪ Contribute relevant ideas to a discussion ▪ Participate in full class, group and paired activities. ▪ Contribute relevant ideas to a discussion. ▪ Modify a statement
2. Recount or add key ideas or details from a text read aloud or information presented orally or through other media. (2. SL.2)	▪ Ask and answers who, what, where, when and how questions. ▪ Answer literal and inferential questions about grade appropriate texts.
3. Ask and answer questions about what a speaker	▪ Ask and answer yes/no and either/or questions.

says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. (2.SL.3)	▪ Ask and answers who, what, where, when and how questions. ▪ Ask questions for clarification.
4. Tell a story or recount a story with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences (2.SL.4)	• Use language from stories and informational text when retelling stories or a topic • Make a brief oral report that demonstrates knowledge of the topic
5. Produce complete sentences when appropriate to tasks and situations in order to provide requested detail or clarification. (2.SL.6)	• Use context to confirm or self-correct word recognition and understanding, rereading as necessary. Read grade-level text with purpose and understanding.
6. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. (2.L.1)	• Speak at appropriate volume to be heard when addressing large and small groups
7. Determine or clarify the meaning of an unknown and multiple-meaning words and phrases based on second grade reading and content, choosing flexibility from an array of strategies. (2.L.4)	• Use content specific words when needed to explain a topic
Standards addressed in this unit: **(Reading for Literature/Informational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Ask and answer such questions as who, what, where, when, why and how to demonstrate understanding of key details in a text.(2.RIT.1)	• Read nonfiction materials for answers to specific questions or for specific purposes. • Respond to oral and written questions about the facts in nonfiction text.
2. Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text. (2.RIT.2)	• Activate prior knowledge about an author or genre in order to make connections to text. • Apply comprehension strategies, such as connecting, predicting, questioning, inferring and visualizing to above grade-level stories read aloud by the teacher and to own reading at independent level. • Use text features such as titles, tables of contents and chapter headings to locate information in nonfiction texts.
3. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2. RIT.3)	• Read more than one book on a science topic then compare and contrast information

4. Determine the meaning of words and phrases in a text relevant to a Grade 2 topic or subject area. (2.RIT.4)	• Use glossaries and dictionaries to identify word meanings. • Use prefixes, suffixes, inflectional endings and abbreviated words to determine the meaning of unknown words. • Reread and read on to determine meaning of unknown words. Identify unfamiliar words.
5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently. (2.RIT.5)	• Preview parts of books, e.g., table of contents and glossary, to gain understanding. • Use the table of contents, chapter heading and the subheadings to get an idea of how the text will go • Identify chapter headings, pictures, illustrations and charts in the text. • Interpret information from simple graphs and charts.
6. Identify the main purpose of a text, including what the author wants to answer, explain, or describe. (2.RIT.6)	• Activate prior knowledge about an author or genre in order to make connections to text. • Identify the elements of genre to aid in comprehension, e.g., biography, personal narrative, expository, folktales and fables. • Respond to oral and written questions about the facts in nonfiction text. • Read several texts within a genre, about a single topic, or by a single author and compare similarities and differences. • Identify what is important to an author based on the content of text. • Synthesize information from a text to extend meaning, e.g., ask an author questions or points to include in a speech.
7. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text. (2.RIT.7)	• Identify the elements of genre to aid in comprehension, e.g., biography, personal narrative, expository, folktales and fables. • Preview parts of books, e.g., table of contents and glossary, to gain understanding. • Identify chapter headings, pictures, illustrations and charts in the text. • Identify print and non-print resource materials matched to a specific purpose (such as informational

	text and/or illustrations and graphics on a nonfiction topic). • Use text features such as titles, tables of contents and chapter headings to locate information in nonfiction texts. • Interpret information from simple graphs and charts.
8. By the end of the year, read and comprehend informational texts, including history, social studies, science, and technical texts in grade 2-3 text complexity band with scaffolding as needed at the end of the range (2. RIT.10)	• Sustain reading for 30 minutes in school and at home • Set goals for the volume of nonfiction reading they need to for the unit • Push themselves to read more and more nonfiction books for new learning of a topic • Always thinking before, during and after reading the book • Prepare and plan for partner reading time • Read more than just the words on the page (we use pictures, graphs, maps etc.) to connect with or add to the words on the page • Make decisions on how their reading lives will go • Choose just right books using the 5-finger rule
Science Standards Addressed	**The students will <u>know</u> and be able to <u>do</u>:**
1. Solids tend to maintain their own shapes, while liquids tend to assume the shapes of their containers, and gases fill their containers fully. (2.1.a)	• Materials can be classified as solid, liquid or gas. All forms of matter have weight and take up space, but each form has unique properties. • Solids are the only form of matter that have a definite shape. A solid's shape can be changed by hammering, twisting or stretching, but its weight remains the same. Solids can be hard, soft, bouncy, stretchy or grainy. • Solids take up a definite amount of space (volume); the volume does not change if the solid is placed in different containers. • Liquids do not have a definite shape; they flow to the bottom of a container and take on the shape of the part of the container they occupy. Liquids pour and flow from a higher point to a lower point; some liquids flow faster than others. • Liquids have a definite volume. When a liquid is poured into different containers, the shape of the

	liquid may change, but the volume does not. • Gases are made of particles too small to see, but they still take up space and have weight. Gases do not have a definite shape; they take on the shape of whatever container they occupy. For example, the air in an inflated balloon can be squeezed and reshaped. • Gases do not have a definite volume; they spread out in all directions to fill any size container, or they keep spreading in all directions if there is no container. For example, blowing even a small amount of air into a balloon immediately fills the entire balloon; the smell of baking bread eventually fills the entire house and even outside. • Compare and contrast the properties that distinguish solids, liquids and gases. • Classify objects and materials according to their state of matter. • Measure and compare the sizes of different solids. • Measure and compare the volume of a liquid poured into different containers. • Design a fair test to compare the flow rates of different liquids and granular solids. •
Standards addressed in this unit: **(Reading Foundational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Know and apply grade level phonics and word analysis skills in decoding words. (2.RFS.3)	***These skills have been previously introduced.*** • Isolate and pronounce initial, medial and final sounds (phonemes) in spoken single syllable words. • Segment spoken single syllable words into their complete sequence of individual sounds (phonemes) • Distinguish long from short vowel sounds in spoken single syllable words. • Distinguish long and short vowels when reading regularly spelled one syllable words. • Know spelling sound correspondences for additional common vowel teams. • Know final e and common vowel team conventions for representing long vowel sounds.

	• Decode words with common prefixes and suffixes. • Read words with inflectional endings. • Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. • Decode regularly spelled two syllable words with long vowels. • Know the spelling sound correspondences for common consonant diagraphs (two letters that represent 1 sound). ***New Skills*** • Decode multisyllabic words, using strategies, i.e., dividing compound words or syllables or separating suffixes or prefixes • Decode orthographically regular multi-syllable words, e.g., butterfly, happiness by using knowledge of sound symbol relationships, syllable division and the alphabetic principle • Phonics Lesson: *Crazy Eights* (pg. 151)
2. Read with sufficient accuracy and fluency to support comprehension. (2.RFS.4)	• When something doesn't make sense we stop and ask ourselves what could I do to fix this part • Use more than one strategy (use phonetic, structural, syntactical and contextual clues) to read and understand unfamiliar words in grade level texts • Read grade-level text with purpose and understanding (ie. Answering questions such as who, what, when, where, why, how based on text). • Read grade-level text orally with accuracy, appropriate rate, and expression.' • Use context to confirm or self-correct word recognition and understanding, rereading as necessary. • Reread books over and over again to become more smoothly, quickly and with more understanding • Read and demonstrate understanding of grade level text (see District Benchmark) • Read at least 200 high frequency words

	• Read aloud informational text and literacy/narrative text, attending to intonation • Read aloud, while comprehending, unpracticed text with fluency at 90-100+ words correct per minute

Significant Tasks

Significant Task 1

Big Idea: Readers read nonfiction texts purposefully

Essential Question: How is reading nonfiction similar to and different from reading fiction?

How do readers think as they read nonfiction?

Your students will be reading about science in the reading workshop, writing about science in the writing workshop, and they'll be functioning like young scientists. This unit is designed to teach second graders the strategies of nonfiction reading. As they study states of matter to provide them with the foundation needed to take part in their first inquiry experiment. Students receive instruction in how to find important facts connected to the topic in nonfiction texts (states of matter) during interactive read alouds. Through guided practice, students will use information to complete a Venn diagram to compare and contrast the states of matter. Students use teacher provided text to independently locate facts and organize them in a Venn diagram.

Inquiry Experiment Identifying the Properties of Solid Objects, Liquids and Gases

Resources: Grade Two Science Curriculum binder
Vocabulary: Solid, Liquids, Gases: property, classify, matter, state of matter, solid, liquid, gas, volume

Significant Task 2

Big Idea: Readers read nonfiction texts strategically

Essential Question: How do nonfiction readers tackle tricky words in their books?

What do readers do to get and keep information from the nonfiction books they read?

How do nonfiction readers accumulate information than seeing more than just the text on the page?

Students will tackle the meaning of words by using text features such as table of contents, index, glossary, diagrams, labels, pictures and captions to formulate the meaning of a new word. Students will be using a science and literacy notebook to record new information learned throughout this unit. In the science and literacy notebook students will use facts gathered to create vocabulary word maps, summarize experiments and observations and create questions to expand and deepen their learning. Students will identify the difference between their schema and the new information they are learning about this topic.

Significant Task 3

Big Idea: Readers compare information learned from more than one text

Essential Question: How do nonfiction readers read more than one book about a topic to compare and contrast?

Over the span of five days students will have the opportunity to plan, create, revise and present a culminating project in order to show their new learning about solids, liquids and gas. (see three possible choices below)

Choice One: Students will create their own science experiment that demonstrates the differences and similarities

between the three states of matter studied.
Choice Two: Students will create a public service announcement that explains the roles of solids, liquids and gases in our environment.
Choice Three: Students will create their own children's nonfiction book that teaches important facts about each of the three states of matter.

Common Learning Experiences

- Main Idea and Detail Minilessons with use of Main Idea and Detail graphic organizer.
- Review of text features previously introduced.
- Before Reading Strategy: creating questions from title, cover, and table of contents.
- During Reading Strategy: identify facts related to specific headings.
- After Reading Strategy: share new information learned in written form with others.
- Brain Pop Jr – Reading Nonfiction and Solid, Liquid and Gas videos

Common Assessments

Pre and Post State of Matter-Unit Assessment (in science curriculum binder)

Teacher Notes

- The Continuum of Literacy Learning Fountas & Pinnell
- Phonics Lessons Grade 2 Fountas and Pinnell
- Grade Two Science Curriculum binder
- (Books used for these two read alouds should be books that compare two of the states of matter).
- A Curricular Plan for the Reading Workshop, Grade 2
- Summit Public Schools Second Grade Content Area

Grade: 2 **Time: Unit 4**	**Genre: Realistic Fiction** **Theme: Characters**
Big Ideas	**Essential Questions**
▪ Readers get to know their characters • Readers think closely about the characters' traits and feelings and draw conclusions about them and their impact on the story	▪ How and why do readers use characters to understand stories? ▪ How and why do readers get to know their characters better?
Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will know and be able to do: (Independently)**
1. Participate in collaborative conversations with diverse partners about grade 2 topics with peers and adults in small and larger groups. (2.SL.1)	• Initiate communication. • Plan and practice conversations. • Work in cooperative groups. • Confer with peers to solve problems and make decisions. • Take turns when speaking. • Join in group response at appropriate times. • Listen to and respect the opinions of others. • Respond to basic feedback appropriately. • Contribute relevant ideas to a discussion • Participate in full class, group and paired activities. • Contribute relevant ideas to a discussion. • Modify a statement
2. Recount or add key ideas or details from a text read aloud or information presented orally or through other media. (2. SL.2)	• Ask and answers who, what, where, when and how questions. Answer literal and inferential questions about grade appropriate texts.
3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. (2.SL.3)	• Ask and answer yes/no and either/or questions. • Ask and answers who, what, where, when and how questions. Ask questions for clarification.
4. Tell a story or recount a story with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences (2.SL.4)	• Use language from stories and informational text when retelling stories
5. Produce complete sentences when appropriate to tasks and situations in order to provide requested detail or clarification. (2.SL.6)	• Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

	Read grade-level text with purpose and understanding.
6. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. (2.L.1)	• Speak at appropriate volume to be heard when addressing large and small groups
7. Determine or clarify the meaning of an unknown and multiple-meaning words and phrases based on second grade reading and content, choosing flexibility from an array of strategies. (2.L.4)	• Use content specific words when retelling stories
Standards addressed in this unit: **(Reading for Literature/Informational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Ask and answer such questions as who, what, where, when, why and how to demonstrate understanding of key details in a text.(2.RIT.1)	• Answer literal and inferential questions about grade appropriate texts. • Know what a narrator is and understand its purpose in a story. • Know and understand important story elements and be able to use them to answer who, what, when, where and why questions. • Know how to use story elements to compare and contrast various realistic fiction books. Students will understand how to use a graphic organizer (matrix) to record the similarities and differences. • Make predictions at beginning at books and also confirm and revise predictions as they go along
2. Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral. (2.RL.2)	• Know how to identify the traits of a character. Students will understand how to use the traits to find similarities and differences within the characters of a story.
3. Describe how characters in a story respond to major events and challenges. (2.RL.3)	• Recognize an author's use of new and interesting words chosen to describe characters and events. • Talk about books with partners to find deeper meaning in their books
4. Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue	• Know what dialogue is and be able to recognize it in text. • Practice correct intonation when reading text aloud to demonstrate the differences in points of view of characters.

aloud.(2.RL.6)	
5. Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting or plot. (2.RL.7)	• Prove that our character is a certain way by referring to specific examples from the story • Notice when characters act of character • Track the character traits and feeling by noticing how the character is feeling at the beginning, middle and end of a book • Keep track of character's actions to make sure to follow what is happening in the story
6. By the end of the year, read and comprehend informational texts, including history, social studies, science, and technical texts in grade 2-3 text complexity band with scaffolding as needed at the end of the range (2. RIT.10)	• Sustain reading for 30 minutes in school and at home • Set goals for the volume of fiction reading • Push themselves to read more and more fiction books • Always thinking before, during and after reading the book • Prepare and plan for partner reading time • Make decisions on how their reading lives will go • Choose just right books using the 5-finger rule
Standards addressed in this unit: **(Reading Foundational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Know and apply grade level phonics and word analysis skills in decoding words. (2.RFS.3)	***These skills have been previously introduced.*** • Isolate and pronounce initial, medial and final sounds (phonemes) in spoken single syllable words. • Segment spoken single syllable words into their complete sequence of individual sounds (phonemes) • Distinguish long from short vowel sounds in spoken single syllable words. • Distinguish long and short vowels when reading regularly spelled one syllable words. • Know spelling sound correspondences for additional common vowel teams. • Know final e and common vowel team conventions for representing long vowel sounds. • Decode words with common prefixes and suffixes.

	• Read words with inflectional endings. • Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. • Decode regularly spelled two syllable words with long vowels. • Know the spelling sound correspondences for common consonant diagraphs (two letters that represent 1 sound). ***New Skills*** • Decode multisyllabic words, using strategies, i.e., dividing compound words or syllables or separating suffixes or prefixes • Decode orthographically regular multi-syllable words, e.g., butterfly, happiness by using knowledge of sound symbol relationships, syllable division and the alphabetic principle • Phonics Lesson: *Crazy Eights* (pg. 151)
2. Read with sufficient accuracy and fluency to support comprehension. (2.RFS.4)	• When something doesn't make sense we stop and ask ourselves what could I do to fix this part • Use more than one strategy (use phonetic, structural, syntactical and contextual clues) to read and understand unfamiliar words in grade level texts • Read grade-level text with purpose and understanding (ie. Answering questions such as who, what, when, where, why, how based on text). • Read grade-level text orally with accuracy, appropriate rate, and expression.' • Use context to confirm or self-correct word recognition and understanding, rereading as necessary. • Reread books over and over again to become more smoothly, quickly and with more understanding • Read and demonstrate understanding of grade level text (see District Benchmark) • Read at least 200 high frequency words • Read aloud informational text and literacy/narrative

	text, attending to intonation • Read aloud, while comprehending, unpracticed text with fluency at 90-100+ words correct per minute

Significant Tasks

Significant Task 1 - Determining Main Characters
Big Idea: Readers think closely about the characters' traits and feelings
Essential Question: How do readers get to know their characters better?

Teacher models during interactive read aloud how readers determine the main character. Teacher uses the idea of paying attention to the characters wants and troubles. This is the initial understanding of the character's conflict. The teacher also uses the illustrations, blurb or any information the book may provide to help determine the main characters. Teacher builds understanding that readers notice through guided practice. Students and teachers use this information to make predictions about the main characters actions or decisions in connection to the story conflict or lesson in the text read aloud to the students. Students use their independent reading texts to make predictions about their characters' actions or decisions using various key details to support predictions. Teacher models making decisions about the main characters and noticing the character's behaviors throughout the story through creating a class chart. Students independently replicate this information about the main characters in their independent reading text. Using Kidspiration, Inspiration or a visual organizer of choice students will create a character development map of a character from a "just right" book.
Timeline: 5-8 days
Vocabulary: main character, conflict
Resources: *Snowy Day, Chicken Sunday,* Eve Bunting Stories

Significant Task 2
Big Idea: Strategies readers use to get to know their characters
Essential Question: How do readers use characters to understand stories?

Students think closely about the characters in their books, the kinds of things they want and the kinds of troubles they have. They make predictions about their characters based on the behaviors the characters exhibit. One strategy a student may use is read a few pages and then stop to think about how the pages they've just read go together. They can mark the character's decision or actions with a post-it to help them remember what they've read.

Students think more closely about characters' traits and feelings by reading carefully and closely for examples of when those traits are driving the character's actions and when in fact the character acts outside of those traits. Using evidence from the book students look closely at the characters' feelings and traits by tracking the characters' actions and changing emotions through the events in the story. Students discuss their ideas in turn and talk opportunities during mini lessons and in independent reading with student partnerships. Students will create a visual showing their character and the traits and feelings that encompass the character from a "just right" book.

Timeline: 2 weeks

Vocabulary: realistic fiction, similarities and differences, traits, events, setting, problem, solution, adventure, experience
Resources: *Just Us Women, Night Shift Daddy, Two of Them, When I Was Young in the Mountains, Amazing Grace, Boundless Grace, The Terrible, Horrible, Very Bad Day, Jamaica Tag Along*

Significant Task 3 - Examining Characters
Teacher models through interactive read aloud examining character decisions as their behaviors are being monitored as a whole class and independently. Teacher expands modeling to noticing and examining the characters feelings and motivations throughout the read alouds. Through guided practice, students and teacher draw conclusions about characters based on decisions, feelings, motivations and key details displayed by characters in the text. Teacher models making and revising predictions about characters and students are encouraged to do so on main characters in their independent reading texts. Students will compare and contrast the characters from two realistic fiction stories using teacher's choice graphic organizer.

Timeline: 5-8 days
Vocabulary: decisions, feelings, motivations, key details
Resources: Patricia Palacco Stories

Common Learning Experiences

- Anchor chart of characteristics of realistic fiction (see resources)
- Story Mapping of Realistic Fiction Books to determine the Author's message and/or theme
- Mini lesson(s) on point of view – using the dialogue between multiple characters in a realistic fiction story
- Compare and contrast of two realistic fiction stories

Common Assessments

- Realistic Fiction-CFA

Teacher Notes

Resources
Phonics Lessons (Fountas & Pinnell)

- Florida Center for Reading Research
- Phonics Jingles (as needed)
- Word Journeys (Kathy Ganske)
- Diphthongs, Modified Vowels and Vowel Diagraphs
- 2nd Grade Prefix and Suffix List
- 2nd Grade VC/CV Word List
- Syllabication Rules (use rules that apply)
- Prefix and Suffix Word List

- Phonics Screener
- The Continuum of Literacy Learning *Fountas & Pinnell*
- Phonics Lessons Grade 2 Fountas and Pinnell
- A Curricular Plan for the Reading Workshop, Grade 2
- Summit Public Schools Second Grade Content Area

Grade: 2 **Unit 5**	**Genre: Poetry** **Theme:** The Power of Words
Big Ideas	**Essential Questions**
• Poems communicate stories, images, feelings and ideas. • Readers use reading comprehension strategies as they learn to navigate through poetry. • Poetry has distinct and unique features that distinguish it from other genres. • Readers will gain a feel for the rhythm and language of poetry	▪ Why do authors write poems? ▪ How do readers pay attention to important images, phrases, and words to think about bigger meaning? ▪ What makes poetry special compared to other genres? ▪ How do readers find their own poetic voice?

Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will <u>know</u> and be able to <u>do</u>: (Independently)**
1. Participate in collaborative conversations with diverse partners about grade 2 topics with peers and adults in small and larger groups. (2.SL.1)	• Listen with attention and understanding to oral reading of stories, poems, and informational texts • Listen actively to others or talk about their writing to give feedback • Actively participate in conversation; listening and looking at person who is speaking • Participate actively in small-group and whole class discussion • Listen attentively to the presentation of the teacher and fellow students to be able to identify the main idea • Listen to remember, and follow two-and three-step directions
2. Recount or add key ideas or details from a text read aloud or information presented orally or through other media. (2. SL.2)	• Ask and answers who, what, where, when and how questions. • Answer literal and inferential questions about grade appropriate texts. • Understand and interpret information presented in visual media
3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. (2.SL.3)	• Ask and answer yes/no and either/or questions. • Ask and answers who, what, where, when and how questions.

	• Ask questions for clarification.
4. Tell a story or recount a story with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences (2.SL.4)	• Use language from stories and informational text when retelling stories or a topic • Make a brief oral report that demonstrates knowledge of the topic
5. Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (2.SL.5)	• Recite some poems from memory • Recite poems or stories with effective use of intonation and word stress to emphasize important ideas, engage listeners' interest, and show character traits
6. Produce complete sentences when appropriate to tasks and situations in order to provide requested detail or clarification. (2.SL.6)	• Use context to confirm or self-correct word recognition and understanding, rereading as necessary. Read grade-level text with purpose and understanding.
7. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. (2.L.1)	• Speak at appropriate volume to be heard when addressing large and small groups
8. Use knowledge of language in its conventions when writing, speaking, reading or listening. (2.L.3)	• Use conventions of respectful speaking • Use language appropriate to oral presentation words
9. Determine or clarify the meaning of an unknown and multiple-meaning words and phrases based on second grade reading and content, choosing flexibility from an array of strategies. (2.L.4)	• Use content specific words when needed to explain a topic
10. Demonstrate understanding of figurative language, word relationships and nuances in word meanings. (2. L.5)	• Vary language according to purpose
Standards addressed in this unit: **(Reading for Literature/Informational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Ask and answer such questions as who, what, where, when, why and how to demonstrate understanding of key details in a text.(2.RL.1)	• Answer literal and inferential questions about grade appropriate texts. • Know and understand the unique text features of poetry and be able to use them to answer questions based on the kind of poem. • Read multiple poems written by the same author and identify similarities and differences. • Identify the special features found in different poetry and be able to answer yes/no and either/or questions.

2. Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral. (2.RL.2) *Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structure and elements.*	• Know and understand the text features of poetry. • Create mental images (visualize) to help them understand the poems purpose and meaning. • Read multiple poems written by the same author and identify what is important to that poet. • Recognize an author's use of new and interesting words, record them and actively add them to speaking or writing vocabulary. • Reread poems • Reread poems with partners • Know that poems have bigger meaning. We ask ourselves, "What is this poem really about?" • Make pictures in our minds as we read poems
3. Describe how characters in a story respond to major events and challenges. (2.RL.3) *Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structure and elements.*	• Students will understand the meaning of figurative language such as; similes, metaphors, idioms etc. and identify their use in poems.
4. Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song. (2.RL.4)	• Students will be able to identify rhyming words and simple rhyming patterns (e.g. AABB, ABAB, etc.)
5. By the end of the year, read and comprehend literature, including stories and poetry, in grades 2-3 text complexity band proficiently, with scaffolding as needed at the end of the range (2. RL.10)	• Sustain reading for 30 minutes in school and at home • Push themselves to read more and more including poetry • Make decisions on how they want their reading life to go • Always thinking before, during and after reading the book • Readers help themselves in many ways when reading including poetry • Decide whether a book is just right and whether they are going to write their ideas on post-it's or not • Choose just right books using the 5-finger rule

Standards addressed in this unit: **(Reading Foundational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:** **(Independently)**
1. Know and apply grade level phonics and word analysis skills in decoding words. (2.RFS.3)	***These skills have been previously introduced.*** • Isolate and pronounce initial, medial and final sounds (phonemes) in spoken single syllable words. • Segment spoken single syllable words into their complete sequence of individual sounds (phonemes) • Distinguish long from short vowel sounds in spoken single syllable words. • Distinguish long and short vowels when reading regularly spelled one syllable words. • Know spelling sound correspondences for additional common vowel teams. • Know final e and common vowel team conventions for representing long vowel sounds. • Decode words with common prefixes and suffixes. • Read words with inflectional endings. • Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. • Decode regularly spelled two syllable words with long vowels. • Know the spelling sound correspondences for common consonant diagraphs (two letters that represent 1 sound). • Decode multisyllabic words, using strategies, i.e., dividing compound words or syllables or separating suffixes or prefixes • Decode orthographically regular multi-syllable words, e.g., butterfly, happiness by using knowledge of sound symbol relationships, syllable division and the alphabetic principle ***New Skills*** • Identify consonant blends • Read irregularly spelled words
2. Read with sufficient accuracy and fluency to support comprehension. (2.RFS.4)	• When something doesn't make sense we stop and ask ourselves what could I do to fix this part • Use more than one strategy (use phonetic, structural,

	syntactical and contextual clues) to read and understand unfamiliar words in grade level texts • Read grade-level text with purpose and understanding (ie. Answering questions such as who, what, when, where, why, how based on text). • Read grade-level text orally with accuracy, appropriate rate, and expression.' • Use context to confirm or self-correct word recognition and understanding, rereading as necessary. • Reread books over and over again to become more smoothly, quickly and with more understanding • Read and demonstrate understanding of grade level text (see District Benchmark) • Read at least 200 high frequency words • Read aloud informational text and literacy/narrative text, attending to intonation • Read aloud, while comprehending, unpracticed text with fluency at 90-100+ words correct per minute
Significant Tasks	
Significant Task 1 *Big Idea: Poems communicate stories, images, feelings and ideas.* *Essential Question: Why do authors write poems?* Each second grade class will study a different poet (teachers will meet to discuss which poet their class will be studying i.e. Jack Prelutsky, Shel Silverstein etc). Each class will read multiple poems by their chosen poet to find similarities and differences among the purposes of those poems and uses of figurative language. Students record figurative language and how it helps convey the ideas or images of the poem. Classes will share their findings with other grade level peers through whole class presentations and partnerships. Students consider who is talking in the poem and what message the poet is hoping to convey through that voice, or how the narrator or featured character is feeling, and how this is shown through the development of the poem and word and phrases including demonstrating understanding of figurative language. At the end of this task students will have a completed Venn diagram of the similarities and differences of their chosen author. Presentations will include readings of poems from the author and include a visual (i.e., power point, poster) introduce their author of study. **Having children read poems while simultaneously writing them in writing workshop helps to make reading and writing connections more explicit.* Timeline: 2-3 weeks Resources: <u>If You're Not Here, Please Raise Your Hand: Poems About School</u> Kalli Dakos Vocabulary: poetry, stanzas, lines, unique, alliteration, onomatopoeia, simile, metaphor, idiom, antonym, synonym,	

rhyming, verse, cinquain, acrostic

Significant Task 2
Big Idea: Deepen their reading comprehension strategies as they learn to navigate through poetry.
Poetry has distinct and unique features that distinguish it from other genres.
Essential Question: What makes poetry special as compared to other genres?

Students talk about how a poem looks and sounds to extract what it is mostly about. During the unit the students will work together with the classroom teacher to find and collect poetry that is accessible for them to read either individually or with a partner. Together you can look back at shared reading poems you did as a class, mentor texts you are using for your writing unit, and the many anthologies available. Students read and discuss what the poems are mostly about and create illustrations to depict their ideas using computer graphics, old magazines/texts, or hand drawn.

Timeline: 1 week
Resources: *Climb Inside a Poem*, Georgia Heard and Lester Laminack
Jeff Foxworthy

Significant Task 3
Big Idea: Readers will gain a feel for the rhythm and language of poetry
Essential Question: How do readers find their own poetic voice?
This unit aims to help children transfer their reading skills to the genre of poetry. Students can also consider a poem's meaning, working in pairs to think, "What is this poem really about?!" Students can get a feel for the sound and genre of poetry as they read, dramatize, sing and rap together.

Timeline: 1 week
Resources: *Explore Poetry*, Donald Graves
Awakening the Heart, Georgia Heard
Jack Prelutsky
Shel Silverstein

**During Writers' Workshop students should be working on creating or writing their own poems of figurative language of their choice (i.e., acrostic, cinquain, rhyming, free verse etc.)*

Common Learning Experiences

- All students will be exposed to the following types of figurative language: similes, alliteration and onomatopoeia
- Understand poems can take a variety of shapes
- Understand poetry is a unique way to communicate about and describe feelings, images, ideas or stories

Common Assessments

CFA-Poetry Unit Assessment

Teacher Notes

- The size of your poetry collection will affect the amount of time children spend reading and discussing poetry

during the workshop. We suggest that students spend the first half of reading workshop reading poetry with a partner. During the second half of the workshop, your students may spend the last twenty minutes of reading workshop reading their just right fiction and nonfiction texts in their book baggies deepen their skills of envisioning, monitoring for meaning, inferring, and synthesis using "Reading is Thinking" template.

Resources

Create math or science poems

- http://mathstory.com/

The Continuum of Literacy Learning Fountas & Pinnell
A Curricular Plan for the Reading Workshop, Grade 2
Summit Public Schools Second Grade Content Area

Grade: 2 **Unit 6**	**Genre: Science: Nutrition** **Theme: Understanding Nonfiction Topics**
Big Ideas	**Essential Questions**
• Readers read nonfiction purposefully • Read to learn about a scientific topic	• How do readers think as they read nonfiction? • How do readers build up a base knowledge on a topic? • What questions do readers ask to deepen their thinking?

Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Participate in collaborative conversations with diverse partners about grade 2 topics with peers and adults in small and larger groups. (2.SL.1)	• Initiate communication. • Plan and practice conversations. • Work in cooperative groups. • Confer with peers to solve problems and make decisions. • Take turns when speaking. • Join in group response at appropriate times. • Listen to and respect the opinions of others. • Respond to basic feedback appropriately. • Contribute relevant ideas to a discussion • Participate in full class, group and paired activities. • Contribute relevant ideas to a discussion. • Modify a statement
2. Recount or add key ideas or details from a text read aloud or information presented orally or through other media. (2. SL.2)	• Ask and answers who, what, where, when and how questions. • Answer literal and inferential questions about grade appropriate texts.
3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. (2.SL.3)	• Ask and answer yes/no and either/or questions. • Ask and answers who, what, where, when and how questions. • Ask questions for clarification.
4. Tell a story or recount a story with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences (2.SL.4)	• Use language from stories and informational text when retelling stories or a topic • Make a brief oral report that demonstrates knowledge of the topic
5. Produce complete sentences when appropriate to tasks and situations in order to provide requested detail or clarification. (2.SL.6)	• Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

	• Read grade-level text with purpose and understanding.
6. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. (2.L.1)	• Speak at appropriate volume to be heard when addressing large and small groups
7. Determine or clarify the meaning of an unknown and multiple-meaning words and phrases based on second grade reading and content, choosing flexibility from an array of strategies. (2.L.4)	• Use content specific words when needed to explain a topic
Standards addressed in this unit: **(Reading for Literature/Informational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Ask and answer such questions as who, what, where, when, why and how to demonstrate understanding of key details in a text.(2.RIT.1)	• Read nonfiction materials for answers to specific questions or for specific purposes. • Respond to oral and written questions about the facts in nonfiction text.
2. Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text. (2.RIT.2)	• Activate prior knowledge about an author or genre in order to make connections to text. • Apply comprehension strategies, such as connecting, predicting, questioning, inferring and visualizing to above grade-level stories read aloud by the teacher and to own reading at independent level. • Use text features such as titles, tables of contents and chapter headings to locate information in nonfiction texts.
3. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2. RIT.3)	• Read more than one book on a science topic then compare and contrast information
4. Determine the meaning of words and phrases in a text relevant to a Grade 2 topic or subject area. (2.RIT.4)	• Use glossaries and dictionaries to identify word meanings. • Use prefixes, suffixes, inflectional endings and abbreviated words to determine the meaning of unknown words. • Reread and read on to determine meaning of unknown words. Identify unfamiliar words.
5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes,	• Preview parts of books, e.g., table of contents and glossary, to gain understanding.

electronic menus, icons) to locate key facts or information in a text efficiently. (2.RIT.5)	• Use the table of contents, chapter heading and the subheadings to get an idea of how the text will go • Identify chapter headings, pictures, illustrations and charts in the text. • Interpret information from simple graphs and charts.
6. Identify the main purpose of a text, including what the author wants to answer, explain, or describe. (2.RIT.6)	• Activate prior knowledge about an author or genre in order to make connections to text. • Identify the elements of genre to aid in comprehension, e.g., biography, personal narrative, expository, folktales and fables. • Respond to oral and written questions about the facts in nonfiction text. • Read several texts within a genre, about a single topic, or by a single author and compare similarities and differences. • Identify what is important to an author based on the content of text. • Synthesize information from a text to extend meaning, e.g., ask an author questions or points to include in a speech.
7. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text. (2.RIT.7)	• Identify the elements of genre to aid in comprehension, e.g., biography, personal narrative, expository, folktales and fables. • Preview parts of books, e.g., table of contents and glossary, to gain understanding. • Identify chapter headings, pictures, illustrations and charts in the text. • Identify print and non-print resource materials matched to a specific purpose (such as informational text and/or illustrations and graphics on a nonfiction topic). • Use text features such as titles, tables of contents and chapter headings to locate information in nonfiction texts. • Interpret information from simple graphs and charts.
8. By the end of the year, read and comprehend informational texts, including history, social studies, science, and technical texts in grade 2-3 text	• Sustain reading for 30 minutes in school and at home • Set goals for the volume of nonfiction reading they need to for the unit

complexity band with scaffolding as needed at the end of the range (2. RIT.10)	• Push themselves to read more and more nonfiction books for new learning of a topic • Always thinking before, during and after reading the book • Prepare and plan for partner reading time • Read more than just the words on the page (we use pictures, graphs, maps etc.) to connect with or add to the words on the page • Make decisions on how their reading lives will go • Choose just right books using the 5-finger rule
Science Standards	**The students will know and be able to do:**
2.4.a. The essential components of balanced nutrition can be obtained from plant and animal sources. **2.4.b.** People eat different foods in order to satisfy nutritional needs for carbohydrates, proteins and fats.	**GRADE-LEVEL CONCEPT 2.4.a.** ▪ People need to eat a variety of foods to get the energy and nutrients they need to grow, move and stay healthy. Foods are classified as grains, fruits, vegetables, dairy, meats and beans, and oils. ▪ Some foods people eat come from plants that grow wild or are planted by farmers as crops. A fruit is the ripened ovary of a flower; vegetables are the roots, stems, leaves or flowers of plants. ▪ Some foods people eat come from animals that are wild or are raised on ranches. Meat, fish, dairy products and eggs all come from animals. ▪ The types of crops that can grow in an area depend on the climate and soil. Some foods are grown and sold by local farms, and some foods are grown far away and transported to local grocery stores. **GRADE-LEVEL CONCEPT 2.4.b.** ▪ All people need the same basic nutrients to grow, move and stay healthy; different cultures satisfy these needs by consuming different foods. ▪ The level of energy and nutrients individuals need depends on their age, gender and how active they are. ▪ Most foods contain a combination of nutrients. Labels on food packages describe the nutrients contained in the food and how much energy the food provides

	(calories). ▪ Breads, cereals, rice and pasta are sources of carbohydrates, which provide energy. ▪ Meat, poultry, fish, beans, eggs and nuts are sources of protein, which keeps the body working properly. ▪ Fruits and vegetables are sources of vitamins and minerals, which keep the body healthy. ▪ Nuts, meats and fish are sources of fats and oils, which provide energy ▪ Explain that food is a source of carbohydrates, protein and fats —nutrients that animals (including humans) convert to energy they use to stay alive and grow. ▪ Classify foods into groups based on their source, and relate common foods to the plant or animal from which they come. ▪ Give examples of ways people can improve soil quality and crop growth (e.g., irrigation, fertilizer, pest control). ▪ Compare and contrast how different cultures meet needs for basic nutrients by consuming various foods. ▪ Evaluate the nutritional value of different foods by analyzing package labels.
Standards addressed in this unit: **(Reading Foundational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
1. Know and apply grade level phonics and word analysis skills in decoding words. (2.RFS.3)	***These skills have been previously introduced.*** ▪ Isolate and pronounce initial, medial and final sounds (phonemes) in spoken single syllable words. ▪ Segment spoken single syllable words into their complete sequence of individual sounds (phonemes) ▪ Distinguish long from short vowel sounds in spoken single syllable words. ▪ Distinguish long and short vowels when reading regularly spelled one syllable words. ▪ Know spelling sound correspondences for additional common vowel teams. ▪ Know final e and common vowel team conventions for representing long vowel sounds. ▪ Decode words with common prefixes and suffixes.

	▪ Read words with inflectional endings. ▪ Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. ▪ Decode regularly spelled two syllable words with long vowels. ▪ Know the spelling sound correspondences for common consonant diagraphs (two letters that represent 1 sound). ▪ Decode multisyllabic words, using strategies, i.e., dividing compound words or syllables or separating suffixes or prefixes ▪ Decode orthographically regular multi-syllable words, e.g., butterfly, happiness by using knowledge of sound symbol relationships, syllable division and the alphabetic principle ***New Skills*** ▪ Identify consonant blends ▪ Read irregularly spelled words
2. Read with sufficient accuracy and fluency to support comprehension. (2.RFS.4)	• When something doesn't make sense we stop and ask ourselves what could I do to fix this part • Use more than one strategy (use phonetic, structural, syntactical and contextual clues) to read and understand unfamiliar words in grade level texts • Read grade-level text with purpose and understanding (ie. Answering questions such as who, what, when, where, why, how based on text). • Read grade-level text orally with accuracy, appropriate rate, and expression.' • Use context to confirm or self-correct word recognition and understanding, rereading as necessary. • Reread books over and over again to become more smoothly, quickly and with more understanding • Read and demonstrate understanding of grade level text (see District Benchmark) • Read at least 200 high frequency words • Read aloud informational text and literacy/narrative text, attending to intonation • Read aloud, while comprehending, unpracticed text with fluency at 90-100+ words correct per minute

Significant Tasks

Significant Task 1

Big Idea: Getting your mind ready to read nonfiction texts
Essential Question: How do readers think as they read nonfiction?

Over the span of five days students will have the opportunity to plan, create, revise and present a culminating project in order to show their new learning about nutrition. (see three **possible** choices below)

Choice One: Students will create a poster that will be used in the cafeteria to educate their peers on making healthy food choices (they are what they eat).

Choice Two: Students will create a brochure to be sent home in their Wednesday folders that explains the importance of a balanced diet.

Choice Three: Students will create a power point presentation that will be presented to a specific audience in order to educate others on the topic of nutrition.

Timeline: 2-3 weeks
Resources: *Grade Two Science Curriculum binder, Rainbow Stew* by Cathryn Falwell
Vocabulary: Nutrition: nutrient, crop, grain, carbohydrate, protein, dairy, fats, oils, energy, fruit, vegetables, meat, poultry, Mentor text vocabulary

Significant Task 2

Big Idea: Read to learn about a scientific topic
Essential Question: How do readers build up a base knowledge on a topic?
What questions do readers ask to deepen their thinking?
Students will be reading about nutrition. Students will be grouped around a nutrition topic teaching them to study with focus. Students will develop a base of knowledge on nutrition by reading texts and using the new learned vocabulary words in discussion and writing. Students will keep a wellness log over a week long period tracking food consumed and exercise based on what they have learned in this unit. As a class student and teacher will create a wellness rubric so can assess their overall wellness over a week.
Timeline: 1 week
Resources: *Grade Two Science Curriculum binder*
Vocabulary: Nutrition: nutrient, crop, grain, carbohydrate, protein, dairy, fats, oils, energy, fruit, vegetables, meat, poultry, Mentor text vocabulary

Common Learning Experiences

- Main Idea and Detail Mini lessons with use of Main Idea and Detail graphic organizer.
- Review of text features previously introduced.
- Before Reading Strategy: creating questions from title, cover, and table of contents.
- During Reading Strategy: identify facts related to specific headings.
- After Reading Strategy: share new information learned in written form with others.
- Brain Pop Jr – Nutrition topics

Common Assessments

CFA-Nutrition Unit
Teacher Notes
• The Continuum of Literacy Learning *Fountas & Pinnell* • *Phonics Lessons Grade 2 Fountas and Pinnell* • *A Curricular Plan for the Reading Workshop, Grade 2* • *Summit Public Schools Second Grade Content Area*

Grade: 2 **Unit 7**	**Genre: Science: Nonfiction: Life Cycles of Plants and Soils** **Theme: Understanding Nonfiction Topics**
Big Ideas	**Essential Questions**
• Readers read nonfiction purposefully • Read to learn about a scientific topic	• How do readers think as they read nonfiction? • How do readers build up a base knowledge on a topic? • What questions do readers ask to deepen their thinking?

Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will <u>know</u> and be able to <u>do</u>:**
8. Participate in collaborative conversations with diverse partners about grade 2 topics with peers and adults in small and larger groups. (2.SL.1)	• Initiate communication. • Plan and practice conversations. • Work in cooperative groups. • Confer with peers to solve problems and make decisions. • Take turns when speaking. • Join in group response at appropriate times. • Listen to and respect the opinions of others. • Respond to basic feedback appropriately. • Contribute relevant ideas to a discussion • Participate in full class, group and paired activities. • Contribute relevant ideas to a discussion. • Modify a statement
9. Recount or add key ideas or details from a text read aloud or information presented orally or through other media. (2. SL.2)	• Ask and answers who, what, where, when and how questions. • Answer literal and inferential questions about grade appropriate texts.
10. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. (2.SL.3)	• Ask and answer yes/no and either/or questions. • Ask and answers who, what, where, when and how questions. • Ask questions for clarification.
11. Tell a story or recount a story with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences (2.SL.4)	• Use language from stories and informational text when retelling stories or a topic • Make a brief oral report that demonstrates knowledge of the topic
12. Produce complete sentences when appropriate to tasks and situations in order to provide requested detail or clarification. (2.SL.6)	• Use context to confirm or self-correct word recognition and understanding, rereading as necessary. • Read grade-level text with purpose and understanding.

13. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. (2.L.1)	• Speak at appropriate volume to be heard when addressing large and small groups
14. Determine or clarify the meaning of an unknown and multiple-meaning words and phrases based on second grade reading and content, choosing flexibility from an array of strategies. (2.L.4)	• Use content specific words when needed to explain a topic
Standards addressed in this unit: **(Reading for Literature/Informational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
9. Ask and answer such questions as who, what, where, when, why and how to demonstrate understanding of key details in a text.(2.RIT.1)	• Read nonfiction materials for answers to specific questions or for specific purposes. • Respond to oral and written questions about the facts in nonfiction text.
10. Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text. (2.RIT.2)	• Activate prior knowledge about an author or genre in order to make connections to text. • Apply comprehension strategies, such as connecting, predicting, questioning, inferring and visualizing to above grade-level stories read aloud by the teacher and to own reading at independent level. • Use text features such as titles, tables of contents and chapter headings to locate information in nonfiction texts.
11. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2. RIT.3)	• Read more than one book on a science topic then compare and contrast information
12. Determine the meaning of words and phrases in a text relevant to a Grade 2 topic or subject area. (2.RIT.4)	• Use glossaries and dictionaries to identify word meanings. • Use prefixes, suffixes, inflectional endings and abbreviated words to determine the meaning of unknown words. • Reread and read on to determine meaning of unknown words. Identify unfamiliar words.
13. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a	• Preview parts of books, e.g., table of contents and glossary, to gain understanding. • Use the table of contents, chapter heading and the

text efficiently. (2.RIT.5)	subheadings to get an idea of how the text will go • Identify chapter headings, pictures, illustrations and charts in the text. • Interpret information from simple graphs and charts.
14. Identify the main purpose of a text, including what the author wants to answer, explain, or describe. (2.RIT.6)	• Activate prior knowledge about an author or genre in order to make connections to text. • Identify the elements of genre to aid in comprehension, e.g., biography, personal narrative, expository, folktales and fables. • Respond to oral and written questions about the facts in nonfiction text. • Read several texts within a genre, about a single topic, or by a single author and compare similarities and differences. • Identify what is important to an author based on the content of text. • Synthesize information from a text to extend meaning, e.g., ask an author questions or points to include in a speech.
15. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text. (2.RIT.7)	• Identify the elements of genre to aid in comprehension, e.g., biography, personal narrative, expository, folktales and fables. • Preview parts of books, e.g., table of contents and glossary, to gain understanding. • Identify chapter headings, pictures, illustrations and charts in the text. • Identify print and non-print resource materials matched to a specific purpose (such as informational text and/or illustrations and graphics on a nonfiction topic). • Use text features such as titles, tables of contents and chapter headings to locate information in nonfiction texts. • Interpret information from simple graphs and charts.
16. By the end of the year, read and comprehend informational texts, including history, social studies, science, and technical texts in grade 2-3 text complexity band with scaffolding as needed at the end of the range (2. RIT.10)	• Sustain reading for 30 minutes in school and at home • Set goals for the volume of nonfiction reading they need to for the unit • Push themselves to read more and more nonfiction books for new learning of a topic

	• Always thinking before, during and after reading the book • Prepare and plan for partner reading time • Read more than just the words on the page (we use pictures, graphs, maps etc.) to connect with or add to the words on the page • Make decisions on how their reading lives will go • Choose just right books using the 5-finger rule
Science Standards	**The students will know and be able to do:**
2.2.a. The life cycles of flowering plants include seed germination, growth, flowering, pollination and seed dispersal.	**GRADE-LEVEL CONCEPT 2.2.a.** • Flowering plants progress through a sequenced life cycle. First, seeds sprout (germinate), then seedlings grow into adult plants with leaves and flowers. If the flowers are pollinated, seeds develop that will grow into new plants to continue the life cycle. • Roots, stems, leaves, flowers and seeds are structures that develop during different stages of the plant's life cycle. • Seeds contain the beginnings of a new plant (embryo) and the food (energy source) the new plant needs to grow until it is mature enough to produce its own food. Different plant varieties produce seeds of different size, color and shape. • Environmental conditions, such as temperature, amount of light, amount of water and type of soil, affect seed germination and plant development. • A plant's seed will grow into a new plant that resembles but is not identical to the parent plant or to other new plants. For example, marigold plants produce marigold seeds that grow into new marigold plants. Individual marigolds, however, vary in height, number of leaves etc. • Seedlings are young plants that produce the structures that will be needed by the plant to survive in its environment: Roots and leaves begin to grow and take in nutrients, water and air, and the stem starts to grow towards sunlight. • Adult plants form more leaves that help the plant collect sunlight and air to make its food. They produce flowers that are the structures responsible for reproduction. • Flowers have structures that produce pollen, attract

2.3.a. Soils can be described by their color, texture and capacity to retain water.	pollinators and produce seeds that can grow into new plants. Some flowers have structures that develop into fruits, berries or nuts that contain the seeds that can grow into new plants. • Some seeds fall to the ground and germinate close to the parent plant; other seeds are carried (dispersed) by wind, animals, or water to places far away. The structure of the seed is related to the way it is dispersed. **GRADE-LEVEL CONCEPT 2.3.a.** • Soil is a mixture of pieces of rock (particles), living and once living things (humus), water and air. The components of soil can be separated using sieves and settlement tests. • There are different types of soil that vary from place to place. Soil properties can be observed and compared. Soils can be classified by properties such as color, particle size, or amount of organic material (humus). Digging a deep hole shows that soils are often found in layers that have different colors and textures. • The size of the particles in soils gives the soil its texture. Soils can be classified by how they feel: Sandy soils feel gritty, silty soils feel powdery, clay soils feel sticky, and soils with small rocks feel rough and scratchy. • The broken rocks that make up soils can be tiny (silt and clay), medium (sand), or large (pebbles). Soils can be classified by the size of their particles. • A soil's texture affects how it packs together; soils that pack together; soils that pack together tightly hold less air and water than soils that stay loosely packed. • There are different types of soil that vary from place to place. Some soil types are suited for supporting the weight of buildings and highways; other soil types are suited for planting food crops or forest growth.
2.3.b. Soils support the growth of many kinds of plants, including	• Many plants need soil to grow. Soil holds water and nutrients that are taken in (absorbed) by plant roots.

those in our food supply.	• Soil is a habitat for many living things. Some organisms live in the soil and others live on the soil. Worms and other underground animals create spaces for air, water and plant roots to move through soil. • Plants we eat ("crops") grow in different soil types. Plant height, root length, number of leaves, and number of flowers can all be affected by how much water, air and organic material the soil holds. • To support the growth of different plants, people can change the properties of soils by adding nutrients (fertilizing), water (irrigating) or air (tilling).
Standards addressed in this unit: **(Reading Foundational Skills)**	**The students will <u>know</u> and be able to <u>do</u>:**
3. Know and apply grade level phonics and word analysis skills in decoding words. (2.RFS.3)	***These skills have been previously introduced.*** ▪ Isolate and pronounce initial, medial and final sounds (phonemes) in spoken single syllable words. ▪ Segment spoken single syllable words into their complete sequence of individual sounds (phonemes) ▪ Distinguish long from short vowel sounds in spoken single syllable words. ▪ Distinguish long and short vowels when reading regularly spelled one syllable words. ▪ Know spelling sound correspondences for additional common vowel teams. ▪ Know final e and common vowel team conventions for representing long vowel sounds. ▪ Decode words with common prefixes and suffixes. ▪ Read words with inflectional endings. ▪ Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. ▪ Decode regularly spelled two syllable words with long vowels. ▪ Know the spelling sound correspondences for common consonant diagraphs (two letters that represent 1 sound). ▪ Decode multisyllabic words, using strategies, i.e., dividing compound words or syllables or separating suffixes or prefixes

	▪ Decode orthographically regular multi-syllable words, e.g., butterfly, happiness by using knowledge of sound symbol relationships, syllable division and the alphabetic principle ***New Skills*** ▪ Identify consonant blends ▪ Read irregularly spelled words
4. Read with sufficient accuracy and fluency to support comprehension. (2.RFS.4)	• When something doesn't make sense we stop and ask ourselves what could I do to fix this part • Use more than one strategy (use phonetic, structural, syntactical and contextual clues) to read and understand unfamiliar words in grade level texts • Read grade-level text with purpose and understanding (ie. Answering questions such as who, what, when, where, why, how based on text). • Read grade-level text orally with accuracy, appropriate rate, and expression.' • Use context to confirm or self-correct word recognition and understanding, rereading as necessary. • Reread books over and over again to become more smoothly, quickly and with more understanding • Read and demonstrate understanding of grade level text (see District Benchmark) • Read at least 200 high frequency words • Read aloud informational text and literacy/narrative text, attending to intonation • Read aloud, while comprehending, unpracticed text with fluency at 90-100+ words correct per minute
Significant Tasks	
Significant Task 1 *Big Idea: Getting your mind ready to read nonfiction texts* *Essential Question: How do readers think as they read nonfiction?* Students read about different types of plants. In this unit students record information in their science and literacy notebooks. Students use their senses and simple tools to observe and describe the roots, stems, leaves, flowers, and seeds of various plants (including trees, vegetables and grass). Students use magnifiers to observe and diagram the parts of a flower. Students describe and label the functions of roots, stems, leaves, flowers and seeds in completing a plant life cycle. Students record observations and make conclusions about the sequence of stages in a flowering plant's life cycle. Students compare and contrast seeds of different plants	

are adapted for dispersal by water, wind or animals. Students conduct a fair test to explore factors that affect seed germination and plant growth.

Timeline: 2-3 weeks
Vocabulary: **Plants:** life cycle, structures (body parts), seed, germinate, reproduce, flower, pollen, pollinator, seed dispersal

Significant Task 2
Big Idea: Read to learn about a scientific topic
Essential Question: How do readers build up a base knowledge on a topic?
What questions do readers ask to deepen their thinking?

Students read about different types of soils and their components. In this unit students record information in their science and literacy notebooks. Students use their senses and simple tools (e.g., sieves, and settlement tests) to separate soil into components such as rock fragments, water, air and plant remains. Students classify soils by properties such as color, particle size (sand, silt or clay), or amount of organic material (loam). Students explain the importance of soil to plants, animals and people. Students evaluate the quality of different soils in terms of observable presence of air, water, living things and plant remains. Students conduct a fair test to investigate how different soil types affect plant growth and write conclusions supported by evidence.

Timeline: 1-2 weeks
Resources: *Grade Two Science Curriculum binder*
Vocabulary: soil, property, classify, mixture, particle, humus, sand, silt, clay, texture, nutrients

During the unit, students have the opportunity to plan, create, revise and present a culminating project in order to show their new learning about the life cycles of plants and soils.

Common Learning Experiences

- Students will create a diagram that shows either the parts of a plant, layers of soil or properties of soil.
- Students will keep an ongoing journal or notebook of what they noticed, wonder, predict, and learn from books, experiments, discussions and observations (see appendix c)
- Use appendix a to teach how to use phrases to respond to new learning.
- Review how text features contribute to student understanding of a text.
- Before Reading Strategy: creating questions from title, cover, and table of contents.
- During Reading Strategy: identify facts related to specific headings.
- After Reading Strategy: share new information learned in written form in partners.
- Brain Pop Jr – Life Cycles of Plants and Soils topics

Common Assessments

- Describe the life cycles of flowering plants as they grow from seeds, proceed through maturation and produce new seeds.
- Explore and describe the effects of light and water on seed germination and plant growth.

- Sort different soils by properties, such as particle size, color, and composition.
- Relate the properties of different soils to their capacity to retain water and support the growth of certain plants.

Teacher Notes

- *The Continuum of Literacy Learning Fountas & Pinnell*
- *Phonics Lessons Grade 2 Fountas and Pinnell*
- *A Curricular Plan for the Reading Workshop, Grade 2*
- *Summit Public Schools Second Grade Content Area*
- *CT Department of Education 2010 Bureau of Teaching and Learning*

3rd Grade Reading CCSS

Grade: 3rd Unit 1 – Reading Building a Reading Community **Time: 4-5 weeks**	**Genre: Realistic Fiction** **Theme: Building a Reading Community**
Big Ideas	**Essential Questions**
▪ Readers who read, think, discuss, ideas and texts	▪ What is a reading community?
Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will know and be able to do:**
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly. (3.SL.1)	▪ Engage in discussion ▪ Draw on text for discussion ▪ Follow agreed upon rules for discussion ▪ Ask questions to check understanding of information ▪ Explain their ideas in a discussion ▪ Ask and answer questions about information from the speaker ▪ Elaborate and provide details in a discussion
2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. (3.SL.2)	▪ Determine the main idea and supporting details
3. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3.SL.4)	▪ Tell a story or recount an experience ▪ Share appropriate descriptive details ▪ Speak clearly and at an understandable pace
4. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (3.SL.6)	▪ Speak in complete sentences ▪ Provide details or clarification
Comprehension Standards addressed in this unit: **(Reading for Literature/Information Skills)**	***The students will know and be able to do:***
▪ Understand classroom rituals and routines of Reading Workshop.	▪ Rituals and Routines of Reading Workshop ▪ Coming to the carpet including where and how to sit ▪ Turn and Talk expectations ▪ Mini lesson expectations including when to ask questions ▪ Independent reading expectations ▪ Just right books ▪ How many books to move levels ▪ Keeping your student book log ▪ Status of the class responsibilities ▪ Abandoning a book ▪ What to do if you finish a book during class?

	▪ Accelerated reader expectations ▪ Move up levels ▪ Work with a small group (including what to do when you need help)
▪ Student understanding of strengths and needs as an individual learner.	▪ Be a reflective reader ▪ Understand various areas of reading ▪ Monitor volume and variety of reading
▪ Read closely to ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3.RL.10)	▪ Practice 7 keys to comprehension o Create mental images o Use background knowledge o Ask questions o Make inferences o Determine the most important themes/ideas o Synthesize o Use fix-up strategies ▪ Re-read for understanding ▪ Share stories with peers and adults ▪ Utilize many strategies to read complex texts ▪ Work effectively with partners
▪ Recount stories, including fables, folktales, and myths fro diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text. (3.RL.2)	▪ write stories to share ideas ▪ Retell stories including important information ▪ Synthesize and retell stories ▪ Retell and discuss stories with partners ▪ Use important information to determine message
▪ Know and understand how authors make stories humorous.	▪ How and why authors use humor ▪ Hyperbole as an example of the literary device – humor
Standards addressed by this unit: (Foundation standards)	***The students will know and be able to do:***
1. Know and apply grade-level phonics and word analysis skills in decoding words. (3.RFS.3)	1. Decode multisyllable words
2. Read with sufficient accuracy and fluency to support comprehension. (3.RFS.4)	2. Read grade-level text with purpose and understanding

Significant Tasks
Significant Task 1 – Rituals and Routines *Big Idea: Readers read, discuss, and share ideas and texts* *Essential Question: What is a reading community?* Teacher models and practices with students the rituals and routines of Reader's Workshop. Utilize this time to get to know students as individual readers. Establish goals based on running records and other data available. Administer reading interest inventories. Work closely with students to determine what independence during workshop looks like. As a review of previously learned comprehension strategies, now is a good time to use mini lesson instruction and teacher conferences to reinforce student use of basic comprehension strategies. Model during read aloud instructional time how readers use these strategies to better understand the story's meaning.

Timeline: 10-15 days
Vocabulary: ritual, routine, interest, goals
Resources: Rituals and Routines handbook resource, running record, inventories

Significant Task 2 – Retell stories (3-5 days)
Big Idea: Readers read, discuss, and share their ideas and texts
Essential Question: What is a reading community?

Use mini lesson instruction to develop understanding about why readers retell stories and how it helps understand the author's central message. Use the read aloud to model how readers retell stories both sequentially and for meaning. Through guided discussion discuss the meaning the author is creating through key details. Record key details from the story and model for students how readers analyze these details. Practice retelling stories orally but also create a written model. Teachers may choose to videotape their retelling and download to a computer for students to watch as a model. Students practice retelling their independent reading texts to partners both orally and in writing. Partners can write letters to each other and the teacher about their book as one written example.

Timeline: 3-5 days
Vocabulary: central message, sequence, key details, retell
Resources: mentor texts, ability to record retelling, computers

Common Learning Experiences

- Rituals and routines of Reader's Workshop
- Goal setting
- Comprehension strategies review
- Determining the story's meaning
- Using retelling to understand author's meaning
- Oral versus written retellings
- Writing letters about your reading

Common Assessments

1. Retelling your summer reading
2. Oral retell to your partner
3. Letter about your book

Grade: Unit 2 - 3rd Reading Author Study (PP) **Time: October/November (6 weeks)**	**Genre: Literature** **Theme: Author Study**
Big Ideas	**Essential Questions**
▪ Authors give their perspective about the world through their life experiences. ▪ Authors of multiple books write about similar themes. ▪ The outcome of events often help us understand the message, moral or lesson in a story. ▪ Everyone's point of view can be different. ▪ Readers make comparisons to draw conclusions	▪ How do writers share their ideas about the world? ▪ How do we use events to determine the message, moral or lesson of a story? ▪ Why do we see things differently? ▪ How do we discuss ideas in multiple texts?

Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will *know* and be able to *do*:**
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. (3.SL.1)	▪ Come to discussions prepared, having read or studied required material; ▪ Explicitly draw on preparation and other information known about the topic to explore ideas under discussion. ▪ Follow agree-upon rules for discussion; ▪ Ask questions to check understanding of information presented. ▪ Stay on topic and link comments to others. ▪ Explain your own understanding in light of discussion.
2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. (3.SL.2)	▪ The goal of all communication is to make a point ▪ Listeners are looking for those points in all media and formats
3. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant descriptive details, speaking clearly at an understandable pace. (3.SL.4)	▪ Report on an author ▪ Give appropriate facts and relevant, descriptive details. ▪ Speak clearly ▪ Speak at an appropriate and understandable pace

Comprehension Standards addressed in this unit: **(Reading for Literature/Writing)**	**The students will *know* and be able to *do*:**
1. Recount stories including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text. (3.RL.2)	▪ Authors use stories to convey a message, lesson or moral. ▪ Authors of multiple texts often write about similar ideas. ▪ Readers compare the messages, morals and lessons of multiple texts. ▪ Identify important plot events vs. less important plot events ▪ Identify and analyze cause and effect of important plot events. ▪ Analyze and discuss how the cause and effect of plot events support an identified message, lesson or moral. ▪ Independently identify messages, lessons, or morals represented in a text through analysis of cause and

	effect of plot events.
2. Distinguish their own point of view from that of the narrator or those of the characters. (3.RL.6)	▪ Point of view shapes understanding of message, lesson or moral ▪ Point of view can be different ▪ Identify various points of views in texts about important plot events ▪ Distinguish between various characters' point of view and narrator of plot events (1st vs. 3rd person) ▪ Establish personal point of view regarding cause and effect of plot events
3. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters. (3.RL.9)	3. Making comparisons enhances understanding 4. Making comparisons is one way readers discuss ideas in texts 5. Analyze and discuss orally comparing using ABAB and AABB format about the cause and effect of plot events. 6. Use key details to support conclusions and opinions.
4. Write opinion pieces on topics or texts, supporting a point of view with reasons. (3.W.1)	▪ Readers have opinions about the events that occur in their stories. ▪ Introduce two texts they are writing about. ▪ Use ABAB or AABB structure to compare at least two different elements of these texts. ▪ Provide reasons that support the opinion. ▪ Use linking words and phrases. ▪ Provide a concluding statement or action.
5. Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3.W.2)	▪ Introduce a topic and group related information together. ▪ Develop the topic with facts, definitions, and details. ▪ Use linking words and phrases. ▪ Provide a concluding statement or section.
Reading Foundation Standards addressed in this unit: (Print Concepts, Phonological Awareness, Phonics, Fluency, Vocabulary)	
3. Know and apply grade-level phonics and word analysis skills in decoding words. (3.RFS.3)	▪ Read grade-appropriate irregularly spelled words.
4. Read with sufficient accuracy and fluency to support comprehension. (3.RFS.4)	▪ Use context to confirm or self-correct word recognition and understanding, rereading as necessary.
Significant Tasks	
Significant Task 1- Understanding the Author's Role *Big Idea - Authors give their perspective about the world through their life experiences.* *Essential Question: How do writers share their ideas about the world?* The teacher introduces four novels selected for the study through sharing brief summaries about each novel including the author's message. Through direct instruction the teacher provides information about author's message as a literary concept and how good readers examine novels for the message.	

Through the use of three to five video clips of Patricia Polacco speaking about herself and her writing career, the teacher makes connections to the big idea of how authors use the stories of their lives to share messages, morals, or lessons they've learned. Through whole class discussion and turn and talk opportunities, students orally explore why this is important to know as a reader.

After watching clips and based on any other previously learned information, students identify at least two examples from Patricia Polacco's life, not previously mentioned, that they believe influenced the message from any of the four novels. Discuss the quality of student examples and the justification to support their thinking. Students should record predictions in reader's notebook and teacher can record class predictions. Using "just right" texts, students may begin to make inferences and draw conclusions about the author's life and message. Students engage in discussions with peers and adults about their ideas from the texts that they are reading providing key details from text and knowledge about the author to support conclusions. Students submit an inference journal entry for teacher review of thinking. To formally assess student learning, students complete a journal entry that explores the questions: How do writers share the stories of their lives? How can you use this information as a reader? How can you use this as a writer?

Timeline: 5-7 days
Vocabulary: penultimate, rural, atrium, author's message, morals, lessons, isolation, brave
Resources: Patricia Polacco novels, summaries and author's message resource

Significant Task #2 - Information about the Author
Big Idea: Authors give their perspective about the world through their life experiences.
Essential Question: How do authors share their ideas about the world?

Through guided practice, teachers spend several days reading the biographical article on Patricia Polacco focusing on the main idea and supporting details. Students learn to notice the text's organizational structures (i.e. cause and effect, comparison, description, etc.). This structure does not need to be read sequentially - features of nonfiction text. Make explicit connections and hypothesize about how these main ideas and key details will influence what the writers write about while reading closely and modeling the thinking of good readers.

Through direct instruction discuss the difference between important versus interesting information. Using the Patricia Polacco biography, create a class T-chart that identifies important versus interesting information about the author. Through guided practice create a class definition of the difference between important information an author may include from their life in a story versus information the reader may find interesting. *This skill of interesting versus important often requires students infer and draw conclusions about authors based on many facts. Important information impacts the story. Interesting information may engage the reader. Model this skill explicitly and inform students of how these inferences and conclusions are drawn from key details. Through guided practice students connect important information learned from article, with the Patricia Polacco novels being read for the author study. Many students will begin to draw conclusions that involve inferences. Ensure students can provide key details to support these conclusions. During independent practice students practice using a graphic organizer, similar to the class T-chart, to record interesting versus important information about an author they are studying.

Timeline: 5-7 days
Vocabulary: text structure, main idea, important, interesting
Resources: Video interviews of many authors can be found at http://www.readingrockets.org/books/interviews/

Significant Task #3 - The Author's Message
Big Idea: The outcome of important events help readers determine the central message, moral or lesson.
Essential Question: How do we use important events to determine the message or moral of the story?

Teachers introduce the novel, Thank You Mr. Falker. Re-read summary information about story including the author's message and class information collected from the author's life that may or may not be reflected in this story based on prior class research. Provide direct instruction in the concept that authors use stories to share messages, morals, or lessons. Utilize the Tortoise and the Hare (or other simple story) as an example of a story with a moral. Remind students that the moral of this story is, "slow and steady wins the race." Read the Tortoise and the Hare and list important events that help convey/reveal the moral. (some teachers have found having these events listed in advance is helpful) Use these events as a model to explain how the events in a story help us determine the author's message.

Read aloud (over several days) Thank You Mr. Falker. Remind students the message in this story is about how teachers are heroes to students. Through guided practice identify the important events that help convey the message. Remind students that authors use the events in the story to share their message with the reader. Provide explicit instruction in distinguishing between important events and interesting details as you read aloud continuing to point to the text's central message/lesson, etc.

Provide direct instruction in the concept that important events impact/change the character (positively and negatively) and move the plot forward while interesting details help paint a picture for the reader to help understand the important events. Students practice independently and with partners identifying important versus interesting events in their reader's notebook. Continue with instruction that even among the important events some are even more important. Use previous examples of events from *The Tortoise and the Hare* to serve as a mentor/example.

Reintroduce students to the text structure cause and effect. The greater the effect of the event, it's likely to be more important than other events. Continue to read various Patricia Polacco stories as a whole class, evaluating the important events as they help convey the author's message. Continue to look at the text structure of cause and effect as one way to evaluate importance. Independent practice for students can consist of a variety of opportunities begin to analyze author's message with text at their level by identifying important events, justifying them with evidence from the text and analyzing how they share the author's message. For assessment purpose, independently or in student partnerships complete a cause and effect graphic organizer based on one of the stories studies in the author's study. Students individually complete a graphic organizer that reflects the 3-6 most important events in a story that they are reading independently and how these events convey the author's message. Students write an opinion paragraph justifying their graphic organizer decisions.

Timeline: 10-15 days
Vocabulary: author's message, lesson, moral, convey, cause and effect, evaluating
Resources: important versus interesting events, Thank You Mr. Falker, Tortoise and the Hare

Significant Task #4 - Making Comparisons & Drawing Conclusions (3-5 days)
Big Idea: Readers make comparisons and draw conclusions
Essential Question: How do readers discuss the ideas in texts?

After reading multiple texts by Patricia Polacco the teacher makes comparisons and draws conclusions about the themes, settings, characters and plots of stories through direct instruction. Conclusions are always supported and justified with key ideas and details from the text. The class engages orally in these conclusions and justification before moving to paper/pencil activity. Through guided practice, students through both orally and in writing, work with the teacher and/or partners to make comparisons and draw conclusions about key story elements in the Patricia Polacco novels that they justify with evidence from the text. This can be done collaboratively with partners and adults and recorded in reader's notebook. Independently students practice making comparisons and drawing conclusions about texts either read independently or in small groups or read aloud as a whole class. Students can demonstrate proficiency either orally and/or in writing at the teacher's discretion.

Timeline: 3-5 days
Vocabulary: comparisons, conclusions, themes, plot, characters

Resources: Patricia Polacco novels, reader's notebooks

Instructional Resources

- Patricia Polacco video clip www.readingrockets.com
- Novel summaries
- Author video clips www.youtube.com
- Cause and Effect Graphic Organizer
- Plot Event Analysis graphic organizer
- Which One is Better Rubric/Description
- Author Study Assessment Description/Rubric

Common Learning Experiences

- Author's message
- The author's influences
- Making inferences
- Reading closely for main ideas
- Important versus interesting
- Drawing conclusions
- Messages, morals, and lessons
- Identifying the events that convey the message
- The most important events
- Utilizing text structure to determine important events
- Comparing novels by the same author
- Examining the themes
- Orally defending the themes in texts
- Justifying with evidence from the texts

Common Assessments

1. Journal Entry – The author's life
2. Opinion Paragraph
3. Students complete a comparison graphic organizer and draw two conclusions based on the chart. This does not have to be a Venn diagram. Students write two paragraphs that explain how they came to those conclusions.
4. Author Study – Students present author study comparison presentations to class/community on selected author of their choice. (see attached assessment description)
5. Independent Reading Opinion Piece – after reading a second book by the same author, students will write an opinion piece about which text, in their opinion, is better. (see assessment description and rubric attached)

Teacher Notes:

Grade: 3 Reading Unit 3 *Rocks and Minerals; Conservation* **Time: 15-20 days**	**Genre: Nonfiction Science Rocks and Minerals**
Big Ideas	**Essential Questions**
Readers do research to learn. Readers represent research in writing or other assessments.	Why do readers research topics? How do readers represent information?

Standards addressed in this unit: (Speaking & Listening/Language)	**The students will know and be able to do:**
1. Engage effectively in a range of collaborative discussions with diverse partners on grade 3 topics and texts building on others' ideas and expressing their own clearly. (3.SL.1)	1. Ask and answer questions about rocks and minerals in groups of three for discussion. 2. Answers come from observations and experiments 3. Refer to texts, diverse media, observations, and experiments to discuss explicit examples
2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. (3.SL.2)	1. Determine the main idea 2. Use key details to support conclusions 3. Informational texts have main ideas supported with key details (boxes and bullets)
Comprehension Standards addressed in this unit: (Reading for Literature/Information Skills)	**The students will know and be able to do:**
1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3.RIT.1)	1. Ask and answer questions about nonfiction texts 2. Answers come from the text 3. Answers come from observations and experiments 4. Refer to texts, diverse media, observations, and experiments for explicit examples
2. Determine the main idea of a text; recount the key details and explain how they support the main idea. (3.RIT.2)	1. Determine the main idea 2. Use key details to support conclusions 3. Informational texts have main ideas supported with key details *4.* Use *boxes and bullets* while watching videos on rocks and minerals or reading texts.
3. Use information gained from illustrations and the words in a text to demonstrate understanding of the text. (3.RIT.7)	1. Use information from illustrations and words 2. Illustrations share important information
Science Standard	

3.3. A. Rocks and minerals have properties that may be identified through observation and testing; these properties determine how earth material are used.	1. Earth is mainly made of rock. Rocks on the earth's surface are constantly being broken down into smaller and smaller pieces, from mountains to boulders, stones, pebbles and small particles that make up soil. 2. Rocks can be sorted based on properties, such as shape, size, color, weight or texture. 3. Properties of rocks can be used to identify the conditions under which they were formed. 4. Igneous rocks are formed when melted rock cools, hardens and forms crystals. Melted rock that cools slowly inside a volcano forms large crystals as it cools. Melted rock that cools rapidly on the earth's surface forms small crystals (or none at all). 5. Sedimentary rocks are formed underwater when small particles of sand, mud, silt or ancient shells/skeletons settle to the bottom in layers that are buried and cemented together over a long a period of time. They often have visible layers or fossils. 6. Metamorphic rocks are formed when igneous or sedimentary rocks are heated and cooled or pressed into new forms. They often have bands, streaks or clumps of materials. 7. Rock properties make them useful for different purposes. Rocks that can be cut into regular shapes are useful for buildings and statues; rocks that crumble easily are useful for making mixtures such as concrete and sheetrock. 8. All rocks are made of materials called minerals that have properties that may be identified by testing. Mineral properties include color, odor, streak, luster, hardness and magnetism. 9. Minerals are used in many ways, depending on their properties. For example, gold is a mineral that is easily shaped to make jewelry; talc is a mineral that breaks into tiny grains useful for making powders.

Significant Tasks

Significant Task 1

Big Idea: Readers observe and record to learn all about rocks and minerals.
Essential Question: How do I learn all I can about rocks and minerals?

Students use magnifiers to observe and then record findings to learn the properties of minerals and rocks. Readers learn
the properties of the three types of rocks: sedimentary, igneous and metamorphic. Students should be able to differentiate between rocks and minerals. Students do this using the senses and simple measuring tools to gather data about various rocks and classify them based on observable properties (e.g., shape, size, color, weight, visible markings). Readers identify important ideas in text. Readers demonstrate learning new content from text. Readers notice how text is organized to determine the main idea. Readers determine the importance of ideas by examining how well they support the text's main idea.

Timeline: 5 days
Vocabulary: minerals, sedimentary, igneous, metamorphic, property,
Resources: Rocks and Minerals Science kit, books/magazines/articles on Rocks and Minerals, web sites listed below

Significant Task 2

Big Idea: Readers do research to learn all they can about a topic.
Essential Question: How do I learn all I can about rocks and minerals?

Students learn properties of minerals. Students conduct simple tests to determine properties of different minerals (e.g. color, odor, streak, luster, hardness, magnetism), organize data in a table, and use the data and other resources to identify unknown mineral specimens. Readers notice facts and opinions to determine the importance of ideas in texts. Readers notice the use of graphics, diagrams, and pictures and how they relate to the text's purpose.

Timeline 5 days
Vocabulary: classify, texture, fossil, crystal, magnetism
Resources: Rocks and Minerals Science kit, books/ magazines/articles on Rocks and Minerals

Significant Task 3

Big Idea: Readers compare and contrast to learn similarities and differences.
Essential Question: How do I write down and remember facts about the formation of igneous, metamorphic and sedimentary rocks?

Students summarize nonfiction text to compare and contrast the conditions under which igneous, metamorphic and sedimentary rocks are formed. Readers determine main idea of text and extend ideas by applying to various contexts. Readers determine importance of ideas by inferring cause and effect. Readers utilize facts to support ideas. Readers compare and contrast ideas and draw conclusions.

Timeline 5 days
Vocabulary: analyze, evaluate
Resources: Rocks and Minerals Science kit, various books on Rocks and Minerals

Significant Task 4

Big Idea: Rock properties make them useful for different purposes.
Essential Question: How can I tell how certain rocks were formed? What can each type of rock be used for?

Students observe and analyze rock properties (e.g., crystal size or layers) to infer the conditions under which the rock was formed. Students evaluate the usefulness of different rock types for specific applications (e.g., buildings, sidewalks, stone walls, statues or monuments). Readers determine importance of ideas by inferring cause and effect.

Timeline: 5 days
Vocabulary: observe, analyze,
Resources: Rocks and Minerals Science kit, books/magazines/articles

Common Learning Experiences:
***See science binder**

Common Assessments:

1. Rocks and Minerals Assessment

Teacher Notes:

Resources
Nonfiction SEM-R Book Marks
Cause and effect Metamorphic Rock
Types of Igneous Rocks graphic
What would the world be like? Rocks and Minerals Activity
Science Kit Rocks and Minerals

Websites and Web-tools: *Use boxes and bullets when viewing.*
http://www.rocksforkids.com
http://www.wesleyan.edu/ctgeology/LISproject/commecticut rocks.htm
http://www.brainpop.com/science/earthsystem/rockcycle/preview.weml
http://www.brainpop.com/science/earthsystem/mineralidentification/preview.weml
http://www.brainpop.com/science/earthsystem/erosion/preview.weml
http://www.rockhoundkids.com/rh-g-022.html
http://www.ehow.com/list 6743096 rock-mineral-games-kids.html
http://www.minsocam.org/MSA/K12/K_12.html
http://www.bbc/co.uk/schools/ks2bitesize/maths/

Grade: Unit 4 3rd – Informational//Explnatory **Time: 4 weeks**	**Genre: Informational/Expository Texts** **Theme: Biography Book Clubs**
Big Ideas	**Essential Questions**
▪ Readers read about people who have done great things ▪ Readers use what they know to learn new things	▪ Why do readers read biographies? ▪ How do readers use what they know?
Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will know and be able to do:**
▪ Engage effectively in a range of collaborative discussions with diverse partners on grade 3 topics and text, building on others' ideas and expressing their own clearly. (3.SL.1)	▪ Come to discussions prepared, having read or studies required material; explicitly draw on that preparation and other information know about the topic to explore ideas under discussion. ▪ Follow agreed-upon rules for discussions. ▪ Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others, ▪ Explain their on ideas and understanding in light of the discussion.
▪ Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and format, including visually, quantitatively, and orally. (3.SL.2)	▪ Determine main ideas and supporting details from texts read aloud or information presented in diverse formats
▪ Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (3.SL.6)	▪ Adapt speech to a variety of contexts
Comprehension Standards addressed in this unit: **(Reading Informational Skills)**	***The students will know and be able to do:***
▪ Compare and contrast the themes, setting, and plots of stories written by the same author about the same or similar characters/characteristics. (3.RL.9) ▪ Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3.RIT.1)	▪ There are connections between most texts ▪ Characteristics of biographies ▪ The subject of the biography is the main character ▪ Transfer knowledge of fictional text to help learn about biographies ▪ History is learned through reading biographies ▪ The setting in fiction is like the time, place, and location in biographies ▪ Text structure of biographies focus on sequence of cause and effect of events ▪ Utilize characteristics of biography to draw conclusions and ask and answer questions about the subject of the biography ▪ Use knowledge of characters to evaluate and analyze the subject of the biography ▪ Compare setting to time, place, and location in biography ▪ Analyze how time, place, and location impact the subject of the biography ▪ Make connections between events and ideas in biography

	▪ Identify the cause and effect of events in the life of the biography's subject
▪ Determine the main idea of a text; recount the key details and explain how they support the main idea. (3.RIT.2) ▪ Use information gained from illustration and the words in a text to demonstrate understanding of the text. (3.RIT.7)	▪ Biographies are about people who make a difference in the world ▪ Authors use vocabulary purposefully ▪ Biographies teach us life lessons ▪ Determine the central message or theme of the biography ▪ Use key details and specific instances to support the central message or themes ▪ Examine and use key vocabulary ▪ Evaluate lessons and ideas
▪ Describe the logical connection between particular sentences and paragraphs in a text. (3.RIT.8)	▪ Biographies tell stories of achievement or overcoming disaster/deplorable human plight ▪ Evaluate and analyze the achievement of subject
Standards addressed by this unit: (Foundation standards)	***The students will know and be able to do:***
▪ Know and apply grade-level phonics and word analysis skills in decoding words. (3.RFS.3)	▪ Read grade-appropriate irregularly spelled words.
▪ Read with sufficient accuracy and fluency to support comprehension. (3.RFS.4)	▪ Use context to confirm or self-correct word recognition and understanding, rereading as necessary.
Significant Tasks	

Significant Task 1 – Transfer Knowledge
Big Idea: Readers transfer what they know from one circumstance to another
Essential Question: How do readers use what they know in new scenarios?

Through mini lesson instruction create a class criteria chart for the qualities of a good book club. Using the Fishbowl strategy, model these qualities with students. Based on those learning experiences and other previous learning, the students and teacher determine the structure and function of their classroom book clubs. Students and teacher should develop at least 3-4 options. For example, same subject different texts, same subject, same text, different subjects, etc. Once clubs are formed, students should select a name and determine the specific structure and function of their book club. Students sign a compact agreeing to the expectations put forth by the group.

Through mini lesson instruction build whole class knowledge about how learners transfer skills and knowledge from one learning experience to another. Initiate this learning by building a list of shared reading fictional texts. Teachers refer to the character, settings, and plot events regularly so this list is kept hanging and available for use. Use current biography read aloud to model making comparisons between the characters in fictional texts read in shared reading experiences to the subjects of various biographies being read aloud and independently with clubs. After drawing several conclusions and comparisons about characters and discussing them with their whole class and book club, continue to make comparisons between the setting in a fictional text and time, place, location in biographies. Follow the format of whole class followed by book club discussion. Build student understanding about the plot structure for fictional texts and biographies are usually told through a sequence of cause and effect events. Through guided practice students participate in comparing the elements of fictional texts to biographies. In student book clubs students discus comparisons between fictional texts read independently and biography book club selection. Student book clubs write the 3 most important things the club has learned from reading and discussion

Timeline: 8 days
Vocabulary: biography, structure, function, transfer, compare, transfer,
Resources: biography book club configurations, Fishbowl, plot structure resource

Significant Task 2 – What's the point?
Big Idea: Biographies are about people who have done great things
Essential Question: Why do we read biographies?

Through mini lesson instruction build and deepen student knowledge about biographies. Students learn that a biography is about someone who has made a difference in the world. Students hear read aloud several different portions of biographies and create a class chart of the achievements of the various subjects. Model through class conversations about subjects and their achievements. After identifying achievements students extend this learning by evaluating the achievement(s) of the subject and through guided practice and reflect in reader response journals. Students learn that authors of biographies want to teach readers about the world. In book club student practice identifying and evaluating the achievements of subjects in a biography.

Students learn through direct instruction how the key details in the text help develop the reader's understanding of the author's point of view and how the subject has contributed to the world. Students build on this learning by looking specifically at how the author selects precise language to describe the achievements and conditions of the subject. Through guided practice students evaluate the precise language authors select to describe the various subjects of biographies to determine the author's point of view about the subject and his/her achievements. Students collaboratively create a class chart that highlights the vocabulary selected to describe the subjects being read about in class. Students draw conclusions, if any about the selected or highlighted vocabulary. Students complete reader response that explains how the author's point of view can be determined or examined through vocabulary.

During independent practice and book club time students analyze the author's point of view about their subject using precise examples and key details from the text. Students should be prepared to note specifically which vocabulary words or phrases illustrate the author's point of view and the subject's contributions to the world. Book clubs complete a collaborative reflection that examines the author's point of view compared to their own point of view about the subject. Student responses highlight the key details/vocabulary from the texts that support their analysis. Students complete self-reflection assessment of book club participation.

Timeline: 10 days
Vocabulary: achievement, evaluate, point of view, contribution, analysis
Resources: Book Club Self-Reflection Assessment,

Common Learning Experiences

- Qualities of Good Book Club
- Types of Book Clubs
- Naming Your Club
- Transfer Your Learning
- Biography versus Fictional Texts
- Quality Book Club Discussions
- Why Write Biographies
- Noticing Achievements
- Learning About the World Through Biographies
- Author's Point of View
- Examining the Details
- Looking Closely at Vocabulary

- Completing a Self-Assessment

Common Assessments

Assessment #1 – What is a Biography
Students complete a reader response answering specific questions about a biography read aloud by the teacher. Students are asked to identify the subject of the biography and his/her specific achievement(s). Students are also asked to compare the biography read aloud to another shared fictional texts. Students use specific examples to support responses.

Standards Addressed:
- Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3.RIT.1)
- Determine the main idea of a text; recount the key details and explain how they support the main idea. (3.RIT.2)
- Compare and contrast the themes, setting, and plots of stories written by the same author about the same or similar characters/characteristics. (3.RL.9)

Assessment #2 – Are they important?
Students determine whether the person they are reading about in their book clubs are important or not. Students identify the achievement(s) of the subject and evaluate its' significant. Students defend their point of view with specific examples. Students compare their point of view to that of the author examining the specific language used the by the author. Student use key vocabulary learned throughout the unit and school year to defend or explain their position.

Standard Addressed:
- Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3.RIT.1)
- Determine the main idea of a text; recount the key details and explain how they support the main idea. (3.RIT.2)
- Compare and contrast the themes, setting, and plots of stories written by the same author about the same or similar characters/characteristics. (3.RL.9)

Teacher Notes:

`Grade: Unit 5 -3rd Informational Texts **Time: 3-4 weeks**	**Genre: Informational Texts** **Theme: Properties of Matter**
Big Ideas	**Essential Questions**
▪ Readers read informational text with a purpose ▪ Readers learn something from informational texts	▪ How do readers read informational texts? ▪ Why do readers read informational texts?
Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will know and be able to do:**
1. Engage effectively in a range of collaborative discussions with diverse partners on grade 3 topics and texts building on others' ideas and expressing their own clearly. (3.SL.1)	▪ Ask questions to check understanding of information presented ▪ Ask questions that stay on topic ▪ Link their comments to the remarks of others ▪ Explain their own ideas and understandings
2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. (3.SL.2)	▪ Listen carefully ▪ Record information from text read aloud, diverse media and format. Including visually, quantitatively, and orally
3. Report on a topic with appropriate facts and relevant facts and relevant, descriptive details, speaking clearly at an understandable pace. (3.SL.4)	▪ Give a report ▪ Use appropriate facts and relevant details ▪ Speak clearly ▪ Use appropriate pacing
Comprehension Standards addressed in this unit: **(Reading for Literature/Information Skills)**	***The students will know and be able to do:***
1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3.RIT.1)	▪ Know questions words (who, what, when, where, why, how) ▪ Ask and answer questions about texts ▪ Answers come from the text ▪ Refer to text for explicit examples
2. Determine the main idea of a text; recount the key details and explain how they support the main idea. (3.RIT.2)	▪ Determine the main idea ▪ Use key details to support conclusions ▪ Informational texts have main ideas supported with key details
3. Use information gained from illustrations and the words in a text to demonstrate understanding of the text. (3.RIT.7)	▪ Use information from illustrations and words ▪ Illustrations share important information
Science Standards addressed in this unit:	***The students will know and be able to do:***
1. Heating and cooling cause changes in some of the properties of materials. (3.1)	1. Materials have properties that are directly observable; examples include its state of matter, or its size, shape, color or texture. Other properties can only be observed by doing something to the material (simple tests). Materials can be sorted and classified based on their testable properties. 2. Some materials dissolve (disappear) when mixed in water; others accumulate on the top or the bottom of the container. The

	temperature of water can affect whether, and at what rate, materials dissolve in it. 3. Some materials, such as sponges, papers and fabrics, absorb water better than others. 4. Some materials float when placed in water (or other liquids such as cooking oil or maple syrup); others sink to the bottom of the container. 5. Some materials conduct heat better than others. Materials that are poor heat conductors are useful for keeping things cold or hot. 6. Some materials are attracted to magnets. Magnetic materials contain iron. 7. The physical properties of a material can be changed, but the material remains the same. For example, a block of wood can be cut, sanded or painted, but it is still wood. 8. Heating and cooling cause materials to change from one state of matter to another and back again. Adding heat can cause solids to melt into liquids (for example, chocolate, ice cream, butter or wax); removing heat (cooling) can cause liquids to harden into solids (for example, hot candle wax hardens as it cools). 9. Adding heat can cause water to boil and evaporate into a gas in the air (for example, steam rises from heated water); removing heat (cooling) can cause water vapor to condense into liquid water (for example, warm steam hitting a cold mirror). Water outdoors or in an open container evaporates without boiling (for example, puddles, ponds, fish tanks, etc.) 10. Water may exist as a solid, liquid or gas, depending on its temperature. If water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing. 11. Liquid water becomes solid water (ice) when its temperature cools to 0 degrees Celsius (32 degrees Fahrenheit). Warming ice to a temperature above 0 degrees Celsius causes it to melt into liquid water. 12. Compare and contrast the properties of solids, liquids and gases. 13. Demonstrate that solids, liquids and gases are all forms of matter that take up space and have weight. 14. Carry out simple tests to determine if materials dissolve, sink or float in water,

	conduct heat or attract to magnets. 15. Classify materials based on their observable properties, including state of matter. 16. Design and conduct fair tests to investigate the absorbency of different materials, write conclusions based on evidence, and analyze why similar investigations might produce different results. 17. Explain the role of heating and cooling in changing matter from one state to another during freezing, melting, evaporation and condensation.
Standards addressed by this unit: (Foundation standards)	***The students will know and be able to do:***
1. Know and apply grade level phonics and word analysis skills in decoding words. (3.RFS.3)	▪ Identify and know the meaning of the most common prefixes and derivational suffixes.
2. Read with sufficient accuracy and fluency to support comprehension. (3.RFS.4)	▪ Read and demonstrate understanding of grade level texts (see district benchmarks)

Significant Tasks

Significant Task 1- Introduce the properties of matter
Big Idea: Readers read information with a purpose
Essential Question: How does the structure of matter affect the properties and uses of materials?

In pairs students will read nonfiction texts about solids, liquids, and gases. Students complete a graphic organizer for main ideas and key details to define the three types of matter. Students are given several different types of objects to determine if they dissolve, sink, float, conduct or attract magnets. Students sort and classify based on their common properties and orally defend choices. Students watch a discovery education video or Brain Pop about the role of heating, cooling and changing matter from one state to another. Students participate in a guided café conversation where they reflect about how the changing properties of matter are important to how we make daily decisions.

Timeline: 3-5 days
Vocabulary: properties, solids, liquids, gases, dissolve, sink, float, conduct, attract, magnets
Resources: science binder, guided café resource

Significant Task 2 - Soggy Paper (5-7 days)
Big Idea: Readers read information with a purpose
Essential Question: How does the structure of matter affect the properties and uses of materials?

****This is the 3rd grade embedded task.*** *(see instructional resource)*
The teacher leads students through a guided exploration to design and conduct experiments to explore the properties of different types of paper. Students make and record observations on graphic organizers. Students move on to investigate the absorbency of different paper. Students hypothesize about the impact of one property on absorbency of various types of paper. In pairs students investigate their theory through designing and conducting an experiment. Students record findings on table and input data into an excel spreadsheet to create a bar graph. `Students participate in various collaborative conversations about their

findings. Students also design and conduct an experiment to determine the brand of paper towels that are the best. Students write a letter to the paper towel companies to discuss their findings.

KEY CONCEPT WORDS: physical property, state of matter, solid, liquid, gas, dissolve, absorb, conduct, attract, melt, freeze, boil, evaporate, condense

Instructional Resources
Nonfiction SEM Bookmarks
http://www.neok12.com/States-ofMatter.htm; Students can take a quiz and view videos
http://www.onlineschools.org/resources/kidsmatter Scroll past the description for the states of matter and there will be a list of websites for students and another list for teachers.
http://www.superteacherworksheets.com/matter.html This page contains a collection of printable materials for teaching students about states of matter, solid, liquid, gas. Includes a cut-and-sort activity, higher level thinking questions, and more.
District Website:
http://www.bbc.co.uk/schools/ks2bitesize/science/materials/
http://www.chem4kids.com/files/matter_intro.html
http://www.schools.utah.gov/CURR/SCIENCE/core/7thgrd/sciber7/matter/html/STATES.HTM

`Grade: 3rd – Unit 6 – Social Issues **Time: 6-8 weeks**	**Genre: Realistic Fiction** **Theme: Social Issues Book Clubs**
Big Ideas	**Essential Questions**
▪ Readers determine social issues. ▪ Readers determine social issues going on in their own lives. ▪ Reading inspires us to take action and affect change. ▪ Engaging in conversation helps people deal with	▪ How do readers locate social issues in the lives of book characters? ▪ How do readers locate social issues in their own lives? ▪ How do I affect change in my life and in the lives of others?

and create solutions for social issues.	▪ How does engagement in conversation help people deal with social issues?
Standards addressed in this unit: (Reading: Literature)	**The students will know and be able to do:**
4. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3.RL.1)	▪ ask questions to check understanding of information presented ▪ answer questions and use text evidence for support ▪ link their comments to the remarks of others ▪ explain their own ideas and understandings
5. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events. (3.RL.3)	▪ locate information about characters ▪ explain information about characters to others ▪ use information about characters and themselves to determine a social issue
6. Compare and contrast the themes, setting, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series) (3.RL.9)	▪ use their knowledge of social issues along with their voice to affect change in others and in themselves ▪ reading teaches us how to deal with and solve social issues ▪ understand that there are many social issues in our homes, schools and communities
Standards addressed in this unit: (Speaking and Listening)	**The students will know and be able to do*:***
4. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. (3.SL.1) 5. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. (3.SL.1a) 6. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). (3.SL.1b) 7. Ask questions to check understanding of	▪ prepare for discussion ▪ look at and listen attentively to a speaker ▪ ask follow-up questions ▪ respond appropriately building on others' ideas ▪ speak clearly

information presented, stay on topic, and link their comments to the remarks of others. (3.SL.1c) 8. Explain their own ideas and understanding in light of the discussion. (3.SL.1d)	
Standards addressed by this unit: (Reading: Informational Text)	
1. Determine the main idea of a text; recount the key details and explain how they support the main idea. (3.RIT.2)	▪ determine the main idea ▪ use key details to support conclusions ▪ understand how nonfiction information contributes to our understanding of and creating solutions for social issues
Standards addressed by this unit: (Foundation standards)	**The students will know and be able to do:**
3. Know and apply grade level phonics and word analysis skills in decoding words. (3.RFS.3) 4. Read with sufficient accuracy and fluency to support comprehension. (3.RFS.4)	▪ identify and know the meaning of the most common prefixes and derivational suffixes. ▪ read and demonstrate understanding of grade level texts (see district benchmarks)

Significant Tasks

Significant Task 1
Big Idea: and ask, Readers determine social issues
Essential Question: What are social issues and what can we learn about them from the books we read?

In significant task 1, teachers will model their thinking behind creating a class chart for where in the world we find social issues: home, school and community. This class chart will be added to as the class encounters issues in their daily lives (read alouds, playground, lunch room, bus, home, community, etc) Students will make a similar chart in their readers notebook for reference. The teacher will then use the main character in a read aloud to study their actions, desires, problems, possible social issue and reactions and chart this information. Students will chart and study the same features for the characters in their books. Students will record big ideas they have about their characters/issues on an index card and use it as a bookmark moving forward. One example of a big idea is, "Amber's acting up because her parents' divorce is really bothering her." Finally, we can ask ourselves, "what is this book teaching us about this issue?" Teacher models through the read aloud how to complete an even bigger thought about the social issue on the back of the index card. This statement may sound like, "Divorce can have negative effects on kids' lives." Students will produce a social issues chart, a character chart and an index card with "big" thinking.

Timeline: 8-10 days
Vocabulary: social issues (poverty, homelessness, fitting-in, peer pressure, divorce) desires, reactions
Resources: Various read aloud texts, readers notebooks, 4-6 copies of various realistic fiction titles

Significant Task 2
Big Idea: Readers read nonfiction information about social issues to deepen their understanding of what a character may be facing.
Essential question: How does factual information help deepen our understanding of a social issue?

In significant task 2, teachers will model their thinking once again with the main character in a read aloud but this time by digging into nonfiction text on the social issue. Text sets on various social issues (divorce, friendship, loss, bullying, sibling rivalry, etc.) will allow teachers and students to learn factual information about how to deal with and create solutions for individual social issues. The teacher will create a chart with the following headings: Issue, Facts, Problems/Effects, Strategies. Students will create the same chart in their notebooks. Conversation in book clubs will center on how this new information affects the ways they understand the issues in their books.

Timeline: 8-10 days
Vocabulary: effects, strategies, content vocabulary associated with individual social issues
Resources: Grade level nonfiction text sets on various social issues for children: divorce, bullying, fitting in, sibling rivalry, etc.

Significant Task 3- Students become activists for a particular social issue
Big Idea: Students use their knowledge of social issues to effect change.
Essential Question: How can we affect change in others about a particular social issue ?

In significant task 3, students will first create a chart outlining the issue, problem(s) and what people can do differently to help. Secondly, students will create a public service announcement that identifies the social issue, whom it effects, and what is currently being done about it. Teachers can model this work by creating a class poster for some type of social action the class will take such as participating in a class or school-wide book donation, food donation, Alex's Lemonade Stand, etc. Students may also include how someone can become more involved.

Timeline: 8-10 days
Vocabulary: Content vocabulary associated with individual social issues
Resources: Grade level nonfiction text sets on various social issues for children: divorce, bullying, fitting in, sibling rivalry, etc.

Common Learning Experiences

- what is a social issue?
- Study the main character
- Big ideas about social issues
- What do we learn about social issues?
- Reading nonfiction about social issues
- Issue and problem
- The issue and who it effects – cause and effect

Common Assessments

1. Social Issues Chart
2. Issue, Facts, Problems/Effects, Strategies.
3. Cause and Effect Chart

Teacher Notes: Students in Windsor have a direct connection to Alex from the official Alex's lemonade stand. Her Mother grew up right here in town.

Grade: Unit 7 3rd grade reading – Plants and Animals **Time: 4 weeks**	**Genre: Informational Texts** **Theme: Plant and Animal Adaptations**
Big Ideas	**Essential Questions**
▪ Readers read informational texts with a purpose ▪ Readers learn something from informational texts	▪ How do readers read informational texts? ▪ Why do readers read informational texts? ▪ What processes are responsible for life's unity and diversity?
Standards addressed in this unit: **(Speaking & Listening/Language)**	**The students will know and be able to do:**
7. Engage effectively in a range of collaborative discussions with diverse partners on grade 3 topics and texts building on others' ideas and expressing their own clearly. (3.SL.1)	▪ Ask questions to check understanding of information presented ▪ Ask questions that stay on topic ▪ Link their comments to the remarks of others ▪ Explain their own ideas and understandings
8. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. (3.SL.2)	▪ Listen carefully ▪ Record information from text read aloud, diverse media and format. Including visually, quantitatively, and orally
9. Report on a topic with appropriate facts and relevant facts and relevant, descriptive details, speaking clearly at an understandable pace. (3.SL.4)	▪ Give a report ▪ Use appropriate facts and relevant details ▪ Speak clearly ▪ Use appropriate pacing
Comprehension Standards addressed in this unit: **(Reading for Literature/Information Skills)**	***The students will know and be able to do:***
9. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3.RIT.1)	5. Ask and answer questions about texts 6. Answers come from the text 7. Answers come from observations and experiments 8. Refer to texts, diverse media, observations, and experiments for explicit examples
10. Determine the main idea of a text; recount	5. Determine the main idea

the key details and explain how they support the main idea. (3.RIT.2)	6. Use key details to support conclusions 7. Informational texts have main ideas supported with key details
11. Use information gained from illustrations and the words in a text to demonstrate understanding of the text. (3.RIT.7)	3. Use information from illustrations and words 4. Illustrations share important information
Science Standards addressed in this unit:	***The students will know and be able to do:***
▪ Plants and animals have structures and behaviors that help them survive in different environments. (3.2)	▪ Plants and animals have physical and behavioral adaptations that allow them to survive in certain environments. ▪ Adaptations are passed from parents to offspring. ▪ Individuals that happen to be bigger, stronger or faster can have an advantage over others of the same kind for finding food and mates. ▪ Animals have behavioral and structural adaptations for getting food. ▪ Structural adaptations include things such as specialized teeth for tearing meat or grinding grasses; specialized beaks for cracking seeds, snatching insects, tearing meat or spearing fish; sharp claws for grasping; keen sense of smell, or long, sticky tongues for reaching food. ▪ Behavioral adaptations include actions such as following herds of prey animals, spinning webs or stalking. ▪ Animals have behavioral and structural adaptations for protection from predators. ▪ Some animals have camouflage that allows them to stay concealed by blending in with their surroundings; some animals look like other animals to avoid being eaten. Structural adaptations include things such as sharp quills, hard shells or antlers. Behavioral adaptations include actions such as staying absolutely still, producing a bad odor, appearing or sounding scary, or fleeing. ▪ Animals have behavioral and structural adaptations for surviving harsh environmental conditions. ▪ Animals that live in cold climates have insulating body coverings such as blubber, down or thick undercoats that keep them warm. ▪ Animals that live in hot climates keep cool by releasing heat from big ears or by panting, or by living underground. ▪ Some animals survive seasonal changes by

	slowing down body functions (hibernating in dens, tunnels or mud) or moving to more favorable conditions (migrating). ▪ Plants have adaptations for getting the sunlight they need to survive. Examples include growing or facing toward sunlight and sending out chutes or tendrils to get taller than neighboring plants. ▪ Plants have adaptations for protection from predators. Examples include spines, thorns and toxins (for example, poison ivy). ▪ Plants have adaptations for surviving in different environmental conditions. Examples include dropping leaves in winter when sunlight and water are limited, having needle-shaped leaves that shed snow, or surviving drought by storing water in thick stems ▪ Compare and contrast the external features and behaviors that enable different animals and plants (including those that are extinct) to get food, water and sunlight; find mates; and be protected in specific land and water habitats. ▪ Explain how behaviors such as hibernation, dormancy and migration give species advantages for surviving unfavorable environmental conditions. ▪ Give examples of ways animals benefit from camouflage. ▪ Evaluate whether an adaptation gives a plant or animal a survival advantage in a given environment. ▪ Design a model of an organism whose adaptations give it an advantage in a specific environment.
Standards addressed by this unit: (Foundation standards)	***The students will know and be able to do:***
5. Read with sufficient accuracy and fluency to support comprehension. (3.RFS.4)	▪ Read and demonstrate understanding of grade level texts (see district benchmarks)

Significant Tasks
Significant Task 1 – The Plant & Animal Study (4-6 weeks) Big Idea: ▪ Readers read informational texts with a purpose, ▪ Organisms can survive and reproduce only in environments that meet their basic needs. Essential Question: ▪ What processes are responsible for life's unity and diversity? ▪ Why do readers read informational texts?

Through a guided exploration of plants and animals and the structures that allow them to survive in different environments, students will write a research report and make a dramatic presentation. Students are assigned to various habitats in which they will become experts. Through Discovery Education, Brain Pop and other diverse media formats, students explore the various plants and animals that exist within their assigned habitats. Students share information studied with students in their habitat and within other habitats through collaborative conversations. Students make comparisons and evaluate various adaptations. Students engage in purposeful research that includes finding resources, taking notes, and writing notes into informative/explanatory paragraphs that demonstrate an understanding of the material read, heard, or viewed about structural and behavioral adaptations of plants and animals. Students write a short report on a chosen plant and animal from a specific habitat. A student 1st person presentation from the point of view of the animal, introduces the animal to a live audience.

KEY CONCEPT WORDS: adaptation, advantage, camouflage, hibernation, migration

Common Learning Experiences:
***See science binder**

Common Assessments:

Teacher Notes:

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4 Reading

Name of the Unit: Unit 1 Building a Reading Life	Length of the Unit: 5 weeks
Purpose of the Unit: This first unit in the fourth grade reading curriculum positions fourth grade students to regard their reading lives as something the students can work purposefully to improve. Therefore the purpose of this unit is to send a message that students already have skills, strategies and behaviors they come in with as readers and they will be asked to draw upon those strategies as they move forward in their continuum of reading. Instruction will help students continue their literacy community from last year around a shared love of books and will build towards text complexity. The final purpose of this unit is for students to begin to build cohesion and understanding around questioning and develop theories using posit-its or in the notebook around their text, building on last year's work.	

Common Core State Standards Addressed in the unit:

RL.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RL.4.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.

RL.4.4 Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).

RL.4.10 By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

RL.4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions)

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.

SL.4.1a Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

SL.4.1b Follow agreed-upon rules for discussions and carry out assigned roles.

SL.4.1c Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

SL.4.1d Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

SL.4.2 Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

SL.4.3 Identify the reasons and evidence a speaker provides to support particular points.

SL4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

RF.4.3 Know and apply grade-level phonics and word analysis skills in decoding words.

RF.4.3a Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

RF.4.4 Read with sufficient accuracy and fluency to support comprehension.

RF.4.4a Read grade-level text with purpose and understanding.

RF.4.4b Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.

RF.4.4c Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Big Ideas:	Essential Questions:
1. Readers have a repertoire of strategies that they apply to their daily reading based on the text in front of them. 2. Readers understand that discussing what they read with others will deepen their comprehension as well as provide them with others perspectives about life. 3. Readers use their repertoire of skills in other content areas.	1. Using what you already know about yourself as a reader, what are your goals as a reader? 2. How does having conversations around texts affect readers? 3. How can reading skills be transferred to other content areas? 4. How can you continue to make reading a big part of your life?
Students will know: 1. what supporting details and specific	Students will be able to: 1. refer to supporting details and specific

examples are 2. the elements of a summary 3. theme is the message in a story 4. the same theme can apply to many texts 5. strategies for determining meaning of unknown words	examples in text 2. summarize text 3. determine theme from details 4. determine the meaning of words and phrases 5. read and comprehend literature in the grades 4-5 text complexity band

Significant task 1: Making Reading Lives – Creating Reading Resolutions, Finding Just-Right Books, Reading Faster, Stronger, Longer, and Awakening Ourselves to Texts

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

In significant task 1, teachers and students work together to create an environment that fosters a love of reading and thinking. Students should be asked to think back on times when reading was the best it could be for them and when it was an unfulfilling reading experience and then reflect on what made each of those times one way or the other. Students will then create reading resolutions for themselves that draw on their experiences. Students will engage in whole class discussions that highlight the focus for the first month. Students answer questions such as, "What was it about that one reading time that made reading work for you?" and "How can we be sure that reading is just as magical in the year ahead?" It is essential that as part of this task, students feel a sense of ownership of their reading lives. Students will work to self-select just-right books with teacher guidance.

Students will begin to use reading tools. They will create a Reading Life Portfolio including a reading log, reader's notebook, and other materials. Students will receive specific instruction on ways to grow as readers and set personal goals. The class will also set class goals. Students will learn how to engage in reading, focusing on things like expression, tone, and using post-its to record their thinking. As they read closely, students will gather evidence from text on post-its which they will use to have conversations with partners.

By the end of this task, students should be taking control of their reading lives, thinking about their reading identities, tucking into books they love and reading these with passion.

As part of significant task 1, teachers should work with students to establish partnerships. Partner talk is important because it give students reasons to develop ideas, to gather text detail, to practice paraphrasing and summarizing. When choosing partners, students will learn that partners pay attention to each other's reading histories, reading interests, and reading hopes, as well as to the kind of intellectual work they do with texts. As students begin to work together in partnerships, they will set goals and choose the work they will do together. Partners may begin by talking about parts of the text that called their attention. Partners may also retell what has happened so far and what may happen next or they may summarize the story.

Product:
Individual reading goals set by students that will drive their purpose for reading. The teacher will encourage students to reflect on their goals.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.2, RL.4.3, RL.4.10, SL.4.1, SL.4.2, SL.4.3, RF.4.4

Timeline: 8 days

Key vocabulary: resolutions, independence, fluency, envision, synthesize, accountable to the text, summary, monitor, awareness, reading identity, partnerships

Resources:

- Independent reading books on the students' levels in book bags (should be used in Significant task 1 and everyday thereafter)
- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit One – Building a Reading Life
- Reading Life Portfolios including: reading log, reader's notebook, reading tools (should be used in Significant task 1 and everyday thereafter)

Significant task 2: Making Texts Matter – Holding Tight to Meaning, Building Relationships with Books, Creating a Buzz about Books, and Choosing Texts that Matter

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task 2 builds upon the work of selecting "just-right" books from task 1 and emphasizes the importance of close reading and holding onto the story. Students will apply the thinking about texts to increasingly complex texts as they weigh levels of meaning, structure, language conventionality and knowledge demands. Students build mental movies while reading which helps them to monitor for understanding, thus increasing comprehension.

Students will create their own personal toolkit of reading strategies, so that when they encounter difficulty, they have a range of ways to get their reading back on track. Students learn that sometimes readers keep reading, thinking, "What's going on here?" and sometimes readers need to go back and reread to see if they missed something. Readers may also slow down and look carefully at the details in the text. Students also learn strategies for determining the meaning of unknown words and phrases as they are used in a text.

In this task, students learn not only to read well, but also how to love reading. They learn that it is we who choose our relationship with a text, so they feel optimistic as they build a reading life. One way this is done is by teaching students to recommend books to each other. Students then use these recommendations as one strategy for stocking their book bags with books they want to read next.

Throughout this task, students should reflect and recall what they've been learning, and spend some time noticing how, why, and when they are transferring and applying their new, stronger skills.

Products:
Students write and share a book review to encourage others to read the book.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.2, RL.4.4, RL.4.10, SL.4.1, SL.4.2, SL.4.3

Timeline: 8 days

Key vocabulary: resolutions, independence, fluency, envision, synthesize, accountable to the text, summary, monitor, awareness, reading identity, close reading

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit One – Building a Reading Life

Significant task 3: Bringing Together Reading Lives, Texts that Matter and Partners

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task 3 continues the work of partnerships started in significant task 1. Students learn that they can foster relationships with one another over books, and that they can hold conversations that will comb through their reading lives. Students will share texts, to hold conversations with partners that mirror and extend the internal conversations we want students to have with themselves as they read.

Some of the work of partnerships in this task will focus on summarizing texts. Students will describe what parts feel important and why. Students may also share how they felt and what they thought about events in the text.

Additional work in partnerships will focus on retelling. When emphasizing retelling, remember that this level of comprehension is necessary and significant, yet absolutely not sufficient on its own for success in reading. Students must be moved from a literal moment by moment retelling, to something more analytical. Therefore depending on students' experience and expertise the teacher may choose which types of retellings to work on with students. The teacher should differentiate the type of retelling work depending on students' needs. Retellings may include character-based retellings, synthesized retellings, and retellings with parenthetical comments.

Students will learn the behaviors necessary for effective partnerships. For example, students will learn to be still when someone is speaking, to allow time for partners to share all thoughts, to not their heads to show they understand, and to ask questions when they are confused.

Finally, the class will celebrate the rich work they did across the month. Students will think back on the unit, recalling memories they want to hold onto forever. To do this, students will look back through logs and post-its and think back on the read-aloud, their conversations with partners and their independent

reading books. Then they can talk with a partner, discussing how they have changed and what they want to remember as they continue to read. Next, students will think about the big discoveries they made about themselves as they read during this unit. After a few minutes of discussion, children can write down what they want to hold onto, recording their memories and their hopes on paper so they are not fleeting. A few children will share what they wrote with the class to end the celebration.

Products:
Students will write a written response to the following questions: 1. How does having conversations around texts affect readers? 2. Describe what an effective partnership looks and sounds like.

Students will complete written summaries in their reader's notebooks.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.2, RL.4.10, SL.4.4, RF.4.3, RF.4.4

Timeline: 4 days

Key vocabulary: resolutions, independence, fluency, envision, synthesize, accountable to the text, summary, monitor, awareness, reading identity, retell

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit One – Building a Reading Life

Common learning experiences:

- Suggested text for close reading: *Jack Adrift: Fourth Grade Without A Clue* by Jack Gantos
- Suggested poems: "Twas the Night Before School Starts" by Ron Yorgason, "Sick" by Shel Silverstein, "Rain" by Douglas Alan Stromback
- Read-alouds used in this unit should be similar in complexity to *Stone Fox* or *Fourth Grade Rats*.
- When possible, use tall tales and legends as read-alouds or mentor texts

Common assessments including the end of unit summative assessment:

- At minimum, a Teachers College Reading and Writing Project running record (TCRR) on each student's independent reading level should be completed in September and at least one additional time each term. Additional TCRRs can be done at any time.
- Anecdotal notes on reading behaviors, talk and writing
- Reading conferences following the research, compliment, teach sequence
- Analysis of post-it notes and reading responses
- Analysis of reading logs

Teacher notes:

- At the beginning of the year, it is a challenge to get all the essentials up and running immediately. Kids often lose ground over the summer because they are not reading a high volume of appropriate books and so the most important goal is to not waste a minute before

getting students reading lots and lots of books.

- Conversations with last year's teachers will determine what structures students are accustomed to, so these will not be re-taught, but rather re-enforced.
- *Building a Reading Life* from Units of Study on Teaching Reading grades 3-5 is a great resource for this unit.
- In third grade students were asked to: find just-right books, create goals for themselves as readers, and write in response to something of importance.
- At the beginning of the year, focus on the classroom environment. Consider: how you set up a literacy rich classroom; how you organize your classroom library; how you make charts to meet the needs of all students; how you scaffold and review skills and lesson from previous years while building on this year's work; how you make your meeting area a purposeful place and establish routines and rituals for coming to the meeting area.
- Interactive read-alouds should be engaging and provide students with the opportunity to hear challenging texts read aloud. Read-alouds can occur during many parts of the day.
- During Interactive Read-alouds, model thinking by "think alouds" and provide students the opportunity to be engaged in the text with "turn and talks" and "stop and jots" (at least 3 turn and talks ; 1 stop and jot)

- Ask students to use text based support in their discussions
- Consider providing students with purposeful graphic organizers that can be used in small groups or individual conferences. These graphic organizers might begin to organize students in reading across a text or making meaning of a phrase.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4 Reading

Name of the Unit: Unit 2 Following Characters into Meaning: Envision, Predict, Synthesize, Infer, and Interpret	Length of the Unit: 5 weeks
Purpose of the Unit: The purpose of this unit is to push students to apply what they already know about reading with increased independence and a growing sense of repertoire. This unit focuses on developing higher level comprehension skills. In this unit, students will not only think about characters in one book, but across many books. The unit asks students to compare and contrast characters across books to deepen understanding of characters (and people), and to help their theories grow in complexity. At the same time in writer's workshop, the children will apply all they learn in reading to the writing of fiction – all of their work in analyzing and interpreting characters and stories will support theses they have developed on their own.	

Common Core State Standards Addressed in the unit:

RL.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RL.4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

RL.4.9 Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

RL.4.10 By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

RL.4.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.

RL.4.6 Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.

W.4.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

W.4.9a Apply *grade 4 Reading standards* to literature (e.g., "Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character's thoughts, words, or actions].").

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.

SL.4.1a Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

SL.4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

L.4.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.

L.4.3aChoose words and phrases to convey ideas precisely.

Big Ideas:	Essential Questions:
1. When inferring from and interpreting characters, readers will gather evidence from across a text, sorting the most relevant evidence, and analyzing this evidence in support of their ideas. 2. Reading well involves pulling the pieces of a text together so that when something happens midway through a story, it doesn't happen out of thin air. The reader can see the causes for that event, the event almost seems inevitable.	1. What do you know or can you infer about specific characters using evidence from the text? 2. Using evidence from the text, what predictions can be made? 3. When events happen midway through a story, what did the author do to foreshadow that event?
Students will know: 6. what supporting details and specific examples are in text 7. what it means to compare and contrast 8. what theme is 9. setting and events are important elements in texts	Students will be able to: 6. refer to supporting details and specific examples in text 7. describe characters in depth 8. describe setting in depth 9. describe events in depth 10. read and comprehend literature in the grades 4-5 text complexity band 11. compare and contrast themes, topics, patterns of events across texts 12. accurately quote 13. determine theme

Significant task 1: Envision, Prediction, and Inference

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/small group work with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task one asks students to dive head first into the worlds of the books they are reading. At the beginning of the unit, there is an increasing emphasis on helping students to accurately quote and draw on textual evidence, in the form of specific details and examples, to support their ideas about characters' motivations. They will be asked to engage in deeper self-reflection and self-analysis by keeping Post-its or notebook entries. In significant task one, students work primarily on envisioning and predicting. In this task, students will be working in groups, pairs, and individually to develop a deeper understanding of texts.

Products:
Reader's notebook entries including specific details and evidence about characters. Readers will revise their thoughts about characters as they read on and gain more information.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.3, RL.4.10, W.4.9, W.4.9a, SL.4.1, SL.4.1a, SL.4.4, L.4.3

Timeline: 5 days

Key vocabulary: envision, scene, trait, theory, evidence, evaluate, analysis, motivation, empathy, relationship, metaphor, simile, persistent, tenacious, resourceful, glum, generous, encouraging, loyal, patient, intolerant, snide, jealous, malicious, emotion, pattern, event, storyline, setting, mood, figurative language, dialogue, interpretation, theme

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Two – Following Characters into Meaning

Significant task 2: Building Theories about Characters

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

In significant task two, students will notice characters' personality quirks, habits, and how they respond to events inferring to develop ideas about characters' traits, motivations, troubles, changes, and lessons. As students collect entries in their notebooks, they will use academic language associated with characters (such as trait, pattern, mood) and have the opportunity to reflect on questions like: "Why did the character do that?" and "Do you think he/she did the right thing?" These inquiries support students in developing ideas about their characters and analyzing the text in support of these ideas, rather than just retelling what happened in their books. Students will think deeply and with nuance about characters—considering what a character holds close, that character's complexities, how characters

change, when characters act “out of character”, the way that secondary characters act as mirrors of main characters—to help them develop inferences, interpretations, and grow in their abilities to talk and write well about reading. In addition to analyzing characters across a single text, students will also compare and contrast characters from multiple texts.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.3, RL.4.9, RL.4.10, W.4.9, W.4.9a, SL.4.1, SL.4.1a, SL.4.4, L.4.3, L.4.3a

Timeline: 12 days

Key vocabulary: envision, scene, trait, theory, evidence, evaluate, analysis, motivation, empathy, relationship, metaphor, simile, persistent, tenacious, resourceful, glum, generous, encouraging, loyal, patient, intolerant, snide, jealous, malicious, emotion, pattern, event, storyline, setting, mood, figurative language, dialogue, interpretation, theme

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Two – Following Characters into Meaning

Significant task 3: From Inference Toward Interpretation

Each day’s lesson should follow the Reader’s Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task three, will focus on interpretation work, with children shifting from inferring about characters to sustaining and supporting theories about them. The goal here will be that children’s theories build in complexity and in richness of evidence. Children will be asked to speak with partners and apply prediction skills, building not only on their sense of how stories tend to go, but also of how this particular story is unfolding, and on all they know about a particular character. They will sometimes have to revise their predictions—or grow new ones—based on new information they learn as they read on. Students will learn that good books are about more than one idea, and that there are lessons that both the character and reader learn. Lastly, they will reflect on the work they’ve done, using strategies learned to theorize about themselves as readers and to theorize about their characters.

Products:
Students will develop a collection of theories about characters in their reader’s notebooks.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.2, RL.4.3, RL.4.6, RL.4.9, RL.4.10, W.4.9, W.4.9a, SL.4.1, SL.4.1a, SL.4.4, L.4.3

Timeline: 8 days

Key vocabulary: envision, scene, trait, theory, evidence, evaluate, analysis, motivation, empathy, relationship, metaphor, simile, persistent, tenacious, resourceful, glum, generous, encouraging, loyal, patient, intolerant, snide, jealous, malicious , emotion, pattern, event, storyline, setting, mood,

figurative language, dialogue, interpretation, theme

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Two – Following Characters into Meaning

Common learning experiences:

- Some predictable strategy groups might be: Readers monitor as they read, focusing on when they stop to think about important information being given about a character, to think and look deeper into a character's story. This could occur through a conversation between characters, or figurative language around a character. Readers can also use their Post-its to assess their comprehension. They can look at their Post-its in relation to the continuum to determine where they fall and how they can move to the next level, reflecting on themselves as readers.

- The Tiger Rising by Kate DiCamillo is a suggested read aloud for this unit. If you choose not to use this, find a text that is in the 4-5 text complexity band, that has some figurative language, richly portrayed characters that change over time, and more than one plot line.
- As part of this unit, teachers should have students analyze their reading responses and mentor responses to determine what makes strong responses to reading. Consider creating a rubric with students that is clearly displayed so that students can constantly reflect on their own work and progress.
- Throughout this unit the class should engage in grand conversations as a way to support partner conversations on grade level complex texts. The teacher can provide scaffolding that will support students in growing a conversation by sticking to an idea or two.
- Post or provide charts with important words and phrases to describe characters traits and emotions
- Students should meet with reading partners for five minutes or so every day at the end of reader's workshop.
- Teach partners the language they need to have conversations. Include the phrases on a chart which students can reference.

Common assessments including the end of unit summative assessment:

- Teachers should conduct an initial formative assessment, establishing a base-line for the skills each student brings to the unit. The same process should be repeated at the end of the unit as a summative assessment. During a read aloud-stop at preplanned places to ask questions. You might ask, "What ideas are you having about the character so far? Be sure to not only jot your ideas, but also evidence from the text." And later, "Have your ideas changed? Stop and jot." Design each question carefully, establishing a situation in which you can assess the children's ability to infer, synthesize, revise inferences and interpret. You'll want to be sure to remind children that textual evidence matters, and hold them accountable to not only formulating an idea, but backing it up with key details from a text. The *Literature Reading Continuum* can be used to help assess students' work.
- At minimum, a Teachers College Reading and Writing Project running record (TCRR) on each student's independent reading level should be completed in September and at least one additional time each term. Additional TCRRs can be done at any time.

- Anecdotal notes on reading behaviors, talk and writing
- Reading conferences following the research, compliment, teach sequence
- Analysis of post-it notes, reader's notebooks and partner conversations
- Analysis of reading logs

Teacher notes:

- In third grade, students evaluate and analyze characters, grow new theories, identify themes, and ask and answer questions, referring explicitly to the text to support answers.
- Third graders also step into their character's shoes so as to glean a more thoughtful understanding of characters, growing theories and altering them according to new information
- Work in this unit will help students to interpret characters in history, thinking about their motivations, traits, and feelings across historical time periods as well as take notes and respond to what they read in science and social studies.
- In realistic fiction, folk tales, poetry, and historical fiction, thinking about the plights of the characters, the reasons for all the characters, and the reasons why the author put these characters in the text and their purpose can be gathered through whole-class interactive read alouds.
- As an optional resource, the books *Following Characters into meaning (Volumes 1 and 2)* from the *Units of Study* series support the work of this unit.
- Students should be reading narratives during this unit.
- During this unit teachers should consider if students are ready to move up a level in their independent reading.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4 Reading

Name of the Unit: Unit 3 Nonfiction Reading: Using Text Structures to Comprehend Expository, Narrative, and Hybrid Nonfiction	Length of the Unit: 5 Weeks
Purpose of the Unit: The purpose of this unit is to support students' work in nonfiction using their skills to understand the choices a nonfiction author makes, and learn all that that author wants to teach. Students will look across nonfiction texts to prioritize information, compare and contrast, and use other analytical strategies that will deepen their connection to the material. In order for fourth graders to ascertain the big ideas in a nonfiction text in such a way that they can summarize as well as think critically about these, they need to grasp the text's infrastructure of ideas and supporting details. To support this work, students will be writing essays during writing workshop on topics of their own choice while they engage in this nonfiction reading work, and therefore will learn to recognize, in the expository texts they read, a template that they'll have come to think of as "boxes-and-bullets." In this unit, students will become experts at explicit and implicit structures of texts. In addition to the expository structure, students will learn to read narrative nonfiction attending to structure, using story grammar and syntax to synthesize and determine importance across large stretches of text.	

Common Core State Standards Addressed in the unit:

RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

RI.4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

RI.4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

RI.4.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

RI.4.10 By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RI.4.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

RL.4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

W.4.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

W.4.9b Apply grade 4 Reading standards to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text").

RF.4.3 Know and apply grade-level phonics and word analysis skills in decoding words.

RF.4.3a Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

RF.4.4 Read with sufficient accuracy and fluency to support comprehension.

RF.4.4a Read grade-level text with purpose and understanding.

RF.4.4b Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.

RF.4.4c Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

SL.4.1a Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

SL.4.1b Follow agreed-upon rules for discussions and carry out assigned roles.

SL.4.1c Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

SL.4.1d Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

SL.4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Big Ideas:	Essential Questions:
1. When reading expository nonfiction, readers use their knowledge of the structure of the text to evaluate and analyze the text and glean the big ideas and supportive details from the text. 2. Comparing and contrasting the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts helps a reader develop a higher level understanding of a topic. 3. It is important for readers to distinguish their own point of view from that of the author of a text and to compare and contrast first and secondhand accounts of the same event. These comparisons help the reader understand the different perspectives that are possible around a topic or event. 4. When reading a cluster of related texts, a nonfiction reader pulls together information from related parts of many texts in order to move within and across any type of nonfiction text.	1. How can understanding the structures of texts influence understanding of a topic? 2. How does the perspective from which this text is written affect understanding? 3. How can related texts shape understanding around a topic? 4. What does a reader need to do in order to learn the main idea and supportive examples that an author is trying to teach?
Students will know: 1. text structures (chronology, comparison, cause/effect, problem/solution) 2. text features (charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages)	Students will be able to: 1. determine main idea 2. summarize text 3. support main idea with key details 4. determine the meaning of unknown words and phrases 5. describe the structure of a text or part of a text 6. interpret information 7. explain how text features aid in understanding 8. read informational texts in the 4-5 text complexity band 9. use evidence from text to support ideas 10. engage in close reading

Significant task 1: Summarizing with Structure in Mind

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form

of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task one begins by helping students to reflect on, transfer, and apply all they already know about text previewing strategies for nonfiction. Students then learn to take in and synthesize all of the elements on a page and then explain how the different parts of the text all contribute to their new knowledge. Students will learn how to look for structure within a nonfiction text so they can use that to summarize texts. Students' understanding of structure will also be used to help with note-taking. Partner work provides a forum for summary and enactment that gives students the opportunity to take ownership over their work and process it collaboratively.

The next step after paraphrasing and synthesizing text is to respond personally and intellectually to what the text teaches. Students will also work to determine the meaning of unfamiliar academic terms.

This task directly targets the following Common Core State Standards: RI.4.2, RI.4.4, RI.4.5, RI.4.7, RI.4.10, RL.4.3, W.4.9, W.4.9b, RF.4.3, RF.4.3a, RF.4.4, RF.4.4a, RF.4.4c, RI.4.1, SL.4.a, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d, SL.4.4

Timeline: 11 days

Key vocabulary: expertise, artifact, expository, main idea, supporting details, glossary

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Three – Nonfiction Reading
- Nonfiction texts for the students and for the teacher

Significant task 2: Navigating Narrative Nonfiction

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

In significant task 2, students read narrative nonfiction with the same attentiveness to structure, using story grammar to synthesize and determine importance across large stretches of text. Students transfer their knowledge about reading narrative to narrative nonfiction. Students will analyze specific details and literary devices to support their thinking about text as they make this transition. By analyzing these devices students gain the opportunity to envision and live in the story in a different way and see writing techniques in action which they can transfer and apply to their writing across the curriculum as well.

Next, students develop generalizations about a famous character or groups of characters, forming ideas about how certain traits might lead to a character's ability to overcome difficulty and achieve something meaningful. Students explore the underlying ideas expressed in their texts and discuss those ideas with a partner.

In final part of this task, students combine their skills for reading and summarizing nonfiction with their

skills for reading narrative, so that students understand that narrative nonfiction both tells a story and teaches information and ideas.

This task directly targets the following Common Core State Standards: RI.4.2, RI.4.4, RI.4.5, RI.4.7, RI.4.10, RL.4.3, W.4.9, W.4.9b, RF.4.3, RF.4.3a, RF.4.4, RF.4.4a, RF.4.4c, RI.4.1, SL.4.a, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d, SL.4.4

Timeline: 7 days

Key vocabulary: expertise, artifact, expository, narrative nonfiction, main idea, supporting details, glossary

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Three – Nonfiction Reading
- Narrative nonfiction texts for the students and for the teacher

Significant task 3: Comparing, Contrasting, and Integrating Information from Two or More Informational Texts on a Topic

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

In significant task 3, students transfer and apply narrative reading and informational reading skills to tackle hybrid texts that include narrative and expository sections. Students will identify and describe the structure of the texts and how these texts present an idea supported by facts and then may tell a story that relates to or illustrates the idea. Students will assess a text using what they know about expository and narrative text structures and then evaluate which are the most appropriate strategies to synthesize and interpret parts of text and the whole.

Next, students not only draw on what they know to understand informational texts but to also compare and contrast texts. Students are expected to compare and contrast important points and key details, as well as the reasons and evidence authors provide to support points. Students also summarize texts in light of that they already read in another text.

This task directly targets the following Common Core State Standards: RI.4.2, RI.4.4, RI.4.5, RI.4.7, RI.4.10, RL.4.3, W.4.9, W.4.9b, RF.4.3, RF.4.3a, RF.4.4, RF.4.4a, RF.4.4b, RF.4.4c, RI.4.1, RI.4.9, SL.4.a, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d, SL.4.4

Timeline: 7 days

Key vocabulary: expertise, artifact, expository, narrative nonfiction, main idea, supporting details, glossary, hybrid

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Three – Nonfiction Reading
- Hybrid texts for the students and for the teacher
- Multiple texts on similar subjects, as well as first hand and second hand accounts

Common learning experiences:

- In addition to nonfiction reading in this unit, reserve at least fifteen to twenty minutes everyday for students to continue reading just-right chapter books and novels in fiction, using and practicing all the skills they've already learned to continue their work towards mastering texts in the 4/5 grade band.
- Predictable strategy groups may include: Monitoring to understand what text-based detail is important; reviewing text structures covered in the third grade; synthesizing information to be able to summarize it; listening to what's important i.e. fluency
- With students and colleagues, consider creating a student friendly rubric for informational reading. The goal is to pass along to students an understanding of the criteria for their work and to engage them in setting and working towards goals.

Common assessments including the end of unit summative assessment:

- At minimum, a Teachers College Reading and Writing Project running record (TCRR) on each student's independent reading level should be completed in September and at least one additional time each term. Additional TCRRs can be done at any time.
- Anecdotal notes on reading behaviors, talk and writing
- Reading conferences following the research, compliment, teach sequence
- Analysis of post-it notes, reader's notebooks and partner conversations
- Analysis of reading logs
- Quick Essay: This brief assessment should serve as a check-in at the end of the unit, assessing students' abilities to apply what you have taught regarding author's craft in informational texts. It can also be used as a pre-assessment at the beginning of the unit. Choose texts that are appropriate for the reading levels of your students and that demonstrate clear text structures that you have taught. Assign a writing prompt that invites students to comment on how the author's choices in that text support the reader's understanding of the content. Some possible prompts: 1. The author of this text chose a particular structure to organize the information for the reader. What structure did this author use and how does it help the reader understand the information? 2. How does the way this text is set up, including how it's organized and how it's supported with text features, help the reader to understand the information it is teaching? 3. What choices did this author make that help the reader understand what he/she is trying to teach? Explain why the author probably made those choices. Think about structure, illustrations, and any other craft decisions we've studied this month.

  OR

  Students can write an essay integrating information gained from two (or more) texts in order to speak or write knowledgeably about a subject. To support them in this work and to support students in applying what they are learning in writing workshop simultaneously, first teach them to talk with a partner. You might decide to put charts up from the essay unit that reminds students of ways to structure essays. You can show students that they can structure their conversation by first stating the idea and then discussing one part from one text and how it

proves their thinking and then a part from a second text and how that part proves their thinking, finishing with a conclusion that relates to the information presented. In this way, the reading unit is also addressing the CCSS Opinion Writing Standards for fourth graders.

Teacher notes:

- Science standards for Magnets and Electricity should be taught along with this unit. Consult science standards for other possible connections.
- Students have learned about text structures and text features in prior years.
- Fourth grade is the first time students are expected to summarize text. They must determine the main idea and explain how it is supported by key details as one integrated activity.
- Fourth grade is the first time students are asked to integrate information from multiple texts on the same topic.
- Students will need to read primary source documents. This will help with various skills addressed in the CCSS. In particular, it will help students make the shift in fourth grade to comparing first and secondhand accounts.
- An optional resource to support teaching in this unit is *Navigating Nonfiction* from *Units of Study in teaching Reading, Grades 3-5.*
- Setting up a listening center including high level complex informational texts will help students develop fluency and vocabulary. Recordings can also be very helpful for speech and language students, students with visual impairments, and ELLs.
- Interactive Read-Aloud: You'll want to start off reading expository informational texts then move to narrative nonfiction and finish the unit with hybrid texts. Choose some interactive read-alouds on the same topic. This will help you to show your students how to build background knowledge, domain-specific vocabulary, and so forth on a topic; it will help provide you with demonstration texts when you come to significant task 3 and it will also allow for you to scaffold readers who might need further support in the next unit when readers begin to work in Nonfiction Reading Clubs. You can hand the topic to a set of readers who may need the support of having discussed the background contextual information.
- Suggested read-aloud texts include: *Electricity: Straight Forward Science* by Peter Riley and *Thomas Edison: The Great Inventor* by Caryn Jenner, a DK Reader Book which is narrative nonfiction.
- To make nonfiction read-alouds interactive, in addition to pausing at strategic points and offering readers quick opportunities to "turn and talk" or "stop and jot," || you may also demonstrate acting out the information as you explain the part you just read before giving readers an opportunity to act out a part as they explain information to their partner. Having readers stop and sketch what you read, and encouraging them to add details to the sketch as you read on, is another way to do this. The chance to put the information they are hearing into action by adding their own drama will enhance comprehension. This allows students to synthesize the text they're hearing by activating their own experiences and imagination as they create meaning.
- Throughout the unit, teachers should model writing summaries in paragraphs and make sure that there are exemplars of different levels hanging in your classroom. You might also do shared writing and have the class create common summaries that all can refer to as mentor examples.
- TCRWP's Informational Reading Continuum is s learning progression that will support you in assessing and tracking readers' growth along certain skill trajectories crucial to informational

reading.

- For a list of text suggestions please view lists on TCRWP's website.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4 Reading

Name of the Unit: Unit 4 Nonfiction Research Projects	Length of the Unit: 4 weeks
Purpose of the Unit: This unit builds on all the essential nonfiction reading comprehension skills students developed in the prior unit and adds new work that teaches students to compare and contrast texts, to analyze their claims and arguments, to investigate authors' points of view, to critique texts, and to design their own independent analysis of urgent nonfiction research topics that they'll pursue in small research groups. To do that kind of high level, critical analytical work, students need to read more than one text on a subject. They must become experts on both gathering information and analyzing how that information is conveyed, so that they can evaluate texts rather than simply summarize them. The work of this unit is approached through multiple pathways in order to help students achieve success.	

Common Core State Standards Addressed in the unit:

RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

RI.4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

RI.4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

RI.4.6 Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

RI.4.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

RI.4.8 Explain how an author uses reasons and evidence to support particular points in a text.

RI.4.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

RI.4.10 By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

SL.4.1a Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

SL.4.1b Follow agreed-upon rules for discussions and carry out assigned roles.

SL.4.1c Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

SL.4.1d Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

SL.4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Big Ideas:	Essential Questions:
1. Readers of nonfiction read to learn across a collection of related texts integrating and learning information and terminology from multiple sources. 2. Readers use not just their texts but also their peers as fellow researchers with whom they can discuss findings to grow further understanding on a topic. 3. Readers must be critical evaluators of information, rather than mere consumers, who analyze different perspectives on the same topic and then form and share their own opinions. 4. All nonfiction texts are simply one author's perspective on the truth.	1. How does reading multiple texts on a topic influence learning? 2. How does discussing findings with fellow researchers affect understanding of a topic? 3. How do you know if you can believe what the author is telling you? 4. Why is it that Author A chose to support this idea with this evidence, while Author B chose this other evidence?
Students will know:	Students will be able to:
1. the difference between facts and opinions 2. writer's write for many reasons 3. writing is skewed based on authors' perspectives on topics 4. what supporting details and specific examples are in text	1. integrate ideas and new learning from multiple texts. 2. research a topic across texts 3. compare and contrast a firsthand and secondhand account of the same topic 4. determine if a source is credible

5. what it means to compare and contrast 6. the difference between a firsthand or secondhand account 7. text structures (chronology, comparison, cause/effect, problem/solution) 8. text features (charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages)	5. refer to supporting details and specific examples in text 6. explain how an author uses, or why an author chose to include or exclude, certain details 7. summarize texts independently and in relation to one another 8. determine the meaning of unknown words 9. describe the structure of a text or part of a text 10. interpret information 11. explain how text features aid in understanding 12. read informational texts in the 4-5 text complexity band 13. engage in close reading

Significant task 1: Synthesizing Complex Information Across Diverse Texts and Working in the Company of Researchers

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Before the first lesson, students will be placed into well thought out collaborative work groups around a particular topic.

In significant task 1, the class will begin with a research project which the teacher initiates as a demonstration study and carries through during the interactive read aloud and whole-class lessons. This study will serve as a scaffold for students' own studies, which they will embark on in collaborative small groups, just as researchers work and study collaboratively now in almost every field. This demonstration study may focus on a complex subject and high level texts, that will be aimed to support the highest level of reading that the students can aim for. Or, it may focus on an accessible subject and text set that will then be handed over to a group of more emergent readers.

In this task, students will begin to become experts by reading across texts and comparing information with fellow researchers. They will focus on acquiring and applying technical vocabulary, note-taking strategies and skills that help them write to develop their thinking as they read, gathering information from multiple sources, keeping track of those sources, and developing the essential skills of researchers.

Products:
To start this task, students will map out a plan for learning. Students will create flowcharts, tables of contents, or other visible plans for the order of the texts that they'll read, the categories of information they'll want to tackle, and some of their burning questions. Teachers will support students in creating

and revising action plans which involve ambitions, large goals that will carry students through long stretches of work time.

Using the structure of boxes and bullets notes, students will have time each day during which they will teach what they have read to their group members.

While reading, students will jot their thinking and then expand their writing as they think about what they have read, consider the big concepts and supporting details and draw inferences from the texts.

Students will begin the work of opinion writing by planning and mentally drafting opinion writing pieces dealing with their topic. Students will engage in active discussions, state and defend opinions. Students will listen to the claims of their group members and then add evidence to support or challenge the claim. Although most of this work will be done orally, it is the essential foundation for opinion/ argument writing. Teachers may have students record the opinion essays they have generated through club conversations by flash-drafting them on papers.

This task directly targets the following Common Core State Standards: RI.4.1, RI.4.2, RI.4.3, RI.4.4, RI.4.5, RI.4.6, RI.4.7, RI.4.8, RI.4.9, RI.4.10, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d, SL.4.4

Timeline: 10 days

Key vocabulary: compare, contrast, synthesize, argument, claim, point of view, procedures, summarize, chronological, firsthand information, secondhand information

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Four – Nonfiction Research Projects
- Nonfiction texts sets on various topics for the students and for the teacher

Significant task 2: Critiquing Texts with Analytical Lenses and Sharing out Research

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

In Significant task 2, students work on enhancing their critical analytical skills, comparing authors' claims and the validity of their arguments, as well as how authors convey and support information. Students will analyze text to ascertain if the text seems to be mainly facts or mainly opinions, what an author gets us to feel about a subject, and how exactly an author engineered a certain response from a reader. Students also make connections across texts, draw conclusions, to design their own informed opinions, and apply their new-found knowledge by creating instructional material for their peers and/ communities.

Products:
Students will create their own graphic representations of various sides to an argument.

In this task students need to be fully aware not only of key ideas and concepts in an informational text, but also that there are many different ways to support these ideas, and that the author is intentionally including certain reasons and evidence, while not including others. Students will write entries in reader's notebooks about how an author uses reasons and evidence to support a particular point.

At the end of the task and unit, group members who have read many books on a topic can come together and plan a presentation that they'll make to the rest of the class, to another class, or to a different audience, on the shared topic they studied. Students in their groups might each take one part of their studied topic and teach that part to others. They may make a poster board including diagrams or charts. They may choose to read a part and act it out, or make a model, or put together a PowerPoint presentation, or make some social action artwork to educate their community. These presentations are meant to be simple and fairly quick, but can help solidify what students have learned and add interest and investment to the topic studied.

This task directly targets the following Common Core State Standards: RI.4.1, RI.4.2, RI.4.3, RI.4.4, RI.4.5, RI.4.6, RI.4.7, RI.4.8, RI.4.9, RI.4.10, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d, SL.4.4

Timeline: 8 days

Key vocabulary: compare, contrast, synthesize, argument, claim, point of view, procedures, summarize, chronological, firsthand information, secondhand information

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Four – Nonfiction Research Projects
- Nonfiction texts sets on various topics for the students and for the teacher

Common learning experiences:

- Possible strategy group instruction: monitor students' comprehension. If you see they are not getting the important facts consider leaving purposeful stopping points and providing talking prompts that will help students understand and glean the most important supporting details. You may try using: *this makes me think of…, I wonder…, this reminds me of…, I didn't know that…, I learned…, I'm thinking…, One one hand…on the other hand…at the end…*
- The role of talk, particularly within clubs and partnerships will need to be elevated in this unit. Students need to move beyond fixating on one text, putting it down and picking up another. Instead they need to think first and foremost of the topic and what they understand about the topic, and then use the texts connected to the topic to develop and support those topic understandings. Students will learn not to leave texts behind, but to hold onto what they have learned and let their prior reading influence what they read next. It will then be crucial for them to be able to develop and share those new topic understandings, and for teachers to support them with various texts through the use of writing and conversation.
- Interactive Read-Aloud: At the same time as students are engaging in research of topics, the interactive read-aloud should be used as a time to involve the class in a shared study. In addition to modeling how to glean big concepts and supporting details relating to a topic, how to discover and use the domain-specific vocabulary, analyze authorial intent and integrate more

than one text to speak or write about a topic, as well as the other work you are teaching students to do within their clubs, you will also use your interactive read-aloud as a time to model all of the informational reading skills happening in conjunction. Your interactive read-aloud should mirror (and act as a prelude to) the reading work you want your students to do. In addition, your read-aloud work will provide a model to students for how to transfer and apply all previous learning—envisioning, prediction, work learned in content areas, and so forth.

Common assessments including the end of unit summative assessment:

- At minimum, a Teachers College Reading and Writing Project running record (TCRR) on each student's independent reading level should be completed in September and at least one additional time each term. Additional TCRRs can be done at any time.
- Anecdotal notes on reading behaviors, talk and writing
- Reading conferences following the research, compliment, teach sequence
- Analysis of post-it notes, reader's notebooks and partner conversations
- Analysis of reading logs
- End presentation

Teacher notes:

- In fourth grade, students are asked to "explain how an author uses reasons and evidence to support particular points" (CCSS RI 4.8). This is a major shift from the expectations in third grade.
- In third grade, students were expected to "describe the logical connection between particular sentences and paragraphs in a text (e.g. comparison, pro/con, first/second/third in a sequence)." Now, in fourth grade, they must build on that practice of looking closely at particular sentences and paragraphs to explain how an author has used parts of the text to support particular points.
- Fourth graders are now expected to not only "distinguish their own point of view from that of the author" (as they did in third grade), but must now compare and contrast a first and secondhand account of the same event or topic, and "describe the differences in focus and the information provided" (CCSS RI 4.6).
- Rather than simply compare and contrast texts on the same topic, as they did in third grade, fourth graders must now synthesize their learning in order to write and speak about what they are learning knowledgeably.
- An additional optional resource for this unit is *Navigating Nonfiction* from *Units of Study in Teaching Reading, Grades 3-5.*
- The writing unit in which students will be immersed at the same time as this reading unit will help to support the reading and research skills students are working on in this unit.
- This unit revolves around thinking and learning derived from reading multiple texts on a single topic—so teachers need to prepare (ideally with students) text sets on specific topics, ones for which there are already plenty of available books (either in the classroom library, school library, or neighborhood). Teachers can ask students to bring in books and journals from home, trade books with other teachers, visit the library, bookmark trusted websites such as PBS.org and Scholastic.com. Many of these texts might have already begun to accumulate during the last unit. They only need to be separated and placed into labeled baskets. It's often helpful if a text set includes print texts at various levels, some digital texts, and texts that represent diverse

points of view. A bibliography of some accessible text sets on high interest and academic subjects is available under 'resources' at www.readingandwritingproject.com.

- Teachers must ensure that students will be reading a stack of texts on topics of interest. Teachers will want to gather primary documents, digital texts, or articles, anything they can find to help create a coherent knowledge base of a topic. Always keep in mind that the single most important job is to keep students reading a large volume of texts calibrated to be at a level at which each student can read with over 96% accuracy, fluency, and comprehension.
- When creating text sets also consider science and social studies standards.
- Spending a little time outside of the workshop a few days before the unit officially begins can help set you up for success. You might allow some time for students to browse the text sets you have available, encouraging them to communicate their interests and to bring in any resources they find on their own, perhaps visiting a local library, so they can share in the act of gathering texts. Some teachers have found it helpful to start a small research bulletin board (real or virtual) where students can post their interests, great resources for finding texts, and in general just offering another avenue for drumming up excitement and getting students to be more interactive.
- TCRWP's Informational Reading Continuum is s learning progression that will support you in assessing and tracking readers' growth along certain skill trajectories crucial to informational reading.
- For a list of text suggestions please view lists on TCRWP's website.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4 Reading

Name of the Unit: Unit 5 Historical Fiction Book Clubs and Informational Reading: Tackling Complex Texts	Length of the Unit: 6 weeks
Purpose of the Unit: Historical fiction creates an opportunity for students to tackle complex texts, through close reading, thoughtful scaffolds and in the company of their peers. Because historical fiction is inherently complicated—it happens in a time and a place the reader has never inhabited, the characters are entangled in historical and social issues of grand significance, and the events of the story are intimately related to real historical events—students have opportunities to harness all the learning that has been done up to this point in the year, and to learn new reading skills that will support them in these books. Students will emerge from this unit as knowledgeable readers who have new confidence in tackling complicated literature. They'll also learn how to build collective interpretations, how to listen closely to each other as they read, and how to carry ideas across time—both across the days of their book club discussions and across more than one text.	

Common Core State Standards Addressed in the unit:

RL.4.1 and RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RL.4.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.

RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

RL.4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

RI.4.6 Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

RL.4.10 and RI.4.10 By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

RI.4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

RI.4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

RL.4.7 Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

RL.4.9 Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

RI.4.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

SL.4.1a Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

SL.4.1b Follow agreed-upon rules for discussions and carry out assigned roles.

SL.4.1c Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

SL.4.1d Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

Big Ideas:	Essential Questions:
1. Readers get lost in the grand drama of historical fiction, while also attending to the work of tracing story elements across a text. 2. Readers revise their interpretations based on their deeper and growing understanding of both the story and interpretation itself. 3. Reading is about learning how to live. 4. Reader's build thoughts off talk with other readers.	1. How does the reading work you do in historical fiction different from that of other genres? 2. How can you read in a way that allows you to trace themes across time, places, and texts? 3. How can I learn more historical information about the time period of my book?
Students will know: 1. content knowledge 2. characteristics of realistic fiction genre 3. story elements	Students will be able to: 1. interpret characters in the context of a particular historical time period 2. read complex texts 3. describe story elements in depth 4. carry ideas across multiple texts 5. use content knowledge to deepen their

	understanding of text 6. use what they know about the time period to develop deeper a understanding of the story elements 7. examine how the time period affects the story 8. draw inferences from text 9. refer to supporting details and specific examples in text 10. determine the meaning of unknown words 11. read informational texts in the 4-5 text complexity band 12. engage in close reading

Significant task 1: Deep Comprehension and Synthesis of Complex Story Elements

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task 1 focuses on deep comprehension and synthesis of complex story elements. Students will notice the words the author chose to describe a character or place. They will pay particular attention to the setting because the setting in historical fiction will inevitably be unfamiliar to students. Students will then use strategies to track all the important elements that occur in a nonfiction text. Students pay particular attention to the timelines- both the main character's time line, and the timeline of historical events - and how the two are intertwined. Students will use essential reading tools such as timelines, graphic organizers, and lists of characters to support this work. Students determine why characters react in certain ways to events. They will also notice the feeling, mood or tone of the event and change their voices to match this, thinking about how and why the author created that mood. Parts of the text will be read and reread by students pulling on information learned earlier to understand what is really happening. Students will study two parts closely side by side to bring out change, revision of thinking, and they will synthesize these parts to see a new possibility or a different perspective.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.2, RL.4.3, RL.4.7, RL.4.10, RI.4.1, RI.4.4, RI.4.10, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d

Timeline: 6 days

Key vocabulary: era, atmosphere, setting, conflict, mood, interpretation, flashback, theme, timeline, social action, *additional terms specific to historical fiction piece*

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit

Five – Historical Fiction Book Clubs and Informational Reading: Tackling Complex Texts
- Texts sets on various topics containing both historical fiction and nonfiction books

Significant task 2: Interpreting Complex Texts

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task 2 focuses on interpretation, especially on paying attention to perspective and point of view, and on carrying ideas across a text. Students bring their own meaning and experience to the story, in doing so they let different parts reverberate in their lives. This personal interpretation supported by key details and examples will be written in students' reader's notebooks and shared with book club members. Students pause to analyze what they are reading so that they can uncover the ideas and themes that underlie the books they read. They jot about them, reread them with their clubs, compare their thinking, connect them to other parts, and have long discussions about them again and again. As they pay attention to these big ideas, students also pay close attention to the potential meaning in small details and objects included by the author as they read.

Next, students use what they are learning through their reading to modify their thinking first with one text, then across texts, and finally between texts and their lives. Students learn to articulate significant ideas about books, revise their interpretations on their own, and learn to reconsider, elaborate on, and defend those ideas in the company of other readers. The book club work will be tremendously important here as students learn that their ideas are more powerful in coalition than when they work alone. Indeed, one of the most significant lessons of this unit, and one of the most lasting, will be that children's greatest strength lies in building thoughts off their talk with each other. Students will pose and answer questions and explain their own understanding of texts in light of these discussions

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.2, RL.4.3, RL.4.7, RL.9., RL.4.10, RI.4.1, RI.4.4, RI.4.9, RI.4.10, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d

Timeline: 5 days

Key vocabulary: era, atmosphere, setting, conflict, mood, interpretation, flashback, theme, timeline, social action, *additional terms specific to historical fiction piece*

Resources:
- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Five – Historical Fiction Book Clubs and Informational Reading: Tackling Complex Texts
- Texts sets on various topics containing both historical fiction and nonfiction books

Significant task 3: Becoming More Complex Because We Read

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about

15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task 3 helps readers move across texts, both fiction and nonfiction, developing readers' thematic understanding and potential as social activists. In order to develop a new way of thinking about the text, students begin this task by looking at the story from various perspectives of different characters within a story. They imagine the different points of view that characters in that scene bring to the action. Students should discuss the perspective of minor characters in their clubs sharing the character's interpretation of the events in writing or orally. As students compare their interpretations, they continue the work of drafting and revising ideas about texts.

Next, students look at books through the lens of power. By investigating who has power, how power is visible, what forms power can take, and how power shifts, readers find huge meaning in books. With this work, students will integrate information from two or more texts to develop their understanding of the time period. Students will read some nonfiction alongside their historical fiction. As students incorporate more nonfiction reading, they begin to talk about ideas and themes across texts – both fiction and nonfiction. To describe the story or character, students learn to use the art of allusion, comparing them to one who is familiar to the audience.

This task ends by having students think more largely about the meaning these tales bear for their own lives and for the world at large. Students will think deeply about the lessons and the defining actions made by characters. They will be affected by them and live differently because of them.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.2, RL.4.3, RL.4.7, RL.9., RL.4.10, RI.4.1, RI.4.4, RI.4.5, RI.4.6, RI.4.9, RI.4.10, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d

Timeline: 8 days

Key vocabulary: era, atmosphere, setting, conflict, mood, interpretation, flashback, theme, timeline, social action, *additional terms specific to historical fiction piece*

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Five – Historical Fiction Book Clubs and Informational Reading: Tackling Complex Texts
- Texts sets on various topics containing both historical fiction and nonfiction books

Common learning experiences:

- In addition to historical fiction texts, it is likely that students need additional work with nonfiction reading, book clubs should also spend time reading nonfiction texts that relate to the time period about which they are reading. This might include articles, biographies, or expository books.
- Interactive Read Aloud: During this unit, read aloud a variety of historical fiction and corresponding informational texts making connections across the texts. As you make the decisions about which book to choose for your interactive read-aloud, consider how to ensure your read aloud will serve as a touchstone for the critical reading and interpretive work you

teach.

- In turn-and-talk and stop and jot you might say things like:
  "So the main character is facing a big problem. Turn and talk to your club how you think she may try to solve it."
  "Hmm, I'm thinking that if I were this character in this situation, I might have done something different. Stop and jot what you would do. Keep in mind what you know about that time." "So far we've gathered a lot of details about the setting! Stop and jot how you think the setting is affecting the main character." (determining importance, interpretation)
  "How do you think what just happened will affect the character? Turn and tell your partner."
  "How does this situation compares to other experiences or situations we've read about?"
  "Why did the author just do that? What does he or she want us to know, think, feel?"
- The interactive read aloud is also an important time to support accountable-talk. Help children talk longer and stronger about ideas, to listen more intently, and to cite evidence as they build theories.
- Several times throughout the unit, you'll want to provide opportunities for close reading of texts, rereading key parts of the text, summarizing the text and discussing their thinking, and referring explicitly to the text for evidence. You will want to pose questions which ask the students to reconsider the text and move to high-levels of comprehension, synthesizing and interpreting the text and analyzing it through speaking and writing. Close reading provides the opportunity to study a shorter section of text, analyzing and discussing its nuances.

Common assessments including the end of unit summative assessment:

- At minimum, a Teachers College Reading and Writing Project running record (TCRR) on each student's independent reading level should be completed in September and at least one additional time each term. Additional TCRRs can be done at any time.
- Anecdotal notes on reading behaviors, talk and writing
- Reading conferences following the research, compliment, teach sequence
- Analysis of post-it notes, reader's notebooks and partner conversations
- Analysis of reading logs

Teacher notes:

- An optional resource is *Tackling Complex Text-Historical Fiction in Book Clubs*, from the *Units of Study for Teaching Reading.*
- It is crucial that teachers have enough historical fiction books so that students can read books at the appropriate level, and make choices about what they read. For a list of text suggestions please view lists on TCRWP's website.
- When selecting texts for book clubs, you may want to use texts set in Colonial America before the American Revolution to connect with social studies standards. Consult the 2011 CT Social Studies Framework (p.26-29) for ideas about additional topics or expectations for fourth grade.
- Each book club must have a text set containing multilevel books dealing with their one historical era, so that easier texts may introduce an era and scaffold the understanding of the harder texts set in the same era.
- Because the time, place, and political circumstances mentioned in their historic novels may be unfamiliar and because the setting is more than a backdrop and contributes so actively to the plot, readers will need help, from the very start of their historical fiction novels, to see and feel

the worlds of their stories. They'll need support to imagine these worlds from the perspectives of protagonists who are often markedly different from themselves. Teacher will want to draw on all possible resources, such as historical images, movie clips, and social studies texts, to augment readers' understanding and awareness of the times and places described in their texts. It will require additional preparation to have these supplementary textual and media resources lined up, but the payback will be great in terms of children's understanding of history and their ability to envision and empathize with distant characters.

- Teach students when to consult the nonfiction books that make up their text sets. For more information on this please see the Curriculum Calendar for this unit.
- This unit is best suited for students reading a level P or above.
- If you are moving some readers into challenging yet accessible texts, in addition to the support of a club, you can also provide those readers with book introductions, film versions of the start of a book, or background information on the time period.
- If you have some readers who have not progressed as you'd expect over the course of the year, now is a good time to blow the whistle, to declare this as an emergency, and to gather all stakeholders together in a SAT.
- Visit www.readingandwritingproject.com to view a video of a book club talking across historical fiction and nonfiction.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4 Reading

Name of the Unit: Unit 6 Information Reading: Reading, Research, and Writing in the Content Areas	Length of the Unit: 5 weeks
Purpose of the Unit: This unit is designed to teach students to be as skilled readers in social studies texts, as they are strong readers in literature. This means that this unit will focus not just on conveying the content being studied, but on teaching the reading skills required to learn any content successfully. Students will read multiple types of texts and gain rich background knowledge in a new subject. They will then move on to pursue a line of thinking through partnerships and group work that not only carries them into the past but also sheds new light on the present day through connections between historical and current events.	

Common Core State Standards Addressed in the unit:

RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

RI.4.6 Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

RI.4.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

RI.4.10 By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

RI.4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

RI.4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

RI.4.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information

contributes to an understanding of the text in which it appears.

RI.4.8 Explain how an author uses reasons and evidence to support particular points in a text.

W.4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

W.4.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

SL.4.1a Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

SL.4.1b Follow agreed-upon rules for discussions and carry out assigned roles.

SL.4.1c Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

SL.4.1d Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

SL.4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Big Ideas:	Essential Questions:
1. Reading texts to build knowledge about the world is supported through investigating different aspects of topics. 2. New, bigger understandings of the world change people. 3. All texts have a perspective.	1. How is knowledge of a topic built? 2. How does what you learn change who you are? 3. Is government ruled by the people, or are people ruled by the government?
Students will know: 14. writer's write for many reasons 15. writing is skewed based on authors' perspectives on topics 16. what supporting details and specific examples are in text 17. what it means to compare and contrast 18. the difference between a firsthand or secondhand account 19. government structure	Students will be able to: 1. refer to supporting details and specific examples in text 2. explain events of ideas in a historical text 3. compare and contrast a firsthand and secondhand account of the same topic 4. categorize and sort information 5. synthesize information from many texts 6. analyze the varying views and perspectives

20. about state constitution 21. process for making and implementing laws in Connecticut 22. about taxes	of the authors 7. determine what biographical information might influence the author's perspective on a topic. 8. weigh the merit behind evidence 9. study the credibility of sources 10. consider the way information is presented 11. read informational texts in the 4-5 text complexity band 12. engage in close reading 13. analyze how a constitution provides structure for a government 14. evaluate the impact of specific Connecticut laws on its residents 15. explain characteristics of a responsible citizen 16. explain how taxes in Connecticut are used to provide goods and services

Significant task 1: Forming a Research Community and Reading to Build Rich Background Knowledge

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

The unit should start with a shared experience around the content topic to kick off the unit regarding the big picture of the relationship between the government and the people. Students will understand that over the next few weeks, they will be working in a research community – a community of researchers who will all be on the same project- to gain information and formulate ideas about the government. Students will establish some common knowledge through gaining information and formulating ideas about their topic in a whole class study. They will research trying to get a broad overview of the time period, the important historical places, events and people, the biggest conflicts, and also important vocabulary. As students are reading quickly is this part of the unit, they will use Post-its to mark information that might be important, go one and read more, and then share their findings at the end of class.

Students will move from the big topic to a sub-topic, with the collective support of their whole-class research community. Text sets for subtopics might be on things like the branches of the state government, leaders in the government, the creation and implementation of the Bill of Rights, perspectives of different political parties, making laws, and the power of citizens in law making. Students will work in small groups to cover this specific subtopic.

Finally, students as experts on their specialized topic will teach others in the class research community about their topic. This should be quick and informal. Teachers should decide if students should bring some of their favorite texts to share important facts or pages, prepare a short index card's worth of

information to share, or bring a reading notebook of preplanned writing to the group to share.

This task directly targets the following Common Core State Standards: RI.4.1,RI.4.3, RI.4.9, RI.4.10, RI.4.2, RI.4.4, RI.4.5, RI.4.7, RI.4.8, W.4.7, W.4.8, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d, SL.4.4

Timeline: 6 days

Key vocabulary: compare, contrast, analyze, claim, argument, on-the-run-research, point of view, stance, perspective, research, skim and scan, *additional terms related to specific studies*

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Six Information Reading: Reading, Research, and Writing in the Content Areas
- Texts sets on various social studies topics

Significant task 2: Becoming Specialists and Reading as Researchers- Synthesizing, Analyzing, and Exploring Essential Questions in Subtopics

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

In the second bend, students zoom in on more specialized subjects and work in small groups reading about an aspect of the government or other big topic. Some of these might include the checks and balances, political parties, important governors and mayors, the role of citizens, or the rights of citizens. Students will generate and refine meaningful, powerful and potential essential questions as they read and collect more information about their sub-topic. To begin this questioning work, Students should be annotating the text, writing their initial thoughts, reactions and questions on Post-its. At this point the teacher should support students as they begin focusing on and revising their questions to become springboards into inquiry. Questions are at the base of developing a strong research practice. The art of posing and perusing questions as a research practice is definitely worth teaching. Suring the initial research process, students typically ask questions that are more 'foundational' questions. Then these become more developed 'consequence' questions.

As the teacher begins to notice some trends in the types of questions students are generating and finding answers to in their reading. The teacher will either set up students to collaborate with another group, sharing their best questions, looking for possible overlap or themes. Or the teacher may choose to model this for the class. Students then use these essential questions to guide their research, returning to their books, reading now to develop more knowledge. Students will then carry the essential questions in the forefront of their minds as they read and collect important information.

Teachers should teach students the powerful tool of signal words – *all, most, few, but*- these words almost always indicate important information for readers. As students do the collaborative work of this unit, they will stop and share often, processing the information they are collecting and learning about the essential question they are pursuing.

The conclusion of this task provides a good opportunity to reteach some of the skills students may need such as note-taking strategies, including boxes and bullets, tables and charts, time-line, and labeled drawing. It is also important to revisit how to use strategies or narrative and expository texts to read hybrid texts, and how to look across the page synthesizing all the information presented.

This task directly targets the following Common Core State Standards: RI.4.1,RI.4.3, RI.4.9, RI.4.10, RI.4.2, RI.4.4, RI.4.5, RI.4.7, RI.4.8, W.4.7, W.4.8, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d

Timeline: 8 days

Key vocabulary: compare, contrast, analyze, claim, argument, on-the-run-research, point of view, stance, perspective, research, skim and scan, *additional terms related to specific studies*

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Six Information Reading: Reading, Research, and Writing in the Content Areas
- Texts sets on various social studies topics

Significant task 3:Connecting the Past with the Present – Exploring Point of View and Perspective of Texts When Forming Ideas and Theories

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

The third bend, is an extension of the synthesis work from the previous bend. Students will compare different points of view that are represented in different texts, as well as those that are left out, in order to come to a much deeper understanding of the truth about a topic. The teacher will demonstrate how to ponder not just the information presented in multiple texts, but also the feeling that are instilled by the stories and images encountered. Students will compare each new test to ones they've already read. This type of analytical work, will fuel productive, meaningful conversations in research groups. Finally, students will make connections between the past and the present and note how ideas have changed or repeated over time. Students will be comparing and contrasting, writing and discussing similarities and differences between different time periods or groups of people. This work will help to prepare students for the final task.

This task directly targets the following Common Core State Standards: RI.4.1,RI.4.3, RI.4.6, RI.4.9, RI.4.10, RI.4.4, W.4.7, W.4.8, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d

Timeline: 5 days

Key vocabulary: compare, contrast, analyze, claim, argument, on-the-run-research, point of view, stance, perspective, research, skim and scan, *additional terms related to specific studies*

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Six Information Reading: Reading, Research, and Writing in the Content Areas
- Texts sets on various social studies topics

Significant task 4: Building and Presenting Knowledge to Others – Teaching Others with New Knowledge Gained

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

In the fourth and final bend, students will reflect, synthesize and teach the new information that they have learned and the ideas they now have. The content area writing unit that parallels this unit includes detailed plans and ideas for how students can use writing to reflect, synthesize and teach the new content being learned. The teacher may choose the option or options for students to demonstrate their learning.

Students may make nonfiction books. The teacher will teach writers how the information they present often seems neutral, and how the images and stories may implicitly create an angle on their subject. This is an opportunity for researchers to use everything they know about reading and writing, to stir up feelings as well as inform, as they share the pasts of history they find most compelling.

Another option is for students to share their new understandings through social studies projects such as acting out important scenes, narrating why a given moment is important in American history. Or perhaps students have a symposium where they present on the issues of the balance of power between the government and the people and how that balance affects us. Students could take a world-approach and use a film, picture books, and articles to compare Connecticut's government to another state government or the United Sates government

This task directly targets the following Common Core State Standards: RI.4.1,RI.4.3, RI.4.6, RI.4.9, RI.4.10, RI.4.2, RI.4.4, RI.4.8, W.4.7, W.4.8, SL.4.1, SL.4.1a, SL.4.1b, SL.4.1c, SL.4.1d, SL.4.4

Timeline: 5 days

Key vocabulary: compare, contrast, analyze, claim, argument, on-the-run-research, point of view, stance, perspective, research, skim and scan, *additional terms related to specific studies*

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Six Information Reading: Reading, Research, and Writing in the Content Areas
- Texts sets on various social studies topics

Common learning experiences:

- Interactive Read Aloud: During the interactive read aloud, in significant tasks one and two read aloud narratives of the topic, nonfiction texts, and perhaps some primary documents from The Library of Congress' website. Students will stop and jot as you read, and then at the end of the interactive read aloud experience, add to your learning tools. Students could add names, places, events, and so forth, to charts in the room. As you read aloud, model making connections between what you are studying and what you have previously studied as a class. You will want to emphasize how the new information you are collecting is adding to the knowledge you already had.
  In significant task three emphasize reading across related texts to compare information, perspective, and point of view. Help students notice that few texts take the side of say, communists, dictatorships, or minority groups, and encourage students to ask why. Show students how to find resources that help them find out the other side of the story. The most important part of this work is to model how to lead this type of curious reading life and care about finding out the whole truth.
- Throughout the unit, look at students' Post-its to serve as an assessment for you as you tailor your instruction to you class's specific needs. If you notice that students are copying down fact after fact, you'll probably want to spend more time teaching into the strategies in the unit on determining main idea and taking notes. If some children are having trouble using the domain language of the topic they are studying, you will probably want to work with them on using their word banks in conversations as well as revising some of their jottings to incorporate the technical vocabulary. Teachers should study the level of sophistication of students' notes. Also, see how your students use their Post-its and jottings when they get ready to talk to their research groups. If students are bringing Post-its to conversations that lead to dead ends, you may use "mentor post-its," or sophisticated Post-its crafted by you or other students, to show how some jotting can lead to rich discussions.
- When differentiating in conferences or small group instruction, consider using the following strategies to support students working at low, medium, and high levels.
  <u>Low:</u>
  Using graphic organizers to outline thinking
  Seeking answers to questions
  Sketching for understanding
  Using book introductions
  Using other media to support nonfiction understanding
  Building and using background knowledge
  Vocabulary building around words related to content as well as to the unit of study
  Supporting students in alternate ways to present newly learned information (sketching, dramatizing, constructing a model, creating a video, making a speech, etc.)
  Rereading texts to reinforce learning
  <u>Medium:</u>
  Using background knowledge to infer answers to questions
  Looking for inconsistencies between authors to gain a deeper understanding of author purpose
  Looking for missing perspectives and analyzing why those perspectives are missing Studying author's craft as a means of communicating perspective
  Using strategies to figure out unknown vocabulary
  <u>High:</u>
  Analyzing one's own perspectives to see how it influences understanding
  Using research to effectively dispute counter arguments
  Teaching others information using various media

Extending research beyond books available in the classroom

Common assessments including the end of unit summative assessment:

- Spring Reading Performance Assessment from TCRWP
  Please see attached documents: Assessment, Rubric, Student Text
- At minimum, a Teachers College Reading and Writing Project running record (TCRR) on each student's independent reading level should be completed in September and at least one additional time each term. Additional TCRRs can be done at any time.
- Anecdotal notes on reading behaviors, talk and writing
- Reading conferences following the research, compliment, teach sequence
- Analysis of post-it notes, reader's notebooks and partner conversations
- Analysis of reading logs

Teacher notes:

- As the expectations around grade four Social Studies from Windsor Public Schools become more defined, the topic studied may become more defined. For now please reference the CT Social Studies Curriculum Framework for standards and expectations related to grade 4.
- After significant task one is a good time to reinvigorate the classroom walls. Consider posting something like a concept map. Students could list a few important facts they learned. Publicly documenting knowledge is one way for students to revisit and retain it.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4 Reading

Name of the Unit: Unit 7 Social Issue Book Clubs	Length of the Unit: 5 weeks
Purpose of the Unit: This unit serves a few important purposes. It encourages students to shift from reading for plot to reading for ideas. Social issues book clubs nudge readers to read and revisit book, thinking about the ways in which books address themes and ideas. Then, too, social issues book clubs ask readers to think about ways books are similar and different. They allow teachers to use books they have on hand with great flexibility. Instruction is not tied to one genre. Reading volume increases as students get more and more curious, smarter and more passionate about the issues they are considering. Finally, social issues book clubs encourage students to see that reading can help us deal with the issues of our lives.	

Common Core State Standards Addressed in the unit:

RL.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RL.4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

RL.4.10 By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

RF.4.3 Know and apply grade-level phonics and word analysis skills in decoding words.

RF.4.4 Read with sufficient accuracy and fluency to support comprehension.

RF.4.4a Read grade-level text with purpose and understanding.

RF.4.4b Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.

RF.4.4c Use context to confirm or self-correct word recognition and understanding, rereading as

necessary.

SL.4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Big Ideas:	Essential Questions:
1. Reading can help people deal with the issues of their lives. 2. Individuals can make a difference in their own lives and in the lives of others. 3. Texts are about more than one idea and many ideas travel across texts. 4. Readers seek out a variety of sources to gain understanding of a topic or idea.	1. How are social issues depicted in texts? 2. What can you learn about life by studying the social issues in texts? 3. What can you do about social issues? 4. How do different texts deal with the same big ideas?
Students will know: 1. social issues are problems that apply to lots of people 2. examples of social issues 3. story elements 4. words to describe character feelings and actions 5. texts convey many big ideas	Students will be able to: 1. interpret characters feelings and actions to grow theories about texts 2. compare issues developed in different texts 3. synthesize elements across texts 4. identify social issues in their books and lives 5. engage in nonfiction sources to deepen understanding of social issues and their effects on individuals and the world 6. use story elements to synthesize social issues embedded within and among texts.

Significant task 1: Reading Can Teach Us About Issues That Exist in the World and in Our Lives

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

Significant task one begins with a return to favorite read aloud books to look for social issues that exist in them. These social issues are recorded on a class chart which will be added to throughout the unit. Students will look at these issues from their own perspectives, as well as the perspectives of the characters in the book, and other students in the club. The teacher will not only teach students to locate issues in their books, but also to learn to use this lens as a way to extend their reading and conversation. The teacher will direct students to crucial scenes, which the students will look at to analyze characters'

reactions, and the big ideas of the texts. Students will write a big idea about the book being read on an index card. This will then be used as a bookmark to remind students of the type of thinking that is helpful to do while reading. These index cards will be revisited in another lesson as students write down even bigger ideas that can travel through many books on the other side. A way to scaffold students to think critically about these abstract social issues is to ask them to think, write, and talk about gender race or class before you read a story that has one of these at the core of the book. Students will make connections between reading and writing work by comparing how authors treat social issues with the ways they treat them in their own writing. This task will conclude with students looking to nonfiction texts to learn more about the issues they are pondering.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.3, SL.4.1, RL.4.10, RF.4.3, RF.4.4, RF.4.4a, RF.4.4b, RF.4.4c

Timeline: 10 days

Key vocabulary: compare and contrast, analyze, lens, social issue, social justice, social action, stance, perspective, activism, Talking Back to the Text, empathy, culture, oppression, attentiveness, *additional terms related to studies of social issues*

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Seven Social Issue Book Clubs
- Texts sets involving various social issues

Significant task 2:Reading with a Lens and Talking Back to the Text

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

As students become adept at noticing social issues, they'll often become particularly interested in certain issues. The next step is to teach students to come to books with certain lenses, or concerns about issues. In order to delve more deeply into some of the issues students have more difficulty recognizing, students will write about the issues as they relate to their own lives, and how group identity shapes them. Students can also make webs, Venn diagrams, lists, or invent their own ways of depicting all the various groups to which they belong. This will help students realize that not only are the characters in their books members of different groups that might contend with particular kinds of issues, but they are members of groups as well.

At this point in the task, more work with nonfiction is brought in. Students look to nonfiction as a means of learning about groups and issues that they are unfamiliar with – and as a way to back the opinions they are beginning to develop in their clubs. Students will also read nonfiction with a lens, evaluating the issues depicted.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.3, SL.4.1, RL.4.10, RF.4.3, RF.4.4, RF.4.4a, RF.4.4b, RF.4.4c

Timeline: 5 days

Key vocabulary: compare and contrast, analyze, lens, social issue, social justice, social action, stance, perspective, activism, Talking Back to the Text, empathy, culture, oppression, attentiveness, *additional terms related to studies of social issues*

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Seven Social Issue Book Clubs
- Texts sets involving various social issues

Significant task 3: Bringing Our Lenses to Our World

Each day's lesson should follow the Reader's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, guided practice, and vocabulary instruction that takes about 15 minutes. This is followed by 45 minutes of independent reading (including writing either in the form of post-its or a written response to reading) and conferences/ small group instruction with a mid-workshop teaching point if needed, and is concluded with a 5 minute share.

At this point in the unit, students may move out of their text sets. The teacher should model practicing looking at anything being read by wondering about how hidden and subtle sources of power, race, class, gender, etc. operate in our culture. Reading across texts and genres, and looking at their own lives as backdrops to their reading work, will help young readers see that the issues their characters face have multiple perspectives and multiple causes, some of which are not what they seem. Students will return to their reader's notebooks and begin to use their writing to help think through their new ideas and concerns about the issues they've been studying across their books. Students may revisit thought prompts they learned earlier this year to stretch their thinking, such as, "this makes me think…", "on the other hand…", "this connects with…", "I used to think…but now I think…", or "some people think…but I think…"

Sometimes when students become involved in an issue, they forget to do much of the good thinking work they have been studying all year. This is a perfect time to bring back charts with various reading strategies from earlier in the year such as: ways to think more deeply about character, tips for synthesizing within and across nonfiction, strategies for understanding what a text is really about and reminders for how to keep one's reading volume up when when we are stopping more often to talk and write about our reading.

This unit will conclude with clubs creating mini social action projects as spin-off to the work they have done in class.

This task directly targets the following Common Core State Standards: RL.4.1, RL.4.3, SL.4.1, RL.4.10, RF.4.3, RF.4.4, RF.4.4a, RF.4.4b, RF.4.4c, SL.4.4

Timeline: 6 days

Key vocabulary: compare and contrast, analyze, lens, social issue, social justice, social action, stance, perspective, activism, Talking Back to the Text, empathy, culture, oppression, attentiveness, *additional*

terms related to studies of social issues

Resources:

- Teachers College Reading and Writing Project Reading Curricular Calendar, Fourth Grade Unit Seven Social Issue Book Clubs
- Texts sets involving various social issues

Common learning experiences:

- Interactive Read Aloud: Read texts that explore a variety of social issues. You may choose to use texts that explore similar issues to the texts being read by a group of students reading at a lower reading level. In significant task 2, model how you can use nonfiction sources to build a stronger understanding of issues with which you may be less familiar.

Common assessments including the end of unit summative assessment:

- At minimum, a Teachers College Reading and Writing Project running record (TCRR) on each student's independent reading level should be completed in September and at least one additional time each term. Additional TCRRs can be done at any time.
- Anecdotal notes on reading behaviors, talk and writing
- Reading conferences following the research, compliment, teach sequence
- Analysis of post-it notes, reader's notebooks and partner conversations
- Analysis of reading logs
- At the end of the unit, students will be asked to choose a social issue that they feel particularly close to, or that they feel strongly about changing. Students will become activists for this social issue, first writing an email, a letter , creating a poster or a public service announcement (which can be acted or recorded) identifying the social issue, whom it affects, and what (if anything) is currently being done about it. Students will have two sessions to develop this work and prepare to present. Teachers may then choose to have the class take action in one or more of these issues, incorporating a service-learning component.

Teacher notes:

- The unit on book clubs in Lucy Calkins's *The Art of Teaching Reading*, the chapter "Reading for Justice and Power: A Social Issues Book Club Unit" by Mary Coakley from *Constructing Curriculum: Alternate Units of Study from the Units of Study for Teaching Reading* and Randy and Katherine Bomer's *For A Better World: Reading and Writing for Social Action* are all texts in which lessons to support these lenses of understanding can be found.
- Some examples of social issues you may explore with your students are worry about fitting in, peer pressure, poverty, the fear that one's family is falling apart, homelessness, joblessness, bullying, as well as racial, social, and class issues.
- When you gather books for social issues text sets, in addition to the novels, picture books, and short stories, you should also have nonfiction texts dealing with a variety of social issues. Be sure you have multiple copies of texts. Do not label bins with a specific social issue. Leave the discovering to students.
- As the school year draws to a close. It is a great time to support students in moving up a level. Consider transitioning some of the books in students' book bags, provide text introductions and

same book partners. Support some of the new vocabulary that readers will encounter, get students excited, and help them to set summer reading goals.

- Since this unit is meant to be the capstone to a year's worth of reading work and learning you might choose to direct any desires for activism to reach in the summer months. One way you could this is to encourage students to think about the issues that became nearest and dearest to their hearts over the course of this unit and to then narrow down to one that they want to commit to learn more about, understand more deeply, and perhaps even take action around. Students can collect book lists for books to check out of the library, websites they can return to, etc. which will serves as their go-to materials when they are away from school. If you feel comfortable lending your books to your students over the summer, you might consider stuffing summer book baggies with texts connected to the social issue interests of each child. You might even consider having students create a social action proposal, where they record their plans for their summer reading as well as any action plans they might have.
- *Change the World for Ten Bucks*, and *101 Ways You Can Save the Planet Before You're 12* are a couple of text suggestions that are appropriate to use in significant task 3 to help students see that they have the power to affect change in their lives and in the lives of others.

Unit 1 - 2d grade writing Launcing Writer's Workshop

Unit 1 – 2nd grade writing (Launching) **Time: 4-5 weeks**	**Genre: Realistic Fiction** **Theme: Launching Writer's Workshop- Qualities (traits) of Good Writing**
Big Ideas	**Essential Questions**
• Writers collect little tiny details that they can later turn into stories. • Writers write about what they know. • Master authors write meaningful stories.	• What is Writer's Workshop? • What inspires writers to write? • How do authors find their ideas? • What are the qualities (traits) of good writing? • What kind of stories do master writers write?

Standards addressed in this unit:	**The students will know and be able to do: (Independently)**
1. Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure. (2.W.3) 2. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). (SL.2.1a)	• Authors write about the things that happen to them and those around them • All good writing shares similar qualities • Write meaningful stories. • Record a tiny event to develop as a story. • Use a variety of strategies to get ideas. • Plan their stories to include details and describe actions, thoughts and feelings. • Magnify a small moment.
Significant Tasks	

Significant Task # 1

Big Idea*:* Writers write about what they know.
Essential Question: How do authors find ideas? What inspires writers to write?

Students generate their own writing topics by recounting memories and experiences from their own life. In whole class discussion, students and teacher will create an anchor chart that lists reasons why writers write and what ideas inspire writers to write. Throughout this discussion students have multiple opportunities to turn and talk and discuss their thoughts related to the essential questions posed by the teacher. The students may begin to notice that much of what inspires authors to write comes from the heart. In a whole group discussion (most likely day 2) the teacher will model different ways writers record topics and ideas for writing. Students are exposed to multiple styles of writing using various strategies including, i.e. heart map*$_1$, pizza slices*$_1$, list, web, etc). Students generate and record their topic and ideas by choosing the recording style of their choice. When complete, students work in small groups and share their ideas with their peers and record in writer's notebook.

Timeline: 2-4 days
Resources: http://twowritingteachers.wordpress.com/category/heart-maps/ , Lucky Calkins; *Launching the Writing Workshop,* J. Wong; *You Have to Write* (mentor text) , H. Lester; *Author: A True Story* (mentor text)
Vocabulary: writer, author, idea, topic, inspire, recount, generate, record

*$_1$ See website listed in resources to view a visual image of what these two recording styles look like. *Note*: this work can also be done on large chart paper to make it more engaging to students and something they can revisit and add onto throughout the school year.

Significant Task # 2

Big Idea*:* Master authors write meaningful stories.
Essential Question: What kind of stories do master writers write? What are the qualities (traits) of good writing?

Students have previously been exposed to the first stage of the writing process along with the first writing trait, *ideas.* Following student exposure and practice around ideas, students will participate in whole class discussions about additional stages of the writing process and the 6 traits. Teachers will choose 1-2 traits to focus on during mini lessons. (i.e. organization and word choice in the drafting stage or organization and sentence fluency in the drafting stage)*$_2$. Students will listen to mentor texts shared by the teacher that model examples of these traits found in published children's text. As students participate in the drafting stage of their writing topics, they will engage in a student/teacher created class rubric that provides them with a shared understanding of what "good" writing looks like as seen through the traits. Students will use this rubric as a resource to independently assess their own writing in the drafting stage, assess writing of a peer or during a writing conference with the teacher. Students will use the common language of the traits described in the rubric to evaluate multiple examples of writing in whole group with the teacher, small groups guided by the teacher, partners and independently.

*$_2$ Teacher choice (considering your students as writers) as to what trait to teach during the drafting stage of the writing process.

Timeline: 5-10 days
Resources: Ruth Culham; *6 + 1 Traits of Writing,* Ruth Culham; *Getting Started with the Traits*, S.

Hampton, S. Murphy, M. Lowry; *Using Rubrics to Improve Student Writing,* Ruth Culham; *100 Trait-Specific Comments,* J. Nobisso; *Show, Don't Tell! Secrets of Writing* (mentor text), http://www.smekenseducation.com/Creating-KidFriendly-Rubrics.shell&print=1 (see appendix 1 for image), http://blogs.longwood.edu/483sp13/page/2/ (see appendix 2 for image)
Vocabulary: qualities (traits: *ideas, organization, voice, word choice, sentence fluency, conventions, presentation*)*$_1$, writing process (stages of writing: generating ideas, drafting, sharing, revising, editing, publishing), rubric

* The words qualities and traits should be used interchangeably when referring to the 6 traits.

Appendix 1 (This example shows all 6 traits, but in this significant task be sure your rubric only displays 1-2 traits. You can add traits as you move throughout the workshop).



Appendix 2

KID-FRIENDLY RUBRIC FOR 6-TRAITS

	1	3	5
IDEAS	•Few/No Details •Doesn't know much about topic	•Some details •Knows little about topic	•Lots of interesting details •Expert on the topic
ORGANIZATION	•Order does not make sense •Middle only	•Some ideas out of order •BM – no end	•Order makes sense – easy to follow •BME – all 3!
VOICE	•Reader is bored	•Some boring parts – some interesting parts	•Reader enjoyed the entire piece of writing
WORD CHOICE	•All R.I.P. words	•Some R.I.P. words and some "WOW" words	•Tons of "WOW" words
SENTENCE FLUENCY	•Little or no sentence variety in length	•Some sentence variety in length – but more needed	•Different types and lengths of sentences
CONVENTIONS	•Tons of mistakes	•Some mistakes	•Few or no mistakes

Common Learning Experiences

- Rituals and routines
- The writing process
- Generating ideas
- Inspired to write
- Various styles of writing
- Organization and word choice
- The remaining traits
- What is "good" writing

Common Assessments

1. My topics – Journal Entry
2. Personal Narrative

Resources

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Unit 2 – 2nd grade writing – The Reading/Writing Connection (Folktale) **Time: 4 weeks**	**Theme: The Reading and Writing Connection**
Big Ideas	**Essential Questions**
▪ Students will identify the reoccurring and persisting elements that make a story a folktale. ▪ Students will become critical readers of published work and will write with a purpose.	▪ What are the reoccurring elements of folktales? ▪ How does reading folktales help us write our own folktales? ▪ What key elements do writers revise and elaborate in their writing?
Standards addressed in this unit:	**The students will know and be able to do: (Independently)**
1. Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section. (2.W.2) 2. Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure. (2.W.3) 3. With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing. (2.W.5) 4. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. 2.W.6)	▪ There are many adaptations of the same folktale ▪ Read folktales closely for variations ▪ Folktales share common elements ▪ Revise and elaborate writing to create tension, convey meaning and consider possibilities ▪ Writers use many strategies to make their writing interesting ▪ Mimic the craft choices of the authors they admire ▪ Authors are inspired by each other ▪ Write narratives ▪ Recount a well-elaborated event or short sequence of events ▪ Include details to describe actions, thoughts, and feelings ▪ Use temporal words to signal event order ▪ Provide a sense of closure
Significant Tasks	
Significant Task # 1 ***Big Idea****:* Students will identify the reoccurring and persisting elements that make a story a folktale. ***Essential Question:*** What are the reoccurring elements of folktales? How does reading folktales help us write our own folktales? As students study the elements of a variety of folktales in Reader's Workshop, they will begin to see the strong connection between reading folktales and writing folktales. During teacher directed mini lessons, students will listen to multiple "How" folktales (*How the Leopard got his Spots*, *How the Bear Lost His Tail,* etc) and list the reoccurring elements found in these mentor texts. Students work in partnerships or independently to write their own "How" folktales. Students will use the stages of the writing process and the previously created 6 trait rubrics to aide in their writing. ***Timeline:*** 5-10 days ***Resources:*** A variety of folktale mentor text, class created 6 trait rubric ***Vocabulary:*** elements, characters, events, problem, beginning, middle, end, personification	

Significant Task # 2 (linked to significant task # 1)*

Big Idea*:* Students will identify the reoccurring and persisting elements that make a story a folktale.
Essential Question: What are key elements do writers revise and elaborate in their writing?

Timeline: 5-12 days
Resources: flip camera, i-pad, class created readers theatre rubric*$_3$
http://www.readwritethink.org/files/resources/printouts/30698_rubric.pdf,
http://lorijamison.com/blog/wp-content/uploads/2010/02/Rubric-for-Readers-Theatre.pdf
Vocabulary: cooperation, presentation, script, readers theatre, narrator, characters

Students vote on the top 1-4*$_1$ most entertaining "How" folktales created by their peers (students will consider the 6-trait model when voting). Students engage in whole group discussions and model lessons on how to transform a "How" folktale into a readers theatre script. Students will work with the teacher to create a readers theatre cooperation and presentation rubric to evaluate the qualities of a "good" play. Working in small groups with support from the classroom teacher students will create a readers theatre script using the events from the student created folktale. Small groups (or as a large group) students will act out the student created readers theatre. The readers theatre play will be recorded by the teacher using a flip camera, i-pod etc. to aide in the reflection and evaluation process of this task.*$_2$

*$_1$Teacher choice. Teacher can choose to do this as a whole group (voting on one folktale) or in small groups (voting on more than one folktale).

*$_2$ This task may not be feasible during this unit of study. Another option to fulfill this task is using it as an activity for tier 1 students during targeted learning.

*$_3$ See appendix 1 below to help scaffold discussion about the presentation part of the rubric. There are also two website listed in resources for ideas.

Appendix 1

Reader's Theatre Rubric

Name: _____ Date:_____

	Expression & Volume	Phrasing	Pace	Prosody
4	Uses expression and volume that is natural to conversational language and that varies with text	Groups words into meaningful phrases or chunks of text	Reads at an appropriate pace and responds to punctuation with appropriate pausing and intonation	Attends to the rhythm of language, reading comfortably and without hesitating or halting
3	Uses expression and volume that is natural to conversational language and that varies with text; sometimes hesitates when unsure	Sometimes groups words into meaningful phrases or chunks of text	Sometimes reads at a suitable pace and attends to most punctuation with appropriate pausing and intonation; stops reading when unsure	Sometimes stops or runs sentences together when challenged by words or sentence structure
2	Often speaks softly and in a monotone; pays little attention to expression or volume; focuses on getting through the text	Reads primarily in groups of two or three words	Reads slowly or too quickly; halts often; pays little attention to punctuation or pacing	Reads smoothly at times but most often reads slowly
1	Reads words in a monotone and quiet voice	Reads word-by-word without meaning	Reads words slowly in a string; does not pay attention to punctuation	Reads sounds stilted and unnatural and lacks meaning

Total Score: _____/16

Resources

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Teachers College Writing Curricular Calendar, Second Grade, 2011-2012, Unit 8
Teachers College Writing Curricular Calendar, Second Grade, 2010-2011, Unit 8

Common Learning Experiences

- What are the elements of folktales
- Writing a "How" folktale

Unit 3 – 2nd grade writing – Informational Writing **Time: 4-5 weeks**	**Genre: Nonfiction** **Theme: States of Matter**
Big Ideas	**Essential Questions**
• Scientists write to learn about the world around them • Scientists write about their experiments and the things they study • Scientists write about their questions and what they wonder about • Scientists write about what they think the answers to questions will be and then what they actually find out	• What do scientists write about? • Why do scientists write? • How do scientists write? • How do scientists use writing to teach others w they have learned?

Standards addressed in this unit:	**The students will know and be able to do: (Independently)**
1. Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., *because*, *and*, *also*) to connect opinion and reasons, and provide a concluding statement or section. 2.W.1 2. Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section. 2.W.2 3. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). 2.SL.1a 4. Build on others' talk in conversations by linking their comments to the remarks of others. 2.SL.1b 5. Ask for clarification and further explanation as needed about the topics and texts under discussion. 2.SL.1c 6. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. 2.SL.2 7. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. 2.SL.3	• learn that scientists, like writers, go through a proc • use mentor texts to help them write analytically as as study techniques the author used • conduct an experiment and write about their progr lab reports • use domain-specific vocabulary in their writing • write with clarity to explain and use reasons and evidence to support their ideas • integrate information from several texts on the san topic to write knowledgably

Significant Tasks
Significant Task # 1 ***Big Idea****:* Scientists write about what they study. Scientists write to learn about the world around them ***Essential Question:*** What do scientists write about? How do scientists use writing to teach others what they have learned? Working with partners, students will integrate their knowledge of nonfiction text features to create a poster describing a state of matter of their choice. Student partners will use headings, font, photographs, diagrams and labels etc. to

inform an audience about their chosen state of matter. (See appendix 1 as a visual to get started). Students will use a variety of resources to gather facts about their state of matter. Students will participate in collaborative behaviors when developing ideas of how they will present the layout of their poster to an audience.

Timeline: 5-10 days
Resources: grade 2 science binder
Vocabulary: nonfiction elements (features)*$_1$: captions, diagram labels, headings, types of font, pictures/photographs, text/page layout, definitions

*$_1$ Use the terms elements and features interchangeably with students

Significant Task #2

Big Idea*:* Scientists write about what they study. Scientists use writing to teach others what they have learned.
Essential Question: What do scientists write about? How do scientists write? How do scientists use writing to teach others what they have learned?

Students will participate in a science night. Students will invite an audience of parents, students, and teachers to participate in hands-on experiments that have previously been done in their science unit of study. Students will share the work they have done in their science notebooks including their lab reports, observations, findings, an states of matter posters they made with their partners in task # 1. Students will share answers to essential questions and any products they produced during this unit in both the reading and writing workshop.

Timeline: Throughout the unit (about 3 weeks)
Resources: grade 2 science binder, states of matter science curriculum, science notebook, leveled nonfiction books about the states of matter
Vocabulary: see significant task 1

Appendix 1 (just to give an idea of what this might look like but with more text features)



Resources

- See 2nd grade science binder

Unit 4 – 2nd grade writing **Time: December**	**Genre: Realistic Fiction**
Big Ideas	**Essential Questions**
▪ Writers select planning strategies from a repertoire of possible ways to plan. ▪ Writers draw on everything they know to write fiction stories ▪ Planning writing is important to success ▪ Writers use dialog to move their story and/or stretch out a meaningful scene.	▪ Where do writers get ideas from for realistic fiction? ▪ How do writers plan their story ideas? ▪ How do writers move their stories from one event to another? ▪ How do writers "story tell" rather than "summarize"? ▪ How do writers stretch out a meaningful scene?
Standards addressed in this unit:	**The students will know and be able to do: (Independently)**
1. Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure. 2.W.3 2. Recall information from experiences or gather information from provided sources to answer a question. 2.W.8 3. Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification. 2.SL.6 4. Use knowledge of language and its conventions when writing, speaking, reading, or listening. 2.L.3	▪ Collect story ideas ▪ Plan their writing by beginning with a storyline ▪ Develop a character or two within a story ▪ Revising is an on-going process ▪ Work in partnerships to revise. ▪ Use feedback for others to aid them with revision. ▪ Think and talk about what a character is like. ▪ Understand that the character wants something but encounters trouble along the way ▪ Revise for elaboration and add more information and/or more details
Significant Tasks	
Significant Task # 1 ***Big Idea(s)****:* Writers select planning strategies from a repertoire of possible ways to plan. Writers draw on everything they know to write fiction stories. Planning writing is important to success ***Essential Question:*** How do writers "story tell" rather than summarize? Students utilize skills from previous units to aid them in this task. Students will call upon their knowledge of generating ideas and organizing events in a story. Simultaneously students will be immersed in mentor texts that support the work they will be do in this writing workshop unit. Students will engage in whole group discussions with the teacher about how writers create characters. Students may enhance a character who is a lot like themselves. They can create a character that reminds them of someone they know. Students will then create a real life problem for this character. Students will work in partners to share their character(s) and problem with their peers. Student partners will then offer ideas that will support each other	

in the writing process. After collecting a variety of ideas, students will begin the drafting stage of their realistic fiction piece adding character traits, feelings and emotions that lead to the problem of the story. Students will confer with teacher and peers throughout this task and use the stages of writing as a process that leads them through to their published piece.

Timeline: 12 days
Vocabulary: characters, traits, feelings, emotion, events, problem, solution, storytell, summarize
Resources: character development lesson, reader's notebook

Significant Task # 2

Big Idea*:* Writers use dialog to move their story and/or stretch out a meaningful scene.
Essential Question: How do writers stretch out a meaningful scene?

With the support of teachers in the technology department students will use story weavers, storybird or another available applications to bring their published story from significant task 1 to life through technology. Classroom and technology teachers with work with students to create a simple scoring rubric that will be used at the end of this task to evaluate peer work. Students will have to incorporate both dialogue and detail as they stretch each event of their story into an animated storybook. Completed animated storybooks will then be presented to classroom peers. Students will receive a score from their peers and a score from their teacher.

Timeline: 12 days
Vocabulary***:*** characters, traits, feelings, emotion, events, problem, solution, storytell, summarize
Resources: story weavers, storybird, technology personnel

Common Learning Experiences

Common Assessments:

Teacher Notes:

Resources

Technology Resources:

- Students can use Inspiration to plan stories.
  Use Comic Life to generate a storyboard for a story.

Unit 5 – 2nd Grade writing Poetry **Time:**	**Genre: Poetry** **Theme:**
Big Ideas	**Essential Questions**
• Writers develop precise and descriptive language through the creation of poems. • Writers use certain words and techniques to create mood, tone and images. • Poets search for words that portray exactly how they feel and wish to say. • Poets write about meaningful topics.	• How do writers write with precision and description? • Why do poets use certain words and phrases, rhythm and meaning? • How do poets help to influence change our world?

Standards addressed in this unit:	**The students will know and be able to do: (Independent**

1. Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song. 2.RL.4
2. By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range. 2.RL.10
3. Read with sufficient accuracy and fluency to support comprehension. 2.RL.4
4. Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings. 2.RF.4b
5. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone. 2.R.4
6. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone. 2.R.4
7. With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing. 2.W.5
8. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. 2.W.5
	• Listen with attention and understanding to oral reading o stories, poems, and informational texts
	• Listen actively to others or talk about their writing to giv feedback
	• Actively participate in conversation; listening and lookin person who is speaking
	• Participate actively in small-group and whole class discussion
	• Listen attentively to the presentation of the teacher and fellow students to be able to identify the main idea
	• Listen to remember, and follow two-and three-step directions
	  • Ask and answers who, what, where, when and how questions.
	  • Answer literal and inferential questions about grade appropriate texts.
	  • Understand and interpret information presented in vi media
	  • Ask and answer yes/no and either/or questions.
	  • Ask and answers who, what, where, when and how questions.
	  • Ask questions for clarification.
	  • Use language from stories and informational text wh retelling stories or a topic
	  • Make a brief oral report that demonstrates knowledg the topic
	  • Recite some poems from memory
	  • Recite poems or stories with effective use of intonati and word stress to emphasize important ideas, engag listeners' interest, and show character traits

Significant Tasks

Significant Task 1
Big Idea: Poems communicate stories, images, feelings and ideas.
Essential Question: Why do authors write poems?
Each second grade class will study a different poet (teachers will meet to discuss which poet their class will be studying i.e. Jack Prelutsky, Shel Silverstein etc). Each class will read multiple poems by their chosen poet to find similarities and differences among the purposes of those poems and uses of figurative language. Students record figurative language and how it helps convey the ideas or images of the poem. Classes will share their findings with other grade level peers through whole class presentations and partnerships. Students consider who is talking in the poem and what message the poet is hoping to convey through that voice, or how the narrator or featured character is feeling, and how this is shown through the development of the poem and word and phrases including demonstrating understanding of figurative language. At the end of this task students will have a completed Venn diagram of the similarities and differences of their chosen author. Presentations will include readings of poems from the author and include a visual (i.e., power point, poster) introduce their author of study.
**Having children read poems while simultaneously writing them in writing workshop helps to make reading and writing connections more explicit.*

Timeline: 2-3 weeks
Resources: If You're Not Here, Please Raise Your Hand: Poems About School Kalli Dakos
Vocabulary: poetry, stanzas, lines, unique, alliteration, onomatopoeia, simile, metaphor, idiom, antonym, synonym, rhyming, verse, cinquain, acrostic

Significant Task 2
Big Idea: Deepen their reading comprehension strategies as they learn to navigate through poetry.
Poetry has distinct and unique features that distinguish it from other genres.
Essential Question: What makes poetry special as compared to other genres?

Students talk about how a poem looks and sounds to extract what it is mostly about. During the unit the students will work together with the classroom teacher to find and collect poetry that is accessible for them to read either individually or with a partner. Together you can look back at shared reading poems you did as a class, mentor texts you are using for your writing unit, and the many anthologies available. Students read and discuss what the poems are mostly about and create illustrations to depict their ideas using computer graphics, old magazines/texts, or hand drawn.

Timeline: 1 week
Resources: *Climb Inside a Poem*, Georgia Heard and Lester Laminack
Jeff Foxworthy
Significant Task 3
Big Idea: Readers will gain a feel for the rhythm and language of poetry
Essential Question: How do readers find their own poetic voice?
This unit aims to help children transfer their reading skills to the genre of poetry. Students can also consider a poem's meaning, working in pairs to think, "What is this poem really about?!" Students can get a feel for the sound and genre of poetry as they read, dramatize, sing and rap together.

Timeline: 1 week
Resources: *Explore Poetry*, Donald Graves
Awakening the Heart, Georgia Heard
Jack Prelutsky
Shel Silverstein

**During Writers' Workshop students should be working on creating or writing their own poems of figurative*

language of their choice (i.e., acrostic, cinquain, rhyming, free verse etc.)

Common Learning Experiences

- All students will be exposed to the following types of figurative language: similes, alliteration and onomatopoeia
- Understand poems can take a variety of shapes
- Understand poetry is a unique way to communicate about and describe feelings, images, ideas or stories

Common Assessments

CFA-Poetry Unit Assessment

Teacher Notes

- The size of your poetry collection will affect the amount of time children spend reading and discussing poetry during the workshop. We suggest that students spend the first half of reading workshop reading poetry with a partner. During the second half of the workshop, your students may spend the last twenty minutes of reading workshop reading their just right fiction and nonfiction texts in their book baggies deepen their skills of envisioning, monitoring for meaning, inferring, and synthesis using "Reading is Thinking" template.

Resources

Create math or science poems

- http://mathstory.com/

The Continuum of Literacy Learning Fountas & Pinnell
A Curricular Plan for the Reading Workshop, Grade 2
Summit Public Schools Second Grade Content Area

Unit 1 - 3rd Grade writing - Launching **Time: 4 weeks**	**Genre: Narrative Writing** **Theme: Launching Writer's Workshop**
Big Ideas	**Essential Questions**
• Writers write, share, discuss and revise their writing • Writers write about important people and events from their lives • Writers include important information	• What is a writing community? • What do writers write about? • What do writers include in their stories?

Standards addressed in this unit:	**The students will know and be able to do: (Independently)**
1. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. (3.W.1) a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally. b. Use dialogue and description of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations. c. Use temporal words and phrases to signal event order d. Provide a sense of closure. 2. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. 3. Use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others. (3.W.6)	▪ Rituals and routines of Writer's Workshop ▪ Utilize a writer's notebook ▪ Establish writing goals ▪ The writing process: pre-write, draft, revise, proofread, publish ▪ Generate ideas (6 traits of good writing) ▪ Write about people and places that are important ▪ Utilize a variety of strategies to support your writing ▪ Tell important parts of stories ▪ Narratives are like movies in our mind ▪ Tell narratives in a step-by-step fashion ▪ Understand the purpose of writing conferences ▪ Writers want the reader to feel what they felt ▪ Stretch out important parts of stories ▪ Narratives have a format of beginning, middle, and end ▪ Use the movie in your mind strategy to build stories ▪ Use a timeline to help tell stories ▪ Add important information and delete unimportant information ▪ Make independent choices about writing ▪ When to move on to a new piece ▪ Leads and endings are important ▪ Write effective leads and endings ▪ Study favorite authors for craft strategies ▪ Attempt the craft strategies of our favorite authors ▪ Select important pieces to revise ▪ when you need additional information ▪ Use a personal editing checklist

Significant Tasks

Significant Task 1- Rituals and Routines

Big Idea: Writers write, share, and discuss writing
Essential Question: What is a writing community?

Students participate in shared writing 2-3 times a week for the first couple of weeks to build student independence in workshop expectations. Students work with the teacher to create a classroom R.A.F.T about Writer's Workshop to creatively explore the essential question, *What is a writing community?* Students develop mini lessons and independent writing expectations, establish effective partnership criteria, determine where and how to keep works in progress, the writer's notebook set-up and additional expectations as differentiated by class need. Students begin independently selecting topics and modes for writing on day one and continue throughout the year

Students work with the classroom teacher to establish personal writing goals based on personal knowledge of writing preferences, strengths, and challenges. With a small group of 3 students a group R.A.F.T is created. Students write a reflective letter to

themselves in June explaining what they did to become the writer they see themselves as in June including how they fit into the classroom writing community. Students receive feedback based on the six traits of writing.

Timeline: 10 days
Vocabulary: ritual, routine, writer, goal, partner, letter, reflection
Resources: R.A.F.T teacher resource, rituals and routines "Must-Haves"

Significant Task 2 – Generate Ideas/6 Traits
Big Idea: Writers write about important events, people, and places
Essential Question: What do writers write about?

Begin task with direct instruction in how writers generate ideas. Read several mentor text and draw conclusions about where the authors got their ideas from. Follow this explicit instruction with a reminder that ideas are always one of the 6 traits of writing. Review the criteria or this trait.

Provide students with the strategy of listing the people or places that are important to them and using that to help generate story ideas. Through mini lesson instruction develop a class list of strategies writers use to develop stories based on mentor texts, independent reading and whole class discussions. Invite students to try various strategies during independent writing and to work with partners to share strategies to generate ideas for stories. Students create a My Writing Territories page in their writer's notebook. This is a place that can help them generate ideas for writing. This page is shared with and discussed with the teacher in a writing conference.

Timeline: 3 days
Vocabulary: ideas, generate, territory, trait
Resources: My Writing Territories, various brainstorming graphic organizers

Significant Task 3 – Storytelling with Peers (5 days)
Big Idea: Writers write about important events, people, and places
Essential Question: What do writers write about?

Through direct instruction inform students that in 3rd grade they will move beyond writing small moments to writing fictional and personal narratives. Inform students that the narrative is a more elaborated or detailed small moment or a collection of small moments that tell a story. Provide clear instruction in the format of a narrative including a beginning, middle, and end. Use mini lesson instruction to model telling stories in various ways to our peers. Make a connection between how readers retell stories that writers write. Inform students that in Writer's Workshop they are now the author – think like a storyteller.

The teacher explicitly models how to tell a story including the most important parts of the story. Utilize the strategy that narratives are like movies in our mind. Demonstrate for students through mini lesson instruction how to tell stories in a step-by-step fashion. Students practice telling stories to their peers and then selecting one story to actually write. Enhance student writing with instruction in stretching out important parts and using description to make the reader feel what you feel. Invite students to think about what they were thinking, feeling, and seeing in the moment of the story. Classroom teachers examine graphic organizer that illustrates sequence of events.

Timeline: 5 days
Vocabulary: storyteller, moment, narrative, stretch
Resources: narrative graphic organizers

Significant Task 4 – Narrative Writing
Big Idea: Writers include important information
Essential Question: What do writers include in their stories?

Use mini lesson instruction to remind students that narratives have a beginning, middle and end. Provide students with the additional strategy of using a timeline to tell the story. Develop a whole class timeline. Use this timeline to build and develop student story telling abilities with strategies for how to include or delete information from the story. Develop a class criteria chart for how writers decide what to scrap and what to keep. Students use partners to help determine important versus less important parts of their stories during independent writing with the help of the criteria chart. Build student understanding that both the lead and ending of a story are important. Study mentor texts during read aloud noting the way in which the author has began and ended their story in particular.

Teach students through mini lesson instruction to use their independent reading time to study their favorite authors and try some of the craft strategies they use. Assess student success through conferences to determine if students are experiencing success with strategic writing work. Students produce a published narrative. Assessment can occur anywhere in the writing process.

Timeline: 5-10 days
Vocabulary: timeline, scrap, editor, craft
Resources:

Common Learning Experiences:

- Rituals and routines of Writer's Workshop
- Using a RAFT
- Establishing personal writing goals
- Setting up your notebook
- Reflective letter
- Generating ideas

Common assessments:

- What is a writing community?
- RAFT
- My Writing Territories
- Graphic Organizer - Sequence

Teacher Notes:

Grade: 3 – Unit 2 writing adventure **Time: 3-4 weeks**	**Genre: Adventure** **Realistic Fiction**
Big Ideas	**Essential Questions**
▪ Writers write about exciting and unusual events ▪ Narratives have beginnings, middle parts, and endings ▪ Writers revise their writing	▪ What do writers write about? ▪ What is the narrative structure? ▪ How do writers make their writing better?

Standards addressed in this unit:	**The students will know and be able to do:**
1. Write narratives to develop real or imagined experiences or events using effective technique, well chosen details, and well-structured event sequences. (3.W.3)	▪ generate many ideas ▪ begin planning a personal narrative ▪ write a personal narrative
2. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (3.W.4)	▪ write a clear beginning, middle part and end of a narrative ▪ use sentence variety ▪ use the 6+1 trait rubric to self-assess writing
3. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. (3.W.10)	▪ include details and descriptive words using the 5 senses
4. Demonstrate command of the convention of standard English capitalization, punctuation, and spelling when writing. (3.L.2)	▪ use conventions of writing focusing on capitalization of proper nouns, ending punctuation marks and correct spelling of grade 3 high frequency words
5. Develop and strengthen writing as needed by planning, revising, and editing.	▪ use peer and teacher conference skills ▪ use 6+1 trait rubric to self-assess writing

Significant Tasks

Significant Task 1 – The Adventure
Big Idea: Writers write about exciting and unusual events
Essential Question: What do writers write about?

During interactive reads aloud/writer's workshop the teacher reads a chapter or several short chapters from chosen mentor texts focusing on one with many adventures (see mentor text suggestions). Teachers use mentor texts to notice the experiences of the characters. Model examining how the author has written about the adventure. Work with the whole class on defining an adventure as an exciting or unusual experience. Record the various strategies used in the mentor texts.

During share writing model writing about a personal experience (snapshot). Daily students practice writing snapshots of unusual or exciting experiences to create adventurous stories. Students may use adventures from their own lives or from those they know really well about others. Student writing focuses on the characters and their experiences. Model for students how to use the 6+1 Trait scoring rubric to self-assess that snapshot for ideas. Ask the question, *Is this an adventure?*

Introduce three additional traits: sentence fluency, word choice and voice. Use multiple mentor texts to demonstrate how authors write sentences and use words precisely. Daily students practice re-writing and revising works in progress for the newly introduced traits. Student assessment can occur on a student-selected piece of "best work" for those things being taught including the idea, sentence fluency, word choice, and voice.

Timeline: 7-10 days
Vocabulary: sentence fluency, voice, unusual, adventure, snapshot
Resources: writer's notebook

Significant Task 2 – Personal Narrative format
Big Idea: Narratives have beginnings, middle parts, and endings
Essential Question: What is the narrative structure?

Review with students the personal narrative format with an emphasis on adventure stories. Adventure stories highlight the experiences of the characters. Teachers provide students with the knowledge that all narratives have beginnings, middle parts, and endings. Refrain from teaching this structure sequentially. Remember students have a great deal of practice writing "middles" (small moments/snapshots). Model how writers think about what happened before their exciting event and then what happened after. Read aloud several mentor texts highlighting the strategies writers use to begin stories. Create a criteria chart with examples of how their favorite authors begin their stories. Repeat a similar process with endings. Teach the writers to ask the question so what happens after the adventurous event or series of small exciting, unusual events. Invite students to re-write multiple beginnings and endings to narratives they are working on. Remind them to try the strategies used by their favorite authors and the author they are reading independently. Students work in partnerships to enhance beginnings middle parts and endings.

Timeline: 3-5 days
Vocabulary: beginning, middle, ending, structure, familiar
Resources: writer's notebook, graphic organizer

Significant Task 3 – Revision (Sentence fluency & word choice)
Big Idea: Writers revise their writing
Essential Question: How do writers make their writing better?

To produce a final narrative the most important part of the writing process is revision. Over a couple of days model revising a piece of class writing for sentence fluency and word choice. Use a series of direct and explicit instruction followed with immediate opportunities to practice on independent work. Utilize writing partners as a source of feedback. Students revise based on feedback given:

Timeline: 3-5 days
Vocabulary: revision, feedback

Unit Assessment: Personal Narrative
Common Learning Experiences: ▪ defining adventure ▪ noticing characters and their experiences ▪ noticing the author's craft – how'd they tell the story? ▪ Snapshots of adventures ▪ Choose your adventure – know your story well ▪ The narrative format ▪ Re-writing beginnings and endings ▪ The writing process
Common Assessments: ▪ Is this an adventure? ▪ Revising an adventure – a rewritten (beginning or ending) ▪ **Personal Narrative – published piece**

Unit 3 - 3rd grade writing informational writing

Grade: 3 **Time: January (3-4 weeks)**	**Genre: Informational Writing** **Theme: Rocks and Minerals**
Big Ideas	**Essential Questions**
▪ Writers represent information in multiple formats. ▪ Writers do research to learn.	▪ How do writers represent information? ▪ Why do writers research?

Standards addressed in this unit:	**The students will know and be able to do:**
6. Gather information from print and digital sources, take brief notes on sources and sort evidence into provided categories. (3.W.8)	▪ Writers use all of their resources ▪ Utilize information from observations and experiments. ▪ Gather information from print and digital resources ▪ Take Cornell notes from print and digital sources
7. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. (3.W.2)	▪ Informative writing uses heading and topics to organize information ▪ Explain properties of objects using descriptive vocabulary ▪ Explain sequence of events and cause and effect for complex ideas and information ▪ Use compare and contrast as organizational structure
8. Write opinion pieces on topics or texts, supporting a point of view with reasons. (3.W.1)	▪ Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons. ▪ Provide reasons that support the opinion. ▪ Use linking words and phrases (e.g., *because*, *therefore*, *since*, *for example*) to connect opinion and reasons. ▪ Provide a concluding statement or section.
9. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	▪ Create a visual and written representation of an object ▪ Self-assess using the 6+1 Trait rubric with a focus on ideas, organization, word choice, and conventions

Significant Tasks
Significant Task 1 – Rocks and Minerals E Book (10 days) Big Idea: Writers do research to learn Essential Question: Why do writers do research? As a whole class review the elements of nonfiction and decide on which are to be included in the class E-book about Rocks and Minerals. The class will write one section together then in partnerships, the class will divide the remaining sections to be put together in a whole book at the end. The class creates a list of text features (previously taught only review) and then decides on which would be most appropriate for the purpose of their E-book including a table of contents, heading, glossary, etc. Teacher will guide students through each element of the process creating independent

and partner work expectations for each component. Elements teachers model and guide students through include, writers create a plan based on resources, strategies to read nonfiction, and observations and experiments to build knowledge for written information. Model specifically how writers review, discuss, and think about information to develop personal understanding (this helps avoid plagiarism). Model using subject appropriate vocabulary in writing and speaking. As a whole class create the first chapter of the E-book. Students work with partners to create a section of E-book for whole class based on established criteria.

Timeline: 10 days
Vocabulary: text features, e-book, descriptive
Resources, e-book template, text features review

Significant Task 2 – Informational/Explanatory & Opinion Writing (10 days)
Big Idea: Writers represent information in multiple ways
Essential Question: How do writers represent information?

Based on content and background knowledge being developed in reading regarding technology's role in energy resources, students write multiple informational/explanatory and opinion paragraphs to demonstrate the understanding of and complex thought about the material taught. What novel ideas do they think about and are now inspired to write about? Students develop conclusions and explain various ideas regarding technology and energy in their writer's notebook.

Teachers use whole class instruction to demonstrate the commonality of informative/explanatory paragraphs. In turn and talk opportunities allow students multiple oral learning experiences to develop opinions, ideas, and conclusions and support them with facts/information previously learned. Use the box and bullets strategy to help reinforce/practice skill of building and supporting opinions. Review previously taught six trait work in sentence fluency, word choice and voice. To assess student writing students write one explanatory and one informational paragraph about the same topic learned about in science.

Timeline: 10 days
Vocabulary: conclusion,, reason, opinion, cause and effect, description, main idea and details
Resources: box and bullets resource, 6+1 trait rubric

Common Learning Experiences

- Elements of nonfiction
- Writing a chapter of explanatory/information paragraphs
- Using all the information you know
- Organizing ideas

Common Assessments:

1. E-book section
2. Informative vs. Explanatory (How-To)

Unit 3 - 3rd grade writing informational writing

Grade: 3 **Time: January (3-4 weeks)**	**Genre: Informational Writing** **Theme: Rocks and Minerals**
Big Ideas	**Essential Questions**
▪ Writers represent information in multiple formats. ▪ Writers do research to learn.	▪ How do writers represent information? ▪ Why do writers research?

Standards addressed in this unit:	**The students will know and be able to do:**
10. Gather information from print and digital sources, take brief notes on sources and sort evidence into provided categories. (3.W.8)	▪ Writers use all of their resources ▪ Utilize information from observations and experiments. ▪ Gather information from print and digital resources ▪ Take Cornell notes from print and digital sources
11. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. (3.W.2)	▪ Informative writing uses heading and topics to organize information ▪ Explain properties of objects using descriptive vocabulary ▪ Explain sequence of events and cause and effect for complex ideas and information ▪ Use compare and contrast as organizational structure
12. Write opinion pieces on topics or texts, supporting a point of view with reasons. (3.W.1)	▪ Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons. ▪ Provide reasons that support the opinion. ▪ Use linking words and phrases (e.g., *because*, *therefore*, *since*, *for example*) to connect opinion and reasons. ▪ Provide a concluding statement or section.
13. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	▪ Create a visual and written representation of an object ▪ Self-assess using the 6+1 Trait rubric with a focus on ideas, organization, word choice, and conventions

Significant Tasks
Significant Task 1 – Rocks and Minerals E Book (10 days) Big Idea: Writers do research to learn Essential Question: Why do writers do research? As a whole class review the elements of nonfiction and decide on which are to be included in the class E-book about Rocks and Minerals. The class will write one section together then in partnerships, the class will divide the remaining sections to be put together in a whole book at the end. The class creates a list of text features (previously taught only review) and then decides on which would be most appropriate for the purpose of their E-book including a table of

contents, heading, glossary, etc. Teacher will guide students through each element of the process creating independent and partner work expectations for each component. Elements teachers model and guide students through include, writers create a plan based on resources, strategies to read nonfiction, and observations and experiments to build knowledge for written information. Model specifically how writers review, discuss, and think about information to develop personal understanding (this helps avoid plagiarism). Model using subject appropriate vocabulary in writing and speaking. As a whole class create the first chapter of the E-book. Students work with partners to create a section of E-book for whole class based on established criteria.

Timeline: 10 days
Vocabulary: text features, e-book, descriptive
Resources, e-book template, text features review

Significant Task 2 – Informational/Explanatory & Opinion Writing (10 days)
Big Idea: Writers represent information in multiple ways
Essential Question: How do writers represent information?

Based on content and background knowledge being developed in reading regarding technology's role in energy resources, students write multiple informational/explanatory and opinion paragraphs to demonstrate the understanding of and complex thought about the material taught. What novel ideas do they think about and are now inspired to write about? Students develop conclusions and explain various ideas regarding technology and energy in their writer's notebook.

Teachers use whole class instruction to demonstrate the commonality of informative/explanatory paragraphs. In turn and talk opportunities allow students multiple oral learning experiences to develop opinions, ideas, and conclusions and support them with facts/information previously learned. Use the box and bullets strategy to help reinforce/practice skill of building and supporting opinions. Review previously taught six trait work in sentence fluency, word choice and voice. To assess student writing students write one explanatory and one informational paragraph about the same topic learned about in science.

Timeline: 10 days
Vocabulary: conclusion,, reason, opinion, cause and effect, description, main idea and details
Resources: box and bullets resource, 6+1 trait rubric

Common Learning Experiences

- Elements of nonfiction
- Writing a chapter of explanatory/information paragraphs
- Using all the information you know
- Organizing ideas

Common Assessments:

3. E-book section
4. Informative vs. Explanatory (How-To)

Grade: 3 Unit 5 Time: 5 weeks	Genre: Science/Non-Fiction Theme: Explain a Process, How-To, Interview
Big Ideas	**Essential Questions**
▪ Writers write about what they know	▪ How is information shared?

Standards addressed in this unit:	The students will know and be able to do:
14. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.	▪ Difference and similarities of process, how-to, and interview pieces ▪ Informational pieces share qualities ▪ Writers use what they know about one mode to write in another mode ▪ Introduce a topic clearly ▪ Group related information together ▪ Develop an explanation with facts and details ▪ Use linking words and phrases to connect reasons and steps/ideas/question ▪ Provide a concluding statement ▪ Explain a process using charts, graphs, illustrations, technology etc. (when appropriate)
15. Conduct short research projects to build knowledge. (3.W.7)	▪ Writers start with a plan ▪ All resources are not equal ▪ Develop a plan to answer research question ▪ Identify resources ▪ Collect and gather materials
16. Recall information from experiences or gather information from print and digital sources, take brief notes on sources and sort evidence into provided categories. (3.W.8)	▪ Writers compile everything they know ▪ Utilize information from observations, experiments, print and digital sources ▪ Take notes from sources ▪ Sort evidence and provide categories
17. Develop and strengthen writing as needed by planning, revising, and editing. (3.W.5)	▪ Complete visual organizers for sequence of events and cause and effect relationships ▪ Turn notes into ideas and explanations

Significant Tasks

Significant Task 1 – Explain a Process
Big Idea: Writers share what they learn and already know
Essential Question: How is information shared?

Students use knowledge developed and additional resources to explain the process of water changing from a solid, liquid to a gas. Teacher models writing a process as an example of how a writer must consider the audience, determine background knowledge needed, select and organize information, and begin to explain the process using important information gathered from notes, linking words and other grade-level vocabulary appropriate to the content. Students produce a paragraph that explains the process of water changing from a solid to a gas. A visual poster that illustrates the process is also included to support the writing.

Timeline: 5-7 days
Vocabulary: process, solid, liquid, gas, illustrate
Resources: science binder, BrainPop,

Significant Task 2 – How-To Pieces
Big Idea: Writers share what they learn and already know
Essential Question: How is information shared?

The teacher models for students how writers sometimes explain processes and other times they describe how to do something. Through guided practice the class writes a class how-to piece about which something they feel they are experts. The teacher emphasizes the tone and key details necessary for how-to pieces which is different than the tone of a process piece. Additional similarities and difference in format and structure should also be highlighted. Students work in partnerships to become experts on a topic of their choice. Students conduct a short research project and present new information to the class.

Timeline: 5-7 days
Vocabulary: how-to, expert, facts, practice, informal
Resources: writer's notebook, how-to criteria chart, comparison graphic organizers

Significant Task 3 – Interview
Big Idea: Writers share what they learn and already know
Essential Question: How is information shared?

Through guided exploration the students examine various interviews to become familiar with the format and structure. Students explore how interviews are arranged by subject/topic. Students practice writing interview questions and regularly practice interviewing each other in class. Students select someone in their life who they would like to interview. They write 10 interview questions and interview their subject. Final interviews are videotaped and shared with a small group of students. Students use class developed criteria to assess student videos.

Timeline: 5-7 days
Vocabulary: interview, question, response, open-ended, subject/topic
Resources: video capability, interview criteria

Common Learning Experiences

- What is a process
- Explaining a process
- Fiction versus nonfiction writing
- Explaining a process versus How-To
- Conducting interview
- Qualities of a well written interview
- Interview questions – the good mix

Common Assessments:

1. Water Process Poster
2. Short Research – My Expertise
3. Interview – Important Person

Teacher Notes:

Grade: 3 Time: December (2-3 weeks)	Genre: Biography Theme: Author Study (Teacher's Choice)
Big Ideas	**Essential Questions**
▪ Writers are influenced by their lives. ▪ Writers do research to learn. ▪ Writers represent information using technology. ▪ Writers emulate others writers	▪ How do our lives influence what we write? ▪ Why do writers research? ▪ How do writers use technology to represent information? ▪ How do writers develop their craft?

Standards addressed in this unit:	The students will know and be able to do:
18. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation. (3.W.7)	A. Writers research before writing B. Create a plan for research C. Conduct internet research on given subject
19. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism. (3.W.8)	A. All resources are not equal B. Decide on appropriate resources C. Background knowledge and experience are resources D. Take Cornell notes from a digital source
20. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. (3.W.2)	A. Organize information logically B. Review and analyze information to develop personal understanding and conclusions C. Create a PowerPoint slide representing understandings of the topic researched
21. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience .(3.W.4)	**A.** Use conventions of writing, focusing on proper capitalization of proper nouns, ending punctuation marks, use of commas in a date and a series of information, and continue use of sentence variety **B.** Self-assess using the 6+1 Trait rubric focusing on ideas, organization, word choice, conventions, sentence fluency and presentation
22. Report on a topic or text, tell a story or recount an experience with appropriate facts and relevant descriptive details speaking clearly at an understandable pace. (3.SL.4)	A. Present information and supporting evidence in a style that is appropriate to task, audience and purpose.

Assured Learning Experiences

- Teacher provides a list of authors students are familiar with, as well as a note-taking template for a biographical sketch
- Teacher models one PowerPoint slide
- Library media help with internet research
- Cornell note-taking template should be provided for teachers

Significant task 1

Big Idea: Writers are influenced by and write about experiences in their own lives.

Essential Question: What do writers write about?

Students take Cornell notes from video clips of author Patricia Polacco as she talks about her life and her writing. Students begin to make connections between Patricia's life experiences and the stories Patricia writes. They then look through their writing journals and see how their own lives influence their writing. Students listen to a book by Patricia Polacco, turn and talk about how an incident in the book may have happened to Ms. Polacco in her life.

Students use many resources available to learn all about Patricia Polacco: internet sites, videos, biographies, magazine articles and the author's books.

Product/Assessment: Students will complete a T chart with Patricia Polacco's life experiences on the left and resulting book on the right, then begin a similar chart with their own lives.
Vocabulary: biography, autobiography,

Significant Task 2
Big Idea: Writers do research to learn
Essential Question: Why do writers conduct research?

Students use various sources of information to research and learn about an author of their choice. Students will assess the credibility and accuracy of each source. This work is completed with the support of the Library Media Specialist. They are looking for experiences/obstacles the author had or needed to overcome which may have influenced their writing along with facts about the author's life. This influence may come across in the author's message, lesson or moral. Students record this biographical information on a note-taking template.

Product: Cornell note-taking template
Vocabulary: obstacles, influence, narrative non-fiction

Significant Task 3
Big Idea: Writers use Power Point slides to represent their understanding of a given topic
Essential Question: How do writers use technology to represent information?

Students attend lessons with the Library Media Specialist on how to present relevant information on a PowerPoint slide. Students will become knowledgeable about and able to use the following features: background color, importing pictures/illustrations, headings, font size and color, hyperlinks, transitions from one slide to the next, special effects, sound effects. Another aspect of this task is for students to then present the created slide to their classmates.

Product: One PowerPoint slide representing biographical information on a chosen author
Vocabulary:

Common Learning Experiences

Common Assessments

- PowerPoint presentation with factual information on chosen author

Teacher Notes:

- Video interviews of authors: www.
- readingrockets.com
- Cornell Notes organizer
- Author Study Assessment Description/Rubric
- Chicken Sunday

- Mrs. Katz and Tush
- The Butterfly
- Thank you, Mr. Falker
- Lincoln
- Various texts on children's authors
- www.brainpop.com

4th grade writing CCSS

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4

Purpose of the Course: 4th grade writing expands on the skills and strategies as writers students have developed across all writing modes. Students begin to develop a more comprehensive understanding of themselves as writers and develop in more sophisticated ways including narrative, informative/explanatory, short-research projects and opinion/persuasive writing.

Name of the Unit: Unit 1 Personal Narrative	Length of the unit: 4 weeks

Purpose of the Unit: This unit is an opportunity to further develop students' abilities as narrative writers and to teach students the qualities, processes and skills of effective writing. Students are required to be able to write narratives that demonstrate students' abilities to story tell on the page using effective narrative technique and clear sequencing. Strong narrative writing also serves a platform for strong opinion and information writing; students will benefit from being able to craft concise, well-told anecdotes to illustrate a topic or a claim. In addition to continuing to teach students how to use narrative writing and encourage them to build upon the foundational skills previously developed in third grade.

Common Core State Standards Addressed in the unit:

W.4.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

W. 4.3a Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.

W.4.3b Use dialogue and description to develop experiences and events or show the responses of characters to situations.

W. 4.3c Use a variety of transitional words and phrases to manage the sequence of events.

W.4.3d Use concrete words and phrases and sensory details to convey experiences and events precisely.

W.4.3e Provide a conclusion that follows from the narrated experiences or events.

W.4.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising and editing.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on other's ideas and expressing their own clearly.

Big Ideas:	Essential Questions:

1. Authors write with detail and focus. 2. Good writing shows rather than tells. 3. Writers focus not only on narrative technique but also on pacing. 4. Writers revise and edit their work. They improve on and strengthen drafts by cycling through the writing process more than once.	1. How can you write long and strong using previously learned writing strategies? 2. How can you show and not just tell about events in their stories? 3. How can you rehearse for and draft your story in multiple ways? 4. How can planning, editing and revising help to improve your writing?
Students will know: 1. descriptive details enhance writing 2. clear sequencing is important in narrative writing 3. transitional words 4. conclusions are important in narrative writing 5. writers cycle through the writing process more than once	Students will be able to: 1. write narratives using descriptive details 2. use clear sequencing of events in narrative writing 3. use transitional words and phrases 4. write a conclusion related to the narrated events 5. improve drafts using the editing and revising process

Significant task 1: Generating Narrative Writing

As part of significant task one Writer's Notebooks should be immediately established. Support students in transferring past experiences with the notebooks to their current work in fourth grade.

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

In significant task one, students are introduced to the goal that they will be creating powerful writing. Students will notice what the author did, and use some of the same moves to make their writing powerful. Students come up with ideas for personal narrative stories by transferring strategies from the previous year. As a class, a chart is created titled. "Strategies for Generating Narrative Writing."

The goal is to raise the level of work that students will do with those strategies, so the ideas on the chart should not be single words such as people and places but rather they need to be *procedures*. Students will not just list words. For example a student could write down the name of a person they care about, then brainstorm several times they were with them.

Students can also generate ideas by thinking of turning points, moments when they learned something important. Another strategy is to think of a strong emotion and think, "When, specifically, did I feel that emotion?" We can sometimes generate ideas by thinking about major issues in our lives such as bullying, family pressure, or fitting in at school.

Students will be expected to produce more than one entry per workshop. The students will use a procedure to generate an idea for writing, write the story and return to the original brainstorming list and repeat the process.

In order to lift the level of writing the students collect they need to be reminded of the essentials of narrative writing; action, incorporating dialogue, using descriptive details, and storytelling rather than summarizing. Students can look at a benchmark example of narrative writing and study it as they would a published author's. Students should read the sample closely annotating the qualities of good narrative writing and ask "What did that writer do that I can also do?"

This task directly targets the following Common Core State Standards:
W4.3, W4.3d, W.4.5

Timeline: 6-7days

Key vocabulary: narrative, significance, strategies, repertoire, turning point, annotate

Resources:

- Writer's Notebooks (will be introduced in Significant task 1 and everyday thereafter)
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit One – Raising the Level Of Personal Narrative Writing
- Units of Study for Teaching Writing, Grades 3-5, RWP

Significant task 2: Selecting a Seed Idea, planning and drafting

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will reread the entries generated in significant task one and choose one to develop (seed idea).

Students will learn about story structure by reading texts other authors have written and studying those structures. Then students will try a few different ways to plan their stories. While choosing the structures students should ask themselves, "What is it I really want my reader to know and feel?"

Students will notice that in writing both external events and internal feelings need to evolve. When authors write a story it is in a sequence, along with that there needs to be a parallel sequence of reactions and emotions-the thoughts and feelings of the main character.

Story telling can be one way to rehearse for writing. Students plan a story with a beginning, middle and end. Students will understand that storytellers stretch out the good parts, trying to be sure to really capture the attention of the listener. They will share their story with a partner or small group to rehearse the story.

Students will practice other ways to rehearse for a story such as drafting multiple leads. Students will apply knowledge about writing strong leads (dialogue, small action, conveys setting.)
After revising outlines for the sequence, writing various leads and telling the story a few times students will be ready to write the first draft of the story. Students will make a movie in their head and quickly write it down. The writer should feel as though he/she is reliving the event, quickly drafting the story in one sitting.

This task directly targets the following Common Core State Standards:
W.4.3, W.4.3a, W.4.3b, W.4.3c, W.4.3d, W.4.3e W.4.5, SL.4.1

Timeline: 6-7 days

Key vocabulary: structure, internal emotions, external events, rehearsal, storytelling, lead, draft, storytelling

Resources:

- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit One – Raising the Level Of Personal Narrative Writing
- Units of Study for Teaching Writing, Grades 3-5, RWP

Significant task 4: Revising Drafts

Students will get ideas on how to revise their drafts by studying the work of other authors. While looking at stories they will ask themselves; “What do I like that this author has done?” and “How could I use a similar technique in my own writing?”

When students read their drafts they need to take a step back and ask; “How else can I bring meaning to the reader?” “Is this everything that I wanted to say?” Students should also make sure the situation is clear to the reader, and if the reader understands what is happening and why it is important.

Rather than only focusing on what can be change in their piece students will also look for potential that can be developed. They will identify the section that works well and that really matters. This is the section that should be the heart of the story, where the reader really pulls in. After identifying this part students should develop it further.

Students will learn how to use the conventions section of the 6+1 Rubric to assist in revisions. They will reread the draft with one item from the rubric as the focus for revision. Students will have to repeat this for other areas of checklist.

This task directly targets the following Common Core State Standards:
W. 4.3a, W.4.5

Timeline: 7-8 days

Key vocabulary: revise, develop, rubric, edit

Resources:

- RWP's Raising the Quality of Personal Narrative Writing, Seeing Possibilities (DVD)
- Units of Study for Teaching Writing, Grades 3-5, RWP

Common learning experiences:

- Possible texts to use as examples of focused narratives:
  - *Fireflies* by Julie Brinckloe
  - "Eating the World" or "Statue" from the memoir *Marshfield Dreams* by Ralph Fletcher
  - "Mr. Entwhistle" from *Hey World Here I am* by Jean Little
  - *Those Shoes* by Maribeth Boelts
  - "Everything Will be Okay" by James Howe from the book *When I was your Age: Original Stories About Growing Up*
  - "Eleven" from *Woman Hollering Creek and other Stories* by Sandra Cisneros (a good example of the parallel of external events and internal emotions)
- At the conclusion of the unit publish children's work. Some possible options for publishing: place finished pieces out on tables with a blank piece of paper next to it. Allow students to work around the room offering positive comments about each piece. Post narratives on bulletin boards or in hallways, create a class anthology. Work with your class to find other ways to publish and share the work.
- Introduce the 6+1 Traits Rubric. This rubric will be used as a tool for editing and revising of drafts. Use sections of the rubric as a lens while reading over the draft.
- Writers can study their own progress by using a rubric. The rubric shows us what we are currently doing well and how we can improve and set goals.

Common assessments including the end of unit summative assessment:

- Begin the unit with an on demand writing assessment. The prompt could begin "I'm really eager to understand what you can do as writers, so before you do anything else, please spend today writing the very best personal narrative, the best small moment story of your life. You'll have 45 minutes to write this. Write in a way that shows me all you know." Use the 6+1 Traits Rubrics to assess.
- At the end of the unit students will turn in their final drafts plus the initial drafts and revisions. Assess using the 6+1 Rubric.

Teacher notes:

- RWP suggests that students write the first draft in one setting on one sheet of paper.
- If students are getting stuck on spelling teach them a strategy that will get them to move on while writing a draft. Some suggestions are to circle to word to come back to it later, write it three different ways and pick the one that seems closest or to rely on a word wall or other resource.
- While writing drafts look for students who are summarizing rather than storytelling- provide support to move away from summarizing.
- Model your own life as a writer by using a writer's notebook, showing examples to the students and participating in the process.
- You may want to read aloud texts that talk about writing and the writing life. Some

examples:

Ish by Peter Reynolds

I'm in Charge of Celebrations by Byrd Baylor

Seeing the Blue Between: Advice and Inspiration for Young Poets (excerpts) by Paul B. Janeczko

Speaking of Journals editied by Paula Graham

Poems by William Stafford, Mary Oliver, Billy Collins

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4

Purpose of the Course:
4th grade writing expands on the skills and strategies as writers students have developed across all writing modes. Students begin to develop a more comprehensive understanding of themselves as writers and develop in more sophisticated ways including narrative, informative/explanatory, short-research projects and opinion/persuasive writing.

Name of the Unit: Unit 2 Realistic Fiction	Length of the unit: 5 weeks
Purpose of the Unit: Students learn more about storytelling and show don't tell. They also learn about story structure, character development, interpretation and theme, concepts that are also critical in reading fiction. Common Core state standards call for high achievement levels in the writing of narratives, fourth graders must write with an awareness of audience and careful attention to craft. This unit will move fourth grade writers to show more control over their stories, asking them to organize an event sequence that unfolds naturally, use a variety of transition words and phrases to manage the sequence of events, and provide a conclusion that follows from the narrated events. Writers must also show a strong grasp of craft moves and in addition, start to consider the meaning they want to bring out in their narrative in order to meet these expectations.	

Common Core State Standards Addressed in the unit:

W.4.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

W. 4.3a Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.

W.4.3b Use dialogue and description to develop experiences and events or show the responses of characters to situations.

W. 4.3c Use a variety of transitional words and phrases to manage the sequence of events.

W.4.3d Use concrete words and phrases and sensory details to convey experiences and events precisely.

W.4.3e Provide a conclusion that follows from the narrated experiences or events.

W.4.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising and editing.

W.4.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on other's ideas and expressing their own clearly.

Big Ideas:	Essential Questions:
1. Writers of narrative stories write with attention to focus, detail and show don't tell. 2. Authors write with an awareness of audience, ensuring that readers can visualize all elements of the story.	1. How can you write a fiction story that is similar to the short stories and picture books that you enjoy? 2. How can you learn to write with more independence, making your own plans and decisions, starting revisions, and making reading-writing connections?
Students will know: 1. descriptive details enhance writing 2. clear sequencing is important in narrative writing 3. transitional words 4. conclusions are important in narrative writing 5. writers cycle through the writing process more than once	Students will be able to: 1. write narratives using descriptive details 2. use clear sequencing of events in narrative writing 3. use transitional words and phrases 4. write a conclusion related to the narrated events 5. improve drafts using the editing and revising process

Significant task 1: Teach Strategies and Tips for Generating Powerful Story Blurbs
Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

In significant task one the students will generate story ideas based on moments and issues in their lives, provoking ideas for stories they could write. Students will ask themselves, "How can I write a story for people like me, so we can see ourselves in books?" Students will use their notebooks to plan out stories and write "story blurbs." Story blurbs, a series of short statements that tell about the story, will be utilized by the students to generate ideas about the main characters' desires and struggles while noting the setting and tension in the story.

Students will plan carefully, choosing key moments to tell, thinking about the action in those moments as well as how to write them so the reader can experience them. Student can return to their personal narrative writing to discover moments of significance and to help spark new ideas or further develop ideas.

This task directly targets the following Common Core State Standards:
W.4.3, W.4.5

Timeline: 5 days

Key vocabulary: blurb, audience, story tension,

Resources:

- Writer's Notebooks
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit Two-Realistic Fiction
- Units of Study for Teaching Writing, Grades 3-5, *Writing Fiction: Big Dreams, Tall Amb*itions, RWP
- "Where Do Writers Get Their Ideas?" by Sharron McElmeel. Book Report Sept/Oct 1996

Significant task 2: Developing Story Elements

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will choose a story idea to develop into a story. Students will spend time rehearsing and revising to develop the story's character and plot before jumping into drafting. Students will practice rehearsing by writing down thoughts or little scenes to develop characters, thinking about the internal and external characteristics of the main character.

After students have done some planning and thinking around characters they will use a graphic organizer to map out their story, thinking about the rising action and the story's important turning points. Students should be sure their story contains no more than two scenes (small moments).

As students are completing the organizer they should also be rehearsing their story by telling it to a partner and allowing for major story revisions to strengthen the plot or the character complexity. Students will try multiple versions of their story, since stories can be told in many ways, changing the character, setting or ending, by adding or removing characters or developing the problem.

This task directly targets the following Common Core State Standards:
W.4.3, W.4.5, SL.4.1

Timeline: 6 days

Key vocabulary: scenes, rehearsing, develop

Resources:

- Writer's Notebooks (will be introduced in Significant task 1 and everyday thereafter)
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit Two-Realistic Fiction
- Units of Study for Teaching Writing, *Writing Fiction: Big Dreams, Tall Ambitions*, Grades 3-5, RWP

Significant task 3:Using Mentor Texts

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by

independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will use mentor texts to imagine the type of writing they want to produce. They will use ideas from mentor texts to try out different leads, and move into drafting. Students will also use the writing of peers as mentor texts to help them.

In their drafts students will try varied craft moves that they come across in mentor texts. Students will try out multiple leads for their stories, deciding what will be told and what will be withheld, recognizing that each new lead sets up a different version of the same story.

Students will need to continually work on storytelling specific story moments, using dialogue, small actions and internal thoughts to carry the storyline.

After trying out leads students will start drafting, stopping to make large scale revisions to develop tension within the story.

This task directly targets the following Common Core State Standards:
W.4.3, W.4.3a, W.4.3b, W.4.3c, W.4.3d, W.4.3e W.4.5

Timeline: 6 days

Key vocabulary: drafting, mentor text, lead, story tension

Resources:

- Writer's Notebooks
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit Two-Realistic Fiction
- Units of Study for Teaching Writing, Grades 3-5, *Writing Fiction: Big Dreams, Tall Ambitions,* RWP

Significant task 4: Crafting and Revising Stories
Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will work on developing the heart of the story with an eye on the conclusion. Since students will be drafting multiple pages they will work carefully to control time, animate scenes with action and setting and develop a plot where the main character strives towards his/her goal. Students will identify what the story is *really* about so that each part of the story spotlights that meaning.

Students will identify the heart of the story and stretch this section out so that they key moment is almost a full page.

Students' revisions will focus on building tension using the character's motivation and obstacles. Revisions could also focus on making solutions more authentic, rather than using "easy" endings. A more complex ending will add more meaning to the story.

This task directly targets the following Common Core State Standards:

Timeline: 8-9 days

Key vocabulary: plot, theme, conclusion, motivation, problem, solution

Resources:

- Writer's Notebooks
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit Two-Realistic Fiction
- Units of Study for Teaching Writing, *Writing Fiction: Big Dreams, Tall Ambitions*, Grades 3-5, RWP

Common learning experiences:

- At the conclusion of the unit publish children's work. Some possible options for publishing: place finished pieces out on tables with a blank piece of paper next to it. Allow students to work around the room offering positive comments about each piece. Post narratives on bulletin boards or in hallways, create a class anthology. Work with your class to find other ways to publish and share the work.

Possible Mentor Texts for Realistic Fiction:

- *Ruby the Copy Cat* by Peggy Rathmann
- Children's Magazines such as *Highlights*, *Free to Be You and Me and 13*
- *Owl Moon* by Jane Yolen,
- *Come on, Rain!* By Karen Hesse
- *Nothing Ever Happens on 90th Street* by Roni Schotter
- *The Boy Who Loved Words* by Roni Schotter
- *Hey World, Here I Am!* By Jean Little
- *Fireflies* by Julie Brinkloe
- *Freedom Summer* by Deborah Wiles
- *The Other Side* by Jacqueline Woodson
- *Bigmama's* by Donald Crews
- *The House On Mango Street* by Sandra Cisneros
- *The Paperboy* by Dave Pilkey
- *Peter's Chair* by Jack Ezra Keats
- *Shortcut* by Donald Crews

Common assessments including the end of unit summative assessment:

- The post assessment from Unit 1 could be used to develop a starting point for new instruction. Personal narrative and realistic fiction are both narrative writing and the qualities you are assessing are the same.
- Another option for pre-assessment is to do another on demand fictional story. Have them write one part of a larger story-or one small moment. Notice their strategies and habits-do they take time to rehearse, do they have strategies for getting started, how much do they write in one setting? Look to see if they are summarizing rather than storytelling.
- At the end of the unit students will turn in their final drafts plus the initial drafts and

revisions. Assess using the 6+1 Rubric.

Teacher notes:

- An example of a story blurb is the blurb on the back cover of a book.
- When working on one specific area of narrative writing-such as character or setting, create a rubric as a class to assess that part. Use the traits from the 6+1 rubric to develop this as a class.
- This unit is a good time to work on developing stamina while writing. It provides an opportunity to teach students to write with higher volume.
- It may help to tell the students that when writing realistic fiction it is a good idea if the main character is about the same age as the writer and if they limit the main characters to two or three. It also helps if students write about places and events that they have direct experience with.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4

Purpose of the Course:
4th grade writing expands on the skills and strategies as writers students have developed across all writing modes. Students begin to develop a more comprehensive understanding of themselves as writers and develop in more sophisticated ways including narrative, informative/explanatory, short-research projects and opinion/persuasive writing.

Name of the Unit: Unit 3 Personal to Persuasive Essay	Length of the unit: 5 weeks

Purpose of the Unit: The purpose of this unit is to support students build upon the previous persuasive work they have done and to use that knowledge to understand how to persuade an audience. They will do that while writing within a more formal structure, as well as using and elaborating upon a greater variety of evidence. This unit will help students to move closer to the logical argument writing expected by the Common Core by the end of twelfth grade. It will also support work across the content areas, as students learn to offer and support opinions on topics across the curriculum.

Common Core State Standards Addressed in the unit:

W.4.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information

W.4.1a Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose

W.4.1b Provide reasons that are supported by facts and details.

W.4.1c Link opinion and reasons using words and phrases (e.g., for instance, in order to, in addition).

W.4.1d Provide a concluding statement or section related to the opinion presented.

W.4.4 Produce clear and coherent writing

W.4.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single setting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

W.4.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on other's ideas and expressing their own clearly.

Big Ideas:	Essential Questions:
1. Authors of opinion writing make claims and then support them with reasons that are elaborated upon with evidence. 2. The process of writing an opinion essay is different than the process of writing a story. 3. Both the structure and content of a writing piece convey ideas, so writers must consider how pieces are organized at the same time as they consider the point that want to make to persuade the audience.	1. How can you use your writer's notebook as a tool for thinking and to develop new ideas? 2. How can I develop an essay which is well organized and persuasive? 3. How can I become more independent and know how to take myself through the essay writing process so that I can develop pieces over time and write pieces on demand?
Students will know: • opinion writers support claims with reasons and evidence • both the structure and content of essay covey ideas • writers must consider audience	Students will be able to: • use boxes and bullets structure in essay writing • support ideas with elaborated evidence • introduce a topic clearly • use transition words and phrases • write to a specific audience

Significant task 1: Growing compelling ideas in Writer's Notebooks
Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will begin this unit with a pre-assessment. They will think of a topic that they have strong feelings about. They will write their opinion on the topic and give reasons explaining their feelings.

Students will "mine" their writer's notebooks for ideas in their stories. They will identify what bigger ideas are within their stories by annotating them-circling words and writing quick notes about those ideas. Students may also generate new ideas in their writer's notebooks. After time has been spent reviewing entries and generating new ideas students will choose one idea which will become the opinion statement for their essay.

Students will plan the main section of their essays. They plan the sections by deciding how to best support the main idea. One way they can organize ideas is by writing their claim/opinion repeatedly, following each time with the word "because" and a reason why that claim is true. This is boxes and bullets planning.

This task directly targets the following Common Core State Standards:
W.4.1, W.4.1a, W.4.1b, W.4.5, SL.4.1

Timeline: 6 days

Key vocabulary: annotate, analyze, support, main idea, thought prompts, boxes and bullets, opinion statement

Resources:

- Breathing Life Into Essays, from RWP's Units of Study for teaching Writing 3-5
- Common Core Appendix-4th grade exemplars
- Teacher's College Reading and Writing Project Writing Curricular Calendar, Fourth Grade

Significant task 2: Developing Essays

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will collect, select, angle, revise and organize evidence to support their opinions. They will experiment with different ways to sequence that material and use transitional words and phrases to construct a coherent draft that supports the point of view on the opinion that the writer is trying to get across.

Students will collect stories that support their opinion statements. Students will identify stories that have an angle that will highlight and support their ideas and opinions.

Students will prepare for drafting essays by identifying if they have all of the necessary materials. They will consider whether their evidence fits with each point and if there is enough variety of evidence to support each point. Students can then develop, add or remove points as needed.

Students use the planning and preparation to draft their essay. They should see that with the proper planning the pieces of the essay should fall into place.

This task directly targets the following Common Core State Standards:
W.4.1, W.4.1a, W.4.1b, W.4.1c, W.4.1d, W.4.4, W.4.10, W.4.5

Timeline: 7 days

Key vocabulary: opinion statement, angle, point of view, evidence

Resources:
Breathing Life Into Essays, from RWP's Units of Study for teaching Writing 3-5
Common Core Appendix-4th grade exemplars
Teacher's College Reading and Writing Project Writing Curricular Calendar, Fourth Grade

Significant task 3: Raising the Quality of Essay Writing

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

In this task students will use all of their experiences in essay writing to take themselves through the process of writing essays with greater independence.

Students will use what they know about themselves and others develop argument driven essays. Students should go from writing opinions such as "being an only child is difficult" to bold statements such as "parents of only children should make sure that their kids are involved in lots of groups" or "some people think that being an only child is bad for you, but I think that it is the best way to grow up, even if it is hard sometimes." Students will use the original idea and branch-off, creating a list of things they wish they could change in the world.

Students will rehearse by trying to convince a partner of their opinions. In partnerships, students will act as critical friends, letting writers know how convincing they found their evidence and offering suggestions for whether writers need more evidence or a better connection between the evidence and reasons.

Students will learn common phrases such as "this shows," or "this proves" in order to show how each piece of evidence supports their reasons. Students will also use phrases such as "for instance," "in addition to," "in order to" to strengthen essays.

As part of the revision process students will read and revise, always taking the reader/audience into account. Students will need to put themselves into the role of the reader, pick up the text as if they have never seen it before, and read it, making notes for revision.

This task directly targets the following Common Core State Standards:
W.4.1, W.4.1a, W.4.1b, W.4.1c, W.4.4, W.4.5, W.4.10, SL.4.1
Timeline: 7 days

Key vocabulary: argument, opinion, audience, revise, transition phrases

Resources:

- Breathing Life Into Essays, from RWP's Units of Study for teaching Writing 3-5
- Common Core Appendix-4th grade exemplars
- Teacher's College Reading and Writing Project Writing Curricular Calendar, Fourth Grade

Common learning experiences:

- Possible "thought prompts" to support developing ideas:
    - The thought I have about this is…
    - In other words…
    - That is…
    - The surprising thing about this is…
    - This makes me realize…
    - To add on…
- Teachers can act as "thinker" and the students can be "the prompters" in a mini-lesson, modeling how the thought prompts can generate new thinking. Students can then be paired and play the same roles.
- If essay writing is new for students, or they need more scaffolding, it could help to have

students write their opinion statement on the outside of a folder, then make smaller internal folders for each of their reasons/bullets (which later become topic sentences) and proceed to collect a small pile of papers within each folder. The folders will house all of the facts and details the students will gather to support all of their reasons. After a few days of collecting and revising the small pile a student can select the best material for that paragraph and rewrite the material by grouping related ideas.

- Show students a speech such as Martin Luther King's "I have a Dream" which contains repetition of key phrases and ideas.
- Possible examples of mentor texts to model opinion writing:
    - The Great Kapok Tree by Lynne Cherry
    - Best Town in the World by Byrd Baylor
    - Grace for President by Kelly DiPucchio
- Other possible sources for examples of persuasive writing:
    - Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science and Technical Subjects Appendix C: Samples of Student Writing
    - Miller Center Presidential Speech Archive: http://millercenter.org/scripps/archive/speeches
    - Student examples of persuasive writing http://www.thewritesource.com/studentmodels/
- Students should be given the opportunity to publish essays. Some possible options for publishing are, filming the reading of an essay as a speech, holding debates, creating podcasts.

Common assessments including the end of unit summative assessment:

- Begin the unit with an on-demand writing assessment on opinion writing. The prompt could begin, "Think of an idea or topic that you have strong feelings about. Write your opinion and give reasons that tell why you feel this way. Use everything you know about essay writing, letter writing, speeches and reviews." Assess using 6 +1 rubric
- At the end of the unit students will submit their final drafts of essays along with the drafting materials that include the initial drafts and revisions. Students will be asked to write a reflection answering these or similar questions
    - What is the most successful strategy that I tried during this unit of study? What made this strategy work for me? How did it help my writing?
    - In what way is my final draft a more powerful essay than my first draft? What did I do as a writer to improve?
    - What do I still need to work on as a writer of opinion pieces? What parts of opinion writing are still tricky for me?
- Assess final piece using 6 +1 rubric

Teacher notes:

- Use writing conferences to name what the writer is doing well-supporting them in transferring that skill to other days and other pieces of writing. Set the writer up to work toward a new goal. The goal should be concrete and specific as well as motivating. Show the student steps to take in order to progress towards this goal.
- Throughout the unit you will want to focus on conventions and helping students to

produce readable writing. You will want to remind students to transfer and apply all they know about conventions to make this part of their work. We don't wait until we are all finished writing to go back and check spelling of words we should know by heart. Remind students of the strategies they have to check the spelling of words.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4

Purpose of the Course:
4th grade writing expands on the skills and strategies as writers students have developed across all writing modes. Students begin to develop a more comprehensive understanding of themselves as writers and develop in more sophisticated ways including narrative, informative/explanatory, short-research projects and opinion/persuasive writing.

Name of the Unit: Unit 4 Research Based Argument Writing	Length of the unit:6 weeks
Purpose of the Unit: The purpose of this unit is to support students as they transfer and apply the skills they have learned in the personal and persuasive essay unit to research based argumentative writing. Further, this writing unit goes hand in hand with the students reading work at this time. In order to write well about a topic, students need to understand that topic well. This unit requires students to thoroughly research topics and then write their opinions about them. The goal of this unit is for students to write essays and use research to back up their claim.	

Common Core State Standards Addressed in the unit:

W.4.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information

W.4.1a Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose

W.4.1b Provide reasons that are supported by facts and details.

W.4.1c Link opinion and reasons using words and phrases (e.g., for instance, in order to, in addition).

W.4.1d Provide a concluding statement or section related to the opinion presented.

W.4.4 Produce clear and coherent writing

W.4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

W.4.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

W.4.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

W.4.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single setting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

W.4.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

W.4.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single setting.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on other's ideas and expressing their own clearly.

Big Ideas:	Essential Questions:
1. Authors of argument writing make claims and then support them with reasons that are elaborated upon with evidence. 2. Writers use evidence gathered from outside sources to inform and argue their opinions. 3. Authors draft multiple essays to make more effective use of evidence and more thoughtful claims and reasons.	1. How can you most effectively support your claim with evidence? 2. How can I learn what I have used about essay writing when writing research based argument essays? 3. How can I become more independent and know how to take myself through the essay writing process so that I can develop pieces over time and write pieces on demand?
Students will know: • argument writers support claims with reasons and evidence • how to gather evidence from multiple sources • authors write to specific audience	Students will be able to: • gather evidence to support claims from outside sources • introduce a topic clearly • use transition words and phrases • consider audience

Significant task 1: Researching to Form Claims and Support those Claims with Text-Based Evidence

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Using a class topic of study students will research and form claims based on the information they gather as readers. Students will learn to gather information from reading and viewing texts, and to take notes on the important information they gather from these texts. They will also learn to recognize that there are multiple perspectives on any given topic and will learn to weigh the argument and evidence of any given claim. Students will explore the different sides of an

issue and then pick a side on which to stand. As they do this, they will also learn to use evidence, instead of their personal opinions, to support their essays. This means that they will return to texts repeatedly, making sure that they have understood and gathered all relevant evidence (In the form of numbers, statistics and significant facts).

Once students have formed opinions, they will engage in debates with peers using evidence gathered from texts, giving students the opportunity to present their claim and hear opposing arguments. Students will be pushed to use text evidence to refute the opposing claim, pushing students to address possible counterclaims in their writing.

In addition to reading, note-taking and speaking students will write using their notebooks. Entries will be centered on the boxes and bullets format in which they state and support claims. Once students have their plan, they should move to writing a draft. Students should be using formal language in their writing. For example rather than using "I think…" use "research states…"

This task directly targets the following Common Core State Standards: W.4.1, W.4.1a, W.4.1b, W.4.1c, W.4.1d, W.4.4, W.4.7, W.4.8, W.4.9, W.4.10, SL.4.1

Timeline: 10 days

Key vocabulary: argument, claim, counterclaim, rebuttal, evidence, reasons, counterclaim, refute

Resources:

- The Reading and Writing Project multimedia text set lists: www.readingandwritingproject.com
- Units of Study in Opinion, Information and Narrative Writing, TCRWP
- Teacher's College Reading and Writing Project Writing Curricular Calendar, Fourth Grade
- Common Core Appendix-4th grade exemplars

Significant task 2: Selecting, Incorporating and Unpacking Text-Based Evidence
Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will write another essay on the same topic, this time focusing on how they organize and incorporate evidence into their essays. Students may return to texts they have researched in the first task to reconsider the available evidence. Students may also benefit from reading or watching new texts on the topic in order to gather new evidence. Students will write long and strong in their notebooks, exploring ideas and again taking turns with classmates debating different sides of the topic.

Students will not only think about which parts of text evidence to use, but how to use that information, deciding between quoting and paraphrasing. They will consider the organization of their essays in order to make the presentation of their argument as strong as possible. Students

may be ready to consider presenting more subtle or nuanced claims which find a middle path between opposing viewpoints.

This task directly targets the following Common Core State Standards: W.4.1, W.4.1a, W.4.1b, W.4.1c, W.4.1d, W.4.4, W.4.7, W.4.8, W.4.9, W.4.10, SL.4.1

Timeline: 10 days

Key vocabulary: viewpoints, evidence, quoting, paraphrasing, argument, subtle/nuanced

Resources:

- The Reading and Writing Project multimedia text set lists: www.readingandwritingproject.com
- Units of Study in Opinion, Information and Narrative Writing, TCRWP
- Teacher's College Reading and Writing Project Writing Curricular Calendar, Fourth Grade
- Common Core Appendix-4th grade exemplars

Significant task 3: Explore new topics for research

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will explore new topics for research and use this research to write new essays, using what they have previously learned. Students will gather evidence on a new aspect of the class topic or students may choose to work in research groups to study a new topic of their choice.

Students will conduct research on these topics, gathering evidence to support their claims. They will rehearse using debate, organize the structure of the essay using boxes and bullets and then write a new essay.

This task directly targets the following Common Core State Standards: W.4.1, W.4.1a, W.4.1b, W.4.1c, W.4.1d, W.4.4, W.4.7, W.4.8, W.4.9, W.4.10, SL.4.1

Timeline: 10 days

Key vocabulary: argument, claim, rebuttal, evidence, reasons, sequence, quote, paraphrase

Resources:

- The Reading and Writing Project multimedia text set lists: www.readingandwritingproject.com
- Units of Study in Opinion, Information and Narrative Writing, TCRWP
- Teacher's College Reading and Writing Project Writing Curricular Calendar, Fourth Grade
- Common Core Appendix-4th grade exemplars

Common learning experiences:

- Use digital text to introduce the class topic. Use their passion for video to launch them into rich research. Video clips are often complex and packed with information. Have

students view the video with their notebooks, model jotting down information. (For example-if the class topic was "Research shows chocolate milk should/shouldn't be in schools," the video *Sugar Overload* on YouTube would be a great resource) You will want to model watching and re-watching the video to find evidence; this is what close-reading looks like in digital texts. Follow up with an article or two on the same topic.

- Use a t-chart to model note-taking, using the left side for one perspective on an argument and the right for the opposite perspective.
- Introduce students to possible sentence starters such as: research shows…, this shows…, what this means is…
- Celebrate students' writing! Possible ideas are: publish on a website or blog. Set up a format that allows feedback from a monitored audience such as parents, administrators and teachers.
- **Published work will need to give credit to sources referenced. Students will need to review or be taught a citation format.

Common assessments including the end of unit summative assessment:

- Before the start of the unit look at the students persuasive essays and analyze them for structure and use of evidence to support their claim, asking, "What are my students really good at? What might they need more support with?"
- A suggested end of unit assessment would be to use a CFA aimed at measuring their ability to read and analyze texts and then use those same texts to write an argument based essay. TCRWP has examples of this type of assessment on their website, www.readingandwritingproject.com

Teacher notes:

- In bends one and two a class topic of study in used. This eliminates choice but allows more support for the student to write knowledgeably and effectively. Students will gain a deeper understanding of the subject matter which will lead them to craft stronger essays. With everyone on the same topic students could read together, discuss the information and push each other's thinking through debate and whole class conversation.
- Before teaching the unit, gather a text set on the class topic including multimedia sources.

Windsor Public Schools
Curriculum Map for the Intermediate Level
Grade 4

Purpose of the Course:
4th grade writing expands on the skills and strategies as writers students have developed across all writing modes. Students begin to develop a more comprehensive understanding of themselves as writers and develop in more sophisticated ways including narrative, informative/explanatory, short-research projects and opinion/persuasive writing.

Name of the Unit: Unit 5 Historical Fiction	Length of the unit: 5 weeks
Purpose of the Unit: Students learn more about storytelling and show don't tell. They also learn about story structure, character development, interpretation and theme, concepts that are also critical in reading fiction. Common Core state standards call for high achievement levels in the writing of narratives, fourth graders must write with an awareness of audience and careful attention to craft. This unit will move fourth grade writers to show more control over their stories, asking them to organize an event sequence that unfolds naturally, use a variety of transition words and phrases to manage the sequence of events, and provide a conclusion that follows from the narrated events. Writers must also show a strong grasp of craft moves and in addition, start to consider the meaning they want to bring out in their narrative in order to meet these expectations.	

Common Core State Standards Addressed in the unit:

W.4.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

W. 4.3a Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.

W.4.3b Use dialogue and description to develop experiences and events or show the responses of characters to situations.

W. 4.3c Use a variety of transitional words and phrases to manage the sequence of events.

W.4.3d Use concrete words and phrases and sensory details to convey experiences and events precisely.

W.4.3e Provide a conclusion that follows from the narrated experiences or events.

W.4.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising and editing.

W.4.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on other's ideas and expressing their own clearly.

Big Ideas:	Essential Questions:
3. Writers of narrative stories write with attention to focus, detail and show don't tell. 4. Authors write with an awareness of audience, ensuring that readers can visualize all elements of the story.	3. How can you write a fiction story that is similar to the short stories and picture books that you enjoy? 4. How can you learn to write with more independence, making your own plans and decisions, starting revisions, and making reading-writing connections?
Students will know: 6. descriptive details enhance writing 7. clear sequencing is important in narrative writing 8. transitional words 9. conclusions are important in narrative writing 10. writers cycle through the writing process more than once	Students will be able to: 6. write narratives using descriptive details 7. use clear sequencing of events in narrative writing 8. use transitional words and phrases 9. write a conclusion related to the narrated events 10. improve drafts using the editing and revising process

Significant task 1: Teach Students to ask, "What might have occurred with that time period and that place that might make a story great?"
Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

In significant task one the students will generate story ideas based on moments and issues in a historical figure's/character's life. Students need to read responsively, letting even the littlest facts spark empathy, imagination and envisioning. Students may also view videos, collect and study information about the details of daily life, personal and social issues. They will once again use their notebooks to plan out stories and write "story blurbs." Story blurbs, a series of short statements that tell about the story, will be utilized by the students to generate ideas about the main characters' desires and struggles while noting the setting and tension in the story.

Students will plan carefully, choosing key moments within a particular historical era to tell, thinking about the action in those moments as well as how to write them so the reader can experience them. Student can return to their personal narrative writing to discover moments of significance and to help spark new ideas or further develop ideas.

This task directly targets the following Common Core State Standards:
W.4.3, W.4.5

Timeline: 5 days

Key vocabulary: blurb, audience, story tension, historical era

Resources:

- Writer's Notebooks
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit Two-Realistic Fiction
- Units of Study for Teaching Writing, Grades 3-5, *Writing Fiction: Big Dreams, Tall Amb*itions, RWP
- "Where Do Writers Get Their Ideas?" by Sharron McElmeel. Book Report Sept/Oct 1996

Significant task 2: Developing Story Elements within a historical era

Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will choose a story idea to develop into a story. Students will spend time rehearsing and revising to develop the story's historical character and plot before jumping into drafting. Students will practice rehearsing by writing down thoughts or little scenes to develop characters, thinking about the internal and external characteristics of the main character as they face challenges within their historical time period.

After students have done some planning and thinking around characters they will use a graphic organizer to map out their story, thinking about the rising action and the story's important turning points. Students should be sure their story contains no more than two scenes (small moments).

As students are completing the organizer they should also be rehearsing their story by telling it to a partner and allowing for major story revisions to strengthen the plot or the character complexity. Students will try multiple versions of their story, since stories can be told in many ways, changing the character, setting or ending, by adding or removing characters or developing the problem.

This task directly targets the following Common Core State Standards:
W.4.3, W.4.5, SL.4.1

Timeline: 6 days

Key vocabulary: scenes, rehearsing, develop

Resources:

- Writer's Notebooks (will be introduced in Significant task 1 and everyday thereafter)
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit Two-Realistic Fiction
- Units of Study for Teaching Writing, *Writing Fiction: Big Dreams, Tall Ambitions*, Grades 3-5, RWP

Significant task 3: Using Historical Fiction Mentor Texts
Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will use historical fiction mentor texts to imagine the type of writing they want to produce. They will use ideas from mentor texts to try out different leads, and move into drafting. Students will also use the writing of peers as mentor texts to help them. Students will also draw on all they know about the era and about the genre.

In their drafts students will try varied craft moves that they come across in mentor texts. Students will try out multiple leads for their stories, deciding what will be told and what will be withheld, recognizing that each new lead sets up a different version of the same story.

Students will need to continually work on storytelling specific story moments, using dialogue, small actions and internal thoughts to carry the storyline.

After trying out leads students will start drafting, stopping to make large scale revisions to develop tension within the story.

This task directly targets the following Common Core State Standards:
W.4.3, W.4.3a, W.4.3b, W.4.3c, W.4.3d, W.4.3e W.4.5

Timeline: 6 days

Key vocabulary: drafting, mentor text, lead, story tension

Resources:

- Writer's Notebooks
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit Two-Realistic Fiction
- Units of Study for Teaching Writing, Grades 3-5, *Writing Fiction: Big Dreams, Tall Ambitions,* RWP

Significant task 4: Crafting and Revising Stories
Each day's lesson should follow the Writer's Workshop format. There should be a brief mini lesson including a clear teaching point, modeling, and guided practice. This is followed by independent writing, partner conferences, teacher conferences, and is concluded with a 5 minute share.

Students will work on developing the heart of the story with an eye on historical accuracy knowing that the story can end without having to resolve the historical struggle. Since students will be drafting multiple pages they will work carefully to control time, animate scenes with action and setting and develop a plot where the main character strives towards his/her goal. Students will identify what the story is *really* about so that each part of the story spotlights that meaning.

Students will identify the heart of the story and stretch this section out so that they key moment

is almost a full page.

Students' revisions will focus on building tension using the character's motivation and obstacles. Revisions could also focus on making solutions more authentic, rather than using "easy" endings. A more complex ending will add more meaning to the story.

This task directly targets the following Common Core State Standards:

Timeline: 8-9 days

Key vocabulary: plot, theme, conclusion, motivation, problem, solution

Resources:

- Writer's Notebooks
- Teachers College Reading and Writing Project Writing Curricular Calendar, Fourth Grade Unit Two-Realistic Fiction
- Units of Study for Teaching Writing, *Writing Fiction: Big Dreams, Tall Ambitions*, Grades 3-5, RWP

Common learning experiences:

- At the conclusion of the unit publish children's work. Some possible options for publishing: place finished pieces out on tables with a blank piece of paper next to it. Allow students to work around the room offering positive comments about each piece. Post narratives on bulletin boards or in hallways, create a class anthology. Work with your class to find other ways to publish and share the work.

Possible Mentor Texts for Historical Fiction:

- *Goin' Someplace Special* by McKissack
- The Other Side by Woodson
- Freedom on the Menu by Weath
- The Bat Boy and His Violin by Curtis
- The American Girl Series
- Fever 1793 by Halse
- Sarah Plain and Tall by MacLachlan

Common assessments including the end of unit summative assessment:

- The post assessment from Unit 1 could be used to develop a starting point for new instruction. Personal narrative and realistic fiction are both narrative writing and the qualities you are assessing are the same.
- Another option for pre-assessment is to do another on demand fictional story. Have them write one part of a larger story-or one small moment. Notice their strategies and habits-do they take time to rehearse, do they have strategies for getting started, how much do they write in one setting? Look to see if they are summarizing rather than storytelling.
- At the end of the unit students will turn in their final drafts plus the initial drafts and revisions. Assess using the 6+1 Rubric.

Teacher notes:

- An example of a story blurb is the blurb on the back cover of a book.
- When working on one specific area of narrative writing-such as character or setting, create a rubric as a class to assess that part. Use the traits from the 6+1 rubric to develop this as a class.
- This unit is a good time to work on developing stamina while writing. It provides an opportunity to teach students to write with higher volume.
- It may help to tell the students that when writing realistic fiction it is a good idea if the main character is about the same age as the writer and if they limit the main characters to two or three. It also helps if students write about places and events that they have direct experience with.

Windsor Public Schools
Curriculum Map
Course Title: Introductory Eighth Grade Spanish

Purpose of the Course: The purpose of this course is to introduce basic vocabulary and grammar concepts to eighth grade students. Students will focus on verbal and written communication including pronunciation, grammar and vocabulary. Various topics of every day interest to middle school students will be explored. In addition, several cultural concepts will be examined by comparing and contrasting Hispanic traditions with our own.

Name of the Unit: Unit 1, Let's get started	Length of the unit: 4 weeks
Purpose of the Unit: This unit introduces vocabulary and grammar necessary to initiate a conversation in Spanish. By practicing the following: greetings, goodbyes, questions useful for getting to know each other, numbers, the Spanish calendar and weather expressions, students will develop the ability to introduce themselves and exchange information with a Spanish speaker. They will learn how the letters of the Spanish alphabet are pronounced, which is essential to effective communication in the target language. Students will also learn phrases common to interactions between teacher and students in classrooms worldwide such as: raise your hand, sit down, can I sharpen my pencil, I need a pen, etc.	

ACTFL Standards

- **1.1** Students engage in conversations, provide and obtain information, express feelings and emotions and exchange opinions.
- **1.2** Students understand and interpret written and spoken language on a variety of topics.
- **1.3** Students present information, concepts, and ideas to an audience of listeners or readers on a variety of topics.
- **2.1** Students demonstrate an understanding of the relationship between the practices and perspectives of the culture studied.
- **2.2** Students demonstrate an understanding of the relationship between products and perspectives of the culture studied.
- **4.1** Students demonstrate understanding of the nature of language through comparisons of the languages studied and their own.
- **4.2** Students demonstrate understanding of the concept of culture through comparisons of the cultures studied and their own.

Big Ideas:	Essential Questions:
Culture shapes how we see ourselves, others and the world. One can gain new insights about self and others by comparing and contrasting target languages and cultures. Learning other languages enhances recreational, educational and occupational opportunities.	How do social interactions and personal interactions differ among cultures? What is considered polite and/or impolite behavior in the two cultures? Why is a direct translation not always possible? How does knowing another language make a difference in the way we connect with others?
Students will know: 1. greetings and introductions 2. the alphabet, including pronunciation 3. numbers 0-20 4. days of the week 5. weather expressions 6. classroom phrases	Students will be able to: 1. greet people and say goodbye 2. introduce themselves and others 3. ask and say how to spell names 4. say where they are from 5. tell which day of the week it is 6. describe the weather 7. respond to classroom instructions 8. comprehend questions in the target language

Significant task 1: Getting to know one and other

As a group, students will familiarize themselves with the expressions, questions and vocabulary appropriate to introducing oneself to a Spanish speaker. Through the use of various visual, oral and written activities they will identify the nuances of polite conversation in Spanish. The textbook provides audiovisual activities with authentic conversations which can be used to assess oral and written comprehension. Teacher developed activities such as: multiple choice, Cloze, matching, venn diagrams and written responses, which are based on authentic target language You Tube videos, are practiced by the whole class. In small groups, students will create a skit in order to get to know one and other and then practice and present it, from memory, to the class. In small groups students will interview each other and record the answers. In both the skit and interview students choose the questions they will ask and then must understand and record the appropriate response, they choose questions from the

following: How are you?, What is your name?, Where are you from?, and How old are you?. Students are given response sheets which they complete individually and then keep in their class folders.

This task directly targets the following standards: **1.1, 1.2, 1.3, 2.2, 4.2**

Timeline: 5 days
Key vocabulary: greetings, goodbyes, introductions, formal, familiar, h, ll (pronunciation of these two letters in Spanish)
Resources: Avancemos textbook, You Tube, Teacher's Discovery videos, flashcards

Significant task 2: The alphabet

As a class, students will compare and contrast the Spanish alphabet with the English alphabet using a t-chart. They will listen to alphabet songs and videos in the target language. By watching videos, and listening and singing to songs, students will practice and learn the name and sound of each letter. Songs are particularly effective for pronunciation modeling and memorization in a second language. The teacher will spell each student's Spanish name and students will individually record their answers on a response sheet matching each student's Spanish name with their given name. Next, the entire class will choose a category of proper names, i.e. famous people, Spanish foods, etc., and students will individually pick one word, write it down and give it to the teacher. As the teacher spells out each word in Spanish students guess the answer.

This task directly targets the following standards: **1.1, 1.2, 1.3, 4.1**

Timeline: 5 days
Key vocabulary: a,b,c,d,e,f,g,h,i,j,k,l,ll,m,n,ñ,o,p,q,r,rr,s,t,u,v,w,x,y,z
Resources: Avancemos textbook, Teacher's Discovery videos, flashcards, songs, games

Significant task 3: The calendar

As a class, students will identify the differences between the Spanish calendar and their own calendar. They will become familiar with the vocabulary necessary for classroom discussions about the calendar, dates, and birthdays. Using a calendar template, students will individually create a Spanish calendar of their birthday month. The project will include days of the week, numbers and Spanish holidays. Students will also write a paragraph about their birthday, age, and where they are from. The class will conduct a survey to find out how many students are born in each month. The teacher will present the findings to the class using an excel graph. To help memorize vocabulary the class will sing and dance to songs about days of the week and months of the year.

This task directly targets the following standards: **1.1, 1.2, 1.3,**
Timeline: 4 days
Key vocabulary: days, Monday-Sunday, week, month, January-February, year, date, calendar, birthday
Resources: Avancemos textbook, Teacher's Discovery videos, songs, teacher generated worksheets

Common learning experiences:

1. Communicative activities in the target language
2. Bingo game in the target language
3. Vocabulary practice with a partner using either flashcards or mini whiteboards
4. Singing songs in Spanish
5. Cloze worksheets, a comprehension activity

Common assessments including the end of unit summative assessment:

1. Unit test, Avancemos (after significant task 3)
2. Student created dialogues with each other
3. Calendar project
4. Class surveys in which students record the required information from their classmates by successfully communicating in the target language.

Teacher notes:

Windsor Public Schools
Curriculum Map
Course Title: Introductory Eighth Grade Spanish

Purpose of the Course: The purpose of this course is to introduce basic vocabulary and grammar concepts to eighth grade students. Students will focus on verbal and written communication including pronunciation, grammar and vocabulary. Various topics of every day interest to middle school students will be explored. In addition, several cultural concepts will be examined by comparing and contrasting Hispanic traditions with our own.

Name of the Unit: Unit 2, My friends and I	Length of the unit: 8 weeks
Purpose of the Unit: This unit focuses on describing personal characteristics, physical appearance, and likes and dislikes. Students will be able to use the verb gustar (to like) in order to express likes and dislikes. Students will learn vocabulary words for activities of personal interest. Students will also use the verb ser (to be) to describe both themselves and others. They will learn vocabulary related to personal traits and physical characteristics. An important component of communication in the Spanish language is the appropriate use of adjective agreement. Adjective agreement refers to gender agreement (masculine verses feminine) when the adjective is modifying a noun, as well as number agreement (singular verses plural) also when modifying a noun. Definite and indefinite articles (the, a, an, and some) are also incorporated into this unit because they follow the same rules of gender and number.	

ACTFL Standards

- **1.1** Students engage in conversations, provide and obtain information, express feelings and emotions and exchange opinions.
- **1.2** Students understand and interpret written and spoken language on a variety of topics.
- **1.3** Students present information, concepts, and ideas to an audience of listeners or readers on a variety of topics.
- **2.1** Students demonstrate an understanding of the relationship between the practices and perspectives of the culture studied.
- **2.2** Students demonstrate an understanding of the relationship between products and perspectives of the culture studied.
- **3.1** Students reinforce and further their knowledge of other disciplines through the foreign language.
- **4.1** Students demonstrate understanding of the nature of language through comparisons of the languages studied and their own.
- **4.2** Students demonstrate understanding of the concept of culture through comparisons of the cultures studied and their own.

Big Ideas:	Essential Questions:
Communication is the ability to understand and be understood in real world contexts. Culture and language are inseparable; they influence and reflect each other. Learning other languages enhances recreational, educational and occupational opportunities.	How would you express your preferences in Spanish? What language skills does a student need to discuss their daily activities? How does an understanding of the nature and construct of another language help us understand our own?
Students will know: 1. the verb gustar (to like) 2. vocabulary associated with daily activities 3. the verb ser (to be) 4. grammatical constructs of asking and answering questions 5. vocabulary associated with personality traits and physical characteristics 6. definite and indefinite articles 7. gender and number of nouns and adjectives	Students will be able to: 1. talk about activities 2. tell where they are from 3. say what they like and don't like to do 4. use subject pronouns and ser 5. use the preposition de to describe where they are from 6. use gustar with an infinitive 7. identify a definite verses indefinite article 8. ask questions and answers them 9. identify the gender of nouns 10. express noun-adjective agreement

Significant task 1: Likes and dislikes

As a whole group students will familiarize themselves with the vocabulary used in expressing daily activities in Spanish through the use of visuals such as power point presentations, videos and flash cards. In whole class activities, they will examine the verb gustar and how its conjugation is used in expressing likes and dislikes. Working individually students will identify parts of speech in a Spanish sentence. They will also examine the word order of a sentence in Spanish, and compare and contrast what is the makeup of a question verses an answer. The class will conduct a survey to determine the top five most popular activities. In groups of two they will ask each other "What is your favorite activity?" and write down their answers. Then as the teacher identifies, in the target language, each activity students will raise their hands as they hear their answer. A student is chosen to tally the answers on the board. In pairs students will also ask and answer What do you like to do?, What don't you like to do?, What do you like to eat? and What do you like to drink?. Based on their likes and dislikes students will create a power point presentation which they will share with the class in the target language. The presentation can also include what their friends like. In pairs this project can also be done using electronic cartoons.

This task directly targets the following standards: **1.1, 1.2, 1.3,**

Timeline: 10 days
Key vocabulary: gustar with: me, te, le, nos, les, las actividades, la comida, qué, el tiempo, infinitive, comer, beber, hacer
Resources: Avancemos textbook, You Tube, power point presentations, flashcards, vocabulary games and Teacher's Discovery videos

Significant task 2: Personality traits and physical characteristics

As a group students will be introduced to vocabulary essential for identifying people by their personality traits and physical characteristics. They will become familiar with the verb ser in order to describe themselves and others. They will use their understanding of parts of speech in a Spanish sentence to create communication using more than one verb. Individually students will practice the vocabulary by identifying and then matching opposite meanings. They can do this with flashcards, clickers, mini whiteboards, and handouts. Learning opposite meanings is a very effective strategy when teaching vocabulary. Students will practice conjugating the verb ser with multiple choice activities. They will choose the correct form of the verb based on the sentences they read. In pairs they will ask each other Describe yourself?, Describe your best friend? and Are you … or …?.

Students will write a descriptive paragraph of either a famous person or a person they know. In the description students will include name, age, where he/she is from, hair color, eye color, height, his/her personality traits, what does he/she like to do, like to eat and like to drink.

This task directly targets the following standards: **1.1, 1.2, 1.3, 2.2**

Timeline: 10 days
Key vocabulary: ser, yo, tú, él, ella, usted, nosotros, nosotras, ellos, ellas, ustedes, características, opuestos, amigos
Resources: Avancemos textbook, You Tube, Teacher's Discovery videos, flashcards, games, teacher generated worksheets

Significant task 3: Gender and Number

As a whole group students will begin by examining what is a definite article verses indefinite article. They will compare and contrast them with English in order to gain a better understanding of a fundamental difference between the two languages, the difference being that all nouns and by association all adjectives have gender in Spanish, but not in English. Students will identify adjective endings and become familiar with the rules of grammar for adjective agreement. In small groups students will practice how to modify an adjective with a noun and identify correct verses incorrect uses of adjective agreement. They will participate in reciprocal teaching activities using mini white boards. In pairs they will quiz each other and correct their answers. They will be given different subjects to describe covering all four categories: male, female, singular and plural. One student writes his/her answer on the mini board and the other student, as the teacher, will have the correct answer. Students take turns being the teacher. Eventually students, as the teacher, can choose their own subjects in all

four categories because they will understand what they represent in the target language.

This task directly targets the following standards: **1.1, 1.2, 1.3, 4.1**

Timeline: 8 days
Key vocabulary: el, la, los, las, un, una, unos, unas, gender, number, adjective, noun
Resources: Avancemos textbook, power point presentation, You Tube, teacher generated worksheets

Common learning experiences:

1. Power Point presentations for task 1 (can also be done with task 2)
2. Memory game (vocabulary practice)
3. Communicative activities (dialogues about likes and dislikes)
4. Class surveys about personal preferences
5. Worksheets designed to practice vocabulary and grammar, often through the use of pictures
6. Paragraph writing
7. Using clickers for multiple choice activities

Common assessments including the end of unit summative assessment:

1. Unit test, Avancemos (after significant task 3)
2. Creation of a power point presentation incorporating vocabulary and grammar from the unit. Students express their likes and dislikes and those of their friends in the presentation.
3. Class surveys in which students record the required information from their classmates by successfully communicating in the target language.
4. Student created dialogue with a partner in the target language.
5. Teacher created dialogue with students.

Teacher notes:

Windsor Public Schools
Curriculum Map
Course Title: Introductory Eighth Grade Spanish

Purpose of the Course: The purpose of this course is to introduce basic vocabulary and grammar concepts to eighth grade students. Students will focus on verbal and written communication including pronunciation, grammar and vocabulary. Various topics of every day interest to middle school students will be explored. In addition, several cultural concepts will be examined by comparing and contrasting Hispanic traditions with our own.

Name of the Unit: Unit 3, Describe your world	Length of the unit: 8 weeks
Purpose of the Unit: This unit incorporates the dual themes of school and family, both important in the daily life of a middle school student. Students will be able to use **-ar** verbs, when communicating in the target language, about their school and families. They will learn about the Quinceañera, a family celebration important in many Hispanic communities. They will use **-ar** verbs and the verb **ser** to describe their school day, including their school schedule, what they do in the classroom and objects in the classroom. When describing their school day students will practice telling time, identify objects in the classroom and have a dialogue about various activities associated with school and learning. When speaking and writing about family members students will use both prior knowledge and new vocabulary and grammar to describe: relationships, ages, names, birthdays, likes, dislikes and favorite foods and activities.	

ACTFL Standards

- **1.1** Students engage in conversations, provide and obtain information, express feelings and emotions and exchange opinions.
- **1.2** Students understand and interpret written and spoken language on a variety of topics.
- **1.3** Students present information, concepts, and ideas to an audience of listeners or readers on a variety of topics.
- **2.1** Students demonstrate an understanding of the relationship between the practices and perspectives of the culture studied.
- **2.2** Students demonstrate an understanding of the relationship between products and perspectives of the culture studied.
- **3.1** Students reinforce and further their knowledge of other disciplines through the foreign language.
- **4.1** Students demonstrate understanding of the nature of language through comparisons of the languages studied and their own.
- **4.2** Students demonstrate understanding of the concept of culture through comparisons of the cultures studied and their own.
- **5.1** Students use the language both within and beyond the school setting.

Big Ideas:	Essential Questions:
Language is at the heart of all human interaction. Comparing and contrasting one's own and other languages and cultures enables individuals to gain new insight about self and the world.	What language is necessary to be able to describe your daily schedule? How do Spanish speakers interact with their families? How are your celebrations similar/different to the celebrations in Spanish speaking countries? What are some of the linguistic similarities and differences between Spanish and English? In what ways does the study of a world language provide advantages and open doors?
Students will know: 1. the present tense of **-ar** verbs 2. the meaning of **-ar** verbs 3. numbers 0-60 4. vocabulary associated with telling time 5. vocabulary associated with the classroom 6. the vocabulary associated with families 7. grammatical constructs of asking and answering questions about school and family 8. grammatical constructs of paragraph writing	Students will be able to: 1. talk about daily schedules 2. ask and tell time 3. say what you do 4. describe classes and classroom objects 5. talk about the family 6. ask and tell ages 7. give dates, especially birthdates 8. provide information on various topics about school and family 9. write about school and family

Significant task 1: Present tense of **-ar** verbs

As a class, students will examine and practice the meanings and conjugations of **-ar** verbs. In the Spanish language verbs, in the infinitive form, are placed into one of three categories based on their endings. In other words, in Spanish, all verbs end with the letters **-ar**, **-er**, or **-ir**. The largest, and therefore most common, category is **-ar** verbs. Working individually, students will participate in many teacher generated activities in order to develop greater familiarity with how the Spanish language communicates through

the use of verbs. Prior knowledge of sentence structure and sentence development will be reviewed and analyzed. Teaching strategies will incorporate visuals, dialogues, and listening, reading and writing comprehension activities. In pairs students will quiz each other using mini whiteboards. They will be given a list of verbs and subjects and will help each other to correctly match subject to verb ending. In pairs students will also play a game with puzzle pieces. Each puzzle piece has a different part, word, of a complete sentence and the correct sentence is revealed when the pieces are connected. The student who finishes his/her puzzle first wins. Individually each student will be assigned a specific verb and will have to teach the verb to the class. They will create a poster, a visual, of how to conjugate the verb and design a lesson, with at least one activity for the class. They will then teach the class their lesson.

This task directly targets the following standards: **1.1, 1.3, 2.2, 4.1, 4.2**

Timeline: 10 days
Key vocabulary: noun, pronoun, subject, verb, infinitive, conjugate, verb endings
Resources: Avancemos textbook, Avancemos listening comprehension CDs, internet, Teacher's Discovery videos, power point presentations, teacher generated worksheets

Significant task 2: School

As a group students will be introduced, through various strategies, to vocabulary words and grammar concepts relating to school and school activities. Using pictures and words, and working individually, they will make connections about the meaning of words and how to develop tools for effective communication. As a class, they will answer questions in the target language about their school day, school schedule, and the physical makeup of their classroom. They will respond to these questions both verbally and in writing. As a comprehension activity students listen to songs and analyze their meanings. The songs are titled What is there in the classroom?, for practicing vocabulary and What do you have in your backpack?, related to the school day. Students will identify vocabulary from the songs and answer questions about the songs in a handout.

Students will translate their class schedule into the target language and describe a typical school day in writing. They will watch a video about a typical school day in Spain and learn about schools in Latin America from the culture section of the textbook. With the teacher, the class will discuss the similarities and differences between students and their schools in a Spanish speaking country and their own experiences in school here in the US. Students will do a project titled Mi Mochila, My Backpack. They are given a template to cut out an envelope in the shape of a backpack. After they complete the backpack students will draw and label, in Spanish, all the items they would typically have in their backpack, including their school schedule. When finished the teacher will ask the class, in the target language, item by item what they have in their backpacks. Students demonstrate comprehension by producing the correct item.

This task directly targets the following standards: **1.1, 1.2, 1.3, 4.2**

Timeline: 10 days
Key vocabulary: schedule, classroom objects, culture, time
Resources: Avancemos textbook, Avancemos listening comprehension CDs, You Tube, Teacher Discovery video, games, songs

Significant task 3: Family

Students will become familiar with the vocabulary for family by analyzing a family tree. They will review a great deal of prior knowledge in order to produce a family tree project using photo story. In small groups students will identify how Spanish speakers express family relationships and they will make use of past lessons to interpret readings, in the target language, about family. As a group, students will learn about a very popular Hispanic tradition called a Quinceañera. A Quinceañera is a birthday celebration for a young girl when she turns fifteen. The event is symbolic of a girl becoming a woman and involves almost the entire community. This tradition is unique to the Spanish culture in terms of its importance to family and community and the sheer size of the event. Students will watch videos about real Quinceañeras and look at real family photos.

This task directly targets the following standards: **1.1, 1.2, 1.3, 2.1, 4.2**

Timeline: 10 days
Key vocabulary: parents, grandparents, aunts and uncles, siblings, cousins, pets, Quinceañera
Resources: Avancemos textbook, Avancemos listening comprehension CDs, You Tube, photo story

Common learning experiences:

1. Vocabulary practice using flashcards and power points
2. Memory, Bingo and puzzle games useful as vocabulary review
3. Songs about the classroom, family and verbs
4. You Tube, short lessons in the target language
5. Quinceañera lesson
6. Student centered discussions on culture

Common assessments including the end of unit summative assessment:

1. Unit test, Avancemos
2. Students will write a paragraph about a typical school day and about their family
3. Project translating a class schedule
4. Project Mi Mochila
5. Family tree project using photo story or this project can be done either as a collage or a poster

Teacher notes:

Windsor Public Schools
Curriculum Map
Spanish 4: Grades 11th and 12th

Purpose of the Course:

This course continues to refine the four basic skills of listening comprehension, speaking, reading, and writing. Students thoroughly review present, past, future, conditional and subjunctive. Students express themselves in Spanish in both oral and written work. Students continue to learn the culture of the Hispanic World through readings, videos, audio visuals, and internet sites.

Name of the Unit: 1.1 En busca de trabajo/Looking for a Job	Length of the unit: 12 blocks (84 minute blocks)

Purpose of the Unit:

Students learn about the concept of a "career" in their own life and country as well as in other countries. Students will be able to discuss the concept of career in their own live and country and a create a portfolio in the target language related to finding their dream job.

Foundations for the unit are based in vocabulary from Spanish 1 through Spanish 3 related to professions and interpersonal communication. Students will also review grammar concepts and tenses from Spanish 1 to Spanish 3 (present, past, future and subjunctive). Students will continue building on the basic skills of listening, speaking, reading and writing through the use of authentic and textbook activities.

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<table>
<tr>
<td>Big Ideas:

• Fluency in a world language may improve option for your future professional plans
• Fluency in a world language enhances travel experiences
• The concept of work varies by culture (live to work or work to live)(Vivir para trabajar o trabajar para vivir)
• While the need for employment is universal, the methods of securing a job vary according to environment and culture</td>
<td>Essential Questions:

• How may fluency in a world language influence what you will be when you grow up?
• How is the concept of working different in the US vs Spanish-speaking countries?
• Which is more important: to make a lot of money or love what you do?
• What is the process of soliciting employment?
• What is a typical work schedule in the US?
• What is a typical work schedule in a Spanish speaking country?</td>
</tr>
<tr>
<td>Students will know:

• similarities and differences between a typical workday in the US and a Spanish-speaking countries
• vocabulary related to job applications, office, insurance and professions
• conjugations and uses of ser vs estar
• present, past and future tenses</td>
<td>Students will be able to:

• read and translate job advertisements and descriptions from authentic sources
• create and present an ideal job
• complete a resume
• write a letter of interest
• make an oral presentation in the target language</td>
</tr>
<tr>
<td colspan="2">Significant task 1: My dream job

Students will use classroom resources to write a short description of their dream job in the target language. This allows students to use their individual vocabulary about authentic interest and skills while allowing them to expand their vocabulary in the target language. Students will respond to peers' presentations using departmental rubrics and discuss their aspirations in groups or pairs.

This task directly target the following standards: 1.1, 1.3 and 4.1

Timeline: 2 blocks
Key vocabulary: los antecedentes académicos, el aspirante, la solicitud, el puesto, la referencia, el diploma, la planilla
Resources: Avancemos textbook Unit 1.1 and ancillary materials, dictionaries, computers and smartboard.</td>
</tr>
<tr>
<td colspan="2">Significant task 2: Finding a job</td>
</tr>
</table>

Given a selection of various job advertisements and descriptions students will summarize each job in English. In pairs students will write the job advertisements for their ideal jobs. Using a resume template students will write their resume in the target language. In small groups, students participate in a mock job fair asking and responding to questions about interests and skills in the target language. Each group will use the job advertisements from the previous lesson to assign two possible jobs to each applicant. Students will choose one job and write their letter of interest.

This task directly targets the following standards: 1.2, **2.1**, and 4.2

Timeline: 3 blocks
Key vocabulary: los antecedentes académicos, el aspirante, la solicitud, el puesto, la referencia, el diploma, la planilla, entrevista, palabras interrogativas, buscar, la red and enlace.
Resources: Avancemos textbook Unit 1.1 and ancillary materials, authentic resources (classified ads), resume and cover letter template

Significant task 3: Job interview

In large group introduce the concepts of do's and don'ts of job interviews and view video clips of job interviews in the target language. Students break into small presentation groups and create a do's and don'ts for a job interview in the target language. In large group, compile list for job interviews and use the list to adjust the general rubric to the individual task. Students then create their mock interviews following the do's and don'ts of the class list. Students practice and present their mock interviews to the class.

This task directly targets the following standards: **1.3** and **2.1**

Timeline: 4 blocks
Key vocabulary: los antecedentes académicos, el aspirante, la solicitud, el puesto, la referencia, el diploma, la planilla, entrevista, palabras interrogativas, buscar, la red and enlace.
Resources: You Tube, Spanish Proficiency Exercises (University of Texas Laits), Avancemos textbook and ancillary materials. (http://www.youtube.com/watch?v=KbzhnmR3TV8) (http://www.youtube.com/watch?v=4yP5E1XF0Us) (http://www.laits.utexas.edu/spe/adv01.html)

Common learning experiences:

- my dream job presentations
- interpreting classified ads in the target language
- listening activities from the textbook
- grammar activities from the textbook
- reading activities from the textbook
- graphing research findings
- completing a resume template
- writing a cover letter
- participating in a mock job interview

- viewing a YouTube video clips on job interviews and do's and don'ts

Common assessments including the end of unit summative assessment:

- Summative assessments for the vocabulary and grammar from the on-level assessment book.
- Performance assessments: my dream job presentations and mock job interview graded with NEASC Rubric Effectively communicates information for a variety of purposes.
- Writing Assessments: cover letter and resume assessed with the departmental writing rubrics.

Teacher notes:

- Students struggle to recall interrogatives in the target language.
- Students default to the informal form of address.
- Students have a common lack of transfer of declarative skill to performance task related to ser and estar.

Name of the Unit: 1.2 Comunicándose en el Trabajo/ Communicating on the job	Length of the unit: 7-8 blocks (84 minute blocks)

Purpose of the Unit:

Students will be able to discuss the concept of work and the process for finding a job as well as participate in a mock job interview in the target language.

Foundations for the unit are based in vocabulary from Spanish 1 through Spanish 3 related to professions and communication on the job. Students will also review grammar concepts and tenses from Spanish 1 to Spanish 3 (present, past, future and subjunctive). Students will continue building on the basic skills of listening, speaking, reading and writing through the use of authentic and textbook activities.

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- 4.2 Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own
- 5.1 Students use the language both within and beyond the school setting

Big Ideas:	Essential Questions:
• Routines exist in the workforce and vary from country to country • Employers and employees both have expectations of each other • There are different ways of communicating in the work force • While the need for employment is universal, communicating in the workplace varies according to environment and culture •	• Who is the ideal employee? • Can you describe daily activities related to work? • Can you express the difference between the U.S. and Spanish-speaking countries with regard to vacation time and business practices? • How do you communicate in a work environment?

Students will know:	Students will be able to:
• vocabulary related to email and the workplace • definite and indefinite articles • present, past and future tenses • similarities and differences in the workplace in the US and Spanish-speaking countries	• exchange work related emails • describe the ideal employee • read, translate and write work-related emails • compare and contrast business in U.S. and Spanish-speaking countries • accurately use por and para • accurately use definite and indefinite articles

Significant task 1: U.S. vs Spanish-speaking countries (Business Practices)

As a class, students will brainstorm common business practices in the U.S. (i.e. hours, salary, benefits, vacation or sick time, unions, dress codes, punctuality, etc.) In pairs or small groups, students will use classroom resources to research these practices in a Spanish-speaking country of their choice. Students will present their findings in the target language to the class and contribute to a classroom chart where 5 categories are compared among the different Spanish speaking countries.

This task directly targets the following standards: 1.1, **1.3** and **4.1**

Timeline: 3 blocks
Key vocabulary: trabajar, medio día, por cuenta propia, tiempo complete, para describir acciones, característicos, expresiones útiles, expresiones para empezar y terminar correos
Resources: Avancemos textbook Unit 1.2 and ancillary materials, dictionaries, computers and smartboard, large bar graph.

Significant task 2: The Perfect Employee

Using the information from task 1 the class will create a poster of ideal and undesirable employee characteristics. Then in pairs, students will use their ideal job description from unit 1.1 to create a skit that acts out the perfect employee and the not so perfect employee for their ideal job. Students present the skit in the target language to the class.

This task directly targets the following standards: **1.1** and **1.3**

Timeline: 3-4 blocks
Key vocabulary: trabajar, medio día, por cuenta propia, tiempo complete, para describir acciones, característicos, expresiones útiles, expresiones para empezar y terminar correos.
Resources: Avancemos textbook Unit 1.2 and ancillary materials,
http://www.youtube.com/watch?v=GowcsUOOmI4

Common learning experiences:

- participating in listening activities from the textbook
- completing grammar activities from the textbook
- researching business practices (internet and textbook)
- graphing research findings
- writing prompts from the textbook
- creating their skits of do's and don'ts' in the workplace
- viewing YouTube video clips on employee characteristics

Common assessments including the end of unit summative assessment:

- Summative assessments for the vocabulary and grammar from the on-level assessment book.
- Performance assessments: compare and contrast research graded using NEASC Rubric on Use of technology.
- Performance assessment: skit on ideal employee graded using NEASC Rubric on Effectively communicates information for a variety of purposes.
- Writing Assessments: job related emails assessed with the departmental writing rubrics.

Teacher notes:

- Students struggle to recall differences between por and para.
- Students struggle to recall saber and conocer.
- Students confuse pronoun usage and placement in Spanish.

Name of the Unit: 2.1 Ejercicio al aire libre/ Outdoor Activities	Length of the unit: 10 blocks (84 minute blocks)
Purpose of the Unit: Students will be able to converse about athletic activities in the target language. Foundations for the unit are based in vocabulary from Spanish 1 through Spanish 3 related to sports, describing people and traits, and likes and dislikes. Students will also review grammar concepts and tenses from Spanish 1 to Spanish 3 (present, past, future and subjunctive). Students will continue building on the basic skills of listening, speaking, reading and writing through the use of authentic and textbook activities.	

ACTFL Standards

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- 1.3 Students present information, concepts and ideas to an audience of listener or readers on a variety of topics
- 2.1 Students demonstrate an understanding of the relationships between the practices and perspectives of the culture studied
- 2.2 Students demonstrate an understanding of the relationship between the products and the perspectives of the culture studied
- 4.1 Students demonstrate understanding of the nature of language through comparisons of the language studied and their own

Big Ideas:	Essential Questions:
• There is a relationship between geography and sports • The is a relationship between the economy of a country and sporting events • There is a relationship between culture and sporting events • There is a relationship between gender and sports • Across the globe, people choose to play sports as part of an active, healthy lifestyle.	• What is the relationship between geography and sports? • What is the relationship between economy and sport? • Why do Hispanic athletes come to the US to play sports? • Are athlete salaries fair? • What sports do adolescents practice? • Are there differences between men and women in sports?

Students will know:	Students will be able to:
• vocabulary related to outdoor sports and activities • popular sports in Spanish speaking countries • similarities and differences of outdoor sports and activities among the US and Spanish-speaking countries	• talk about outdoor sports and sports equipment • express thoughts and beliefs about sports • compare and contrast sports in U.S. and Spanish-speaking countries • talk about Hispanic athletes in U.S. sports • accurately use the imperfect and preterit tenses • accurately use reflexive verbs

Significant task 1: Hispanic Sports

- In small groups, students will complete an activity where they match narratives in Spanish with its corresponding sport. Some sports included will be new and unknown to students. This provides the basis for their significant task of researching a unique Hispanic sport. Some of these sports will include: pato, charreria, basque pelota, torero, ulama, and jai alai. In small groups, students will use classroom resources to research these sports and compile a presentation in the target language addressing the four big ideas of geography, gender, culture and economy. Groups will jig saw into new groups where they will act as experts in their sports in the context of the big ideas. Then when they regroup they will write a summary report answering the following the essential questions: What is the relationship between geography and your sports? What is the relationship between economy and your sport? Are there differences between men and women and your sport?

This task directly targets the following standards: **1.2, 1.3** and **3.1**

Timeline: 3 blocks
Key vocabulary: los deportes, las actividades, expresiones útiles y objetos
Resources: Avancemos textbook Unit 2.1 and ancillary materials, dictionaries, computers and smartboard.

Common learning experiences:

- Participating in listening activities from the textbook and workbook
- completing grammar activities from the textbook
- researching a Hispanic sport (internet and textbook)
- writing prompts from the textbook
- completing jig saw activity
- delivering an oral presentation about a sport

Common assessments including the end of unit summative assessment:

- Summative assessments for the vocabulary and grammar from the on-level assessment book.
- Performance assessments: Sport presentation using the NEASC Rubric on Effectively communicates information for a variety of purposes and NEASC Works collaboratively to accomplish group goals.

Teacher notes:

- Students struggle to accurately apply preterit and imperfect.
- Students are unaware that certain verbs for mental processes change meaning in the preterit and the imperfect.

Name of the Unit: 2.2 Diversion bajo techo/ Indoor sports and activities	Length of the unit: 10 blocks (84 minute blocks)
Purpose of the Unit: Students will be able to communicate in the target language about leisure activities. Foundations for the unit are based in vocabulary from Spanish 1 through Spanish 3 related to sports, games, likes and dislikes. Students will also review grammar concepts and tenses from Spanish 1 to Spanish 3 (present, past, future and subjunctive). Students will continue building on the basic skills of listening, speaking, reading and writing through the use of authentic and textbook activities.	

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- 1.3 Students present information, concepts and ideas to an audience of listener or readers on a variety of topics
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- 4.1 Students demonstrate understanding of the nature of language through comparisons of the language studied and their own
- 4.2 Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own

Big Ideas:	Essential Questions:
• Cultural importance of board games • All cultures use games to entertain and socialize	• Compare the popularity of board games in between the US and Spanish-speaking countries • What is the difference between a sport and a game? • What are the resources available for sports in the US and Spanish-speaking countries? • What do people do in their free time?
Students will know: • vocabulary related to indoor sports and activities	Students will be able to: • talk about indoor sports and sports equipment

• similarities and differences between indoor and outdoor activities • entertainment activities in Spanish-speaking countries	• express thoughts and beliefs about sports and games • compare and contrast accessibility to sports in U.S. and Spanish-speaking countries

Significant task 1: Sports Announcer

In groups of two, students will pretend to be a Hispanic sports commentor. Students will view video clips of sports commentaries in Spanish and a video of a project exemplar. Then students will research their own clips to include in their presentation (i.e ESPN Deportes, Yahoo es). Each pair of students will create a video presentation using animoto, prezi, glogster, etc to narrate in the target language a 2 minute commentary on a sport event.

This task directly targets the following standards: **1.2, 1.3** and 2.1

Timeline: 4 blocks
Key vocabulary: los deportes, las actividades, expresiones útiles y objetos
Resources: Avancemos textbook Unit 2.2 and ancillary materials, dictionaries, computers and smartboard. (http://www.laits.utexas.edu/spe/adv13.html
(http://www.youtube.com/watch?v=oXUYs4Igi_c)

Significant task 2: Writing prompt: ¿Cuál es tu deporte favorito?

Students will write an essay about their preferred sport in the target language and include why they like it, narrate a memory about that sport and explain the significance that the sport has on them. They will use graphic organizers for pre-writing activities and will have an opportunity to peer-edit their rough drafts. Students will be provided with a template with guiding questions to help them complete their task.

This task directly targets the following standards: **1.3** and 4.2

Timeline: 3 blocks
Key Vocabulary: los deportes, las actividades, expresiones útiles y objetos
Resources: Avancemos textbook Unit 2.2 and ancillary materials and dictionaries.

Common learning experiences:

- participating in listening activities from the textbook and workbook
- completing grammar activities from the textbook
- researching a sport or game video clip

- writing prompts from the textbook
- delivering an oral presentation as a sport commenter

Common assessments including the end of unit summative assessment:

- Summative assessments for the vocabulary and grammar from the on-level assessment book.
- Performance assessments: Sport commentary presentation using the NEASC Rubric on Effectively communicates information for a variety of purposes and NEASC Works collaboratively to accomplish group goals.
- Performance assessments: Favorite sport essay graded using the departmental writing rubric.

Teacher notes:

- Students struggle to accurately conjugate spell changing gerunds.
- Students struggle recalling the construction of comparative phrases.
- Peer editing is difficult for students especially identifying errors in others work.

Name of the Unit: 3.1 ¿Adónde vamos de vacaciones?/ Where do we go on vacation?	Length of the unit: 12 blocks (84 minute blocks)
Purpose of the Unit: Students will be able to research, plan and present a virtual trip to a Spanish speaking country. Foundations for the unit are based in vocabulary from Spanish 1 through Spanish 3 related to travel. Students will also review grammar concepts and tenses from Spanish 1 to Spanish 3 (present, past, future and subjunctive). Students will continue building on the basic skills of listening, speaking, reading and writing through the use of authentic and textbook activities.	

ACFTL Standards Addressed in the unit: (Provide the link to the specific standards.)

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- 4.1 Students demonstrate understanding of the nature of language through comparisons of the language studied and their own
- 4.2 Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own

Big Ideas:	Essential Questions:
• Attitude towards leisure time reflects the culture of each country • While vacations are forms of diversion, they can also be fraught with challenges especially when in the midst of traveling	• How can travel broaden one's horizons? • What considerations should you make when traveling? • What are some major tourist attractions in the US and Spanish-speaking countries? • What are some problems that can occur when traveling and how do you correct them? • How has air travel influenced travel experience?
Students will know:	Students will be able to:

• vocabulary related to travel activities • present perfect, future and conditional tenses	• plan a trip to a Spanish-speaking country • research and create an itinerary with activities for their vacation • make an oral reservation for their vacation • write a travel diary or travel blog for their vacation • deliver a presentation in Spanish about their vacation • reflect what they would do differently given the chance to repeat the task

Significant task 1: Plan the vacation

Students will decide to work in pairs or individually for this task. Students will choose a Spanish-speaking country to visit for a 7 to 10 day virtual vacation. Using computers in the target language, students will research flights, activities, special considerations, hotels, currency conversions, food, transportation and attractions. Using their information students will create a written itinerary for their trip. Students are graded for this task with NEASC Rubric 1: Using technology for research and NEASC Rubric 5: Problem Solving. Their written itinerary is graded using the departmental writing rubric.

This task directly targets the following standards: **1.2** and **3.1**

Timeline: 4-5 blocks
Key vocabulary: agencia de viajes, alojamiento, , en el aeropuerto, en el avión, expresiones útiles
Resources: Avancemos textbook Unit 3.1 and 3.2 and ancillary materials, dictionaries, computers, digital voice recorders

Significant task 2: Travel Blog

As a large group students will view exemplar travel blogs. In a whole group the class discusses what is included in a blog and view the tutorial for travelpod.com. Students will then have the task of writing a travel blog in Spanish based on their itinerary. Students will be graded using departmental writing rubic.

This task directly targets the following standards: **1.1, 1.3, 2.1,** and **2.2**

Timeline: 3 blocks

Key Vocabulary: agencia de viajes, alojamiento, , en el aeropuerto, en el avión, expresiones útiles
Resources: Avancemos textbook Unit 3.1 and 3.2 and ancillary materials, dictionaries, computers

Resources: http://seecolombia.travel/blog/2012/08/los-5-post-mas-leidos-de-nuestro-colombia-travel-blog-en-2012-hasta-ahora/) (www.travelpod.com)

Significant task 3: Travel Presentation and reflection

Students will create a visual and oral presentation of their trip using any 21st century technology. Students also reflect on their trip and changes they would make. Students present it to the class in the target language. Students will be graded with NEASC Rubric 3: Effectively communicates information for a variety of purposes.

This task directly targets the following standards: **1.3** and **4.2**

Timeline: 3.-4 blocks
Key vocabulary: agencia de viajes, alojamiento, , en el aeropuerto, en el avión, expresiones útiles
Resources: Avancemos textbook Unit 3.1 and 3.2 and ancillary materials, dictionaries, computers and smartboard

Common learning experiences:

- participating in listening activities from the textbook
- completing grammar activities from the textbook
- researching an itinerary and attractions from a Spanish-speaking country
- writing an itinerary for trip
- delivering an oral presentation on their vacation
- making a travel blog

Common assessments including the end of unit summative assessment:

- Summative assessments for the vocabulary and grammar from the on-level assessment book.
- Performance assessments: Itinerary task is graded with NEASC Rubric 1: Using technology for research and NEASC Rubric 5: Problem Solving and departmental writing rubric.
- Performance assessments: Travel blog is graded using departmental writing rubric.
- Performance assessment: Travel presentation is graded with NEASC Rubric 3

Teacher notes:

- Students need to be kept to a time line.
- This unit has several tasks that are sequential and student must be complete each step.
- Teacher has to be aware of student grouping and possibly adjust the task if a student chooses to work alone (i.e. shorter trip)

Name of the Unit: 4.1 Familia, sociedad y problemas sociales/ Family, society and social problems	Length of the unit: 10 blocks (84 minute blocks)
Purpose of the Unit: Students will explore the concept of family by comparing their own experiences and understandings. They will explore concepts of racism, sexism, stereotypes in their personal experiences, in the U.S., and in Spanish-speaking countries using the target language Foundations for the unit are based in vocabulary from Spanish 1 through Spanish 3 related to family and social problems. Students will also review grammar concepts and tenses from Spanish 1 to Spanish 3 (present, past, future and subjunctive). Students will continue building on the basic skills of listening, speaking, reading and writing through the use of authentic and textbook activities..	

ACFTL Standards addressed in this unit: (Provide the link to the specific standards.)

- 1.1 Students engage in conversations, provide and obtain information, feelings and emotions and exchange opinions
- 1.2 Students understand and interpret written and spoken language on a variety of topics
- 1.3 Students present information, concepts and ideas to an audience of listener or readers on a variety of topics
- 2.1 Students demonstrate an understanding of the relationships between the practices and perspectives of the culture studied
- 3.1 Students reinforce and further their knowledge of other disciplines through the foreign language
- 4.1 Students demonstrate understanding of the nature of language through comparisons of the language studied and their own
- 4.2 Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own
- 5.1 Students use the language both within and beyond the school setting

Big Ideas:	Essential Questions:
• Your personal experiences affect your beliefs • Relationships in today's world are challenged by a number of social problems that are more easily solved by strong familial bonds.	• How does one express wishes and desires? • How does one make impersonal statements? • What issues to immigrants confront in the USA? • How is the immediate family viewed in

• Immigration is a social issue related to family, work and resources	different countries? • What are the most common problems facing societies across the world today and do they vary from country to country?
Students will know: • vocabulary related to family, social problems and actions • the subjunctive mood and tense	Students will be able to: • express personal experiences related to discrimination, sexism and stereotypes in the target language • express thoughts, desires, wishes and beliefs in the target language • compare and contrast accessibility to sports in U.S. and Spanish-speaking countries • accurately use the subjunctive mood

Significant task 1: Manos a la obra
As a class students discuss social problems affecting our school and community (i.e hunger, violence, disease). Individually students will choose a problem to address and in the target language students will create a written plan to address the problem. Students can brainstorm with other classmates, relatives for possible ways of addressing the problem. Students will also use online community resources to gather data related to their problem. Students will write and present a final version of their plan in the target language to the class.

This task directly targets the following standards: **1.1, 1.3** and **5.1**

Timeline: 3 blocks
Key vocabulary: vocabulary related to family and communities
Resources: Avancemos textbook Unit 4.1 and ancillary materials, dictionaries, computers and smartboard.

Common learning experiences:

- participating in listening activities from the textbook and online (http://www.laits.utexas.edu/spe/int18.html)
- completing grammar activities from the textbook
- writing prompts from the textbook
- delivering an oral presentation about a community problem
- writing a plan to address community problem

- peer editing
- brainstorming session on social problems in our community

Common assessments including the end of unit summative assessment:

- Summative assessments for the vocabulary and grammar from the on-level assessment book.
- Performance assessments: final written plan graded using departmental writing rubric
- Performance assessment: final presentation of community problem graded using NEASC Rubric 3: Effectively communicates information for a variety of purposes
- Performance assessments: students will self-assess using NEASC Rubric 4: Critical Analysis/Thinking

Teacher notes:

- Teacher will need to provide lots of opportunities for practice in forming and using the subjunctive mood.
- Teacher might want to compile a list of community resources to lead discussions

Name of the Unit: 5.1 Arte, Música y Literatura / Art, Music and Literature	Length of the unit: 12-14 Blocks (84 minute blocks)
Purpose of the Unit: The purpose of this unit is to explore the political and cultural attributes of Hispanic countries through the study of art, music and literature. Foundations for the unit are based in vocabulary from Spanish 1 through Spanish 3 related to art, music, likes and dislikes. Students will also review grammar concepts and tenses from Spanish 1 to Spanish 3 (present, past, future and subjunctive). Students will continue building on the basic skills of listening, speaking, reading and writing through the use of authentic and textbook activities.	

ACFTL Standards addressed in this unit: (Provide the link to the specific standards.)

- 1.1 Students engage in conversations, provide and obtain information, feelings and emotions and exchange opinions
- 1.2 Students understand and interpret written and spoken language on a variety of topics
- 1.3 Students present information, concepts and ideas to an audience of listener or readers on a variety of topics
- 2.1 Students demonstrate an understanding of the relationships between the practices and perspectives of the culture studied
- 3.1 Students reinforce and further their knowledge of other disciplines through the foreign language
- 4.1 Students demonstrate understanding of the nature of language through comparisons of the language studied and their own
- 4.2 Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own

Big Ideas:	Essential Questions:
• Many forms of art are represented by Hispanic artists. • Musical styles vary by region and culture. • Literary works reflect the cultural identities and attitudes of the author. • Paintings and music not only serve as a source of entertainment but also teach about past history. • Art can be created by hand and with words to educate and entertain.	• What is art? • How does culture affect art? • How do Spanish speakers discuss a work of art? • What are the influences that determine different musical styles? • What cultural attitudes can you determine from reading Don Quixote? • How will studying Hispanic art, music and literature affect your life? • How does visiting a museum impact someone's life and feelings?

	• What type of impact does Spanish music have on our communities?
Students will know: • qualities represented by modern art movements • perfect tenses • comparatives • different regional music styles	Students will be able to: • compare and contrast art movements in Spanish • express and discuss their musical interests in Spanish • read and comprehend a work of Spanish literature • use the perfect tenses •

Significant task 1: Self Portrait

In a large group, students will watch a brief powerpoint about the art movements of cubism, realism, surrealism, and impressionism. Students will work in small groups using a computer and a teacher-generated list of Hispanic artists to find an example of each movement of art. They will present their findings to the class in the target language. Next, in a large group, students will use guiding questions to analyze a painting. Upon completion, students will choose a painting from a Hispanic artist and individually complete an analysis. Students will self-select into groups based on their preferred art movement. Each group will generate a list of characteristics shown in the movement and not shown. Given the list and a variety of art supplies, each student will complete a self-portrait in that particular style and a written explanation or their work in the target language.

This task directly targets the following standards: **1.1, 1.2, 1.3, 2.1, 2.2, 3.1, 3.2** and **4.2**

Timeline: 3 blocks
Key vocabulary: la pintura, los instrumentos musicales, la escultura, la literatura
Resources: Avancemos textbook Unit 5.1 and 5.2 and ancillary materials, dictionaries, computers and smartboard.

Significant task 2: Música y baile

In pairs students choose a type music/dance from a Spanish-speaking country. Students research and answer questions related to the type of music/dance. Students will find an important artist of that genre to present to the class. They will create a multimedia presentation in the target language that incorporates both music/dance and cultural influences related to the genre. It will be graded according to NEASC Rubric 1 Use of technology and NEASC Rubric 3 Effectively communicates information
Timeline: 3 blocks
Key Vocabulary: instrumentos, música, bailes

Resources: Avancemos textbook Unit 5.1-5.2 and ancillary materials and dictionaries.
http://www.classzone.com/cz/books/avancemos_2/page_build.htm?id=resources/jsp/interactiva/interactiva

Significant task 3: A Hero's Journey

In a large group students will brainstorm aspects of the Hero's Journey 1 2. Students will read an abbreviated story of Don Quijote, one chapter at a time. For each chapter they will write a diary entry reflecting on the aspects of a hero's journey in the target language. Students will finalize this task by writing a 5 paragraph essay in the target language comparing and contrasting 1 aspect of the hero's journey in Don Quijote with a novel/film of their choice. (i.e Harry Potter, Starwars, Hunger Games)

Common learning experiences:

- listening activities from the textbook
- completing grammar activities from the textbook
- researching music / dances from Spanish-speaking country
- creating and analyzing a self-portrait
- brainstorming
- using Cornell notes for Don Quixote
- peer-editing of essays

Common assessments including the end of unit summative assessment:

- Summative assessments for the vocabulary and grammar from the on-level assessment book.
- Performance assessments: Group presentation on artist graded with the NEASC Rubric on Effectively communicates information for a variety of purposes and NEASC Works collaboratively to accomplish group goals.
- Performance Assessment: Self Portrait graded with NEASC Rubric on Effectively communicates information for a variety of purposes
- Performance assessment of Spanish musician/artist graded with to NEASC Rubric 1 Use of technology and NEASC Rubric 3 Effectively communicates information
- Performance assessment: Hero's diary graded using the It will be graded according NEASC Rubric 3 Effectively communicates information
- Performance assessment: compare/contrast essay on Hero's aspects graded using NEASC Rubric 3 Effectively communicates information

Teacher notes:

- Students struggle to accurately conjugate spell changing gerunds.

- Students struggle recalling the construction of comparative phrases.
- Peer editing is difficult for students especially identifying errors in others work.

Windsor Public Schools
Curriculum Map
Spanish Conversation and Culture: 9th – 10th

Purpose of the Course:

Through world language study, students develop sensitivity to the cultural and linguistic heritage of other groups and their influence on our own, and are prepared to participate in a society characterized by linguistic and cultural diversity.

The goal of the World Language program at WHS is to expose students to a different language and culture in order to make them knowledgeable and active members of a global society. Students will learn to use modern world languages for meaningful communication in both spoken and written form. This Conversational Spanish course emphasizes language as it is used in various real-life situations that students are most likely to encounter. As the world moves towards a global community, it is increasingly important to be able to communicate in languages other than English. It is important to understand the perspectives of a culture that generate its patterns of behavior, ways of life, world views and contributions.

Name of the Unit: 1 Getting to know the Spanish Speaking World	Length of the unit: 8-9 blocks (84 minutes)

Purpose of the Unit:

Students learn about the geography of the Spanish-speaking countries. They will learn their location, major landmarks, capitals, weather, and products from those countries. Students will also be able to compare and contrast those countries with regions in the US.

ACTFL Standards

- 1.3 Students present information, concepts and ideas to an audience of listener or readers on a variety of topics
- 4.1 Students demonstrate understanding of the nature of language through comparisons of the language studied and their own
- 4.2 Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own

<table>
<tr><td>Big Ideas:

• Understanding cultural differences among Spanish-speaking countries aids in language comprehension
• Gaining knowledge about and empathizing with other peoples and cultures leads to a more tolerant society</td><td>Essential Questions:

• How does where I live shape who I am?
• What is the Spanish-speaking world like?
• What can I learn about my own culture from the study of others?</td></tr>
<tr><td>Students will know:

• The geography and capitals of Spanish speaking countries
• Products from a Spanish speaking country
• Vocabulary related to weather, seasons and landmarks</td><td>Students will be able to:

• Use technology as a tool to research, organize, evaluate and communicate information
• Demonstrate knowledge of geographical locations and identify major countries, cities and geographical features of the places where the target language is spoken
• Read, summarize and discuss information regarding the Hispanic and Spanish culture
• Compare and contrast a Spanish speaking country with a region of the US</td></tr>
<tr><td colspan="2">Significant task 1

Students will create a technology based presentation using power point, prezi or animoto on a Spanish speaking country of their choice. In their presentation they will describe the geography, products, and practices of that country including weather, seasons, food and other products, clothing and sports.

This task directly target the following standards: 1.3 and 4.1

Timeline: 3-4 blocks
Key vocabulary: Spanish speaking countries and capitals, geography terms (mountains, rivers, coast, lakes) weather, seasons, sports, food, and clothing
Resources: Avancemos textbook Unit 1.1 and ancillary materials, dictionaries, computers and smartboard., and library media resource center</td></tr>
<tr><td colspan="2">Significant task 2

Using Google maps (on the smart board) students will participate on a whole class discussion of the New England region. Students discuss geography, products, practices including weather, seasons and sports. After the whole group discussion, students will break up into groups (each group with a computer) and do the same discovery activity for one of the other 4 regions of the US (Northwest, Southwest, Midwest,</td></tr>
</table>

and Southeast). Students will jigsaw into new groups where each member represents a different region of the US. Students will create a list of Spanish speaking region that most closely match each region (ex. Argentina mostly closely resembles the Midwest because of the climate, geography, and products). Finally students will use their specific expertise from Task 1 and would complete a poster with this statement "If (my country) were to join the US which region would it fit and why?"

This task directly target the following standards: **4.2**
Timeline: 4-5 blocks
Key vocabulary: : Spanish speaking countries and capitals, geography terms (mountains, rivers, coast, lakes) weather, seasons, sports, food, and clothing
Resources: Avancemos textbook Unit 1.1 and ancillary materials, dictionaries, computers and smartboard, Google maps, art supplies and poster board.

Common learning experiences:

- Students will label blank maps identifying countries, capitals and geographical features
- Students will attend an instructional block in the library media center to learn animoto, prezi, museum box and powerpoint
- Students will use large floor map of the Spanish speaking countries and capitals made in the classroom with masking tape to practice kinesthetically recall of countries and capitals
- Online research and presentation of their designated country
- KWL whole group discussion on the New England Region
- Small group activity of the US regions
- Jigsaw activity creating the list of Spanish speaking countries and their corresponding region
- Create and present a poster of where the most similarities exist among a region of the US and their Spanish-speaking country.

Common assessments including the end of unit summative assessment:

- Formative assessments include the kinesthetic activity using the floor map, KWL group discussion
- Summative assessments for the Spanish speaking countries identifying capitals, countries and major landmarks.
- Performance assessments would include research and presentation of individual country and small group research on US regions and final poster board activity (each performance will be scored using a NEASC rubric)

Teacher notes:

- Students will be taught mnemonic devices for memorizing country names and capitals.
- Teacher might want to differentiate the poster board activity for struggling students with a compare/contrast activity.

Name of the Unit: 2 Who am I?	Length of the unit: 4-5 blocks (84 minutes)
Purpose of the Unit: Students participate in guided conversations, dialogues and activities to express basic interpersonal greetings and exchange basic information about themselves. Students previously learned the location of the Spanish speaking world and now they will learn basic conversation with greetings, farewells and basic personal information.	

ACTFL Standards

- 1.1 Students engage in conversations, provide and obtain information, feelings and emotions and exchange opinions.
- 1.2 Students understand and interpret written and spoken language on a variety of topics
- 2.1 Students demonstrate an understanding of the relationships between the practices and perspectives of the culture studied
- 5.1 Students use the language both within and beyond the school setting

Big Ideas:	Essential Questions:
• Knowledge of the Spanish Language and Culture is a valuable asset in our global world • Foreign language learning extends beyond the classroom to real life situations	• Who am I in a global world? • How do I get to know others in another country? • What basic personal information is important to share? • How do practice conversations and presentations help me become a better speaker in Spanish?
Students will know: • Vocabulary related to greetings, farewells, polite expressions • The difference between formal and informal address • How to form a question in Spanish • Adjective placement and agreement • Pronunciations and speech patterns vary by country	Students will be able to: • Introduce themselves and someone else • Ask and give basic personal information • Use appropriate greetings and leave takings in Spanish • Address people using the appropriate level of formality • Create and present a dialogue with a partner
Significant Task 1 With a partner students will create and present a dialogue introducing and describing themselves in Spanish. Students will use vocabulary and learned phrases in the appropriate register (formality) for their dialogues.	

Students pretend to be a citizen of the country they studied in chapter 1 and include details in their dialogues (nationality, sports, likes and dislikes). Students will practice using digital recorders in class to score their dialogues for improvement before presenting their final dialogues to the class.
This task directly target the following standards: **1.1, 1.2,** 2.1 and 5.1
Timeline: 4-5 blocks
Key vocabulary: greeting, introductory phrases, nationalities, likes and dislike phrases, activities and personal pronouns.
Resources: Avancemos Unit 1.1 ancillary materials, dictionaries, computers, digital recorders, smartboard, teacher created materials and listening comprehension proficiency (http://www.laits.utexas.edu/spe/beg08.html)

Common learning experiences:

- participating in listening activities
- creating their own flashcards of vocabulary phrases
- participate in round robin speaking practice
- writing, recording and performing dialogue

Common assessments including the end of unit summative assessment:

- Formative assessments vocabulary quiz and comprehension questions from listening dialogues
- Summative assessment of listening comprehension using the laits speaking clips ((http://www.laits.utexas.edu/spe/beg08.html)
- Performance assessments: written dialogue and performed dialogue of a basic conversation where students exchange greetings, personal information and good bye with the appropriate register. Graded with the NEASC Effective Communication Rubric

Teacher notes:

- Activities can be differentiated by adjusting length of dialogues, increasing repetition for comprehension activities.

Name of the Unit: 3 Culture Exploration of Mexico and Argentina	Length of the unit: 12-13 blocks (84 minutes)
Purpose of the Unit: Students will explore and learn about the culture of Mexico and Argentina. Using a variety of sources students will gain new perspectives on the customs, history, food, sports, holidays, music and dance and traditions related to each country. Foundations for the unit are geography and basic vocabulary structures so that students can comprehend information from web quests.	

ACTFL Standards

- 1.1 Students engage in conversations, provide and obtain information, feelings and emotions and exchange opinions.
- 1.3 Students present information, concepts and ideas to an audience of listener or readers on a variety of topics
- 2.1 Students demonstrate an understanding of the relationships between the practices and perspectives of the culture studied
- 2.2 Students demonstrate an understanding of the relationship between the products and the perspectives of the culture studied
- 3.1 Students reinforce and further their knowledge of other disciplines through the foreign language
- 4.1 Students demonstrate understanding of the nature of language through comparisons of the language studied and their own
- 4.2 Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own

Big Ideas:	Essential Questions:
• Language shapes culture and culture shapes language • Exploring other countries develops an awareness and respect for others people's lives • Death can be discussed openly and does not need to be feared • The cultural traditions involved in celebrating Día de los Muertos help people to become comfortable with death • Día de los Muertos was created from a mix of Aztec and Catholic beliefs in an attempt to transform barbaric Aztec practices	• What is culture? • How are language and culture linked? • How does the study of another language and culture make another language smaller? • How can I explore other cultures without stereotyping? • How do we treat the idea of death in the United Sates compared to Mexico and other countries that celebrate Día de los Muertos?

Students will know:	Students will be able to:
• Information related to Mexico and Argentina related to the following topics: history, food, music and dance, sports, customs, holidays, traditions, famous people and immigration • similarities and differences between cultures of Mexico and Argentina • traditions and holidays can be honored and celebrated in different ways	• research and create a museum box (virtual or actual) depicting information related to a specific country on 6 different topics (history, food, music and dance, traditions, sports, customs, holidays, famous people and immigration • compare and contrast between Argentina and Mexico on the previous topics • discuss culturally relevant topics and show respect to others' beliefs

Significant task 1:

- Students will pair and pick a topic card about Argentina. Topics would include history, food, music, famous people, native peoples, and holidays. They will complete an introduction to Argentina webquest (http://www.langwitches.org/projects/internet/webquests/argentina/) Next they perform research on that topic (online, text, library etc). Students will then jigsaw into two Argentina groups and share their "expertise" on their topic with the group. As a group they create their multimedia presentation (animoto, prezi, power point, museum box) and present it to the class.

This task directly targets the following standards: **1.3, 2.1** and 3.1.

Timeline: 4-5 blocks
Key vocabulary: key vocabulary varies based on their topic (historia, revolución, guerra, conquista)
Resources: online sources, on line sites (ex: http://www.infoplease.com/country/argentina.html; http://www.turismo.gov.ar/eng/menu.htm) Webquest: http://www.langwitches.org/projects/internet/webquests/argentina/

Significant Task 2

- Students will pair and pick a topic card about Mexico. Topics would include history, food, music, famous people, native peoples, and holidays. They will complete an introduction to Mexico web quest (http://zunal.com/webquest.php?w=66790)
- Next they perform research on that topic (online, text, library etc). Students will then jigsaw into two Mexico groups and share their "expertise" on their topic with the group. As a group they create their multimedia presentation (animoto, prezi, power point, museum box) and present it to the class.

This task directly targets the following standards: **1.3, 2.1** and 3.1.

Timeline: 4-5 blocks
Key vocabulary: key vocabulary varies based on their topic (historia, revolución, guerra, conquista)
Resources: online sources, on line sites (ex: www.infoplease.com/ipa/A0107779.html www.visit**mexico**.com/ Web quest: http://zunal.com/webquest.php?w=66790

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Significant Task 3

- Students will work in small groups to create a Web quest based on the website http://www.azcentral.com/ent/dead/ . Students have successfully completed two web quests (in Task 1 and Task 2) and will be provided with login to Zunal.com (Free online web quest maker) and a Google Chrome laptop in order to create their own Web Quest for Día de los Muertos. After groups create and present their Web quest as a whole class discussion generate a list of American Holidays that share characteristics with Día de los Muertos

This task directly targets the following standards: **1.1, 2.1,** 2.2, **3.1** and 4.2.

Timeline: 3-4 blocks
Key vocabulary: key vocabulary would focus on Día de los Muertos (muerto, calaca, calavera, ofrenda, pan de los muertos, papel picado, velas, etc.)
Resources: online sources, on line sites (ex: www.infoplease.com/ipa/A0107779.html www.visit**mexico**.com/ Webquest: http://zunal.com/webquest.php?w=66790

Common learning experiences:

- Students will use topic card to research with a partner
- Students will complete the Webquest on Argentina and Mexico
- Pairs will form larger groups to expand knowledge of Argentina and Mexico
- Students will share their knowledge with larger group
- Large group will create a multimedia presentations
- Small group work to create Webquest on Día de los Muertos
- Class will generate a list of American holidays that share characteristics of Día de los Muertos

Common assessments including the end of unit summative assessment:

- Summative teacher created assessment based on general information related to Argentina and Mexico and Día de los Muertos
- Formative reflection comparing Día de los Muertos with Halloween and Memorial Day
- Performance assessment: Successful completion of the web quests based on the rubric (http://www.langwitches.org/projects/internet/webquests/argentina/evaluation.htm) for Argentina and http://zunal.com/evaluation.php?w=66790 for Mexico
- Performance assessment on multimedia presentations using the NEASC rubrics for Technology Research, Effective Communication and Collaboration.

Teacher notes:

- Given time teacher could supplement Día de los Muertos with crafts and artifacts so that students create an authentic altar.

Name of the Unit: 4 Culture Exploration of Guatemala and the Maya	Length of the unit: 11-12 blocks (84 minutes)
Purpose of the Unit: Students will explore and learn about the culture of Guatemala. Using a variety of sources, students will gain new perspectives on the customs, history, holidays, and traditions related to Guatemala and the Maya. Students will develop a deep understanding of the relationship between the historical record and written language. Further, students will be able to link their own outward representations of identity to practices thousands of years ago. Foundations for the unit are geography and basic vocabulary structures so that students can comprehend information from travel related video clips.	

ACFTL Standards Addressed in the unit: (Provide the link to the specific standards.)

- 1.1 Students engage in conversations, provide and obtain information, feelings and emotions and exchange opinions.
- 1.2 Students understand and interpret written and spoken language on a variety of topics
- 1.3 Students present information, concepts and ideas to an audience of listener or readers on a variety of topics
- 2.1 Students demonstrate an understanding of the relationships between the practices and perspectives of the culture studied
- 3.1 Students reinforce and further their knowledge of other disciplines through the foreign language
- 4.1 Students demonstrate understanding of the nature of language through comparisons of the language studied and their own
- 4.2 Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own

Big Ideas:	Essential Questions:
• Language shapes culture and culture shapes language • There is a relationship between spoken and written language • Exposure to other cultures helps students to understand that all people are connected in some way	• How are language and culture linked? • How does oral or written language impact our understanding of history? • Did the Maya really disappear? • How are people from various cultures connected?
Students will know: • information related to Guatemala on the following topics: history, food, customs, traditions • the history of the Spanish conquest	Students will be able to: • create a personal huipil that represents their individual identity based on the Guatemalan practice • describe their huipiles in Spanish

related to the destruction of the Mayan writing system • why so little is known about the Maya	• create a hieroglyph representation of their own life history based on ancient Mayan hieroglyphs • decipher a class wide hieroglyph using the understanding and skills gained in the unit •

Significant task 1: Research on the Huipiles

As a class students will read a short article and view online images of huipiles and a short video on a woman that makes huipiles (https://guatemalanhuipils.com/). The class has a whole group discussion of the huipiles, and colors and how they represent members of a particular group. The class then divides into small groups and using a Chrome notebook compile a collage of 4-5 different examples of clothing that identify people as members of a group or society. Students present these collages to the class. Finally students design, color and present their own huipil.

This task directly targets the following standards: 1.1, 1.2**, 1.3** and **4.1**

Timeline: 4-5 blocks
Key vocabulary: colors, verb ser in "it" form, review of gustar and activities
Resources: computers, and teacher created materials and art supplies, smart board

Significant task 2: Creating their own personal history hieroglyph

Students will view the PBS video: Cracking the Mayan code with guided questions to complete during the video. And then a quick follow up of a whole class discussion on the video. Discussion also explores communication through images (examples: an apple for teacher, (abstract or concrete) lightbulb for idea) Students use the chrome notebooks to search for other examples and compile a class google dictionary of images that represent words or ideas (class codex). Using the Mayan alphabet students make their own hieroglyph representing their name. This leads into their final performance tasks of creating an actual clay model of a hieroglyph representing their life history along with a written explanation. Students will include the Mayan representation of their name, birth date and some personal details and or family history using the images included in the class codex. Finally, students demonstrate their ability to interpret hieroglyphs by translating another student's section of the stela.

This task directly targets the following standards: 1.1**, 1.2**, 2.1, 3.1, and **4.2**

Timeline: 6-7 blocks
Key vocabulary: Spanish alphabet, numbers, variety of common nouns (day, night, sun, etc.) stela, codex, family Spanish vocabulary
Resources: Mayan alphabet (http://www.famsi.org/research/pitts/MayaGlyphsBook1.pdf), Cracking the Mayan code (http://video.pbs.org/video/980048895/), chromenotebooks, Smartboards, art supplies, quick drying clay or Crayola model magic

Common learning experiences:

- Reading, viewing and discussion of huipiles https://guatemalanhuipils.com/
- Creating and presenting collage using Google Chrome notebooks
- Design, color and present personal huipil
- viewing of the pbs video: cracking the mayan code (http://video.pbs.org/video/980048895)
- “picture worth 1000 words” presentation and discussion
- Create class codex activity
- Write name hieroglyph activity
- Extend name hieroglyph into personal history
- Read and decipher a section of the class “stela”(historical stone describing events)

Common assessments including the end of unit summative assessment:

- Summative assessments for the vocabulary related to numbers, colors, activities and common nouns.
- Summative assessments for the videos watched during this unit. (Huipiles and Cracking the Mayan Code)
- Formative assessment: the collage of common images representing words and the class codex
- Performance assessments: creating the personal huipil graded using the NEASC rubric for Effective Communication
- Performance assessments: Writing name using Mayan alphabet scored against the Mayan alphabet
- Performance assessment: Creating their extended history in clay and writing the translation in English scored using the NEASC Effective Communication Rubric
- Summative assessment: accurately interpreting hieroglyphics from another student’s stela

Teacher notes:

- Teacher must check links prior to each lesson to ensure that they are working.
- Be prepared to prompt students with examples of communication through images and identity groups.

Windsor Public Schools
Curriculum Map for the Secondary Level
U.S. Military History: The American Military Experience Since 1890

Purpose of the Course:
This course examines the military heritage of the United States from the onset of the America's Imperial expansion to the present time. Through an in-depth analysis of literature, primary & secondary sources, maps, data, biographies and documentaries students will assess key individuals, military policies, organizations, strategies, campaigns, tactics and battles that have defined the military experience. Students will also investigate connections between America's military infrastructure and the country's social and cultural framework.

Name of the Unit:	Length of the unit:
Unit 1 – Building an American Military Empire	8-10 Blocks (84 Minutes Each)
Purpose of the Unit:	
The purpose of this unit is to delineate and analyze the foundations of the modern American military establishment. The unit discusses a conceptual understanding of war, as well as its cultural connection within American society. As the unit moves beyond ideological fundamentals, it provides an investigation of the Spanish-American war as the birth of an American Empire as well as the United State's involvement in the Great War and the subsequent creation of the military forces of a world power.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

- CCSS.ELA-Literacy.RH.11-12.1 Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- CCSS.ELA-Literacy.RH.11-12.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- CCSS.ELA-Literacy.RH.11-12.3 Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain
- CCSS.ELA-Literacy.RH.11-12.5 Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
- CCSS.ELA-Literacy.RH.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem

- CCSS.ELA-Literacy.RH.11-12.9 Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources
- CT Social Studies Curriculum Framework 1.1 – Significant events and themes in United States History.
- CT Social Studies Curriculum Framework 2.1 – Access and gather information from a variety of primary and secondary sources including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.2 – Interpret information from a variety of primary and secondary sources, including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.4 – Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation
- CT Social Studies Curriculum Framework 3.1 – Use evidence to identify, analyze and evaluate historical interpretations
- CT Social Studies Curriculum Framework 3.2 – Analyze and evaluate human action in historical and/or contemporary contexts from alternative points of view

Big Ideas:	Essential Questions:
• Military conflict and war have defined many aspects of American culture; subsequently American culture has continuously affected our conduct of war • A shift in military strategy and importance coincided with America's desire to expand our sphere of influence at the onset of the 20th Century • Despite isolationist intents, America's involvement in the Great War solidified the existence of America as a world power	• What are the roots of military conflict? • How has the United States attempted to use military power to advance its interests and ideals around the world and to what effect? • How have American military policies, establishments, and practices evolved over time; and what role has technology played in this evolution? • How did U.S. administration officials shape foreign policy both during and as a result of the military conflict? • How does war shape public opinion; and subsequently how does public opinion affect the war? • How do concepts of identity shape the character of war and how war, in turn, shapes identity through the human experience?

Students will know: • tenets of American culture and how they summarize American thinking about war • a brief history of the early developments of the American military experience from the French-Indian Wars through the Civil War and the roots of American Imperialism • the causes, actions and outcomes of America's involvement in the Spanish-American War • the effects of American Neutrality policy and the reasons for U.S. entrance into the Great War ▪ the role of media in shaping U.S. public opinion of the war during both the Spanish-American War and WWI ▪ the significance of various leaders, battles and policy decisions during and after the Great War	Students will be able to: • Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas in regard to the relationship between American Culture and war • analyze the roots of American Imperialism through complex primary sources and the subsequent relation with the modernization of the American military including Alfred T. Mahan and the influence of sea power • Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, for both the Spanish-American War and America's involvement within the Great War • Integrate information from diverse sources, both primary and secondary, into a coherent understanding of the origins and outcomes of American Imperialism, Spanish-American War and Great War involvement • Access and gather information from a variety of primary and secondary sources including electronic media • Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation

Significant task 1: "Just War" Inquiry Activity

Through direct teacher instruction, class discussions and smaller assignments such as "Great War Poetry", students will be presented a complete background to U.S. involvement in the first World War. Students will gain an understanding regarding the collapse of American neutrality and the subsequent increasing role of American military involvement in Europe. Following this instruction and discussion, students will be assigned into five investigative groups and given the task of responding to the following prompt; was the First World War a "Just War"? In order to respond to this prompt, students will be

provided the following information;

1. President Carter's March 2003 Letter to the Editor – "Just War -- or a Just War?"
2. WWI statistics – costs, combat deaths, wounded, civilian, damage estimates, etc.
3. Photographs
4. Diary and Journal Entries
5. League of Nations and Wilson's 14 Points

Students will use the above primary and secondary source material to determine whether or not World War I met President Carter's qualifications for a Justified Military Conflict. Aside from provided materials, students will also be required to draw from previous knowledge obtained from key text (s) and course lecture and discussion. Students will be given one block to analyze their evidence and prepare their response. They will present their responses the following day and the class will debate the qualifications as a whole. Students will be graded on their individual analysis of the source material as well as their groups' presentation briefing. The 21st Century NEASC Rubrics will be used to grade the presentation component.

Timeline: 2-3 Blocks
Key vocabulary: Zimmerman Note, *Lusitania & Sussex*, Selective Service Act, Conscientious Objector, War Industries Board, George Creel, CPI, AEF, John J. Pershing, Belleau Wood, 2nd Battle of the Marne, Espionage & Sedition Act, Wilson's 14 Points

Resources: *"Just War or a Just War?"*, Teacher's Choice

Significant task 2: *Note Card Research Essay*

Through teacher direct instruction and independent research, students will gain knowledge of a topic regarding the America's involvement in either the Spanish-American War or World War I for their summative Note Card Research Assignment approved by the teacher ahead of time. The teacher will establish specific procedures, protocols as well as a timeline for research and will facilitate class discussions around the topics provided for student choice.

After completing their research, students will be required to write an in-class analytical essay regarding their choice of topics for their end-of-unit summative assessment. Students will be allowed to have one 3x5 note card containing research notes for the day of the essay. Department Analytical Essay Rubrics will be used to grade the essay.

Timeline: 8-10 blocks (independently with 1 in-class research day)
Key vocabulary: all (see "Teacher's Notes")
Resources: Course Text, Unit Information, WHS Library, Outside Researh

Common learning experiences:

- Direct Instruction & Class Discussion regarding background, combat operations, statistics, public opinion, outcomes, policy shifts
- Spanish-American War & U.S. Imperialism Map Activity
- Sinking of the U.S.S. Maine Inquiry Activity
- Poetry of the Great War

- Debate; “Just War” Activity - WWI
- Primary Source Readings – Various combat veterans personal account
- Note Card Research Paper – Spanish-American War & WWI

Common assessments including the end of unit summative assessment:
(Provide link to assessments and rubrics.)

1. Sinking of the U.S.S. Maine Group Briefing
2. Poetry of the Great War Analysis Reflection
3. “Just War” Inquiry Presentations/Debate
4. Summative Assessment – Note Card Research Essay (research assignment, essay is written in class on the day of the summative assessment)

Teacher notes:

Core Text Resources:

- *For The Common Defense: A Military History of the United States of America* (Millett & Maslowski)
- *The American Culture of War* (Adrian R. Lewis)
- *What is Military History?* (Stephan Morillo)
- *Doughboys, the Great War, and the Remaking of America* (Jennifer Keene)
- *Over Here: The First World War and American Society* (David Kennedy)
- *Lost Battalions: The Great War and the Crisis of American Neutrality* (Richard Slotkin)

Historical Documents:

- “The Influence of Sea Power upon History”, Alfred T. Mahan, 1890
- Oxford Laws of War on Land, Sept. 9, 1880
- "Instances of Use of United States Forces Abroad, 1798 - 1993," Ellen C. Collier, Specialist in U.S. Foreign Policy, Foreign Affairs and National Defense Division, Washington DC: Congressional Research Service, Library of Congress. October 7, 1993
- *"American Interests in the Cuban Revolution"* , Grover Cleveland, 1896
- *"Can the United States Afford to Fight Spain?"* The North American Review, February 1897
- William McKinley, First Inaugural Address, Thursday, March 4, 1897
- *"The World of 1898: The Spanish American War,"* Hispanic Division, US Library of Congress
- *"The Blowing up of the Maine"*, Albert Shaw, 1898
- *"What Really Sank the Maine"*, Thomas B. Allen, Naval History Magazine
- "First Speech Against Imperialism," By William Jennings Bryan, Extract from speech delivered at Trans-Mississippi Exposition, Omaha, Neb., June 14, 1898.
- *“The Schlieffen Plan, 1905”* The Army Quarterly, London. July, 1929
- *“The Treaty of Portsmouth”*, 1905
- *"What Our Navy Costs Us"*, Lucia Ames Mead, The World Today, April, 1909.
- *“Col. Charles Young” Retirement Letter,* Aug. 16, 1917
- *Carter, James. “Just War – or a Just War?”* New York Times, March 9, 2003
- *British, German and American Propaganda & Recruitment Posters*

- *Various Diary/Journal Entries, Letters Home & Speeches*

Media:

- *"Shell Shock" – The Century: America's Time (1999) (Documentary – 76 minute segment)*
- *Song - "Keep the Home Fires Burning" – Ivor Novello*
- *Song - "Keep the Trench Fires Going" – Tilzer & Moran*
- *Song - "Over There" – George M. Cohan*

Key Terms:

- Military History
- War
- Cultural Theory
- Imperialism
- Alfred T. Mahan
- Yellow Journalism
- Spanish-American War
- U.S.S. Maine
- George Dewey
- Rough Riders
- San Juan Hill
- Platt Amendment
- Roosevelt Corollary
- Dollar Diplomacy & Big Stick Policy
- Pancho Villa
- John Pershing
- Protectorate
- John Hay
- Open Door Policy
- Zimmerman Note
- *Lusitania & Sussex*
- Selective Service Act
- Conscientious Objector
- AEF
- John J. Pershing
- War Industries Board
- George Creel, CPI
- Belleau Wood
- 2nd Battle of the Marne
- Espionage & Sedition Act
- Wilson's 14 Points

Windsor Public Schools
Curriculum Map for the Secondary Level
U.S. Military History: The American Military Experience Since 1890

Purpose of the Course:
This course examines the military heritage of the United States from the onset of the America's Imperial expansion to the present time. Through an in-depth analysis of literature, primary & secondary sources, maps, data, biographies and documentaries students will assess key individuals, military policies, organizations, strategies, campaigns, tactics and battles that have defined the military experience. Students will also investigate connections between America's military infrastructure and the country's social and cultural framework

Name of the Unit:	Length of the unit:
Unit 2 – World War II – The Birth of a Superpower	8-9 blocks (84 Minute Blocks)
Purpose of the Unit:	
The purpose of this unit is to discuss, analyze and reflect on America's entrance and roles during the Second World War. As the unit moves beyond America's entrance and armament, it provides an investigation of the Second World War's battles, major players and American soldiers.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

- CCSS.ELA-Literacy.RH.11-12.1 Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- CCSS.ELA-Literacy.RH.11-12.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- CCSS.ELA-Literacy.RH.11-12.3 Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain
- CCSS.ELA-Literacy.RH.11-12.5 Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
- CCSS.ELA-Literacy.RH.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem
- CCSS.ELA-Literacy.RH.11-12.9 Integrate information from diverse sources, both primary

and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources

- CT Social Studies Curriculum Framework 1.1 – Significant events and themes in United States History.
- CT Social Studies Curriculum Framework 2.1 – Access and gather information from a variety of primary and secondary sources including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.2 – Interpret information from a variety of primary and secondary sources, including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.4 – Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation
- CT Social Studies Curriculum Framework 3.1 – Use evidence to identify, analyze and evaluate historical interpretations
- CT Social Studies Curriculum Framework 3.2 – Analyze and evaluate human action in historical and/or contemporary contexts from alternative points of view

Big Ideas:	Essential Questions:
• American post-war (WWI) isolationism policy and the effects on peacetime military infrastructure • Pearl Harbor and America's mobilization for war; the greatest economic buildup in world history • European Theatre vs. Pacific Theatre; A variation of purpose, tactics and combat experiences • The influence of technology on the face of war; WWII Air War Doctrine vs. WWII Ground War Doctrine • Fighting Nazism, Fascism and Militarism within the context of segregated American Society	• What are the roots of military conflict? • How has the United States attempted to use military power to advance its interests and ideals around the world and to what effect? • How have American military policies, establishments, and practices evolved over time; and what role has technology played in this evolution? • How did U.S. administration officials shape foreign policy both during and as a result of the military conflict? • How does war shape public opinion; and subsequently how does public opinion affect the war? • How do concepts of identity shape the character of war and how war, in turn, shapes identity through the human experience?

Students will know: • the roots of American Isolationism and the consequences of isolationism on peacetime military organizations • a brief history of the early developments of German, Japanese aggression and America's entrance into World War II • and the causes, actions and outcomes of America's involvement in both the European and Pacific Theatres • the role of racism in shaping U.S. public opinion of the war in the pacific • the significance of various leaders, battles and policy decisions during and after the World War II • the role technological advancements played in the evolution of 20th Century warfare	Students will be able to: • Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas in regard to the relationship between peacetime and war time military establishments • Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, for both post-war isolationism policy and America's involvement in World War II • analyze the roots of America's entrance into World War II • Integrate information from diverse sources, both primary and secondary, into a coherent understanding of World War II; its origins, theatres of combat and consequential shifts within the American military establishment • analyze the impact of technological advancements on the American military establishment and the generally accepted principles of warfare • Access and gather information from a variety of primary and secondary sources including electronic media • Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation

Significant task 1: *The Bombing of Pearl Harbor Inquiry*

Following teacher directed instruction and class discussion on the between wars years and early ages of German/Japanese aggression, in small groups students will use pieces of primary source and secondary sources data to determine whether or not the United States government had prior knowledge regarding the attack on Pearl Harbor. Evidence will include personal accounts, telegram messages between Tokyo and the United States, military maneuver intelligence and memoir/film

accounts.

Students will record their data on their data collection sheet and then will prepare a briefing for the class. Each group will present their findings to the class. Students will be evaluated by their analytical skills and their ability to draw conclusions from the evidence provided. Presentations will be scored using the building-wide NEASC presentation rubric.

Timeline: 2 Blocks

Key vocabulary:

- Isolationism, Pearl Harbor, Selective Service Act, Japanese Internment

Resources:

- Teacher provided primary & secondary source materials (telegrams, photographs, memoirs, statistics, military maneuver intelligence)
- *"The War"*, Ken Burns. PBS, 2007 (Documentary – Elements of Episode 1 – "A Necessary War" (excerpt - roughly 45 minutes)

Significant task 2: *Critical Readings of Core Texts(s)*

Students will independently read one or more of the core texts taking reading notes on key topics assigned by the teacher ahead of time. The teacher will establish a specific procedure for reviewing reading notes and facilitating class discussions around key topics, points of interest and/or student generated questions.

After completing the text(s), students will be required to write a document-based essay regarding their choice of two controversial topics as part of their end-of-unit summative assessment. Department DBQ Rubric will be used to grade the essay.

Timeline: 8-9 Blocks (Independently)
Key vocabulary: all (see "Teacher Notes")
Resources:

- Maslowki, Peter and Allan R. Millett. For the Common Defense: A Military History of the United States of America. Enlarged Edition. Simon &Schuster. 1994
- Lewis, Adrian R. The American Culture of War. 2012
- Zinn, Howard, Mike Konopacki, Paul Buhl. A People's History of American Empire (A Graphic Adaptation), 2008. VI: World War II: A People's War? - "Atomic Age"
- Dower, John W. War Without Mercy: Race and Power in the Pacific War. 1987
- Sledge, E.B. With The Old Breed. 2007

Significant task 3: *WWII Propaganda Analysis*

Through the course Edline web page, students will participate in a 3 day discussion regarding analysis of WWII propaganda posters. Students will analyze several posters using the analysis form created by the National Archives and Records Administration and submit a summary of their poster to an online discussion forum. They will then be responsible for responding to several other classmates' analysis summaries over the next 3 days. Their analysis will be based on the following question;

"Evaluate the role and effectiveness of government propaganda posters on motivating the American

public during the Second World War. What elements or techniques do you believe were most effective and why?"

The results of the online discussion forum will be used to drive teacher directed and class discussions regarding the use of propaganda and the whole class investigation into the differences between European Theatre and Pacific Theatre propaganda.

Timeline: 3 blocks (independently, used to facilitate a class discussion)
Key vocabulary: all (see "Teacher's Notes")
Resources:

- Posters of World Wars I and II, Dover Publications, Mineola, New York. 2005
- National Archives and Records Administration, Education Department, Washington D.C., 20408

http://www.archives.gov/education/lessons/worksheets/poster_analysis_worksheet.pdf

Common learning experiences:

- Direct Instruction & Class Discussion regarding background, combat operations, statistics, public opinion, outcomes, policy shifts
- Pearl Harbor Inquiry Activity
- Critical Reading assignments
- WWII Propaganda Analysis and Online Forum
- Film excerpts: *"The War", "Saving Private Ryan"*

Common assessments including the end of unit summative assessment:

1. Pearl Harbor Inquiry Briefs
2. WWII Propaganda Analysis
3. Summative Assessment – M/C & DBQ based exam (Department DBQ Rubric will be used score the DBQ and measure growth)

Teacher notes:

Core Text Resources:

- Millett, Allan R. and Peter Maslowski. For The Common Defense: A Military History of the United States of America. 2012
- Lewis, Adrian R. The American Culture of War. 2012
- Zinn, Howard, Mike Konopacki, Paul Buhl. A Peoples's History of American Empire (A Graphic Adaptation), 2008. VI: World War II: A People's War? - "Atomic Age"
- Dower, John W. War Without Mercy: Race and Power in the Pacific War. 1987
- Sledge, E.B. With The Old Breed. 2007

Historical Documents:

- Warren G. Harding calls for a "Return to Normalcy," Boston, MA, May 14, 1920
- CONFERENCE ESTABLISHING A COMMISSION OF JURISTS TO CONSIDER LAWS OF WAR, Washington, February 4, 1922

- CONFERENCE ON THE LIMITATION OF ARMAMENT, WASHINGTON, NOVEMBER 12 1921-FEBRUARY 6, 1922.
- Imperialism Is Easy, by John Dewey, The New Republic (March 23, 1927)
- Kellogg-Briand Pact, August 27, 1928
- U.S., Department of State, Publication 1983, Peace and War: United States Foreign Policy, 1931-1941 (Washington, D.C.: U.S., Government Printing Office, 1943), THE FATEFUL DECADE
- POLITICAL STRATEGY PRIOR TO OUTBREAK OF WAR, PART I, PREPARED BY MILITARY HISTORY SECTION HEADQUARTERS, ARMY FORCES FAR EAST, DISTRIBUTED BY OFFICE OF THE CHIEF OF MILITARY HISTORY DEPARTMENT OF THE ARMY, Japanese Monograph No. 144, 31 December 1952, "The Manchurian Incident"
- Franklin Roosevelt, The Forgotten Man, Radio Address, Albany, N. Y April 7, 1932
- "Neutrality Act" of August 31, 1935, JOINT RESOLUTION
- The Secretary of State to President Roosevelt on Strategic Materials, WASHINGTON, October 21, 1938.
- PRESIDENT FRANKLIN D. ROOSEVELT MESSAGE TO CONGRESS ON EXTENSION OF SELECTIVE SERVICE TERMS OF SERVICE, Washington, D. C., July 21, 1941
- George Orwell, "Wells, Hitler and the World State," Horizon, August 1941
- Winston Churchill, The Second World War, Volume III, The Grand Alliance (Boston: Houghton Mifflin Company, 1950), Chapter 26, "Persia and the Middle East: Summer and Autumn 1941," pp. 423-432.
- STATEMENT ON SENDING OF A MILITARY MISSION TO CHINA, August 26, 1941
- Radio Address Delivered by President Roosevelt From Washington, December 9, 1941
- Sherman Miles, "Pearl Harbor in Retrospect," The Atlantic Monthly, July 1948
- David M. Kennedy, "Victory at Sea, The Atlantic Monthly, March 1999
- "GEARING UP FOR VICTORY: American Military and Industrial Mobilization in World War II, Colloquium on Contemporary History, June 25, 1991, No. 5, Naval Historical Center, Department of the Navy, Washington, D.C. 1991
- Lt. Col. S. B. Mason, US, 1st Infantry Division, Report on Operation Torch, 24 November 1942
- Public Broadcasting System "The 1943 Detroit Race Riots"
- General Patton's Speech to the Third Army, 5 June 1944
- "D-Day," TIME, June 6, 1994 Volume 143, No. 23
- CONFERENCE AT BRETTON WOODS, United Nations Monetary and Financial Conference at Bretton Woods. Summary of Agreements. July 22, 1944
- US, 82nd Airborne Division Operation Market, 17 September 1944
- FIVE POINTS OF U. S. FOREIGN POLICY, An Outline by Secretary of State Edward R. Stettinius, Jr., December 18, 1944
- Yalta Conference, February 1945
- Roy E. Appleman, James M. Burns, Russell A. Gugeler, and John Stevens, Okinawa: The Last Battle, Center of Military History, United States Army, Washington, DC, Library of Congress Catalog Card Number: 49-45742, First Printed 1948-CMH Pub 11-1
- FIRST MESSAGE OF PRESIDENT TRUMAN TO THE CONGRESS, April 16, 1945
- Letter from Henry Stimson, Secretary of War to President Truman, informing him about the atomic bomb, April 24, 1945
- PRESIDENT TRUMAN'S BROADCAST ON SURRENDER OF GERMANY, May 8, 1945
- US Public Opinion Poll on Treatment of the Japanese Emperor, June 1945
- The Berlin (Potsdam) Conference, July 17-August 2, 1945; Protocol of the Proceedings, August l, 1945

- The Japanese Surrender Documents, 1945
- U. S. Strategic Bombing Survey: The Effects of the Atomic Bombings of Hiroshima and Nagasaki, Chairman's Office, 19 June 1946
- Doris Kearns Goodwin, "The Way We Won: America's Economic Breakthrough During World War II, The American Prospect, Volume 3, Issue 11. September 1, 1992.

Media:

- *"The War"*, Ken Burns. PBS, 2007 (Documentary – Elements of Episode 1 – "A Necessary War", Episode 3 – "A Deadly Calling", Episode 6 – "The Ghost Front"
- *Oral History Archives of World War II (Website)*, Rutgers University
- *"Saving Private Ryan"*. 1998 (Opening Omaha Beach Scene – included in parental permission slip)

Key Terms:

- Isolationism
- Lend Lease Act
- The Atlantic Charter
- Pearl Harbor
- Selective Service Act
- George Marshall
- GI Bill
- Japanese Internment
- Rationing
- Operation Torch
- Battle of Stalingrad
- D-Day
- Battle of the Bulge
- Dwight D. Eisenhower
- George Patton
- Battle of the Bulge
- VE Day
- VJ Day
- Douglas MacArthur
- Kamikaze
- Battle of Midway
- Battle of Okinawa
- Battle of Iwo Jima
- Manhattan Project
- Robert Oppenheimer
- Hiroshima
- Nagasaki
- Yalta
- Nuremburg Trials
- Rosie the Riveter
- Total War

Windsor Public Schools
Curriculum Map for the Secondary Level
U.S. Military History: The American Military Experience Since 1890

Purpose of the Course:
This course examines the military heritage of the United States from the onset of the America's Imperial expansion to the present time. Through an in-depth analysis of literature, primary & secondary sources, maps, data, biographies and documentaries students will assess key individuals, military policies, organizations, strategies, campaigns, tactics and battles that have defined the military experience. Students will also investigate connections between America's military infrastructure and the country's social and cultural framework.

Name of the Unit:	Length of the unit:
Unit 3 – Cold War; Rhetoric, Ideology and the Military Industrial Complex	8-10 Blocks (84 Minutes Each)
Purpose of the Unit:	
Through the use of a wide variety of primary and secondary source materials, this unit allows students to investigate various presidential administrations involvement in the advancement of Cold War rhetoric and ideology, the creation of a permanent military industry and the roles of proxy wars and nuclear deterrence.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

- CCSS.ELA-Literacy.RH.11-12.1 Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- CCSS.ELA-Literacy.RH.11-12.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- CCSS.ELA-Literacy.RH.11-12.3 Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain
- CCSS.ELA-Literacy.RH.11-12.5 Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
- CCSS.ELA-Literacy.RH.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem
- CCSS.ELA-Literacy.RH.11-12.9 Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources
- CT Social Studies Curriculum Framework 1.1 – Significant events and themes in United States History.

- CT Social Studies Curriculum Framework 2.1 – Access and gather information from a variety of primary and secondary sources including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.2 – Interpret information from a variety of primary and secondary sources, including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.4 – Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation
- CT Social Studies Curriculum Framework 3.1 – Use evidence to identify, analyze and evaluate historical interpretations
- CT Social Studies Curriculum Framework 3.2 – Analyze and evaluate human action in historical and/or contemporary contexts from alternative points of view

Big Ideas:	Essential Questions:
• Cold War ideologies, competition and administrative doctrines were the driving factors in fundamental shifts in U.S. military structure, organization and policy • Rapidly advancing technology and the need for a permanent arms industry created substantial shifts in military organization, size and doctrines for war	• What are the roots of military conflict? • How has the United States attempted to use military power to advance its interests and ideals around the world and to what effect? • How have American military policies, establishments, and practices evolved over time; and what role has technology played in this evolution? • How did U.S. administration officials shape foreign policy both during and as a result of the military conflict? • How does war shape public opinion; and subsequently how does public opinion affect the war? • How do concepts of identity shape the character of war and how war, in turn, shapes identity through the human experience?
Students will know: • the effects of post-war competition between the United States and the Soviet Union on foreign policy and domestic spending	Students will be able to: • Cite specific textual evidence to support analysis of primary and secondary sources, regarding post-war tension, containment doctrine and the Cuban

• origins of the containment doctrine and U.S. involvement in Korea • the causes and effects of shifts in U.S. military organization and doctrines • the role of technology in shaping U.S. military policy • and the rationale behind various U.S. administrations and their perception of military doctrine • the significance of various leaders, battles and policy decisions	missile Crisis • Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas regarding combat experiences, effects and outcomes of the Korean war. • Evaluate the effectiveness of the Kennedy's response to the Cuban Missile Crisis • Interpret information from a variety of primary and secondary sources, including electronic media using maps, music, memoirs, film • Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentations • use primary and secondary source materials including photographs, diary entries and video footage to evaluate the effects of technological shifts on military doctrines of war • Use evidence to identify, analyze and evaluate historical interpretations of Cold War doctrines and the need for the military industrial complex and apply them to current debates regarding military spending today

Significant task 1: *Security Concerns of the Big Four*

Through direct teacher instruction and class discussion, students will be presented background to the origins of Cold War ideology and post-war tensions between the United States and her allies and the Soviet Union. Students will gain an understanding regarding the viewpoints of the "Big Four" and their concerns immediately following the conclusion of World War II. Following this instruction and discussion, students will be assigned into four groups; Soviet Union, United States, Great Britain and France. They will research the concerns of their corresponding nation then present their findings to the class in a brief. This will serve as the background activity to their second significant task.

Aside from provided materials, students will also be required to draw from previous knowledge obtained from key text (s) and course lecture from the previous day. Students will be given one block to prepare their country's briefing, presenting their course of action to class the following

block. Their brief will serve as the background information for their peers. Students will be graded on their briefing based on the high school NEASC rubric for presentations.

Timeline: 2 Blocks
Key vocabulary: Harry Truman, Nikita Khrushchev, Winston Churchill, Iron Curtain,
Resources: "*The Origins of the Cold War: U.S. Choices After World War II" - Choices for the 21st Century Education Program, Brown University*

Significant task 2: *Cold War Options – Policy Role Playing*

Through direct teacher instruction and class discussion, students will extend their background of Cold War ideology discussions from the previous blocks by looking at the U.S. policy of containment directly. Students will be assigned into five groups; four policy option groups and a fifth, smaller group, will represent President Truman for the purpose of this Options Scenario. The other groups are as follows;

1. Option 1 – Impose a Paz Americana
2. Option 2 – Contain Soviet Communism
3. Option 3 – Co-Exist and Compromise
4. Option 4 – Avoid Foreign Entanglements

Students will be assigned primary/secondary source materials for each of their options (President Truman is responsible for developing questions for each of the four options). Aside from provided materials, students will also be required to draw from previous knowledge obtained from key text (s) and course lectures and discussion from the previous days. Students will be given one block to prepare their option, presenting their course of action to President Truman the following day. Students will be graded on their individual analysis of the option from their defined role as well as their groups' presentation briefing. The NEASC Rubrics will be used to grade the presentation component.

Timeline: 2 Blocks
Key vocabulary: Containment, Satellite Nations, George Kennan, NATO, Warsaw Pact, Marshall Plan, Truman Doctrine
Resources: "*The Origins of the Cold War: U.S. Choices After World War II" - Choices for the 21st Century Education Program, Brown University*

Significant task 3: *Cuban Missile Crisis – Inquiry/Role Playing Activity*

Through direct teacher instruction and class discussion, students will investigate the paradigm shifts in U.S. military organization through the execution of both the Truman Doctrine and Eisenhower Doctrine; in doing so students will develop a strong understanding on the Nuclear Arms race and subsequent buildup of America's nuclear arsenal. They will investigate the emphasis on air power and Eisenhower's vision of a national command structure, massive retaliation and a chaotic array of nuclear technologies. Students will be presented with the background information to the Cuban missiles crisis, but will then be assigned to a key member of Kennedy's Cabinet. They will be provided the same CIA briefings, Intelligence Reports and U2 photographic evidence that the cabinet had at the time, and will be forced to make a suggestion to President Kennedy based on their individual's transcript, excerpts and recordings. Students will be given a day to prepare their stance which will be presented in a Socratic Discussion roundtable format the following block. Students will be graded both on their individual background analysis and predictions as well as their participation within the Socratic Discussion.

Timeline: 2 Blocks
Key vocabulary: John F. Kennedy, Nikita Khrushchev, Fidel Castro, Dean Rusk, M.A.D., Massive Retaliation, U2, Flexible Response, Bay of Pigs, Robert McNamara
Resources:

"Cuban Missile Crisis" – Avalon Project – Yale University
http://avalon.law.yale.edu/subject_menus/msc_cubamenu.asp

"Cuban Missile Crisis" – John F. Kennedy Library and Museum
http://www.jfklibrary.org/JFK/JFK-in-History/Cuban-Missile-Crisis.aspx

Common learning experiences:

- Direct Instruction & Class Discussion regarding background, combat operations, statistics, public opinion, outcomes, policy shifts
- Korean Map Activity
- Big Four Security Concerns
- U.S. Cold War Policy Options
- Cuban Missile Crisis
- *Why We Fight?*
- Primary Source Readings – Various combat veterans personal accounts (Korean War)

Common assessments including the end of unit summative assessment:

1. Big Four Security Concerns
2. U.S. Cold War Policy Options Brief
3. Cuban Missile Crisis Action Plan
4. Doctrine Analysis DBQ – Comparing Truman Doctrine, Eisenhower Doctrine and Kennedy's Flexible Response (Summative)

Teacher notes:

Core Text Resources:

- Millett, Allan R. and Peter Maslowski. For The Common Defense: A Military History of the United States of America. 2012
- Lewis, Adrian R. The American Culture of War. 2012
- Appleman, Roy E. East of Chosin: Entrapment and Breakout in Korea. 1950. Reprint. Texas A & M University Press, 1991.
-

Historical Documents:

- *American Military History: A Documentary Reader* (Brad Lookingbill)
- *The Origins of the Cold War: U.S. Choices After World War II* (Choices Program, Brown University)
- *The Cold War International History Project, Woodrow Wilson Center*
- *The Harvard Project on Cold War Studies*

- The Yalta Conference February, 1945
- Donald P. Steury, "On the Front Lines of the Cold War: The Intelligence War in Berlin," Studies in Intelligence, Bo. 9 (Summer 2000) US, Central Intelligence Agency
- Charter of the United Nations; June 26, 1945
- Oral History Interviews with CLARK M. CLIFFORD, Assistant to White House Naval Aide, 1945-46; Special Counsel to the President, 1946-50. Truman Library, Interviews in 1971-73. Early Cold War History
- George Kennan, Excerpts from Telegraphic Message from Moscow of February 22, 1946
- Winston Churchill, "Sinews of Peace," (the Iron Curtain Speech), Westminster College, 5 March 1946
- Joseph Stalin: Reply to Churchill, 14 March 1946
- Center for the Study of Intelligence, Central Intelligence Agency, "CIA's Analysis Of The Soviet Union, 1947-1991," 2001
- Draft of a White House meeting regarding the Greek situation (no date) discussing the British Note of 27 February 1947
- Background memorandum on Greece, March 3, 1947
- Speech Announcing the "Truman Doctrine," 1947
- Address of the President of the United States: Recommendation for Assistance to Greece and Turkey, March 12, 1947
- "The Evaluation of the Atomic Bomb as a Military Weapon", the Final Report of the Joints Chiefs of Staff Evaluation Board for Operation Crossroads, 30 June 1947
- George F. Kennan, "X," "The Sources of Soviet Conduct," Foreign Affairs, July 1947
- ADDRESS BY GENERAL GEORGE C. MARSHALL SECRETARY OF STATE OF THE UNITED STATES AT HARVARD UNIVERSITY, JUNE 5, 1947
- 'The Marshall Plan -- Then and Now' By Ambassador Harlan Cleveland U.S. Permanent Representative to the North Atlantic Treaty Organization (NATO), 1967
- U.S. Air Force in Europe, 50th Anniversary of the Berlin Airlift
- U.S., Central Intelligence Agency, Memorandum for the President on the Soviet Response to the merger of the British, French, and American zones of Occupation in Germany, 9 June 1948
- THE NORTH ATLANTIC TREATY, 4 APRIL 1949
- Airbridge to Berlin --- The Berlin Crisis of 1948, its Origins and Aftermath, By D.M. Giangreco and Robert E. Griffin, 1988
- Benjamin O. Fordham, "Economic Interests, Party, and Ideology in Early Cold War Era U.S. Foreign Policy," International Organization, Vol. 52, no. 2 (Spring 1998)
- Atomic Explosion in the U. S. S. R., Statement by President Truman, September 23, 1949
- NSC-68, 1950
- US, Center for Military History, Army, Remembering the Korean War
- UNITED STATES ARMY IN THE KOREAN WAR: POLICY AND DIRECTION: THE FIRST YEAR by James F. Schnabel CENTER OF MILITARY HISTORY UNITED STATES ARMY WASHINGTON, D. C., 1992
- President Truman's speech sending troops to Korea, June 30, 1950
- Eisenhower on the Centrality of Nuclear Weapons to US Foreign Policy
- Korean Armistice Agreement
- William J. Broad, "Soviets Stole Bomb Idea From U.S., Book Says," New York Times, December 29, 2008
- William. J. Jorden, "Soviet Fires Earth Satellite Into Space; It Is Circling the Globe at 18,000 M.P.H.; Sphere Tracked in 4 Crossings Over U.S.," New York Times, 5 October 1957

- Khrushchev-Nixon "kitchen" debate, July 24, 1959
- News Conference Statement by President Eisenhower on the U-2 incident, May 11, 1960.
- President Eisenhower's "Military-Industrial Complex" Speech, January 1961
- Sam Roberts, "In Archive, New Light on Evolution of Eisenhower Speech," New York Times, 10 December 2010
- President John F. Kennedy Inaugural Address, January 20, 1961
- President Kennedy's Berlin Speech, July 25, 1961
- Khrushchev speech on the Berlin crisis, August 4, 1961
- Memorandum, General Maxwell D. Taylor, Chairman, Joint Chiefs of Staff, to General LeMay, General Wheeler, Admiral McDonald, General Shoup, "Chinese Nuclear Development," 18 November 1963, Top Secret
- "Cuban Missile Crisis" – John F. Kennedy Library and Museum
- "Cuban Missile Crisis" – Avalon Project – Yale University
- *Various Diary/Journal Entries, Letters Home & Speeches*

Media:

- *Why We Fight? (2006) (Full Documentary – 98 Minutes)*
- *The Korean War: Fire and Ice (2010) (Documentary – Excerpts)*
- *Unforgettable: The Korean War (2010 PBS) (Documentary – Excerpts)*

Key Terms:

- Satellite Nations
- Containment
- George Keenan
- NATO
- Warsaw Pact
- Mao Zedong
- Chaing Kai-Shek
- Korean War
- 38th Parallel
- General Douglass MacArthur
- U2 Incident
- Marshall Plan
- Berlin Airlift
- Truman Doctrine
- Eisenhower Doctrine
- Brinkmanship
- M.A.D.
- Flexible Response (Kennedy)
- CIA
- NSA
- Robert McNamara
- Fidel Castro
- Bay of Pigs
- Cuban Missile Crisis
- Nikita Khrushchev
- Limited Test Ban Treaty

Windsor Public Schools
Curriculum Map for the Secondary Level
U.S. Military History: The American Military Experience Since 1890

Purpose of the Course:
This course examines the military heritage of the United States from the onset of the America's Imperial expansion to the present time. Through an in-depth analysis of literature, primary & secondary sources, maps, data, biographies and documentaries students will assess key individuals, military policies, organizations, strategies, campaigns, tactics and battles that have defined the military experience. Students will also investigate connections between America's military infrastructure and the country's social and cultural framework.

Name of the Unit:	Length of the unit:
Unit 4 – The United States in Vietnam	8-10 Blocks (84 Minutes Each)
Purpose of the Unit:	
Through the use of a wide variety of primary and secondary source materials, this unit allows students to investigate various administrations interpretations of the perceived situation in Vietnam, the success and failures of U.S. military interventions and actions as well as long term consequences and changes to American military policy as a result of the Vietnam war and how the war defined a generation of Americans.	

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

- CCSS.ELA-Literacy.RH.11-12.1 Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- CCSS.ELA-Literacy.RH.11-12.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- CCSS.ELA-Literacy.RH.11-12.3 Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain
- CCSS.ELA-Literacy.RH.11-12.5 Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
- CCSS.ELA-Literacy.RH.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem
- CCSS.ELA-Literacy.RH.11-12.9 Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources
- CT Social Studies Curriculum Framework 1.1 – Significant events and themes in United States History.
- CT Social Studies Curriculum Framework 2.1 – Access and gather information from a

variety of primary and secondary sources including electronic media (maps, charts, graphs, images, artifacts, recordings and text)

- CT Social Studies Curriculum Framework 2.2 – Interpret information from a variety of primary and secondary sources, including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.4 – Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation
- CT Social Studies Curriculum Framework 3.1 – Use evidence to identify, analyze and evaluate historical interpretations
- CT Social Studies Curriculum Framework 3.2 – Analyze and evaluate human action in historical and/or contemporary contexts from alternative points of view

Big Ideas:	Essential Questions:
• American involvement in Vietnam was driven by Cold War rhetoric; beginning long before the deployment of combat troops • The quagmire of Vietnam resulted in significant, long-standing policy shifts for the U.S. military	• What are the roots of military conflict? • How has the United States attempted to use military power to advance its interests and ideals around the world and to what effect? • How have American military policies, establishments, and practices evolved over time; and what role has technology played in this evolution? • How did U.S. administration officials shape foreign policy both during and as a result of the military conflict? • How does war shape public opinion; and subsequently how does public opinion affect the war? • How do concepts of identity shape the character of war and how war, in turn, shapes identity through the human experience?
Students will know: • the effects of imperialism and colonialism in French Indochina • origins of the U.S. involvement in Vietnam • the causes of shifts in public support for	Students will be able to: • Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole in regard to U.S.

the war • the role of media in shaping U.S. public opinion of the war • the rationale behind various U.S. administrations and their perception of the war in Vietnam • the difference between unconventional and conventional war methods and the problems which arise from fighting and unconventional war with conventional means • the significance of various leaders, battles and policy decisions	involvement in Vietnam • Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas regarding previous colonization of Vietnam, U.S. ideology, combat experiences, effects and outcomes. • evaluate the effectiveness of the selective service system • Interpret information from a variety of primary and secondary sources, including electronic media using maps, music, memoirs, film • Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation • use primary and secondary source materials including photographs, diary entries and video footage to evaluate whether or not an unconventional war can be won with conventional methods • Use evidence to identify, analyze and evaluate historical interpretations of Vietnam and apply them through current U.S. conflicts today, particular Iraq/Afghanistan

Significant task 1: *Vietnam Options – Policy Role Playing*

Through Direct Teacher Instruction and class discussion, students will be presented background to the expansion of Cold War ideology in Southeast Asia from 1946-1964. Students will gain an understanding regarding Chinese, Japanese and French involvement in Vietnam and the subsequent increasing role of American involvement throughout the 1950s. Following this instruction and discussion, students will be assigned into four groups; with defined roles in each group of "Group Director", "Political Expert", "Historian" and "Military Expert". A fifth, smaller group, will represent President Johnson for the purpose of this Options Scenario. The other groups are as follows;

1. Option 1 – Americanize the War, and Fight to Win!
2. Option 2 – Escalate Slowly and Control the Risks
3. Option 3 – Limit Our Involvement and Negotiate a Withdrawal
4. Option 4 – Unilateral Withdrawal – Pull Out Now!

Students will be assigned primary/secondary source materials for each of their options (President

Johnson is responsible for developing questions for each of the four options). Aside from provided materials, students will also be required to draw from previous knowledge obtained from key text (s) and course lecture from the previous day. Students will be given one block to prepare their option, presenting their course of action to President Johnson the following day. Students will be graded on their individual analysis of the option from their defined role as well as their groups' presentation briefing. The 21st Century Rubrics will be used to grade the presentation component.

Timeline: 2-3 Blocks
Key vocabulary: Escalation, Withdrawal Imperialism, Colonialism, Diplomatic Recognition, Ho Chi Minh, Vietminh, Vietcong, Containment, Communism, Domino Theory, Dien Bien Phu, Ngo Dinh Diem, Geneva Accords
Resources: "The Limits of Power: The United States in Vietnam" - *Choices for the 21st Century Education Program, Brown University*

Significant task 2: *Critical Readings of Core Texts (s)*

Students will independently read one or more of the core texts taking reading notes on key topics assigned by the teacher ahead of time. The teacher will establish a specific procedure for reviewing reading notes and facilitating class discussions around key topics, points of interest and/or student generated questions.

After completing the text(s), students will be required to write a document-based essay regarding their choice of two controversial topics as part of their end-of-unit summative assessment. Department DBQ Rubric will be used to grade the essay.

Timeline: 8-9 Blocks (Independently)
Key vocabulary: all (see "Teacher Notes")
Resources:

- Caputo, Philip. *A Rumor of War*. Holt, Henry & Company, 1996
- Maslowki, Peter and Allan R. Millett. *For the Common Defense: A Military History of the United States of America*. Enlarged Edition. Simon &Schuster. 1994
- Zinn, Howard. *The Twentieth Century*. MJF Books. 2003

Common learning experiences:

- Direct Instruction & Class Discussion regarding background, combat operations, statistics, public opinion, outcomes, policy shifts
- Vietnam Map Activity
- Debate Rationale: Enlistment (as presented by Oliver Stone's *Born of the 4th of July*) vs. Drafted (as expressed by Tim O'Brien's *The Things They Carried – "On The Rainy River"*)
- View *Dear America: Letters Home From Vietnam (1987)*
- Vietnam through Music (Various Artists)
- *Surprising Lessons of Vietnam* – Comparison to Iraq/Afghanistan
- Primary Source Readings – Various combat veterans personal accounts

Common assessments including the end of unit summative assessment:

1. Policy Options Role Playing Presentation
2. Comprehension Checks – Multiple-Choice/Short Answer - Millett & Maslowski, Zinn

3. Enlistment Rationale Analytical Essay
4. Music Lyrics Analysis
5. Summative Assessment – M/C & DBQ based exam (Department DBQ Rubric will be used score the DBQ and measure growth)

Teacher notes:

Core Text Resources:

- *For The Common Defense: A Military History of the United States of America* (Millett & Maslowski)
- *The Twentieth Century* (Howard Zinn)
- *The Things They Carried* (Tim O'Brien)
- *A Rumor of War* (Philip Capote)
- *Vietnam Wars, 1945-1990* (Marilyn Young)

Historical Documents:

- *American Military History: A Documentary Reader* (Brad Lookingbill)
- *The Limits of Power: The United States in Vietnam* (Choices Program, Brown University)
- *The Vietnam Project* (Texas Tech University)
- *"Declaration of Independence of the Democratic Republic of Vietnam"* (Sept. 2, 1945)
- *The Pentagon Papers*
- *"United States Recognition of Viet-Nam, Laos, and Cambodia: Statement by the Department of State"* (Feb. 7, 1950)
- *"Extension of Military and Economic Aid: Statement by the Sec. of State"* (May 8, 1950)
- *"NSC Staff Study on United States Objectives and Courses of Action with Respect to Communist Aggression in Southeast Asia"* (Feb. 13, 1952)
- *"U.S. Policy on Viet-Nam: White House Statement"* (Oct. 2, 1963)
- *"40th Anniversary of the Gulf of Tonkin Incident"* (The National Security Archive)
- *"The Debate" (Time Magazine,* July 2, 1965)
- *"How Do You Ask a Man to Be the Last Man to Die in Vietnam?"* (John Kerry)
- *"The Surprising Lessons of Vietnam"*, Newsweek, 2009
- *Various Diary/Journal Entries, Letters Home & Speeches*

Media:

- *Born on the 4th of July (1989) (Opening 45 Minutes *included in course permissions slip)*
- *Dear America: Letters Home From Vietnam (1987) (full documentary – 85 minutes)*
- *CBS News Broadcasts of Vietnam* (In particular, Tet Offensive Coverage)
- *Various Musical Artists*

Key Terms:

- Imperialism
- Colonialism
- Diplomatic Recognition
- Ho Chi Minh
- Vietminh

- Vietcong
- Containment
- Communism
- Domino Theory
- Dien Bien Phu
- Ngo Dinh Diem
- Ho Chi Minh Trail
- Geneva Accords
- Puppets
- Accords
- Tet Offensive
- Gulf of Tonkin Resolution
- Buddhist Monks
- Vietnamization
- Napalm
- Conventional Bombing
- Rolling Thunder
- Agent Orange
- Credibility Gap
- Military Offensive
- Casualties
- Coalition Government
- Escalation
- The New Left
- Kent State
- My Lai Massacre
- Henry Kissinger
- Counterculture
- Withdrawal
- Saigon

Windsor Public Schools
Curriculum Map for the Secondary Level
U.S. Military History: The American Military Experience Since 1890

Purpose of the Course:

This course examines the military heritage of the United States from the onset of the America's Imperial expansion to the present time. Through an in-depth analysis of literature, primary & secondary sources, maps, data, biographies and documentaries students will assess key individuals, military policies, organizations, strategies, campaigns, tactics and battles that have defined the military experience. Students will also investigate connections between America's military infrastructure and the country's social and cultural framework.

Name of the Unit:	Length of the unit:
Unit 5 – The New American Practice of War	8-10 Blocks (84 Minutes Each)

Purpose of the Unit:

Through the use of a wide variety of primary and secondary source materials, this unit allows students to understand the recovery and reorganization of the United State military which took place following the Vietnam conflict. In doing so, students will investigate, analyze and interpret America's peacekeeping missions, the Persian Gulf War and America's current involvement in both Iraq and Afghanistan.

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

- CCSS.ELA-Literacy.RH.11-12.1 Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- CCSS.ELA-Literacy.RH.11-12.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- CCSS.ELA-Literacy.RH.11-12.3 Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain
- CCSS.ELA-Literacy.RH.11-12.5 Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
- CCSS.ELA-Literacy.RH.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem
- CCSS.ELA-Literacy.RH.11-12.9 Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources

- CT Social Studies Curriculum Framework 1.1 – Significant events and themes in United States History.
- CT Social Studies Curriculum Framework 2.1 – Access and gather information from a variety of primary and secondary sources including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.2 – Interpret information from a variety of primary and secondary sources, including electronic media (maps, charts, graphs, images, artifacts, recordings and text)
- CT Social Studies Curriculum Framework 2.4 – Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentation
- CT Social Studies Curriculum Framework 3.1 – Use evidence to identify, analyze and evaluate historical interpretations
- CT Social Studies Curriculum Framework 3.2 – Analyze and evaluate human action in historical and/or contemporary contexts from alternative points of view

Big Ideas:	Essential Questions:
▪ Reform and reorganization of the United States military was a reactionary measure to the failures of Vietnam ▪ Shifts in U.S. military doctrines were brought about by the need to adapt and adjust to 21st Century policy demands	• What are the roots of military conflict? • How has the United States attempted to use military power to advance its interests and ideals around the world and to what effect? • How have American military policies, establishments, and practices evolved over time; and what role has technology played in this evolution? • How did U.S. administration officials shape foreign policy both during and as a result of the military conflict? • How does war shape public opinion; and subsequently how does public opinion affect the war? • How do concepts of identity shape the character of war and how war, in turn, shapes identity through the human experience?
Students will know: • the effects of post-Vietnam attitudes on domestic and international viewpoints	Students will be able to: • Cite specific textual evidence to support analysis of primary and secondary

of the U.S. military • origins and outcomes of The Persian Gulf War • the role of technology in shaping U.S. military policy • and evaluate the effectiveness of the Bush Doctrine in both Iraq and Afghanistan • the significance of various leaders, battles and policy decisions	sources, regarding the Persian Gulf War, Iraq and Afghanistan • Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas regarding U.S. military intervention and peacekeeping missions. • understand the causes and effects of shifts in U.S. military organization and doctrines brought about by Vietnam and Terrorism • Interpret information from a variety of primary and secondary sources, including electronic media using maps, music, memoirs, film • Demonstrate an ability to participate in social studies discourse through informed discussion, debate, and effective oral presentations • use primary and secondary source materials including photographs, diary entries and video footage to evaluate the effects of 21st century terrorism on military doctrines of war • Use evidence to identify, analyze and evaluate historical interpretations of America's involvement in Iraq and Afghanistan

Significant task 1: *Peacekeeping Presentations*

Through direct teacher Instruction and class discussion, students will be presented background information regarding the recovery and reorganization of the armed forces in the decades that immediately followed the conclusion of the Vietnam War. In a way to extend their learning and apply this information, students will be paired and assigned a particular instance of U.S. troop deployment. The students will have 1 week (class time and outside of class), including at least 1 full block to create a powerpoint presentation on their mission; purpose, details, outcomes and connection to new military philosophies. The following topics will be assigned:

- Libya (1981), Lebanon (1982-83), Grenada (1983), Libya (1986) , Persian Gulf (1987-88), Panama (1988-89), Bolivia & Columbia (1986 & 1989), Philippines (1989), Somalia (1992-1995), Bosnia (1993-1999), Yugoslavia/Albania (1999), East Timor (1999)

Aside from provided materials, students will also be required to draw from previous knowledge

obtained from key text (s) and course lecture from the previous days. Students will be given one block to prepare their presentation in class; they must complete the rest of the assignment outside of class. Students will be graded on their briefing based on the high school NEASC rubric for presentations.

Timeline: 3-4 Blocks (1 in-class research day, 1 presentation day, outside of school work)
Key vocabulary: all (see "Teacher Notes")
Resources: -"Instances of Use of United States Forces Abroad, 1798 - 2004," Richard F. Grimmett, Specialist in National Defense, Foreign Affairs and National Defense Division, Washington DC: Congressional Research Service, Library of Congress. October 5, 2004

Significant task 2: *Iraq Options – U.S. Policy Role Playing*

Through direct teacher instruction and class discussion, students will extend their background of United States military involvement in the Middle East, particularly Iraq. During previous blocks, students will have been introduced to the Persian Gulf War, or "First Iraq War" and the subsequent U.S. monitoring of air space and weapons development. Students will investigate the geography of Iraq, with its oil infrastructure, distinctly different ethnic groups and variations in population density. Students will also evaluate the Rhetoric of the Iraq War by analyzing direct quotes and speeches by President Bush and his cabinet members. Students then will be assigned into three groups;

1. Option 1 – Increase Our Presence in Iraq
2. Option 2 – Provide Iraqis with the Means to Succeed
3. Option 3 – Withdraw from Iraq Now

Students will be assigned primary/secondary source materials for each of their options, while also drawing from previous knowledge obtained from key text (s) and course lectures and discussion from the previous days. Students will be given one block to prepare their option, presenting the benefits, drawbacks and presumed end result of their policy to the class. Students will take notes from their peers' presentation so that they have strong background in all three options presented to the United States. Once done, students will examine more recent evidence since the removal of combat troops in Iraq to determine whether or not either of the three policy options was validated. Students will be graded on their individual analysis of the option, their notes on the other policy options and their analysis of Iraq today. The NEASC Rubrics will be used to grade the presentation component.

Timeline: 2-3 Blocks

Key vocabulary: Terrorism, Weapons of Mass Destruction, Sunni, Shi'a, Oil Interests, Sectarian Divisions, Insurgent, Kuwait, Saddam Hussein, Richard Cheney, President George H.W. Bush, President Clinton, President George W. Bush

Resources: "*Conflict in Iraq: Searching for Solutions" - Choices for the 21st Century Education Program, Brown University*

Significant task 3: Critical Readings of Core Texts (s)

Students will independently read one or more of the core texts taking reading notes on key topics assigned by the teacher ahead of time. The teacher will establish a specific procedure for reviewing reading notes and facilitating class discussions around key topics, points of interest and/or student

generated questions.

After completing the text(s), students will be required to write a document-based essay regarding their choice of two controversial topics as part of their end-of-unit summative assessment. Department DBQ Rubric will be used to grade the essay.

Timeline: 8-9 Blocks (Independently)
Key vocabulary: all (see "Teacher Notes")
Resources:

- Millett, Allan R. and Peter Maslowski. For The Common Defense: A Military History of the United States of America. 2012
- Wright, Evan. Generation Kill; Devil Dogs, Iceman, Captain America, And The New Face of American War. Penguin Group, 2005.
- Rashid, Ahmed. Descent into Chaos: The U.S. and the Disaster in Pakistan, Afghanistan, and Central Asia. Penguin Group, 2009.
- Atkinson, Rick. In The Company of Soldiers: A Chronicle of Combat. 2005

Common learning experiences:

- Direct Instruction & Class Discussion regarding background, combat operations, statistics, public opinion, outcomes, policy shifts
- U.S. Middle-East Map Activity
- Peacekeeping Presentations
- Iraq Options & Analysis
- Primary Source Readings – Various combat veterans personal accounts (Grenada, Somalia, Persian Gulf, Iraq, Afghanistan)

Common assessments including the end of unit summative assessment:

1. Middle East Map Activity
2. Peacekeeping Presentations
3. Iraq Options & Analysis
4. Summative – Typed Essay – The American Culture of War and the Future or Warfare (2-3 pages)

Teacher notes:

Core Text Resources:

- Millett, Allan R. and Peter Maslowski. For The Common Defense: A Military History of the United States of America. 2012
- Lewis, Adrian R. The American Culture of War. 2012
- Brown, John Sloan. Kevlar Legions: The Transformation of the United States Army 1989-2005. 2012
- Wright, Evan. Generation Kill; Devil Dogs, Iceman, Captain America, And The New Face of American War. Penguin Group, 2005.
- Rashid, Ahmed. Descent into Chaos: The U.S. and the Disaster in Pakistan, Afghanistan, and

Central Asia. Penguin Group, 2009.
- Kitfield, James. Prodigal Soldiers: the Generations of Officers Born of Vietnam Revolutionized the American Style of War. New York, Simon & Schuster, 1995.
- Atkinson, Rick. In The Company of Soldiers: A Chronicle of Combat. 2005

Historical Documents:

- *American Military History: A Documentary Reader* (Brad Lookingbill)
- "Instances of Use of United States Forces Abroad, 1798 - 2004," Richard F. Grimmett, Specialist in National Defense, Foreign Affairs and National Defense Division, Washington DC: Congressional Research Service, Library of Congress. October 5, 2004
- Ronald Reagan, First Inaugural Address (January 20, 1981)
- "The Evil Empire," President Reagan's Speech to the House of Commons, June 8, 1982.
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- "Bush's War" Frontline. Mar. 24, 2008 (Documentary – Excerpts)
- "Obama's War" Frontline. Oct. 13, 2009 (Documentary – Excerpts)
- "The Wounded Platoon" Frontline. March 10, 2010. (Documentary – Excerpts)
- "Invisible Wounds of War" 60 Minutes. May 5, 2013. (Documentary – Excerpts)
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- "The Gulf War" Frontline. Interactive Website

Key Terms:

- Genocide
- Biological Weapons

- Terrorism
- Iraq
- Afghanistan
- Weapons of Mass Destruction
- Arabization
- Diplomatic
- Muslim
- Sunni
- Shi'a
- Pan-Arab Movement
- Oil Interests
- Coup
- UN Resolutions
- Embassy
- Sectarian Divisions
- Insurgent
- Kuwait
- Saddam Hussein
- Osama Bin Laden
- Al-Qaida
- President Reagan
- Richard Cheney
- President George H.W. Bush
- President Clinton
- President George W. Bush
- President Obama

Windsor Public Schools
Curriculum Map for the Secondary Level
Fashion Merchandising

Purpose of the Course: Fashion Merchandising will give students an in-depth view of the textile/apparel/retail soft goods chain. Prior to creating their own boutique, students will explore the many aspects which influence a fashion business, along with how to create a business plan and how to manage a business. In addition, students will be introduced to the apparel manufacturing process as well as analyze an array of career opportunities. Fashion Merchandising, by its nature is interdisciplinary and calls for the application of 21st century skills and concepts in fashion, marketing, accounting, entrepreneurship as well as a range of researching, reading, writing, and presentation skills. This one year elective course will allow students to bring to life the world of fashion merchandising through the real life experience of creating and running an e-commerce boutique.

Name of Unit: Fundamentals of Fashion Unit 1	Length of the unit: 10 blocks (86 minute blocks)
Purpose of the Unit: This unit introduces students to the many factors which have direct and indirect influence on fashion and the business of fashion. Students will learn how fashion reflects current economic conditions, entertainment trends, current events, and political issues. Students will also gain an understanding of the concept of fashion movement: the role of leaders and followers, theories, stages and cycles of fashion movement.	

FACS Standards addressed in the unit:
Become exposed to fashion history and elements of design 11.10
Demonstrate design ideas through visual presentation 11.4
Analyze career paths within textile and design industries 11.16

Common Core State Standards Addressed in the unit:
Text Types and Purposes 10.W.2: writing informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7:Conduct short as well as more sustained research projects to answer questions(including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Comprehension and Collaboration 10.SL.1: initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues.
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence, clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Big Ideas: • Making choices about what we wear goes far beyond our own personal preferences. • Fashion is not a static business.	Essential Questions: • What factors influence personal clothing choices? • In what ways does fashion reflect the economy, political climate, and the entertainment industry? • How does understanding the factors that influence the fashion industry translate to running a successful business?
Students will know: • The basic factors that influence personal fashion choice. • How fashion reflects economic climate, political climate and the entertainment industry. • What fashion movement means. • Theories of fashion movement. • Principles of fashion movement.	Students will be able to: • Identify and classify the wide range of factors which impact fashion choices. • Assess their own personal fashion choices in regards to influencing factors. • Identify how fashion reflects economic climate, political climate and the entertainment industry. • Identify and analyze principles of fashion movement.

Significant task 1: Why we wear what we wear

In a whole group students will be introduced to the concept of various factors influencing fashion choices. Students will compile a list of possible factors; the document camera will be utilized so the list can be viewed by the class. Students will then break up into small groups of 4-5 to explore the identified factors and brainstorm other possible factors; they may use secondary sources to aid in the identification process, such as magazines. Students will record their results. The small groups will elect a representative to present their findings to the class. Students will return to a whole group to present their findings to the class. Modifications will be made to the original list of findings; utilizing the document camera. Class discussion will follow in order to identify categories of factors and organize their findings into these categories. Direct whole instruction with guiding questions will be utilized to supplement student findings.

Timeline: 2 class periods (86 minutes)

Key vocabulary:
physical needs, psychological needs, social needs, values/attitudes, identification, status

Resources: Clothing: Fashion, Fabric, and Construction: McGraw-Hill, document camera, magazines

Significant task 2: mini portfolio

On an individual basis students will create a portfolio, utilizing PREZI presentation software, 'Why We Wear What We Wear: Then and Now'. Based on new learning from significant task 1: Students will select an influencing factor of their choice: physical needs, psychological needs, social needs, values/attitudes, identification, status, culture, religion, socioeconomics, politics, or entertainment industry. Students will then select a garment of their choice which will accurately represent/reflect the influencing factor chosen, and identify the fashion type; avant-garde, fad, classic, ford, high fashion, mass fashion. Students will then research a similar garment from at least 50 years ago – they will then compare and contrast various aspects of the two garments in terms of influences, appearance, and fashion type. Extension- additional garments from the given time periods may be included.
Presentation: students will give a five minute presentation on their project utilizing PREZI presentation software.

Timeline: 5 class periods (86 minutes)

Key vocabulary:
physical needs, psychological needs, social needs, values/attitudes, identification, status, fad, classic, avant-garde, ford, high fashion, mass fashion

Resources: Clothing: Fashion, Fabric, and Construction: McGraw-Hill; computer lab;
presentation software

Significant task 3: Appling your knowledge; fashion movement essay

Students will each select an outfit they love to wear and assess it in terms of: influencing factors, location on the fashion cycle, fashion movement theory applicable to their outfit, factors that may have influenced the speed of fashion movement. Students will compile their information on a graphic organizer. They will then write a five paragraph essay which reflects their assessment. Student must justify their assessment with information from this unit. Rough drafts will be submitted and then returned to student for finalization.

Timeline: 2 class periods (86 minutes)

Key vocabulary:
fashion cycle; introduction, rise, peak, decline, obsolescence:
fashion movement; trickle-down, trickle –up, trickle-across

Resources: Clothing: Fashion, Fabric, and Construction: McGraw-Hill: graphic organizer

Common learning experiences:

- Brainstorming and creation of a list of factors which influence fashion choices; incorporate vocabulary via application to the factors students identify.
- Direct instruction to supplement student findings of influencing factors.
- Each student will develop a mini portfolio, utilizing PREZI presentation software; describing one factor affecting fashion with examples from today and at least 50 years ago.
- Essay in which each student will apply theories of fashion movement to one of their own garments.

Common assessments including the end of unit summative assessment:

- Mini Portfolio
- Classroom presentation
- Fashion Movement essay
- End of unit summative assessment

Rubrics:

- School-wide rubric #1: Uses research tools to access evaluate and document information.
- School-wide rubric #3: Effective oral communication.
- Teacher-developed writing rubric

Teacher notes:
Allow students to brainstorm factors influencing fashion choices prior to direct instruction, allow students to explore and discuss their findings. Use articles of clothing in classroom and or visuals to aid students' identification of factors- if needed.

For task 1, one goal is for students to identify the following categories: physical needs, psychological needs, social needs, values/attitudes, identification, and status. Provide guiding questions as needed. Encourage students to draw on prior knowledge.

In all units, utilize non-linguistic methods of introducing vocabulary. Consider using gallery walks, do-nows, quick writes and word splashes to reinforce vocabulary retention.

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Name of the: The Business Plan Unit 2	Length of the unit: 12 blocks (86 minute blocks)
Purpose of the Unit: This unit introduces students to the importance of and the creation of a business plan. Students will come to understand that the business plan is a comprehensive, detailed document that enables an entrepreneur to develop a strategy for a particular business. The business plan helps the existing business analyze current market factors and properly manage future growth. Students will learn the basic components of the road map that will guide the development of their business; the business plan. Students will learn the importance/need of a business plan as a requirement to obtain funding. All students will work cooperatively to complete various sections of the business plan and compete at the Entrepreneurial Symposium at The Hartford Insurance.	

Performance Standards Addressed in the unit: Textile, Apparel, Housing, Interiors and Related Careers
Evaluate the components of customer service 12.13
Become exposed to technology used to produce textile, apparel and furnishings 12.14
Demonstrate general operational procedures required for business profitability and career success 12.15
Demonstrate general procedures for business profitability and career success 12.20
Demonstrate the integration of knowledge, skills, and practices required for careers in textile, apparel, housing, and interiors 12:2 0

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)
Text Types and Purposes 10.W.2 :Writing Informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Research to Build and Present Knowledge 10.W.8: Gather relevant information from multiple

authoritative print and digital sources
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Big Ideas:	Essential Questions:
• A business plan is an effective tool to attract investors to your business. • The business plan is your basic strategic instrument.	• Why is it important to create a business plan? • What are some special needs that a fashion business might have that a manufacturing business does not have? • How does a business plan impact the decisions of potential investors?
Students will know:	Students will be able to:
• The business plan helps the entrepreneur analyze current market situations and properly manage future growth. • The business plan is an important document that is mandatory to obtain funding from investors. • The business plan is a plan to use as a basis for making sound financial/business decisions. • The business plan is a standard by which you can measure and improve business performance.	• Formulate ideas for a new entrepreneurial venture. • Gather data through various sources to plan their business plan. • Organize data for clarity of the business plan • Write, edit and revise the business plan. • Write a one page paper that describes the managerial roles within a business.

Significant task 1: Dream Board/Vision Board project for your business idea(s)

All students will complete this significant task. In a whole group, students will be introduced to a sample business plan. After giving students a brief synopsis of each section of the business plan (Vision and Mission statement, product and service plan, company description, Industry Overview, Market Analysis, Competitive Analysis, Marketing plan, Organizational plan, Financial plan, Growth plan, Contingency plan, Executive Summary, Cover page, Title page, Table of Contents, and supporting documents) students will brainstorm goals: short term, medium term and long term goals, target markets, and sales strategies in order to create a vision board depicting their 1st year, 5th year, 10th year in business.

Within small groups students will be assigned a specific managerial role within their team. The managerial

teams are: Sales, Marketing, Production, Distribution, Chief Operations Officer. Each student will research, using the internet and interview, if applicable, her specific role in order to give a five minute presentation to the class on her functional role within the business.

At the conclusion of the vision board activity, each team within the class will create a vision and mission statement for their perspective business.

Timeline: 4 class periods (86 minutes)

Key vocabulary: mission statement, company description, executive summary, vision, business plan
Resources: JA Student workbook, Glencoe Entrepreneurship & Small Business Management

Significant task 2: Creating the Business Plan

In sub-groups within each business team, students will work on a specific section of the business plan. Students will gather/research supporting documents using the internet to successfully create a cohesive business plan. The sections are as follows: marketing plan which includes competitive analysis section, industry overview, contingency plan and growth plan.

At the end of Task #2 students are expected to have a first draft of their respective sections of the business plan.

Timeline: 2 class periods (86 minutes)

Key vocabulary: marketing plan, industry overview, contingency plan, growth plan, economics

Resources: Resources: library visit,
Sites: SBA, Chamber of Commerce, computer/internet access.

Significant task 3: JA Entrepreneurial Business Symposium

Preparation for JA Symposium:

Activity 3:1: (JA Be Entrepreneurial student workbook)
Elements of a successful start-up:

As a whole group, students will visit websites (SBA and JA.org) for information and activities related to funding an entrepreneurial venture, and for podcasts and other resources to assist in business planning.

Activity 3:2: (JA Be Entrepreneurial student workbook)

Individually, students will listen to podcasts and complete the Entrepreneur Scripts section in the student workbook, provided by Junior Achievement. This activity is in preparation for the JA Be Entrepreneurial symposium and is mandatory for all students. These podcasts will give feedback regarding entrepreneurial traits of successful entrepreneurs.

Activity 3:2:1 (Day of Symposium) – A Day in the Life

Timeline: 1 day- (8 hour field trip)

All students will participate in the JA BE Entrepreneurial Symposium at The Harford Insurance. Individually students will experience a day in the life of a business person. Industry leaders will share their success stories with students.

Within small groups, students will role play the aspects of product development and work cooperatively to formulate a concept for their product: product development review, choosing the right product or service, learning about customer satisfaction, gaining competitive advantage, and business ethics and social responsibility.

Activity 3:2:2 A (Day of Symposium) – Creating the business plan

In their teams, students will work with mentors to revise the draft of their business and refine their business plan.

Upon completion of the business plan draft, students will work with mentors to prepare for the onsite presentation of their business plan. This section is a competitive event where the finalists will be selected for final round of the competitive event, two weeks later.

Activity 3:2:2 B (In class, after Symposium) – Finalizing the business plan and preparing for competition

In small groups, all students will edit, revise and fine tune their business plan PowerPoint presentation. Competition finalists will present to a panel of local business leaders, teachers and administrators. Remaining students will present to their classmates.

Time Line: 3 class periods (86 minutes)

Key vocabulary: incremental and original innovation, SWOT analysis, competitive advantage, supply and demand

Resources: JA – Be Entrepreneurial! Student workbook, student's interactive notebook, online research tools, The Hartford Insurance staff and Junior Achievement Staff

Common learning experiences:

- Creation Vision/Dream Board
- Interactive notebook for vocabulary, notes and reflections
- 1st draft of the business plan components
- Management Table
- Field trip to The Hartford Insurance
- Editing and revising the business plan and PowerPoint presentation
- Presentation practice
- Business Plan Competition

Common assessments including the end of unit summative assessment:

- Interactive notebook
- Business plan development and presentation
- End of unit summative assessment in development.

Rubrics:

- Interactive notebook assessed through teacher-generated rubric.
- School-wide rubric #1: Uses research tools to access evaluate and document information.
- School-wide rubric #3: Effective oral communication.

Teacher notes:

Task #1: At the end of Significant task #1: Students will have created an activity planner that will enable them to remain on task and maintain the agreed upon timelines of implementation of their business plan drafts

Task #2: At the end of Significant task #2: students will have the major sections for the business plan organized and in draft form.

Task #3: At the end of the JA Symposium each team will have a completed "professional" business plan that they will be able to present to either 1: panel of judges from JA or classmates.

Windsor Public Schools
Curriculum Map for the Secondary Level
Fashion Merchandising

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Name of the Unit: Managing your business: Basic accounting and record keeping Unit 3	Length of the unit: 6 blocks (86 minute blocks)
Purpose of the Unit: This unit gives students an opportunity to examine financial statements, such as the income and cash flow statement, and balance sheet. Accounting records should be viewed as the organizing and recording of financial activities of a business. When correctly maintained these records provide valuable data for management decision making and indicate the financial strength of the business.	

Performance Standards Addressed in the unit: Textile, Apparel, Housing, Interiors and Related Careers
Demonstrate general operational procedures required for business profitability and career success 12.15
Demonstrate general procedures for business profitability and career success 12.20

Common Core State Standards Addressed in the unit:
Text Types and Purposes 10.W.2: Writing Informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Research to Build and Present Knowledge 10.W.8: Gather relevant information from multiple authoritative print and digital sources
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts

and issues

Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
10.L.4: **Vocabulary Acquisition and Use-** Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context
College and Career Ready Attributes
Students will demonstrate independence, strong content knowledge, respond to the varying demands of audience, task, purpose, and discipline, and comprehend as well as critique, value evidence, and use technology and digital media strategically and capably.

Big Ideas:	Essential Questions:
• Accurate financial records support sound business decisions and efficient use of resources. • Estimated cash flow statements are projections about cash needs for the future.	• Who would be interested in the financial statements of a business, and why? • What is the primary purpose of going into business? • How can inaccuracies in the financial records impact the business?
Students will know:	Students will be able to:
• Purpose of the income statement. • The sections in the income statement. • The formula for computing net income/loss. • Sources of cash, disbursement of cash. • Careful analysis of income statement will determine whether or not the business is making a profit or a loss.	• Describe the interrelationships of an income statement, balance sheet, and cash flow statement. • Prepare financial statements for a merchandising business. • Analyze the relationship among the income statement, the cash flow statement and the balance sheet. • Perform calculations to determine if the accounting equation is in balance. • Use spreadsheet applications to complete accounting functions and reports. • Explain the different user of the financial statements of a business. • Analyze financial statements to explain discrepancies and trends.

Significant task 1: Preparation of income statement

Using whole group instruction teacher will introduced to the concept of financial statements. “Financial statements tell the story”. The income statement sections are introduced and explained with the use of a teacher prepared a case study. Students will analyze the case study and identify the component parts. Using this information student will prepare an income statement and compute net income/loss.
To demonstrate mastery of these concepts, students will individually prepare an income statement from a sample case study provided by the teacher.
Through whole group instruction students will be introduced to comparative analysis of financial statements for two or more accounting periods. Through guided practice students will calculate amount of change and percentage change for the periods under review.
In groups of four, students will provide explanations for the differences between the periods and make recommendations for corrective action. Each group will present recommendations and answer questions asked by the class members.

Timeline: 2 class periods (86 minutes)

Key Terms: revenue, operating expense, fiscal period, income statement, merchandising business, net income/loss, owners’ equity, revenue, accrual method of accounting, comparative analysis

Significant task 2: Preparation of cash flow statement

Using whole group instruction students will be introduce to the purpose and use of a cash flow statement, as well as the role of the income statement in the preparation of the cash flow statement. The timing of receipts and expenditures impacts the liquidity of the business. Using a sample cash flow statement the teacher will demonstrate proper format, identify the various sections of the cash flow statement: sources of cash and disbursements, and net increase/decrease in cash
Through guiding questions, students will identify cash inflows and outflows and identify whether their business had a positive or negative cash flow for the period. Using a case study, students will demonstrate their mastery of the cash flow statement by individually developing a projected cash flow statement for six months to determine whether there is enough cash to cover expenses for the period.

Timeline: 2 class periods (86 minutes)

Key Terms: cash inflows, cash disbursements, liquidity, accrual method of accounting, operating expense, profit

Resources: Entrepreneurship Teaching Strategies by John E. Crow (NBEA), library visit,
Sites: SBA, Chamber of Commerce, computer/internet access.

Significant task 3: Preparation of balance sheet

All students will complete this significant task: As a class students will be introduced to the accounting equation. Through guided practice students will demonstrate how the balance sheet reflects the accounting equation.(using teacher provided template)

In groups of four students will analyze a hypothetical business. Each group will gather information on what is owned, (assets) what is owed (liabilities) and determine the owners' equity (capital). Using this information each group will develop a beginning balance sheet. Students prepare balance sheet from a set of case study information provided by the teacher.

Timeline: 2 class periods (86 minutes)

Resources: Textbook, Entrepreneurship Teaching Strategies by John E. Crow (NBEA), library visit,
Sites: SBA, Chamber of Commerce, computer/internet access.

Key Terms: inventory records, beginning inventory, ending inventory, cost of merchandise, operating expense, profit, assets, accounts receivable, accounts payable, notes payable

Common learning experiences:

- Guided practice to prepare financial statements
- Group activities
- Case study analysis
- Presentation
- Interactive notebook for vocabulary, notes and reflections

Common assessments including the end of unit summative assessment:

- Presentation
- Journal/interactive notebook
- End of unit assessment

Using the financial statements prepared as directed in classes use several cases studies to prepare income statement, cash flow statement and balance sheet
With two years financial information students prepare a comparative analysis, providing the management of their hypothetical business with recommendations for any troubling trends and or corrective measures to be taken.

Rubrics:

- School-wide rubric #3: Effective oral communication.
- Interactive notebook assessed through teacher-generated rubric.

Teacher notes: (Source of notes entrepreneurship teaching strategies, John E. Clow, NBEA)

Income Statement:
The income statement helps the entrepreneur know whether or not a profit is made during a particular period. It is also beneficial for the entrepreneur to compare the income statement form past periods to determine any positive of negative trends or developments.
Formula for calculating net profit/loss: Revenue – Expenses = Net Income/lost
For a merchandising business the income statement reports the revenue, the expenses, and the net

income or net loss for a specific period a major component of revenue is sales. Expenses are bills incurred during the period. Most businesses use the accrual method of accounting instead of a cash method. This means that an expense is claimed in the time period in which it is incurred or used - not when it is paid. Similarly, revenue is claimed when it is earned not when cash is received.

Cash flow Statement:
Point out to students that entrepreneurs estimate their cash flow for an upcoming month based on past experience and what they project to happen in the immediate future. This is done to ensure there is enough cash available for the month to pay for expenses as they become due.
Cash receipts – Cash payments = Net cash flow

Balance Sheet:
The balance sheet is another report on the health of the business. It shows how many assets are held by the business, and the degree of indebtedness. It also shows how much of the value of the assets can be claimed by the owners and the creditors
Accounting equation, Assets = Liabilities – Owners equity

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Name of the: Managing your business, Financing Unit 4	Length of the unit: 6 blocks (86 minute blocks)
Purpose of the Unit: Entrepreneurs need to estimate the amount of cash needed for expenditures such as inventory, fixtures, and equipment. Estimates must be made for cash reserves needed to keep the business going during the first few months of operations This unit will give students the opportunity to estimate the start-up capital requirement needed to finance their in-class business.	

Family and Consumer Science Performance Standards and Competencies:

Demonstrate the integration of knowledge, skills, and practices required for careers in textile, apparel, housing, and interiors. 12.20
Evaluate the components of customer service 12.13
Become exposed to technology used to produce textile, apparel and furnishings 12.14
Demonstrate general operational procedures required for business profitability and career 12.15
Demonstrate general procedures for business profitability and career success 12.20

Common Core State Standards Addressed in the unit:
Text Types and Purposes 10.W.2: Writing Informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Research to Build and Present Knowledge 10.W.8: Gather relevant information from multiple authoritative print and digital sources
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Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence

clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use- 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Big Ideas:	Essential Questions:
• Under-capitalized businesses fail within the first year. • Source of capital affects debt to income relationship. • All financial resources must be thoroughly examined in light of benefits/drawbacks.	• What factors makes one sources of capital more attractive than others? • Who are angel investors and why are they important to new businesses? • What factors would support your decision to accept a partner for your start-up business? • What could I live without to give my business a sound financial foundation?
Students will know: • The basis for classifying expenses for business startup and plan accordingly for each type of expense. • The criteria for selecting the major funding sources for a business.	Students will be able to: • Define startup expenses. • Identify examples and sources of startup capital. • Define operating expenses and identify examples of operating expenses. • Differentiate business expenses as startup, operating or personal. • Analyze the trade-offs between debt and equity financing.

Significant task 1:

All students will complete this task: Through direct instruction teacher will Introduce students to the concept of startup expenses, operating and personal expenses utilizing examples for different types of businesses. A discussion forum will be used to expose students to startup costs categories: real estate, equipment, fixtures, furniture, building renovation, prepaid deposits, beginning inventory, supplies, and pre-opening expenses.
Working in small groups of three or four students will be assigned various types of businesses. Business types: nail salon, small ice cream shop, resume writing service, catering service, lawn care service or a business of student's choice. In their teams, students will develop a list of startup expenses as the owner of their business.
Each group will share their list with the class. Differences among groups will be discussed. Using guiding questions students will identify any major expenses that were overlooked by the groups.
Through direct instruction the class will be introduced to operating expenses and personal expenses. Students will participate by adding to the list started by the teacher. Individually students will identify

and give examples of expenses common to the majority of small businesses.

Individually students will create a start-up lemonade stand. In this activity students will identify startup expenses and operating expenses necessary to have the business ready to open on the first day. Students will share their list with a partner and discuss any missing items.

As a whole group class will develop a master list of startup and operating expenses for the lemonade stand, color-coding expenses as either startup or operating expenses. Students will verbally justify their classification into either category.
Teacher will introduce students to the classification of expenses demonstrating for students what constitutes a fixed and a variable expense.
Working as pairs students will practice identifying the classification of expenses, utilizing a teacher-provided list. Students will demonstrate their understanding of the concept by brainstorming additional items to be added to the list.

Timeline: Two class periods (86 minutes)
Key vocabulary: Startup expenses, operating expenses, personal expenses, fixed expenses, variable expenses
Resources: Entrepreneurship Teaching Strategies by John E. Crow (NBEA), library visit,
Sites: SBA, Chamber of Commerce, computer/internet access.

Significant task 2: Source and types of funding, pros and cons of types of funding sources

Using guiding questions teacher will ensure that the main sources of funding are identified. Individually students will brainstorm the pros and cons to the entrepreneur of each source of funding. These sources are: using personal savings, borrowing from friends, finding an Angel investor, borrowing from commercial sources and obtaining trade credit.
Using whole group instruction teacher will introduce the following concepts:

Capital: Money needed to start a business, and keep it operating. Entrepreneurs need different amounts of money for various periods of time.
Short term borrowing: Usually requires payment within 90 days, mostly used for purchasing inventory or lower priced- equipment.
Intermediate-term borrowing: This type of borrowing is usually for one to five years. Equipment, fixtures, or commercial vehicles are often purchased using this type of borrowing.
Long-term borrowing: For periods of five years or greater, usually used for the purchasing real estate, or building facilities.
Venture capitalists: These investors provide loans to high-risk entrepreneurs. These investors are interested is a high return on their investment.
Trade credit: A form of credit provided by suppliers to their customers. The purchase of inventory and equipment are usually financed this way.
The Small Business Administration (SBA): A federal agency whose mission is to help small businesses get started. The SBA assist entrepreneurs in obtaining “bank guaranteed loans”. The money for these loans is usually provided by commercial lenders such as banks. To convince the lender to make the loan, the SBA guarantees that it will be repaid.

Working in groups of three of four, students will complete the assignment: Sources of funding. Students will list 5 – 8 sources of funding for a business and list the benefits and drawbacks of each. Finally, students will extend their knowledge of funding and business terms through a writing assignment: Using literary elements to convey meaning. Figurative terms are used to create new meanings to familiar words: Student will select five figurative phrases used in business and explain why they are appropriate.

Timeline: 2 class periods (86 minutes)

Significant Task 3: Funding Research

Students will be introduced to this topic through a visit to the library for a presentation with the media specialist on appropriate research strategies and how search engines help users access information. Individually, students will conduct internet research exploring two financing options to start the business. The following information must be covered in the report, as well as an explanation as to how the final selection of funding was made.
Contact the bank or financial institution of your choosing. Record responses to the following questions.

- Name of bank/financial institution
- Address
- Representative contacted
- What are the requirements for obtaining a small business loan?
- What is the MINIMUM amount usually provided for small business loans?
- What is the MAXIMUM amount usually provided for small business loans?
- What is the current interest rate for a small business loan?
- What are typical repayment plans for small business loans?
- For what types of small businesses are loans most often approved?
- Are there any special requirements for new businesses in the fashion industry?

Timeline: 2 class periods (86 minutes)

Key vocabulary: Capital, short-term borrowing, intermediate –term borrowing, Trade credit, venture capital, Small Business Administration, equity financing, debt financing, “Angel” investors, fixed expense variable expense

Resources: Resources: Entrepreneurship Teaching Strategies by John E. Crow (NBEA), library visit, Sites: SBA, Chamber of Commerce, computer/internet access.

Common learning experiences:

- Whole group instruction with teacher and media specialist
- Think-pair-share
- Presentation on startup costs
- Research paper on funding sources
- Interactive notebook for vocabulary, notes and reflections

Common assessments including the end of unit summative assessment:

- Research paper on funding sources
- Interactive notebook
- End of unit assessment in development

Rubrics:

- Research paper assessed through teacher-generated rubric.
- Interactive notebook assessed through teacher-generated rubric.

Teacher notes:

The expenses entrepreneurs have when starting a business are usually one-time costs to get the business off the ground. Some startup expenses include fixtures fittings, equipment, beginning inventory, deposits for rent and utilities, business licenses and permits, some legal fees and advertising. Size of the business will affect the number and types of startup expenses.

Windsor Public Schools
Curriculum Map for the Secondary Level
Fashion Merchandising

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Name of the Unit: Managing your business: Projections Unit 5	Length of the unit: 6 blocks (86 minute blocks)
Purpose of the Unit: Forecasting is an extremely important skill that business owners need. The wrong forecasts can lead to having too much merchandise in stock. This lesson gives students an understanding of forecasting and how it is used by business owners.	

Family and Consumer Science Performance Standards and Competencies:

Demonstrate the integration of knowledge, skills, and practices required for careers in textile, apparel, housing, and interiors. 12: 0
Evaluate the components of customer service 12.13
Become exposed to technology used to produce textile, apparel and furnishings 12.14
Demonstrate general operational procedures required for business profitability and career success 12.15
Demonstrate general procedures for business profitability and career success 12.20

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)
Text Types and Purposes 10.W.2: Writing Informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Research to Build and Present Knowledge 10.W.8: Gather relevant information from multiple authoritative print and digital sources
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues

Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Big Ideas:	Essential Questions:
• Forecasting is necessary to plan for purchases. • Inaccuracies in forecasting will negatively impact profits. • Forecasting involves predicting consumer behavior. • Forecasting is an educated guess based on analysis of current conditions and past performance.	• Why is forecasting important to a business? • What is likely to happen if you do not have the proper amount of product in stock? • Can consumer purchasing be predicted?
Students will know: • Forecasting involves guessing. • Forecasting ability improves with practice and experience.	Students will be able to: • Identify, establish, maintain and analyze appropriate records to make business decisions. • Define forecasting. • Discuss approaches to forecasting sales. • Describe internal and external factors affecting sales forecasts. • Forecast sales. • Plan purchases based on sales forecasts. • Calculate planned purchases.

Significant task 1: Forecasting

Teacher will present lesson through whole group instruction:
Ask students to make predictions relative to the following situations; writing down their responses.

- The cost of one year's college tuition at a state college in five years
- Three jobs that will have the fastest growth in the next 10 years
- The largest retail chain in the USA 20 years from now
- The score of the next game involving a team from the school

Students will share their predictions with the class, with each student discussing the factors they considered when making their forecasts. The activity will conclude with a discussion of why the predictions varied. Individually students then will record the types of information they would need to make more accurate predictions for each of the situations.
The concept of forecasting then will be extended; using the weather forecast for two days from the newspaper, internet, and television. Students will record the forecast over two days, and then discuss the accuracy of the forecast based on the current weather conditions. Through guiding questions, students will come to understand that sometime predictions are wrong because unforeseen factors change the predicted outcome.
Whole group guided practice: calculating sales trends. Using teacher- prepared handout with sales data for previous year sales listed in quarterly sales and current year sales, students will make predictions for fourth quarter sales based on trends from previous three quarters. (See teacher notes)
Individually each student will create a sales forecast from teacher- provided data in a case study and explain the rationale for their predictions.

Timeline: Two class periods (86 minutes)

Key vocabulary: forecasting, Inventory records, cost of merchandise, operating expense, profit, internal factors, external factors,

Resources: : Entrepreneurship Teaching Strategies, John E. Clow (NBEA), library visit,
Sites: SBA, Chamber of Commerce, computer/internet access.

Significant task 2: Conditions that affect sales forecasts

Using whole group instruction, students will be introduced to the reasons why past sales figures are important to business owners when making sales forecasts, but they should only be used as a guide. In addition to past store records, other factors are likely to impact sales. These factors can be grouped into two categories- internal and external, which will be explained through whole group discussion.
Following the discussion, students individually will write responses to the following, using teacher-provided template. Identify all the conditions and events (internal and external factors) that would affect sales at a concession stand at the games during the season.
In groups of three, students will demonstrate mastery of these concepts by creating their sales forecast for three months with internal and external factors considered.

Time line: 2 class periods (86 minutes)

Resources: : Entrepreneurship Teaching Strategies, John E. Clow (NBEA), library visit, computer lab visit
Sites: SBA, Chamber of Commerce, computer/internet access.

Significant task 3: Practice purchases plan based on sales forecast, inventory records and profit and loss statement

The lesson will be introduced to students through the following scenario: You have saved $100 and are going shopping this weekend. Review ads in the paper (to be supplied by teacher) and select the items you wish to purchase. Once students have made their individual selections, they will share their choices with the class and explain the factors that affected their choice. Teacher will highlight that all businesses

must understand consumer demand and make decisions about what products they purchase for their store.
Through whole group instruction, students will be introduced the concept of consumer demand, defined as the number of products units customers are willing and able to buy at a specified price and at a particular time. The higher the price, the less quantity that is demanded. To practice the concept, students will individually create a list of inventory items for the school store and identify factors that will affect demand. As a class, students will share their lists and state the basis for their choices.
Determining inventory levels:
Inventory record keeping will be introduced using direct instruction. Once business owners have estimated demand at a given price point and examined past sales records, they need to determine the amount of inventory to start or if a going concern, the amount of inventory on hand. All businesses must maintain some kind of inventory records involving the following:

- Beginning inventory + purchases = merchandise available for sale – sales = ending inventory

This calculation will be introduced to students, highlighting that ending inventory for one month becomes the beginning inventory for the next month. In the computer lab, students will practice applying this concept through the preparation of an inventory tracking system using Excel.

Using whole group instruction, students will be introduced to the concept that tracking inventory allows them to know inventory levels at all times. Once sales and purchases are forecasted, profitability needs to be examined. The key consideration is: Are the products priced high enough to cover the cost of goods sold and operating expenses while showing a profit?

Review the way to calculate each part of the profit/loss statement as follows:

- Sales($) = Number of units sold *retail price
- Cost of merchandise sold = Number of units sold * unit cost
- Gross Margin = Sales – Cost of goods sold
- Profit/Loss = Gross Margin – Expenses

Individually students will complete a practice purchasing plan, inventory record, and monthly profit/loss statement from teacher provided case study as a means of demonstrating mastery of these concepts.

Key vocabulary: forecasts, demand, inventory records beginning inventory, ending inventory, cost of merchandise sold, gross margin, merchandise available for sale, operating expenses, profit

Time line: 2 class periods (86 minutes)

Resources: Entrepreneurship Teaching Strategies, John E. Clow (NBEA), library visit, computer lab
Sites: SBA, Chamber of Commerce, computer/internet access.

Common learning experiences:

- Whole group instruction and simulated activities on sales forecasts
- Case studies related to purchasing plans, inventory records and profit/loss statements
- Think-pair-share
- Using Excel spreadsheet application

Common assessments including the end of unit summative assessment:

Assessments:

- Students will complete simulated activities, consider inventory, retail price, and projected demand as they make sales forecasts.
- Extend simulation for one more month making purchasing and pricing decisions supporting rationale for their decision. Next make calculate profit/loss based on sales they made
- Interactive notebook for vocabulary, notes and reflections

Rubrics:

- Teacher-developed rubrics will be used to assess simulation activities
- Journal/Interactive Notebook Rubric

Teacher notes:

Calculating sales trends:

Sales cannot be forecasted with absolute accuracy. One helpful guide is the average rate of increase of or decrease in sales from one period of time to another. Create a chart with sales figures and have students compute percentage increase or decrease using the following formula:

% of sales increase of decrease = difference in sales for two periods / sales for first period

Assign students calculating sales trends activity.

Purchasing plan

Point out to students how current styles and trends affect their decisions. Discuss how some of the items purchased complemented other items selected. Point out similarities and differences between what students wanted to purchase.

Putting it all together: At what price will I make a profit? (case study problem #1) Students create monthly profit and loss statement.

Windsor Public Schools
Curriculum Map for the Secondary Level
Fashion Merchandising

Purpose of the Course: Fashion Merchandising will give students an in-depth view of the textile/apparel/retail soft goods chain. Prior to creating their own boutique, students will explore the many aspects which influence a fashion business, along with how to create a business plan and how to manage a business. In addition, students will be introduced to the apparel manufacturing process as well as analyze an array of career opportunities. Fashion Merchandising, by its nature, is interdisciplinary and calls for the application of 21st century skills and concepts in fashion, marketing, accounting, and entrepreneurship as well as a range of researching, reading, writing, and presentation skills. This one year elective course will allow students to bring to life the world of fashion merchandising through the real life experience of creating and running an e-commerce boutique.

Name of the Unit: The Business of Fashion Unit 6	Length of the unit: 9 blocks (86 minute blocks)
Purpose of the Unit: This unit introduces students to assessing their potential as entrepreneurs. All students will complete the entrepreneurial characteristic assessment to demonstrate their potential of becoming successful entrepreneurs. Being an entrepreneur can be an exciting, rewarding and challenging way to earn a living. The greatest rewards are not material at all. For many entrepreneurs, the greatest rewards of owning a business include such things as independence, personal satisfaction, and prestige. Starting your own business puts you in charge.	

Performance Standards: Textile, Apparel, Housing, Interiors and Related Careers
Evaluate the components of customer service 12.13
Become exposed to technology used to produce textile, apparel and furnishings 12.14
Demonstrate general operational procedures required for business profitability and career success12.15
Demonstrate general procedures for business profitability and career success 12.20
Demonstrate the integration of knowledge, skills, and practices required for careers in textile, apparel, housing, and interiors 12: 0

Common Core State Standards Addressed in the unit:
Text Types and Purposes 10.W.2: Writing Informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Research to Build and Present Knowledge 10.W.8: Gather relevant information from multiple authoritative print and digital sources
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization,

development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Big Ideas:	Essential Questions:
• Entrepreneurial characteristics are habits that can be improved upon and are within the control of each individual. • When you consider owning your own business, an important first step is to analyze the advantages and disadvantages of entrepreneurship. • An entrepreneur accepts the risks and responsibilities for business ownership to gain profit and personal satisfaction. • Creating and running a business venture requires a variety of skills. The ability to recognize new opportunities and to think creatively are essential skills required for success in today's global economy.	• Do the rewards of entrepreneurship outweigh the risks? • Why do you think some people become entrepreneurs while others do not? • How can demographic changes create entrepreneurial opportunities? • What is the impact of social media and popular culture on entrepreneurial endeavors and the economy? • Are there any new trends in the fashion industry that can create entrepreneurial opportunities?
Students will know:	Students will be able to:
• Technological advances have created a global economy. The internet has revolutionized the way business is conducted. • The most important question an entrepreneur should ask is, "Is there a market for the product or service I am offering?" • As the world shifts towards a truly integrated global economy, more and more small businesses are getting involved in e-commerce.	• Identify the characteristics and skills needed by entrepreneurs necessary for success in any career. • Discuss current trends that provide opportunity for entrepreneurs. • Compare and contrast the advantages and disadvantages of starting your own business. • Create videos that are suitable for publishing on a website.

Significant task 1: You as an Entrepreneur

Individually students will take a personal inventory test which they will later use in a Quick Write formative assessment. From a teacher generated list, students will choose a successful entrepreneur and identify key personality strategies that promote entrepreneurial success. Individually students will compare the results from their personal inventory tests with the traits identified by whole class discussions. Are there key personality traits that you (the student) possess that could show you could be a successful entrepreneur?

Individually students will present a quick three minute presentation to the entire class to discuss their findings.

Task 1.1: Quick Write: Topic - After doing the personal inventory questionnaire, what are the key entrepreneurial characteristics you discovered you possess?

How do these characteristics enhance your business savvy skills?

Timeline: 2 class periods (86 minutes)

Key vocabulary: Opportunity, entrepreneurs, competition, foundation skills, niche, innovation, demographics

Resources: computer/internet access, library or computer lab visit, Entrepreneurship

Significant task 2: Marketing your business - Selling

As a whole group, students will view QVC and/or HSN presentation of fashion-related goods. Individually, students will record descriptive language as it is used in the presentation, and then share their results in small groups. In their teams, students will list descriptive language and methods of presentation they believe to be effective. The aspects of effective video development and production will be introduced through a guest lecturer, the TV Production teacher. Following the overview, students will work in teams to develop a script for their product. Upon approval by the teacher, each team will have the opportunity to work with a TV Production student to shoot their video. Upon completion, ads will be aired on WHS-TV

Timeline: 6 class periods (86 minutes)

Key vocabulary: product, price, promotion, product placement

Resources: video recorder, computer

Significant task 3: Create an ad campaign for the school store

In small groups students will design, write and shoot video ads, launching the school store. The campaign will be shown during morning announcements on WHS-TV.

Timeline: 2 class periods (86 minutes)

Resources: video equipment, computers

Common learning experiences:

- Interactive notebook for vocabulary, notes and reflections
- Personal inventory assessment and presentation
- Entrepreneurial traits assignment
- Team script writing of videos
- Team video production
- Quick Write

Common assessments including the end of unit assessment:

- Journal/Interactive Notebook Rubric
- Presentations assessed by school-wide rubric #3: Effective oral communication
- Group work assessed by school-wide rubric #2: Works collaboratively
- Video production rubric, to be designed collaboratively by Fashion Merchandising and TV Production teachers

Teacher's notes:
Management Team Plan – Business Plan Project

(see page 88 in Glencoe, Entrepreneurship and Small Business Management)
In the Management Team section of the business plan, you will present your management team's qualifications for making the venture a success.
Step #1: Describe yourself

Write a one page biography that describes how your experience will help you run a small business. For example, if you have played team sports, you may have teamwork and people skills that can help you achieve small business success. Focus on what you can do to make your business work.

Step #2: Think about the skills you have an the skills you need

Every business needs certain key skills and experiences. If you do not have these skills, you can bring in partners or hire employees with these skills or you can outsource the function. Create and fill out the chart and write down how each of these managerial jobs will get done.

MANAGERIAL SKILL	JOB TITLE	QUALIFICATIONS	RESPONSIBILITIES
Leadership	Chief Executive Officer		
Managing			
Web site Manager			

Marketing	Marketing Director		
Sales	Sales Director		
Finance	Chief Financial Officer		

Windsor Public Schools
Curriculum Map for the Secondary Level
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Name of the Unit: E-commerce Unit 7	Length of the unit: 6 blocks (86 minute blocks)
Purpose of the Unit: In this unit students will learn what globalization means for e-commerce and how many U.S. businesses expand into global positions. Students will also learn the importance of cultural differences and why cultural differences must be considered when business go global. In addition, students will discover the risks, challenges and rewards for businesses in the global market.	

Performance Standards : Textile, Apparel, Housing, Interiors and Related Careers

Evaluate the components of customer service 12.13
Become exposed to technology used to produce textile, apparel and furnishings 12.14
Demonstrate general operational procedures required for business profitability and career success 12.15
Demonstrate general procedures for business profitability and career success 12.20
Demonstrate the integration of knowledge, skills, and practices required for careers in textile, apparel, housing, and interiors 12: 0:

Common Core State Standards Addressed in the unit:

Text Types and Purposes 10.W.2: Writing Informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Research to Build and Present Knowledge 10.W.8: Gather relevant information from multiple authoritative print and digital sources
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues

Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Big Ideas:	Essential Questions:
• The internet has made it much easier to conduct business, but has created new challenges. • E- Commerce companies face many of the same challenges and enjoy many of the same rewards as conventional businesses. Ultimately, the goals remain the same—to satisfy customers' wants and needs, to keep customers coming back and to make a profit. • Companies spend a great deal of time, effort, and money to develop and maintain their websites. A well-designed and well-organized web site that is easy to navigate is more likely to attract customers who will visit, browse, buy and become repeat customers.	• In what ways does technology impact business? • How is customer service impacted when dealing with an e-commerce site? • What are the trends in e-commerce that may impact your business?
Students will know: • The proper tools used in website creation. • Strategies for protecting a business's web site. • Demonstrate how a search engine works. • The importance of a well-structured web site.	Students will be able to: • Analyze the effectiveness of a website. • Create site maps and story boards to effectively plan a website. • Create and maintain an e-commerce business. • Add graphics, hyperlinks, audio and video to enhance a website's ease of use and show products available for sale . • Edit, and revise the website to attract and keep customers
Significant task 1: Analyzing websites In whole group, students will discuss the websites that they frequently visit and/or purchase from.	

Individually, students will look at two or three of their favorite websites and analyze the site for ease of use, navigation, security issues, layout consistency, special needs (hearing impaired, color blindness, etc.)

Activity 1:2: Quick Talk: Have you ever tried to purchase an item from a Website but had problems completing a product search or checking out?

In small groups, students will discuss how consistent Web-site problems can (have) driven customers away from a particular site. At the end of this 15 minute activity, teams will report to the entire class of their experiences.
Each student will create a PowerPoint or PREZI and give a three minute maximum synopsis of the website focusing on the following topics:

Visual balance - balanced use of text, graphics, and white space
Graphics – the most powerful way to convey messages to the consumer
Color consistency - colors that are pleasing to the eye and reflect the company's image
Multimedia – what interactive effects (games, music or video) that make the website fun

As a result of analyzing website task students will become aware of the do's and don'ts when creating and updating the class' website.

Timeline: 2 class periods (86 minutes)

Key vocabulary: tags, frames, image map, JavaScript, button, GIF, JPEG, hyperlinks, feasibility assessment

Resource: *ecommerce.glencoe.com*

Significant task 2: Planning a Website

Activity 2:1: In small groups, students will choose two (2) web sites. One must be the online site for a big box store. The other should be an e-commerce site of your choice. Compare and contrast each website:

Questions to keep in mind:

1. What objectives did the companies had in mind when planning their sites?
2. Who is the target audience for each Web site?
3. What navigational bars and buttons are used on each website?
4. How easy is it to track your orders?
5. What is the policy for returning an item you do not want?
6. How would you improve each site?

Activity 2:2: From the analysis of the first activity, in small groups, students will work cooperatively to create a story board of their planned website. Each group will then present their design to class for critique. As a whole class, students will choose the storyboard that best represents the objectives of the class to create the website on line.

Timeline: 2 class periods (86 minutes)

Key vocabulary: back-end management, bandwidth, Pay-pal, positioning, site layout, storyboards, navigate, site map

Resources: Resources: Textbook, *Ecommerce in partnership with Business Week (Chapter 11)*
Sites: ecommerce.glencoe.com

Significant task 3: Creating the Web site

Activity 3:1:
After final decision from Activity 2-2, students will work cooperatively as a whole group to create the website. From the chosen template students will upload graphics and set up web pages.

Activity 3:2: Customer Service

Customer Service is often called customer care, and it is essential to the success of any business. Excellent customer service can mean the difference between happy customers who will return to your site and customers who you will never see again. Most e-tailers agree that their customer service must be excellent at all times.

Imagine you are a consultant working with a company that is planning to launch an e-commerce site. Write a memo/business letter to the owner of a company describing the customer service options you would recommend for the business.

Timeline: 2 class periods (86 minutes)

Key vocabulary: image map, cascading sheet style, hyperlinks, file links, broken links, buttons, hot spots

Resources: Glencoe e-commerce textbook; ecommerce.glencoe.com (Chapter 10 – Building a web site)

Common learning experiences:

- Analyzing website
- Story board
- Presentation of website story board for class critique
- Creating a website
- Maintaining and managing a website

Common assessments including the end of unit summative assessment:

- Website analysis
- Story board creation
- Story board presentation

Rubrics:

- Website analysis to be assessed by School-wide rubric #1: Uses research tools to access evaluate and document information.
- Team activities to be assessed by school-wide rubric #2: Works collaboratively.
- Presentation to be assessed by school-wide rubric #3: Effective oral communication.
- Website development to be assessed by teacher-generated rubric.

Teacher notes:

Guest speakers:

Invite a Web-site designer to speak to the class about analyzing, maintaining and updating web sites

Small business owner to speak to class about the importance of customer service, maintaining a business presence on line (web-site, social networking site, etc.)

Questions to ponder/have students keep in mind while designing the e-commerce business are. . . . . (Pre –reading activity)

'The most important thing to remember about the purpose of e-commerce is . . . . . .'

'Some questions I have about how businesses operate in the world of e-commerce are . . . . . .'

'Unique challenges to setting up an online business are . . . . . .'

21st Century Skills:
Information and Communication Skills: Understanding, managing and creating effective oral, written and multimedia communication in a variety of forms and contexts.
Thinking and Problem Solving: Developing, implementing and communicating new ideas to others, staying open and responsive to new and diverse.
Interpersonal Skills: Demonstrating teamwork and leadership and adapting to varied roles and responsibilities within the "organization".

All these aforementioned skills are required to make a successful transition into the workplace.

PLANNING IS KEY: Worksheet

Planning is essential to any successful e-commerce web site. Usually the easy parts are the design and layout, selecting the "bells and whistles" to attract customers, and choosing the features you'll incorporate into it. Before you begin, you must take the time to prepare and plan your site.
When you plan, you have a much better chance of success.

1. Choose two websites. One MUST be the online site for a big box store (Lowes.com, Bestbuy.com, etc.) The other may be an e-commerce site of your choice. Describe the layout of each site.

2. As you analyze the sites, try to determine what objectives the companies had in mind when planning their sites.

3. Who is the target audience for each Website?

4. Describe the navigational bars and buttons for each.

5. Choose one of the sites. How would you improve that site?

6. What features on either site that you believe are important and should be incorporated into the website you are designing? Why?

Windsor Public Schools
Curriculum Map for the Secondary Level
Fashion Merchandising

Purpose of the Course: Fashion Merchandising will give students an in-depth view of the textile/apparel/retail soft goods chain. Prior to creating their own boutique, students will explore the many aspects which influence a fashion business, along with how to create a business plan and how to manage a business. In addition, students will be introduced to the apparel manufacturing process as well as analyze an array of career opportunities. Fashion Merchandising, by its nature is interdisciplinary and calls for the application of 21st century skills and concepts in fashion, marketing, accounting, entrepreneurship as well as a range of researching, reading, writing, and presentation skills. This one year elective course will allow students to bring to life the world of fashion merchandising through the real life experience of creating and running an e-commerce boutique.

Name of the Unit: Apparel Design and Manufacturing Unit 8	Length of the unit: 11 classes (86 minute blocks)
Purpose of the Unit: In this unit students will learn how to evaluate fiber and textile material as they relate to apparel production. Students will be introduced to a range of fiber and fabric characteristics and methods of assessment through a hands-on fabric lab. Students will learn about the elements and principles of design as they relate to apparel production and to their own clothing choices. In addition students will gain an understanding of the 'flow' of apparel manufacturing and how it relates to fashion business.	

FACS Standards addressed in the unit:
Evaluate fiber and textile materials. 11.9
Become exposed to fashion history and elements of design. 11.10
Evaluate design decision in relation to available resources and options. 11.2
Select appropriate terminology for identifying, comparing, and analyzing the most common generic textile fibers. B5
Identify general performance characteristics of fiber and textiles. B6
Describe and assess effects of textile characteristics on design, construction, care, use, and maintenance of products. B7
Describe the ways in which fabric, texture, and pattern can affect visual appearance. C9
Apply basic and complex color schemes and color theory to develop and enhance visual effects. C10
Explain the appropriate usage of elements and principles of design in designing, constructing, and/or altering textile products. C11
Become exposed to fashion history and elements of design. 11.10
Demonstrate design ideas through visual presentation. 11.4
Analyze career paths within textile and design industries. 11.16

Common Core State Standards Addressed in the unit:
Text Types and Purposes 10.W.2: writing informative/explanatory text to examine and convey complex ideas

Research to Build and Present Knowledge 10.W.7:Conduct short as well as more sustained research projects to answer questions(including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Comprehension and Collaboration 10.SL.1: initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues.
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence, clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: - Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Big Ideas:	Essential Questions:
• Having knowledge and understanding of various fibers, textiles, elements and principles of design will enable you to make better choices as a consumer.	• How does having knowledge of fibers and textiles influence you as a consumer? • How does having an understanding of the elements and principals of design allow you to create apparel which create illusion and enhance appearance? • How does having an understanding of fibers, textiles, and the elements and principles of design impact having a successful business in the fashion industry?
Students will know: • The characteristics and differences between natural and synthetic fibers. • The basic types of fabric construction. • What fabric finishes are and how they impact apparel. • The elements and principles of design. • What the general flow of apparel manufacturing is and how it is impacted by textile choice.	Students will be able to: • Identify natural verses synthetic fibers. • Identify various types of woven and knit fabrics. • Identify elements and principles of design as they relate to apparel construction. • Predict effectiveness of a product based on textile used and elements and principles of design applied.

Significant task 1: Fiber to Fabrics
Students will be introduced to a variety of fabric types- they will explore fabric characteristics through hands on introduction to fabric. They will brainstorm, with guided questions, ways to describe and identify characteristics of a fabric swatch. They will also be encouraged to dissect the swatch in order to discover how it is constructed.
Students will then be introduced to the primary types of fibers and fabrics: manmade, natural, advantages and disadvantages of each, characteristics, and construction methods.

Fabric Lab
Students will work together in small groups to assess a variety of fabrics. They will have samples of fabrics in which they will use magnifying glasses to assess the type of construction, and a range of fabric characteristics. They will compile their information into a matrix.

Timeline: 4 class periods (86 minutes)

Key vocabulary: fiber, yarns, fabric, woven, knit, natural, cellulosic, protein, manmade, blend, wicking, hand, denier, tensile strength, texture/hand, shape retention, air permeability, drape-ability, wrinkle resistance, ,stretch, cover
(careers to be added to career section of notebook: textile chemist, textile converter, environmental engineer, machine operator)

Resources: Clothing Fashion, Fabrics & Construction; fabric lab kits(fabric swatches, magnifying glasses, matrix)

Significant task 2: Elements and Principles of Design
Introduction to the elements and principles of design: students will work in small groups to assess a variety of fashion garment pictures in which they will brainstorm various aspects of each garment. Guided questions will be provided as needed.
Presentation: Students will create a presentation portfolio in which they select garments which represent various aspects of elements and principles of design. Students will present their projects with an oral presentation to the class.

Timeline: 4 class periods (86 minutes)

Key vocabulary: color scheme, primary color, secondary color, monochromatic, analogous, complimentary, triadic, neutral, line, shape, space, texture, pattern
(careers to be added to career section of notebook: apparel designer, apparel stylist, design associate, textile designer)

Resources: Clothing Fashion, Fabrics & Construction; computer lab

Significant task 3: Preproduction-production-postproduction
Students will write a short essay on “Tying it together”- based on the information students have gained regarding: fiber to fabrics and the elements/principles of design students will predict how those factors influence apparel production. Students will be introduced to the basics of the complex process of apparel manufacturing; Students will work utilizing an Understanding By Design approach; they will start with the concept of a completed garment and work backwards to break down all of the various aspects that go into the creation and construction of a garment. Students will create their own flow chart of the

steps they identify as possible steps in apparel production. Lists will be complied and a whole group list generated (using the document camera).
Students will then compare and contrast their flow chart with an actual flow chart.
Teacher to provide guided questions as needed.

Timeline: 3 class periods (86 min classes)

Key vocabulary: automation, ready to wear, sourcing, inside shop, outside shop, pattern making, grading, marking
(careers: grader, marker, pattern maker, inspector, piece goods buyer, designer, sketcher)

Resources: Clothing: Fashion, Fabric, and Construction: McGraw-Hill

Common learning experiences:

- Creation of a list of elements and principles of design; incorporate vocabulary via application to the elements and principles they identify
- Fabric lab
- Short essay predicting impact of the choices of fabric, elements and design principles.
- Comparing and contrasting student generated flow chart to industry based flow chart
- Interactive notebook for vocabulary, notes and reflections

Common assessments including the end of unit summative assessment:

- Fabric lab
- Essay
- Interactive notebook
- End of unit summative assessment

Rubrics:

- Fabric lab will be assessed by teacher-generated rubric and school-wide rubric #2: Works collaboratively.
- Essay will be assessed by teacher-generated rubric.
- Interactive notebook assessed through teacher-generated rubric.
- End of unit summative assessment under development

Teacher notes:
Students will be utilizing an interactive notebook for this course.
Identified careers will be added into career section of interactive notebook- to be further explored in the career unit
Be sure to access students prior knowledge throughout unit
During the fabric lab encourage students to deconstruct the fabric swatches in order to more thoroughly assess construction methods

Windsor Public Schools
Curriculum Map for the Secondary Level
Fashion Merchandizing

Purpose of the Course: Fashion Merchandising will give students an in-depth view of the textile/apparel/retail soft goods chain. Prior to creating their own boutique, students will explore the many aspects which influence a fashion business, along with how to create a business plan and how to manage a business. In addition, students will be introduced to the apparel manufacturing process as well as analyze an array of career opportunities. Fashion Merchandising, by its nature is interdisciplinary and calls for the application of 21st century skills and concepts in fashion, marketing, accounting, entrepreneurship as well as a range of researching, reading, writing, and presentation skills. This one year elective course will allow students to bring to life the world of fashion merchandising through the real life experience of creating and running an e-commerce boutique.

Careers in the Fashion World Unit 9	Length of the unit: 10 classes (86 minute blocks)
Purpose of the Unit: In this unit students will explore employability skills, explore career planning as well as create an individual career path. Students will spend time in the WHS Career Resource Center to supplement this unit. Students will also identify, explore, and analyze a wide range of careers in the fashion industry; textile and apparel careers; retail careers; promotion careers; entrepreneurship careers.	

FACS Standards addressed in this unit:
Analyze career paths within textile and design industries. 11.16
Demonstrate general procedures for business profitability and career success. 12.20
Identify education and training requirements and opportunities for career paths in textiles and apparel E.17
Describe employability skills used in the community and workplace settings. E.18

Common Core State Standards Addressed in the unit:
Comprehension and Collaboration 10.SL.1: initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led)with diverse partners on topics, texts and issues.
Presentation of Knowledge and Ideas 10.SL.4 : Present information findings and supporting evidence, clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks.
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Big Ideas:	Essential Questions:
• Careers in the fashion world require varying levels of education. • Starting at the bottom does not mean you stay at the bottom. • How we present ourselves makes a difference when pursuing a career.	• In what ways does it matter how we present ourselves when pursuing a career? • What knowledge, skills, and practices are required to have a successful career in the textile and apparel industry?
Students will know: • The basic categories of fashion careers. • The skills and practices required for a successful career in the fashion world. • The educational requirements for various fashion industry careers. • What aspects of how we present ourselves have the most impact when pursuing a career path in the fashion industry.	Students will be able to: • Identify the basic categories of careers in the fashion world. • Develop a career plan. • Identify the skills and practices required for a successful career in the fashion world. • Identify the differences in educational requirements for various fashion careers

Significant task 1: Self-assessment and Career planning
Students will have a guest speaker presenting on the issues of employability; resume writing, interview process, and career planning. Students will also participate in individual career planning activities, using the CRC as a resource. This will include a career self- evaluation and successful career planning approaches in contrast to less successful career planning approaches. In addition students will write a resume.

Timeline: 4 class periods (86 minutes)

Key vocabulary: strengths, weaknesses, interests

Resources: Clothing: Fashion, Fabric, and Construction: McGraw-Hill
WHS Career Resource Center; Women's Wear Daily

Significant task 2: Career options

In small groups of 4-5, students will brainstorm different careers in the fashion industry. Students will work utilizing an Understanding By Design approach; they will start with the concept of a retail outlet and work backwards to break down all of the various aspects that go into setting up and maintaining that business; from the sale of the products back to the creation of the products. Students will identify similarities and differences among the careers identified. Each group will create a visual depicting their results: each group will present their findings to the class. Direct whole group instruction with guiding questions to supplement student findings will be done.

Timeline: 4 class periods (86 minutes)

Key vocabulary: research and development, design, production, sales

Resources: Clothing: Fashion, Fabric, and Construction: McGraw-Hill
Women's Wear Daily

Common learning experiences:

- Guest speaker
- Resume writing
- Effective interviewing
- Self-evaluation re career planning
- Dissection of a fashion business to identify types of careers
- Creation of visual presentation
- Interactive notebook for vocabulary, notes and reflections

Common assessments including the end of unit summative assessment:

- Resume
- Career planning activities
- Fashion career identification and categorization
- Group presentation
- Interactive notebook for vocabulary, notes and reflections

Rubrics:

- Resume to be assessed by teacher-generated rubric.
- Career plan to be assessed by teacher-generated rubric.
- Identification and categorization of fashion careers activity to be assessed by teacher-generated rubric.
- Group presentation to be assessed by School-wide rubric #3: Effective oral communication.
- Interactive notebook assessed through teacher-generated rubric.

Windsor Public Schools
Curriculum Map for the Secondary Level
CAD/CAM

Purpose of the course: (CBIA Education Foundation 2011 SURVEY OF CONNECTICUT'S MANUFACTURING WORKFORCE): Connecticut manufacturers expressed concerns about finding and attracting skilled labor. The top five most difficult positions to fill were CNC programmers (87%), tool and die makers (85%), CNC machinists (79%), CAD/CAM technicians (78%), and engineers (64%). The goal of this course will be to prepare our students to enter post-secondary education to go on to fill the void in Connecticut's manufacturing/engineering workforce.	
Name of the unit: Introduction to CAD/CAM (Computer Aided Drafting/ Computer Aided Machining) and Electrathon systems Unit #1	**Length of the unit:** 14 Blocks (86 minutes)
Purpose of the unit: The purpose of this unit is to introduce students to CAD/CAM basics and Electrathon car systems.	

Common Core State Standards addressed in the unit:

Text Types and Purposes 10.W.2: Writing informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence, clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determines or clarifies the meaning of unknown and multiple meaning words and phrases based on reading and context

Connecticut Technology Education CAD Standards addressed in this unit:
Describe and demonstrate the use of graphic communication skills through sketching CADD.02.04
Evaluate and select appropriate method of communication for a given problem CADD 02.05
Use the concepts of geometric construction in the development of design drawings CADD 05.04
Create and manipulate line types, colors and layers/levels CADD 05.09
Produce proportional two- and three-dimensional sketches and designs CADD 08.01
Use freehand graphic communication skills to represent conceptual ideas, analysis, and design concepts CADD 08.03
Explain the purpose of sketching and how it applies to design CADD 08.04

Connecticut Technology Education Engineering Standards addressed in this unit:
Describe and utilize the steps in the design process ENG. 02.01
Describe the process for researching known, relevant information, constraints and limitations ENG 02.03
Analyze and research between alternate solutions ENG 02.06
Develop details of a solution ENG 02.07
Communicate processes and results ENG 02.11
Compare and contrast physical properties of materials ENG 04.02
Explain the process used for selecting the correct materials for specific functions ENG 04.06
Make an oral presentation ENG 05.03
Actively contribute to a team project ENG 05.04
Identify available resources for researching problem solutions ENG 07.01
Use presentation software to develop oral presentation of findings ENG 07.03

Connecticut Technology Education Manufacturing Standards addressed in this unit:
Select materials based on properties required by the project MAN 02.03
Describe the relationship between materials and manufacturing MAN 02.04

Big ideas:	**Essential questions:**
• Engineers follow a specific process when designing. • Manufacturing is critical to the economy.	• What makes one design more desirable than another? • What is an optimum solution?

Students will know:	**Students will be able to:**
• The uses of CAD/CAM. • The systems in an Electrathon vehicle. • The engineering design process. • The components of effective communication. • The characteristics of productive teams.	• **S**et a purpose for searching. • **E**mploy effective search strategies. • **A**nalyze search engine results. • **R**ead critically and synthesize information. • **C**ite their sources. • Analyze **H**ow successful their search was. • Describe and utilize the steps in the design process. • Prepare an effective multimedia presentation.

Significant task 1: Introduction to CAD/CAM

In a whole group setting, students will view a presentation about CAD/CAM careers and processes. In teams of 3-4, students will discuss the careers identified in the presentation and brainstorm additional careers related to manufacturing. Individually, students then will research CAD/CAM career opportunities present in Connecticut and give a three minute presentation to the class regarding their findings. A guest speaker, (from CBIS or a local manufacturing facility) will be invited to speak to students about career opportunities and the need for skilled labor. Finally, students will take a tour of the manufacturing and drafting labs and view several machines in operation.

This unit will culminate with a field trip to the ACM (Aerospace Components Manufacturers) Future Workforce Opportunities fair. Students will interview vendors of their choice and complete a worksheet documenting their findings.

Timeline: 3 blocks (86 minutes)

Key vocabulary: CAD, CAM, manufacturing, milling, tool paths, turning, boring, drilling, pocketing, contour

Resources: PowerPoint presentations, shared class vocabulary Google Doc, guest speaker, ACM field trip

Significant task 2: Lab safety

In a whole group setting, students will be introduced to lab safety by observing safety presentations, question and answer sessions, and a safety pre assessment. Students then will participate in a manufacturing lab safety scavenger hunt to find all of the safety equipment and PPE in the Labs.

The general lab safety unit will conclude with a written safety test and an activity in which students will label the location of all the safety equipment on a floor plan drawing of the lab.

Timeline: 2 blocks (86 minutes)

Key vocabulary: PPE, combustible, e-stop, safety zone, safety attitude

Resources: Safety pretest, scavenger hunt worksheets, class floor plan drawing, general shop safety test, shared class vocabulary Google Doc

Significant task 3: Systems research

As a class, students will be introduces to Henry's SEARCH Framework. Students will be using the framework to guide all of their internet research throughout the course.

In this task, students will:
1. **S**et a purpose for searching.
2. **E**mploy effective search strategies.
3. **A**nalyze search-engine results.
4. **R**ead critically and synthesize information.
5. **C**ite your sources.
6. **H**ow successful was your search?
(Henry, 2006)

In small groups (3-4), students will be asked to identify all of the mechanical systems necessary to build an electric car. Guiding questions will be utilized to assist groups having difficulty finding all of the necessary information. This approach will give students an overview of the vehicle before they asked to research a single system. As a whole group the class will discuss their findings and will come to consensus on the required systems that are necessary to make up an electric vehicle.

Timeline: 2 blocks (86 minutes)
Key vocabulary: drive train, suspension, steering, braking, chassis, body, safety, power

Resources: A computer with internet access, SEARCH worksheets. Electrathon systems research worksheets, shared class vocabulary Google Doc

Significant task 4: Assigned system research

In a whole class group, students will view a presentation on the 12 step engineering design process used by Project Lead the Way and the engineering notebook. Small groups of students

will then be assigned a specific Electrathon system (steering, braking, suspension, etc...). Using Henry's framework as a guide, students will research their assigned system. Students will use the first 6 steps of the engineering design process as a guide to develop sketches of their system.

In this task, students will:

- Research their system
- Synthesize the information
- Learn the vocabulary for the components of the system
- Compare and contrast the different configurations of their system
- Synthesize their research to decide on their final system configuration
- Compare and contrast their material options
- Develop preliminary design sketches

Individually, students will record each step of the design process in their engineering notebook.

Timeline: 4 blocks (86 minutes)

Key vocabulary: Vocabulary will be unique for each group.

Resources: Electrathon America handbook, computer with internet access, shared class vocabulary Google Doc, presentations

Significant task 5: System presentation

For this task, students will be working in the small groups established in significant task #4. Each group will collaborate to construct a multimedia presentation, in which they will describe their system research and initial design to the whole group.
In this task, students will:

- Use Google Presentations to collaboratively build their group multimedia presentation
- Present their findings to the class
- Assess their fellow group members' contribution to the project using school- wide rubric #2: Works Collaboratively.

Timeline: 3 blocks (86 minutes) (2 classes to design and one to present)

Key vocabulary: Each group will present unique vocabulary based on their assigned system.

Resources: Computer with internet access, teacher-created Google presentation instructions

Common learning experiences:

- Introduction to Connecticut's manufacturing workforce through guest speaker and field trip
- Conducting internet research utilizing Henry's SEARCH framework
- Introduction lab machinery and safety equipment

Common assessments including the end of unit summative assessment:

- Multimedia presentation
- Engineering notebook
- Safety assessment
- Collaboration on a task team

Rubrics:

- Presentations scored using school-wide rubric #3 (Effective oral communications)
- Internet research scored using school-wide rubric #1 (Uses research tools to access, evaluate and document information)
- Engineering notebooks scored using school-wide rubric #5 (Problem solving)
- Effective collaboration scored using school-wide rubric #2 (Works collaboratively)

Teacher notes:

- Vocabulary instruction will be integrated into each unit of study throughout the course, utilizing the following method: First, students will be assigned a content- related vocabulary word. Each student then will define the assigned word in a Google Doc. Using Italic (screen share software), the teacher will share each student's screen with the rest of the class via the projector. Each word will then be added to a shared class vocabulary Google Doc. This method will create a digital word wall for the class.

- For significant task #5, seniors with prior experience with the Electrathon vehicle will be asked to research possible modifications to the existing design.

Windsor Public Schools
Curriculum Map for the Secondary Level
CAD/CAM

Purpose of the course: (CBIA Education Foundation 2011 SURVEY OF CONNECTICUT'S MANUFACTURING WORKFORCE): Connecticut manufacturers expressed concerns about finding and attracting skilled labor. The top five most difficult positions to fill were CNC programmers (87%), tool and die makers (85%), CNC machinists (79%), CAD/CAM technicians (78%), and engineers (64%). The goal of this course will be to prepare our students to enter post-secondary education to go on to fill the void in Connecticut's manufacturing/engineering workforce.

Name of the unit: Introduction to CAD Unit #2	**Length of the unit:** 14 Blocks (86 minutes)
Purpose of the Unit: The purpose of this unit is to introduce students to CAD (Computer Aided Drafting).	

Common Core State Standards addressed in the unit:
Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder) HSG-MG.A.1
Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects. HSG-GMD.B.4

Connecticut Technology Education CAD Standards addressed in this unit:
Apply conventional Computer Aided Drafting and Design processes and procedures accurately, appropriately, and safely CADD.02.01
Describe physical objects as geometric entities CADD.02.02
Describe and demonstrate the process of using mechanical and electronic measuring devices accurately as required by the design intent CADD.02.03
Send and access information through a network CADD.02.8
Evaluate choice and placement of dimensions, notes and annotations to clearly communicate design intent CADD.02.09
Revise a design and update finished drawings appropriately CADD.02.10
Identify basic geometric elements (e.g., line, circle, rectangle, sphere, and cube) CADD.02.11
Describe and apply the basic geometric concepts to building 3D models (e.g., tangent, parallel concentric, etc.) CADD.02.12
Develop drawings using notes and specifications CADD.03.07

Explain the Cartesian Coordinate System CADD.05.08 Create a 2-D drawing from a 3-D model CADD.06.05	
Big ideas: • CAD (Computer Aided Drafting) is a process used to create mechanical drawings quickly and accurately.	**Essential questions:** • Why use CAD instead of traditional pencil drawings? • Why is there an industry standard for mechanical drawings?
Students will know: • Industry standards used to produce drawings. • Industrial uses of CAD/CAM.	**Students will be able to:** • Complete a CAD drawing quickly and accurately. • Use basic 2-D commands in Kubota Key Creator CAD software (line, circles, rectangles, trim) • Apply conventional Computer Aided Drafting and Design processes and procedures. • Revise a design and update finished drawings. • Identify basic geometric elements (e.g., line, circle, rectangle, sphere, and cube). • Evaluate choice and placement of dimensions, notes and annotations to clearly. • Communicate design intent.

Significant Task 1: Basic 2-D commands

As a class, students will view a presentation that introduces the CAD software user interface. The presentation also will explain the process of accessing the CAD tutorials from the network, and where and how students are to save their files. The following days will involve students accessing software tutorials from the network and guiding themselves through the step by step process. Basic 2-D tutorial to be completed include:

- landscape
- extrusion
- baseplate

Students who move through the tutorials more quickly will be assigned additional enrichment drawings to extend and improve their drawing skills. The enrichment drawings for this task will include:

- bevel spacer
- pattern
- bracket

Upon completion of the three assigned tutorials, all students will be required to complete a drawing that will test their knowledge of the commands they learned by removing the support of the step by step tutorial.

CAD skills to be assessed: Line, line string, circle, rectangle, polyline, change attributes, and coordinate entry.

Timeline: 4 blocks (86 minutes)

Key vocabulary: absolute, arc, axis, Cartesian coordinates, circle, concentric, conversation bar, entity, line, linear, origin, grid, cursor snap, cursor tracking

Resources: PowerPoint presentations, CAD tutorials, CAD workstation, network to save and access work.

Significant Task 2: Modify and Dimensioning

Students will repeat the procedure described in significant task #1. Individually, students will work on tutorials focused on modification and dimensioning of CAD drawings. Students who progress quickly will be given more difficult drawings, to extend their skills. At the completion of the tutorials, all students will be given an enrichment project, to demonstrate their skills. Modification and dimensioning tutorials will include:

- target
- tower
- spinner
- pipe clamp

Enrichment drawings:

- polygon challenge
- knotwork challenge
- sheet stamping
- tangram

This unit culminates with an end of unit assignment. Students will be assessed on their ability to quickly and accurately create the assigned CAD drawing.

CAD skills to be assessed: object snap, trim first, trim divide, polygons, three point circles, dimensioning lines and angles, parallel lines, trim double, creating arcs, and creating angles.

Timeline: 5 blocks (86 minutes)

Key vocabulary: diameter, radius, trim, break, vertex, fillet, chamfer, symmetry, linear dimensions, angle dimensioning

Resources: PowerPoint presentations, CAD tutorials, CAD workstation, network to save and access work.

Significant Task 3: Advanced 2-D commands

Students will continue their work described in significant task #1, extending their learning in 2-D commands. Advanced 2-D command tutorials to be completed include:

- keyplate
- slotted cam

Enrichment drawings:

- pipe support
- aligning tool
- multiple polygons

This unit culminates with students returning to their previously selected Electrathon groups to work together and use the CAD software to design their Electrathon system. Students will create the parts that they researched for the Electrathon vehicle. This part design will be detailed, as the students need to rely on their researched knowledge, engineering design process knowledge, and machinability. Students will need to collaborate both within their small group and with the class as a whole to ensure their system works with all of the other systems that exist on the car. Each small group will create a number of small parts; including, parts for the Electrathon car specific to their system, brackets, and fixtures to secure or machine their part. Each of their designs/tool paths/machine setups will challenge the students to utilize their learning throughout the year. If a group does not have enough parts in their system for each group member, they will each draw their own rendition of a part and present their design to the class for a class vote.

CAD skills to be assessed: transform mirror, transform rotate, edit text, transform copy, and selection by attributes,

Timeline: 5 blocks (86 minutes)

Key vocabulary: polar coordinates, vertex, fillet, chamfer, symmetry, rotational symmetry, line of symmetry

Resources: PowerPoint presentations, CAD tutorials, CAD workstation, network access

Common learning experiences:

- Vocabulary (for this unit and all units for the rest of the year)- Students will be assigned a content related vocabulary word. They will define the assigned word in a Google Doc. using Italic (screen share software). The teacher will share each student's screen with the rest of the class. Each word will then get added to a shared class Vocabulary Google Doc.
- Students paced step- by- step tutorials.
- Student demonstration of content knowledge.
- Worksheets that act as documentation of their learning.

Common assessments including the end of unit summative assessment:

- CAD drawings completed at the end of each significant task.
- Student's daily professionalism grade.
- End of unit summative assessment (final Electrathon system design in CAD software).

Rubrics

- CAD drawings to be assessed by teacher-generated rubric.
- Professionalism grade to be based on school wide rubric # 6 (Demonstrate personal responsibility and character)

Teacher notes:

- Seniors who have prior experience with the Electrathon car will be asked to research possible modifications to the existing Electrathon vehicle.

- Enrichment activities will be scaffolded and are designed to remove the supports of the step by step tutorials by asking students to create drawings based on the commands they have already learned. Students will be encouraged to use each other for support if they have difficulty with these enrichment activities. Students are asked to "ask three before you ask me" where they ask three of their classmates for help with a problem before they ask the teacher for help (90% of their problems can be solved this way and it frees the teacher to help students who are struggling.

- As outlined in significant task number one, additional drawings will be assigned to students who complete the step by step drawings quicker that the rest of the class. These drawings will reinforce the skills learned in the step by step tutorial and help students recall more quickly how to use a command.

Windsor Public Schools
Curriculum Map for the Secondary Level
CAD/CAM

Purpose of the course: (CBIA Education Foundation 2011 SURVEY OF CONNECTICUT'S MANUFACTURING WORKFORCE): Connecticut manufacturers expressed concerns about finding and attracting skilled labor. The top five most difficult positions to fill were CNC programmers (87%), tool and die makers (85%), CNC machinists (79%), CAD/CAM technicians (78%), and engineers (64%). The goal of this course will be to prepare our students to enter post-secondary education to go on to fulfill the void in Connecticut's manufacturing/engineering workforce.

Name of the unit: Machining Unit #3	**Length of the unit:** 12 Blocks (86 minutes)
Purpose of the unit: Students will demonstrate an understanding of machining as it applies to computer aided manufacturing.	

Common Core State Standards addressed in the unit:
Create equations that describe numbers or relationships HSA-CED.A.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.
Make geometric constructions HSG-CO.D.12 Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.).

Connecticut Technology Education Engineering Technology Standards addressed in this unit:
Identify and use tools, fasteners and equipment. ENG.03.02
Measure with precision measurement tools and instruments. ENG.03.03
Actively contribute to a team project. ENG.05.04:

Connecticut Technology Education Manufacturing Standards addressed in this unit:
Demonstrate the safe and accurate secondary process to create a finished product; forming; separating; combining; assembly; finishing. MAN.03.02
Apply a variety of manufacturing techniques and processes to create a usable product. MAN.03.03
Identify and describe the four major types of engineering materials: metallic, polymeric,

ceramic and fibrous. MAN.02.01
Identify and describe seven major types of material properties. MAN.02.02
Select materials based on properties required by the project. MAN.02.03

Big ideas:	**Essential questions:**
• Milling machines are used to fabricate objects from various materials. • Milling requires setup, accuracy, planning, and efficiency.	• How important is an optimal setup for machining? • How is raw material turned into a finished good?
Students will know:	**Students will be able to:**
• The differences between climb vs. conventional milling. • Cutter types. • How the Cartesian coordinate system is used in CAM.	• Demonstrate how to properly setup and use a vertical milling machine. • Choose the correct cutting tool for a particular function. • Create a basic NC program of their initials utilizing the fundamentals of the Cartesian coordinate system.

Significant task 1: Milling machine safety and overview

In a whole group, students will be introduced to the vertical milling machine through an interactive PowerPoint presentation. The PowerPoint will outline the machine's capabilities, components and safety features. While viewing the PowerPoint, students will complete a notes template. Following the presentation, students will view a teacher demonstration of proper equipment protocols. In small groups the students will demonstrate basic safe use of the machine in the lab, label major working parts, and complete an exit slip about the capabilities of the machine. Students, who demonstrate mastery of the milling machine, as evidenced by the completion of the worksheet, will take part in an extension activity. In this activity, students will work individually to create a laminated display sheet for each mill that defines applicable safety guidelines.

Timeline: 2 blocks (86 minutes)

Key Vocabulary: spindle, table, saddle, knee, base, column

Resources: Notes template that correlates to vertical milling machine PowerPoint presentation, milling machine parts identification and safety worksheet

Significant task 2: Materials and properties

Students will participate in an experiential learning exercise that will demonstrate how a milling machine alters the 4 types of engineering materials (metallic polymeric, ceramic and fibrous) with very different results with all else being constant. In small groups students will examine one material, and then complete a worksheet that asks them to note characteristics of the work, and the quality of cut. Students will hypothesize possible milling outcomes, based on their observations. Each small group will present their findings to the class, and, as a whole group, determine the properties of each different material.

Students working in their small groups will take each of their four types of engineering materials and describe each of the seven characteristics (tenacity, density, color, streak, luster, magnetism, & hardness). Students then will examine how these qualities affect the quality of the cut. This information will then be presented to the whole class. For an exit slip students will answer the question: why is this important for machining? The following class will begin with a short follow-up about how engineers choose a material for a particular job.

Timeline: 2 Blocks (86 minutes)

Key vocabulary: metallic, polymeric, ceramic, fibrous, tenacity, density, color, streak, luster, magnetism, hardness

Resources: Computers with internet access, rubric for assignment

Significant task 3: Setup and tools

This significant task will expose students to the two types of milling (conventional vs. climb). In a whole group setting, students will be introduced to milling, the advantages and disadvantages of each type, and the various categories of cutting tools. Students then will be divided into small groups. Each group will be assigned a particular milling operation. For their assigned operation, each group will:

- Complete an action list of how they will setup their mill
- Identify the process they will be using
- Choose the proper cutting tool
- Upon teacher approval, complete set up in the lab
- Mill with their proposed setup

Upon completion of the task, each student will write a reflection that asks them to examine:

- the chip thickness

- surface finish of the part
- tool wear
- chatter in part
- chip clogging present
- load on the machine

Timeline: 3 Blocks (86 minutes)

Key vocabulary: conventional, climb, end mill, carbide, high speed steel, feed, speed, chip load, surface finish

Resources: Milling machine with appropriate tools, clamping devices, material to mill

Significant task 4: Coordinate system

In this task students will gain experience in how to use the Cartesian coordinate system as it pertains to Computer Numerical Control (CNC) Milling. In a whole group, students will be introduced to the CNC coordinate system through an interactive PowerPoint presentation that outlines how the system is set up and its major components. Individual students will complete a PowerPoint study guide during the presentation.

Individually, students will demonstrate their understanding of the coordinate system by plotting their initials on graph paper, and then determining the corresponding sequence of coordinates. Students will check the accuracy of their work by having a peer recreate their initials, utilizing their coordinate sequence sheet.

Students who demonstrate mastery of this activity will be given a more complex shape to program. Upon completion of their program, they will input their program into computer simulation software and troubleshoot any issues that arise.

Students will discover the need for a z axis through a small group exercise. Each small group will be given the same initials at different depths on different materials and given the task of writing a sequence of coordinates that describes the initials. The task for each group will be as follows:

Group 1: Initials written on paper
Group 2: Initials engraved on piece of metal
Group 3: Initials ¼" deep into material
Group 4: Initials ½" deep into a material

Upon completion, teams share their coordinate sequence. Through guiding questions, students will discover the need for the z axis to plot depth. Following class discussion, students will return to work in their small groups to complete their original task, utilizing the z axis.

Students will demonstrate their understanding of the three axis coordinate system by

completing an individual task. Each student will be assigned a depth of cut and then work to revise their initials' coordinate sequence to include the z axis.

In a whole group, students will observe a teacher demonstration of CNC simulation software. Upon completion of the revised initials activity, they will be responsible for entering their program into the software. They will be assessed on the accuracy of their program and if the program accomplishes their intended outcome.

Timeline: 5 blocks (86 minutes)

Key vocabulary: datum, absolute, incremental, X,Y,Z Axis, CNC, Cartesian coordinate system

Resources: PowerPoint, initials activity handout, CNC simulation software, CNC Machines

Common learning experiences:

- Small group, student-led learning experiences
- Discussion-based introductory lessons
- Student demonstration of content knowledge
- Worksheets that act as documentation of their learning
- Reflection on classroom experience
- Do now's
- Exit slips

Common assessments including the end of unit summative assessment:

- End of unit assessment: Demonstration of initials activity program on CNC machine. Encompasses all significant tasks within unit: safety, understanding of machine operation, proper setup, choice of material and tool, understanding of basic programming
- Group work
- Students' daily professionalism
- Recording of design ideas in engineering notebook

Rubrics:

- End of unit assessment to be scored by teacher-generated rubric.
- Collaboration in groups scored using school-wide rubric #2 (Works collaboratively)
- Students' daily professionalism graded using the school wide rubric # 6 (Demonstrates personal responsibility)
- Students' design ideas recorded in their engineering notebooks scored using the school wide rubric #5 (Problem solving)

Teacher notes:

- Significant Task 1: The guideline sheet is common in industry, every machine will have a guidelines sheet that accompanies it.

Windsor Public Schools
Curriculum Map for the Secondary Level
CAD/CAM

Purpose of the course: (CBIA Education Foundation 2011 SURVEY OF CONNECTICUT'S MANUFACTURING WORKFORCE): Connecticut manufacturers expressed concerns about finding and attracting skilled labor. The top five most difficult positions to fill were CNC programmers (87%), tool and die makers (85%), CNC machinists (79%), CAD/CAM technicians (78%), and engineers (64%). The goal of this course will be to prepare our students to enter post-secondary education to go on to fill the void in Connecticut's manufacturing/engineering workforce.

Name of the unit: Introduction to CAM Unit #4	**Length of the unit:** 12 Blocks (86 minutes)
Purpose of the unit: Students will demonstrate an understanding of how to create a tool path that can be performed on a CNC machine.	

Common Core State Standards addressed in the unit:

Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence, clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Connecticut Technology Education Engineering Standards addressed in this unit:

Ensure quality control using the major components of manufacturing processes including measurement systems, tools and instruments to produce a product ENG.03

Connecticut Technology Education Manufacturing Standards addressed in this unit:

Describe the relationship between materials and manufacturing MAN.02.04
Apply a variety of manufacturing techniques and processes to create a usable product MAN.03.03

Big ideas:	**Essential questions:**
• Computer Aided Manufacturing (CAM) takes a drawing on a computer and translates the information to a set of lines of code. • CNC Milling Machines use code to dictate movements and create a part from raw material.	• Are all tool paths equal? • What is the best structure for a program?
Students will know:	**Students will be able to:**
• The differences between G and M code. • How a CNC machine reads and acts on code.	• Create a tool path. • Create basic CNC programs.

Significant task 1: Introduction to CNC

In a whole group, students will be introduced to CNC programming, by learning about G and M codes, programming structure and how to interpret CNC programs. Activities in this task will be scaffolded: as a whole group students will receive tiered level instruction, starting with the most basic and work up to creating their own program. Once each student has learned the basic lines of code present in a program, they will work individually to complete the activity "You're the CNC Machine." In this activity students are asked to decipher a simple program, in which they draw the program as it would be read by the machine. Simply, each line of code is a direction, they need to be able to understand each "direction" and draw it as such.

In the second tier of instruction, students will work individually to "fill in" the missing information in a CNC program.

Upon completion of the first two tiers, the students will write their own basic program with linear commands, using the approved class template for programs. Their written program will be verified on the computers in the lab using CNC simulation software that will alert them of any errors. If issues arise, students will be expected to troubleshoot and correct errors.

The culminating activity for this task will be to create a program that requires using a variety of codes. Upon completion students will input their program into the computer to verify if the program is correct and running as efficiently as possible. This activity will be differentiated through the complexity of programs each student needs to complete.

Advanced students in this section will work with "canned programs" and the intuitive programming that is incorporated into the CNC program. These programs can produce complex programs with information that is inputted by the user. These allow the user to complete a complex task without complex programming. However, in order to understand and use this programming, an in depth knowledge of program structure and codes is necessary.

Timeline: 6 blocks (86 minutes)

Key vocabulary: program, g-code, m-code, modal, interpolation, coolant, safety block

Resources: Notes template that correlates to PowerPoint presentation, CNC simulation software

Significant task 2: Tool path Creation

As a class, students will view a presentation that introduces the software user interface and how to save their Key Creator files into .STEP format so they are accessible with MasterCAM. The following days will involve students accessing video tutorials (Created by D. Ricci and located on his YouTube channel) to guide themselves through the step by step process for selecting the information necessary to create a tool path.

Students who move through the tutorials more quickly will be assigned additional tool paths to create using more complex drawings that require more operations. To be sure that students are not missing any steps, each tool path will need to go through several quality control steps:

1. Students will use the MasterCAM posters to verify their machine settings for each tool path type.
2. Students will use feeds and speeds charts to double check the default feeds produced by

MasterCAM.
3. Students will verify their tool path with secondary tool path verification software.
4. Students will individually go through the tool path settings verification checklist with the teacher.

This unit culminates with an end of unit test. Students will be assessed on their ability to accurately create the assigned tool path to produce a part. Students also will be assessed on their ability to follow and correctly identify the quality control steps outlined above.

Timeline: 6 blocks (86 minutes)

Key vocabulary: contour, pocket, engraving, stock, material, cutter compensation, tip compensation, ramp, breakthrough, tangent, tabs, clearance plane, feed plane, top of stock, absolute, incremental, coolant.

Resources: PowerPoint presentations, vocabulary Google Doc, CAD tutorials, CAD workstation, network to save and access work.

Common learning experiences:

- Vocabulary development using Google Doc.
- Small group, student centered learning experiences.
- Discussion-based introductory lessons.
- Student demonstration of content knowledge.
- Worksheets that act as documentation of their learning.
- Reflection on experience.

Common assessments including the end of unit summative assessment:

- Creation of a tool path program for CNC machine. Encompasses all significant tasks within unit: understanding of programs and code, how to create a tool path that can be interpreted by the CNC machine
- Student engineering notebook.
- Daily professionalism grade.

Rubrics:

- Teacher created CNC program rubric.
- Students' design ideas recorded in their engineering notebooks scored using the School wide rubric for #5 (Problem solving)
- Students' daily professionalism graded using the School wide rubric # 6 (Demonstrate personal responsibility and character)

Teacher notes:

- Differentiation for this unit will take place by adding additional operations to a tool path. A tool path becomes more difficult to generate when more operations need to take place on the part being produced.
- Each written activity and program will be submitted as a formative assessment, and individualized attention will be given to students to correct any misinformation.

CAD/CAM

Purpose of the course: (CBIA Education Foundation 2011 SURVEY OF CONNECTICUT'S MANUFACTURING WORKFORCE): Connecticut manufacturers expressed concerns about finding and attracting skilled labor. The top five most difficult positions to fill were CNC programmers (87%), tool and die makers (85%), CNC machinists (79%), CAD/CAM technicians (78%), and engineers (64%). The goal of this course will be to prepare our students to enter post-secondary education to go on to fill the void in Connecticut's manufacturing/engineering workforce.

Name of the unit: Contours Unit #5	**Length of the unit:** 10 Blocks (86 minutes)
Purpose of the unit: Students will demonstrate an understanding of how to create a program, tool path, and machine a part so that it can be performed on a CNC machine.	

Common Core State Standards addressed in the unit:
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence, clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Connecticut Technology Education CAD Standards addressed in this unit:
Develop drawings using notes and specifications CADD.03.07
Explain the Cartesian Coordinate System CADD.05.08
Create a 2-D drawing from a 3-D model CADD.06.05Revise a design and update finished drawings appropriately CADD.02.10

Connecticut Technology Education Engineering Standards addressed in this unit:
Ensure quality control using the major components of manufacturing processes including measurement systems, tools and instruments to produce a product ENG.03

Connecticut Technology Education Manufacturing Standards addressed in this unit:
Describe the relationship between materials and manufacturing MAN.02.04
Apply a variety of manufacturing techniques and processes to create a usable product MAN.03.03

Big ideas:	**Essential questions:**
• Computer Aided Manufacturing (CAM) is the industry standard in manufacturing. • CAM is a seamless process that requires collaboration from the designer to the machinist.	• How do you verify that a program will work correctly, safely and efficiently? • What is the most efficient way to manufacture a part?
Students will know:	**Students will be able to:**
• The attributes of CAD software. • The capabilities of different software products (KeyCreator, MasterCAM, etc.)	• Create a contour drawing using CAD software. • Create a contour tool path. • Machine contours in complex parts, utilizing various CNC equipment.

Significant task 1: Create a drawing using CAD software

Students will be working individually to create their own wall hung name tag design. They will be relying on the knowledge they gained from Unit 2 and 4, which introduced the students to the fundamentals of CAD and MasterCAM.

Students have been working extensively with the CAD software, and this unit will give students the opportunity to showcase what they have learned by creating a drawing of their personalized name tag. They will then be working to create the tool path and finally machining their name tag. Having the activity personalized will help to boost interest, enthusiasm and engagement throughout the unit.
The class will be given a template from which to create a drawing. This template sets the

parameters for the size of the name tag, and defines the information that must be included in their design. Each student will then begin work on their name tag using the template found on the shared drive. The name tag is designed to be hung on the wall and will have a hole that is drilled in it for mounting the sign. Students will be exposed to different types of drilling operations, reference charts throughout the room and drill types through a short class discussion and demonstration.

Students will be assessed using a teacher created rubric that looks for proper information, neat construction, and utilization of available space.

Timeline: 2 blocks (86 minutes)

Key Vocabulary: template, parameters, design principles, utilization, engrave, z depth, center drill, clearance hole, tap hole

Resources: CAD drawing lab, network drive

Significant task 2: Tool path creation

This task will begin with a review discussion covering tool path creation. There are approximately 15 different steps in tool path creation. In a "round robin" format, each student will take a step and highlight the necessary information and process for completing it.

As a whole group, students will view a brief presentation on how to complete the tool path for a contour and how this process differs from previous tool paths created.

Students will work individually to create a tool path from the CAD designs they created. Students who move through the work more quickly will be assigned additional tool paths to create using more complex drawings that require more operations.

Students will be exposed to the various drilling cycle tool paths through a teacher led demonstration on the computer projector. They will explore and utilize the best cycle for their operation.

To ensure that students are not missing any steps, each tool path will need to go through four quality control steps:
1. Students will use the MasterCAM posters to verify their machine settings for each tool path type.
2. Students will use feeds and speeds charts to double check the default feeds produced by MasterCAM.
3. Students will verify their tool path with secondary tool path verification software.
4. Students will individually go through the tool path settings verification checklist with the teacher.

The tool path will serve as their end of task assessment. Students will be assessed on their ability to accurately create the assigned tool path to produce a part, and that they followed the quality control process outlined above.

Timeline: 3 Blocks (86 minutes)

Key vocabulary: contour, compensation, r plane, z plane, ramp, tabs, lead in, lead out, peck drill, drill cycle

Resources: PowerPoint presentations, vocabulary Google Doc, CAD tutorials, CAD workstation, network to save and access work

Significant task 3: Machine setup, machining

In CNC machining, for each product produced there are a variety of ways to secure the object while it is being milled, and a wide library of tools from which to choose. Each of the projects in this course will expose students to a particular system for work holding that is best suited to the current project. Students will also learn about the applicable cutting tool appropriate for that product. In this unit students will be working to create their own individualized name tag. Drilling will also be discussed as a whole class. Students will learn through discussion with a teacher created notes template about the various types of drills, drill sizes, nomenclature and proper usage.

To introduce his task, students will learn how a work piece in held in a fixture or a vice. A whole group discussion will detail how to properly use a fixture to hold a part to be machined, and how to properly setup the CNC machine to mill a product. Through a short teacher-led PowerPoint, students will see and discuss the applicable work holding, tool holding, tool offsets and work offsets. For each topic the teacher will demonstrate proper technique and, in small groups, students will have the opportunity to practice. The students also must verify that their tool path is ready for the CNC machine by using the simulation software. Once the students have demonstrated each of the necessary techniques, they will go on to mill the name tag that they have worked to design. The teacher will demonstrate how this is done to the first student. The first student will go on to mill their object, and then demonstrate to the second student. This process will continue for each student in the class, while the teacher observes each student in action, and provides guidance when necessary. During this process only 2 students will be working on the machine at one time. Once a student has completed the machining of their object and demonstrated how to run the machine to the next student, they will return to work collaboratively with peers who have not completed their project. This will allow all students to be actively engaged; either in machining or in helping peers fabricate their

name tag.

Timeline: 5 Blocks (86 minutes)

Key vocabulary: tool holding, vise, work holding, tool offset, work offset, fixture, nose angle, twist drill, drill size

Resources: PowerPoint presentation, CNC simulation software, CNC Machine

Common learning experiences:

- Vocabulary development using Google Doc.
- Small group, student centered learning experiences
- Discussion based introductory lessons
- Student demonstration of content knowledge
- Worksheets that act as documentation of their learning
- Reflection on an experience
- Do Now
- Exit Slip

Common assessments including the end of unit summative assessment:

- Creation of a tool path program for CNC machine. Encompasses all significant tasks within unit: understanding of programs and code, how to create tool path that can be interpreted by the CNC machine
- Fabrication of the name tag. Students will be assessed on their use of the fixture and the accuracy of milling, within tolerance and safety
- Student engineering notebook
- Daily professionalism grade

Rubrics:

- Teacher created tool path rubric
- Teacher created rubric for manufactured object. Rubric will assess correct use of the fixture, accuracy of milling, tolerances achieved and safe use of the machine
- Students' design ideas recorded in their engineering notebooks scored using the School wide rubric for #5 (Problem solving)
- Students' daily professionalism graded using the School wide rubric # 6 (Demonstrate personal responsibility and character)

Teacher notes:

- Units 6 and 7 will follow the same format as unit 5. However the material, skills acquired and tasks will be different. The three step process that has been laid out in the three significant tasks of this unit is the same process that industry uses to produce a final product. This makes it important for our students to be able to demonstrate these skills for a variety of tasks.
- Students again will be using the "ask three before you ask me" where they ask three of their classmates for help with a problem before they ask me for help (90% of their problems can be solved this way and it frees the teacher to help students who are struggling.)

CAD/CAM

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Name of the unit: Pockets Unit #6	**Length of the unit:** 10 Blocks (86 minutes)
Purpose of the unit: Students will demonstrate an understanding of how to create a program, tool path, and machine a part so that it can be performed on a CNC machine.	

Common Core State Standards addressed in the unit:
Text Types and Purposes 10.W.2: Writing informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence, clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning

Connecticut Technology Education CAD Standards addressed in this unit:
Develop drawings using notes and specifications CADD.03.07
Explain the Cartesian Coordinate System CADD.05.08
Create a 2-D drawing from a 3-D model CADD.06.05Revise a design and update finished drawings appropriately CADD.02.10

Connecticut Technology Education Engineering Technology Standards addressed in this unit:
Ensure quality control using the major components of manufacturing processes including measurement systems, tools and instruments to produce a product ENG.03

Connecticut Technology Education Manufacturing Standards addressed in this unit:
Describe the relationship between materials and manufacturing MAN.02.04

Big ideas:	**Essential questions:**
• Computer Aided Manufacturing (CAM) is how products are currently manufactured. • CAM is a seamless process that requires collaboration from the designer to the machinist.	• What is the future of manufacturing technology? • Why is collaboration important in product fabriacation?
Students will know:	**Students will be able to:**
• The attributes of pockets. • Characteristics of pocket tool paths. • Challenges associated with pocket fabrication.	• Demonstrate how to create a pocket drawing using CAD software. • Demonstrate how to properly create a pocket tool path. • Machine pockets in complex parts utilizing various CNC equipment.

Significant task 1: Create a drawing using CAD software

Students will work individually to create a CAD drawing that incorporates a pocket. (A pocket is a term that is used in CAD to describe an interior recess that is cut into the surface of a work piece.)
This task will be introduced through a class discussion, defining the characteristics of pockets. Students then will view and follow step-by-step video tutorial on YouTube, "Pocketing with MasterCAM by Dustin Ricci." Additional videos on pocketing also will be made available to students, to be viewed as homework, prior to working on their CAD drawing. Using the tutorials, students will individually produce a CAD drawing, incorporating a pocket.
Timeline: 2 blocks (86 minutes)

Key Vocabulary: pocket, design constraints, accuracy, machinability

Resources: CAD drawing lab, network drive

Significant task 2: Tool path creation

Students will take a short pre-assessment that examine what they know about tool path creation. The results will help to guide instruction and determine the level of understanding of each student. Based on student data, the teacher will either introduce pockets to the students or review how to create a tool path.

Students will participate in teacher- created video tutorials on the topics of pocket tool path creation in MasterCAM and drilling tool path creation in MasterCAM.

The students will go on to work individually to create a tool path from their CAD designs. Students who move through the work more quickly will be assigned additional tool paths to create using more complex drawings that require more operations.

The tool path will serve as the end of task assessment. Students will be assessed on their ability to accurately create the assigned tool path to produce a part and the degree to which they they followed the quality control process outlined above.

Timeline: 3 Blocks (86 minutes)

Key vocabulary: contour, compensation, r plane, z plane, ramp, tabs, lead in, lead out

Resources: PowerPoint presentations, vocabulary Google Doc, CAD tutorials, CAD workstation, network to save and access work

Significant task 3: Machine setup, machining

Students will begin this task by examining an example of direct clamping and noting how it is used for a work piece that will be machined with a pocket. A short discussion will follow about the advantages and disadvantages of direct clamping. The teacher will demonstrate how to direct clamp an object to be machined, and the students will then practice the technique in small groups. Once each student has completed the activity successfully, they will move on to the machining of the pocket in their work piece, following the same procedure as defined in Unit 5.

Timeline: 5 Blocks (86 minutes)

Key vocabulary: tool holding, work holding, direct clamping, tool offset, work offset, fixture

Resources: PowerPoint presentation, CNC simulation software, CNC Machine

Common learning experiences:

- Small group, student-centered learning experiences
- Discussion-based introductory lessons
- Student demonstration of content knowledge
- Worksheets that act as documentation of their learning
- Reflection on an experience
- Do Now
- Exit Slip

Common assessments including the end of unit summative assessment:

- Creation of a tool path program for CNC machine. This project will encompass all significant tasks within the unit; including the understanding of programs and code and how to create a tool path that can be interpreted by the CNC machine
- Student engineering notebook.
- Daily professionalism grade.

Rubrics:

- Teacher created tool path rubric.
- Students design ideas recorded in their engineering notebooks scored using the school wide rubric for #5 (Problem solving)
- Student's daily professionalism graded using the school wide rubric # 6 (Demonstrate personal responsibility and character)

Teacher notes:

- This unit removes another layer of support by asking the student to be more responsible for their own learning. They will no longer have a template to work from as they have in previous assignments. They will work to create their drawing from scratch. Students will be given design constraints and follow the steps of the engineering design process for creating their drawing.
- Videos will also be available for students to watch before the actual lesson. They will be assigned a homework assignment that asks them to watch a YouTube video pertaining to pocketing and post a comment to the class website.
- Refer to Unit #5 for the process of completing the design, tool path creation and machining process. The steps will be the same, while the end result and learning will be new and different.

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Name of the unit: Contours and Pockets Unit #7	**Length of the unit:** 16 Blocks (86 minutes)
Purpose of the unit: Students will demonstrate an understanding of how to create a program, tool path, and machine a part so that it can be performed on a CNC machine.	

Common Core State Standards addressed in the unit:
Text Types and Purposes 10.W.2: Writing informative/explanatory text to examine and convey complex ideas
Research to Build and Present Knowledge 10.W.7: Conduct short as well as more sustained research projects to answer questions (including self-generated questions) or solve a problem, narrow or broaden the inquiry when appropriate, demonstrating understanding of the subject under investigation
Comprehension and Collaboration 10.SL.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on topics, texts and issues
Presentation of Knowledge and Ideas 10.SL.4: Present information findings and supporting evidence, clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance and style are appropriate to purpose, audience and tasks
Conventions of Standard English 10.L.1: Demonstrate command of the conventions of standard English and usage when writing or speaking
Vocabulary Acquisition and Use 10.L.4: Determine or clarify the meaning of unknown and multiple meaning words and phrases based on reading and context

Connecticut Technology Education CAD Standards addressed in this unit:
Develop drawings using notes and specifications CADD.03.07
Explain the Cartesian Coordinate System CADD.05.08

Create a 2-D drawing from a 3-D model CADD.06.05Revise a design and update finished drawings appropriately CADD.02.10

Connecticut Technology Education Engineering Standards addressed in this unit:
Ensure quality control using the major components of manufacturing processes including measurement systems, tools and instruments to produce a product ENG.03

Connecticut Technology Education Manufacturing Standards addressed in this unit:
Describe the relationship between materials and manufacturing MAN.02.04
Apply a variety of manufacturing techniques and processes to create a usable product MAN.03.03

Big ideas:	**Essential questions:**
• The engineering design process is critical to create a plan to manufacture a product. • Manufacturing a product from an idea requires collaboration at many levels and with colleagues.	• How do you take an idea and, through the design process, fabricate a finished product to fill a need? • How do you effectively collaborate in a small group setting? • How do you work together as a large team to achieve a common goal?
Students will know: • The steps of the engineering process. • The benefits of collaboration.	**Students will be able to:** • Demonstrate the engineering design process. • Demonstrate how an idea becomes an actual product. • Machine complex parts utilizing various CNC equipment.

Significant task 1: Revise CAD drawing and new too lpath creation

In this unit, students will create the parts that they researched for the Electrathon vehicle. Students worked in Unit 2 to design the part in CAD. Over the course of the year, students have designed and fabricated several objects, and during this time gained new knowledge of techniques, successes and failures. Students will individually apply this knowledge to their previously designed part to revise and improve their previous design. This revision also is part

of the engineering design cycle and will show students that a design can always be improved. Once they have revised their design they will also need to create a new/revised tool path.

The tool path will serve as their end of task assessment. Students will be assessed on their ability to accurately create the assigned tool path to produce a part, and their adherence to the quality control process.

Timeline: 3 blocks (86 minutes)

Key Vocabulary: brackets, fixtures, sprocket, Ackerman angle, aerodynamics, contour, compensation, r plane, z plane, ramp, tabs, lead in, lead out

Resources: CAD tutorials, CAD workstation, network to save and access work.

Significant task 2: Machine setup, machining

Once each student has completed their tool path successfully, they will move on to the machining of their pocket in the work piece and will follow the same procedure define in Unit #5.

Timeline: 6 Blocks (86 minutes)

Key vocabulary: tool holding, work holding, tool offset, work offset, fixture

Resources: PowerPoint presentation, CNC simulation software, CNC Machine

Significant task 3: Fundraising

As a class, students will work to create a mass production project that will be used as an Electrathon fundraiser. Students will work collaboratively as a class to design an object that can be sold to benefit and sustain the Electrathon program.

Students will begin this task by individually researching and brainstorming at least three fundraising product ideas that we could design and fabricate. They will then bring their ideas to a whole class engineering discussion. The class will utilize the engineering design process to identify the problem, brainstorm possible solutions, identify criteria/constraints, explore possibilities, and select an approach. They will develop a design proposal and make a prototype once a class consensus has been reached.

All students will participate in generating the ideas for a fundraising product. The actual

design of the object will be assigned to students who have successfully machined their pocket in significant task #2.

Timeline: 5 Blocks (86 minutes)

Key vocabulary: collaboration, interpersonal skills, intrapersonal skills, manufacturing

Resources: PowerPoint presentation, CNC simulation software, CNC Machine

Significant task 4: Hands-on final exam

Students will take a three part final exam, in which they will be assessed on a drawing, tool path and their interpretation of the tool path. This three step process will begin 2 class periods before the exam as well as during the exam time period to allow ample time to finish the exam. Students will be given a object to design, make a tool path and then, using their tool path, explain the CNC code in a narrative.

Timeline: 2 Blocks (86 minutes)

Key vocabulary: contour, CNC code, narrative

Resources: CAD workstation

Common learning experiences:

- Small group, student-centered learning experiences
- Discussion-based introductory lessons
- Student demonstration of content knowledge
- Worksheets that act as documentation of their learning
- Reflection on an experience
- Do Now
- CAD drawing, tool path development and CNC code narrative

Common assessments including the end of unit summative assessment:

- Creation of a tool path program for CNC machine. This project will encompass all significant tasks within the unit; including the understanding of programs and code and how to create a tool path that can be interpreted by the CNC machine.
- Student engineering notebook.

- Daily professionalism grade.

Rubrics:

- Teacher created tool path rubric.
- Students design ideas recorded in their engineering notebooks scored using the school wide rubric for #5 (Problem solving).
- Student's daily professionalism graded using the school wide rubric # 6 (Demonstrate personal responsibility and character).
- Teacher created rubric to assess final exam project.

Teacher notes:

- Refer to Unit #5 for the process of completing the design, tool path creation and machining process. The steps will be the same, while the end result and learning will be new and different.
- Fundraising object will be fabricated and marketed by the afterschool Electrathon Club.

Windsor Public Schools
English Elective: Young Adult Literature

Purpose of the Course:

This multi-cultural, multi-genre course incorporates award-winning young adult literature into the framework of an appealing, but challenging English course. Course work will explore issues of stereotyping, "growing up," bias, transition, adult expectations rites of passage, and social justice with precise attention to literary technique. Students are expected to read independently and use the texts to identify themes that are relevant in "their world." Students will use the literature to answer, "What issues presented in these texts are important to me?" and "How does this book qualify as a literary text?" Young adult literature is becoming increasingly popular in pop culture and the adult world. Through evaluation of its features and quality, students will begin to understand its profound impact on the entire literary canon.

Name of the Unit:	**Length of the unit**:
UNIT 1- Society's Perception of Young Adults	Approximately 15 Blocks

Purpose of the Unit:

In this unit, the students will use multiple texts to build an understanding of how society perceives young adults and how it stereotypes them.

Common Core State Standards Addressed in the unit:

RL.11-12.6: Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).

RI.11-12.7: Integrate and evaluate multiple sources of information presented in different media formats, as well as in words, in order to address a question or solve a problem.

W.11-12.9a-9b: Draw evidence from literary or informational texts to support analysis, reflection and research, including application of knowledge of grades 11-12 reading standards for literature and literary nonfiction.

SL.11-12.5: Make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence to add interest.

L.11-12.4c: Consult general and specialized reference materials to find the pronunciation of a word or determine or clarify its precise meaning.

L.11-12.4d: Verify the preliminary determination of the meaning of a word or phrase.

Big Ideas:	**Essential Questions**:
• The media commonly characterizes adolescents as the “mook” and “midriff.” • Young adults make choices that shape others’ perceptions of them. • Young adult authors create a “freeze frame” of the young adult experience to remind adults of its uniqueness.	• How do the media perpetuate stereotypes about adolescents? • How do young adults have the power to shape others’ (media, parents, siblings, peers) perceptions of them? • To what extent do authors of young adult literature depict a realistic image of the young adult experience?
Students will know: • How to identify the many stereotypes of adolescents through literature and other media; • The significance of their own actions and the impact those actions have on others’ perception of adolescents; • How realistic elements of the young adult experience can result in stereotypes.	**Students will be able to:** 1. Define these terms: • perpetuate • perception • stereotypes • media • adolescence • “mook” • “midriff” • satire • irony • debunk • “freeze frame” • support • refute 2. Analyze a text for the author’s implied meaning. 3. Draw evidence from multiple sources to support an analysis. 4. Use digital media when making presentations. 5. Determine and check the accuracy of the preliminary understanding of word meanings.

Significant task 1: *Analysis of Media's Stereotypes*

Students will study various mediums to eventually answer the first two essential questions.

All students must engage in these:

- Read chapter/ partial chapter from *Dynamics of Mass Communications* text ("Social Effects of Mass Communication").
- Watch Frontline's documentary- *Merchants of Cool*.

For enrichment, or to enhance the complexity of the sources, the teacher should use any of the following items to facilitate this task:

- Music selections (various)
- Movie clips: *Mean Girls*, *Breakfast Club*, *10 Things I Hate About You*, *The Outsiders*, Disney
- TV clips: "Teen Mom", etc.

To complete this task to mastery, all students must demonstrate an understanding of the text, documentary, and the essential questions through writing *and* discussing. Students should be aware of the satirical and ironic nature of many of the media's portrayals of teenagers. Students should demonstrate an understanding of the essential questions (and the additional elements of satire and irony) through Various Journals, Reflection Journals, and/or engaging in Various Discussions of the essential questions.

Timeline: 3-4 Blocks

Key vocabulary:

- perpetuate
- perception
- stereotypes
- media
- adolescence
- "mook"
- "midriff"
- satire (pre-teach)
- irony (pre-teach)

Resources:

- Frontline's Merchants of Cool Documentary ("Mook" and "Midriff")
- *Dynamics of Mass Communication* textbook

Significant task 2: *Critical Reading of Text(s) to Define Key Terms*

Students will read the young adult texts that are assigned by the teacher (see the choices below). While reading, students should complete a multi-entry Reflection Journal that requires students to (1) identify realistic elements of the young adult experience that occur in the text(s) and (2) reflect on how/why those elements can result in stereotypes. A double-entry style is recommended.

Using their knowledge from Significant Task 1 and the critical reading of this task, students will then

create a Mini-Dictionary or a Flip Book, in which they define the key terms of the unit and provide an appropriate example of each one. (They must create their own definitions and not rely on a dictionary.)

As a final step, students should check their definitions for accuracy. This can be accomplished using a print text, or an online dictionary. In a final Reflection Journal, students must justify why their incorrect definitions (if they have any) are valid. For those students with totally accurate definitions, they must choose *three* key words for further exploration. They should investigate the word origin of each- again, using a print or electronic source- and explain how this origin contributes to the current understanding of the word.

Timeline: 3-4 Blocks

Key vocabulary:

- perpetuate
- perception
- stereotypes
- media
- adolescence
- "mook"
- "midriff"

Possible Resources:

- *The Book Thief* (Zusak)
- *Lone Ranger and Tonto Fistfight in Heaven* (Alexie)
- *Looking for Alaska* (Green)
- *Hole in My Life* (Gantos)
- *Freaky Green Eyes* (Oates)
- *A Northern Light* (Donnelly)
- *Catalyst* (Halse Anderson)
- *Perks of Being a Wallflower* (Chbosky)
- *A Separate Peace* (Knowles)
- *Whale Talk* (Crutcher)
- *Tales of a Madman Underground* (Barnes)

Significant task 3: *Big Idea Mini-Essay*

The requirement for "MCC Certificate Students" includes: 5-6 pages and multiple drafts of this essay. For all others, the teacher can dictate the length and number of drafts. For all students, this task should be preceded by Book Talks and Independent Reading Assessments; this way, the teacher can be aware of each student's progress with reading the texts independently.

In this Big Idea Essay, students use the selection of readings from the unit to support a thesis, as related to analyzing a big idea. The goal is for students to create and prove an argument, not merely summarize the many different ideas. Students should work to synthesize ideas from all sources.

Students should choose to support or refute ONE of the following big ideas from the unit:

- The media commonly characterizes adolescents as the "mook" and "midriff."

- Young adults make choices that shape others' perceptions of them.
- Young adult authors create a "freeze frame" of the young adult experience to remind adults of its uniqueness.

Teachers can use a writing workshop to guide students through the basic organization of the essay. It is suggested that the teacher group students together by idea choice and allow them to brainstorm and plan together. The essay will be graded using the 5-Level Rubric and/or the MCC-Aligned Writing Rubric.

Timeline: at the teacher's discretion (the assignment can be completed at home, partially in class, or completely in class)

Key vocabulary:

- perpetuate
- perception
- stereotypes
- media
- adolescence
- "mook"
- "midriff"
- "freeze frame"
- debunk
- support
- refute

Possible Resources:

- *The Book Thief* (Zusak)
- *Lone Ranger and Tonto Fistfight in Heaven* (Alexie)
- *Looking for Alaska* (Green)
- *Hole in My Life* (Gantos)
- *Freaky Green Eyes* (Oates)
- *A Northern Light* (Donnelly)
- *Catalyst* (Halse Anderson)
- *Perks of Being a Wallflower* (Chbosky)
- *A Separate Peace* (Knowles)
- *Whale Talk* (Crutcher)
- *Tales of a Madman Underground* (Barnes)

Common learning experiences:

- Group discussions of the texts, big ideas, and essential questions
- Writing workshops
- Presentations of final products (writing and/or digital)
- Book talks
- Independent reading exploration in the media center
- Visitations from MCC professors
- Use of the Warrior Writing Center

- Use of Independent Reading Assessments

Common assessments including the end of unit summative assessment:

Unit Pre-Assessment
Students will complete an Anticipation Guide that will assess their understanding of the unit's key terms and big ideas.

Unit Post-Assessment
Create a Digital Text- mini-Documentary, blog, digital story, narrative/ story, or webpage- that "debunks" the stereotypes of the "mook" and the "midriff." This text is the student's opportunity to become an author or voice of the realistic "freeze frame" of adolescents. This assessment must have an appropriate writing component, as determined by the teacher. This can include: script, narrative, informational text, interviews, etc. The students will also be graded on their presentation skills, as they share their digital text with the class in a Digital Media Presentation. The Presentation Rubric or the 21st Century Rubrics can be used.

Teacher notes:

Possible Core Literary Resources:
- *Dynamics of Mass Communications*
- *The Book Thief* (Zusak)
- *Lone Ranger and Tonto Fistfight in Heaven* (Alexie)
- *Looking for Alaska* (Green)
- *Hole in My Life* (Gantos)
- *Freaky Green Eyes* (Oates)
- *A Northern Light* (Donnelly)
- *Catalyst* (Halse Anderson)
- *Perks of Being a Wallflower* (Chbosky)
- *A Separate Peace* (Knowles)
- *Whale Talk* (Crutcher)
- *Tales of a Madman Underground* (Barnes)

Other Media:
- Frontline's "Merchants of Cool" Documentary
- Video clips: *The Breakfast Club*, *Mean Girls*, *The Outsiders*, *10 Things I Hate About You*

Rubrics:
- 21st Century Rubrics
- Presentation Rubric
- 5-Level Rubric
- MCC-Aligned Writing Rubric

Key Vocabulary:
- perpetuate

- perception
- stereotypes
- media
- adolescence
- “mook”
- “midriff”
- debunk
- “freeze frame”
- Support
- Refute

Windsor Public Schools
English Elective: Young Adult Literature

Purpose of the Course:

This multi-cultural, multi-genre course incorporates award-winning young adult literature into the framework of an appealing, but challenging English course. Course work will explore issues of stereotyping, "growing up," bias, transition, adult expectations rites of passage, and social justice with precise attention to literary technique. Students are expected to read independently and use the texts to identify themes that are relevant in "their world." Students will use the literature to answer, "What issues presented in these texts are important to me?" and "How does this book qualify as a literary text?" Young adult literature is becoming increasingly popular in pop culture and the adult world. Through evaluation of its features and quality, students will begin to understand its profound impact on the entire literary canon.

Name of the Unit:	**Length of the unit:**
Unit 2: The Transition to Adulthood	Approximately 15 Blocks

Purpose of the Unit:

This unit will help students to understand the concept of "transition" and how young adults must make a difficult shift to adulthood.

Common Core State Standards Addressed in the unit:

W.11-12.3a: Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple points of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.

W.11.-12.3b: Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines to develop experiences, events, and/or characters.

W.11-12.3c: Write narratives to…use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome.

W.11-12.5: Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose or audience.

Big Ideas:	**Essential Questions**:
• Adolescence is a personal journey, in which individuals choose to "grow up" differently. • In "growing up," individuals demonstrate varying levels of responsibility, maturity, and rebellion. • Institutions (academic, family, legal) often hold adolescents accountable for full adult expectations, but sometimes that is not fair.	• How do we accept our adult responsibilities, but still retain our youth? • Is rebellion a bad thing? • Should adolescents be held accountable for adult expectations?
Students will know: • How responsibility, maturity, and rebellion play a role in the transition to adulthood; • How to differentiate between positive rebellion and negative rebellion; • Why accepting adult expectations as an adolescent is an essential part of "growing up."	**Students will be able to**: 6. Define these terms: • "growing up" • maturity • rebellion • responsibility • accountability 7. Write narratives that demonstrate the student's ability to use a variety of techniques. 8. Develop and strengthen different forms of writing through the writing process.

Significant task 1: *Character Scrapbook* or *Other Characterization Project*

Students will choose a character from the text and create a Character Scrapbook of the events that depicts the development of the character's responsibility, maturity, and rebelliousness. For each event, students must examine and describe the significance of each event and explain how it influences this character's ability to accept expectations imposed on them by others. This scrapbook must contain a significant portion of writing, including text that supports the student's beliefs about the character's development.

If a student does not want to create a scrapbook, (s)he can choose another project that also incorporates the character's growth and development, as related to the three categories above (responsibility, maturity, and rebelliousness). A list of Mini-Projects is available. Choices include: making a 3-D model of an object that symbolizes the character's development and writing a corresponding writing piece to explain its significance, creating a book jacket the "paints a picture" of a specific character and his/her growth, or designing a "choice" project. The teacher must approve the last one.

As students read, they will utilize a Learning Log or Various Journals to keep track of their findings. Students may also utilize group note taking and discussion to report out and share ideas in the given text. As needed, the teacher will implement Independent Reading Assessments, to check for student compliance in reading the text(s) at home.

Timeline: 3-4 blocks

Key vocabulary:

- "growing up"
- maturity
- rebellion
- responsibility
- accountability

Possible Resources:

- *The Book Thief* (Zusak)
- *Lone Ranger and Tonto Fistfight in Heaven* (Alexie)
- *Looking for Alaska* (Green)
- *Hole in My Life* (Gantos)
- *Freaky Green Eyes* (Oates)
- *A Northern Light* (Donnelly)
- *Catalyst* (Halse Anderson)
- *Perks of Being a Wallflower* (Chbosky)
- *A Separate Peace* (Knowles)
- *Whale Talk* (Crutcher)
- *Tales of a Madman Underground* (Barnes)

Significant task 2: *Compare and Contrast Teenage Behavior*

PART ONE

Students will begin by comparing and contrasting two adolescents from current events (sample texts will be provided) who are juxtaposed in terms of their personal journeys to adulthood. The teacher can choose to provide a "bank" of texts, or can allow students to research appropriate articles. Another option is for the teacher to consider using Robert Frost's poem "The Road Not Taken"- revisited from the freshman curriculum- to convey the idea of choices and/or journeys. This poem can be compared to another one of the teacher's choice, in order to begin the task with scaffolding.

Using these initial texts, the student will practice comparing and contrasting using a traditional tool like a Venn Diagram or a Comparison Matrix.

PART TWO

Then, students will create their own Illustrated Compare-Contrast Diagram. It must contain symbolic images that represent two opposing characters from a young adult text they are reading, as part of this unit. For example, if students were comparing Alaska to Miles (in *Looking for Alaska*), they could use a "crashed car" to represent Alaska and "a road" to symbolize Miles. In this case, students would complete their diagram by "filling in" these two symbols with information from the play that

demonstrates that these two characters have contrasting personal journeys because Alaska cannot escape her past and Miles wants to embark on a journey of reinvention. (In the text they choose and the symbols they draw, students will need to account for the topics of the unit: maturity, responsibility, and rebellion.) Furthermore, the students must account for commonalities, and again, these should be illustrated symbolically. Perhaps for Alaska and Miles "a phone booth" could be used to show that they both feel that they must stay connected to the world, and their families, to transcend fully into adulthood.

A Visual Sample will be provided.

PART THREE

As a second component to this task, students will compose a 1-2 page Character Persona Reflection to explain, *as* the character(s), the illustrated compare-contrast diagram. In this reflection, the student will become the characters and take on their personas. These characters will explain how their personal journeys are represented in the different images and will describe how their varying levels of responsibility, maturity and rebellion contributed to their destructive or productive personal journey. As included in Significant Task 1, the student will also have the characters remark on their respective ability to accept expectations that are imposed by others.

Timeline: 3-4 blocks

Key vocabulary:

- maturity
- rebellion
- responsibility
- accountability
- compare
- contrast
- Symbol?
- juxtaposed

Possible Resources:

- Integrated Prom Article and other sample texts
- *The Book Thief* (Zusak)
- *Lone Ranger and Tonto Fistfight in Heaven* (Alexie)
- *Looking for Alaska* (Green)
- *Hole in My Life* (Gantos)
- *Freaky Green Eyes* (Oates)
- *A Northern Light* (Donnelly)
- *Catalyst* (Halse Anderson)
- *Perks of Being a Wallflower* (Chbosky)
- *A Separate Peace* (Knowles)
- *Whale Talk* (Crutcher)
- *Tales of a Madman Underground* (Barnes)

Significant task 3: *Claim Template*

Students will complete a Claim Template, in preparation for the Unit Post-Assessment. Using the

template as a framework, they will be asked to argue whether they are fairly held accountable for the expectations in in their lives. They must use concrete examples to support their claim.

Then, students will engage in a Graded Debate about the essential question: *Should adolescents be held accountable for adult expectations*? To prepare for the debate, students must create 5 or more Support Cards. On these cards, they will indicate various ways they can support their claims, with each card designated to a specific resource. Students should use the unit text(s), but can also incorporate outside sources. The teacher must require students to cite these sources properly, on one side of the card. The cards will be submitted to the teacher for a grade.

Finally, students are required to take notes during the debate, so these findings can be used when writing the "In Light of… Essay." These notes should be submitted with the essay.

Timeline: 2-3 blocks

Key vocabulary:
- defend
- maturity
- rebellion
- responsibility
- accountability

Possible Resources:
- *The Book Thief* (Zusak)
- *Lone Ranger and Tonto Fistfight in Heaven* (Alexie)
- *Looking for Alaska* (Green)
- *Hole in My Life* (Gantos)
- *Freaky Green Eyes* (Oates)
- *A Northern Light* (Donnelly)
- *Catalyst* (Halse Anderson)
- *Perks of Being a Wallflower* (Chbosky)
- *A Separate Peace* (Knowles)
- *Whale Talk* (Crutcher)
- *Tales of a Madman Underground* (Barnes)

Common learning experiences:
- Defining key terms
- Writing workshops
- Writing workshops
- Presentations of final products (writing and/or digital)
- Book talks
- Independent reading exploration in the media center
- Visitations from MCC professors
- Use of the Warrior Writing Center

Common assessments including the end of unit summative assessment:

Unit Pre-Assessment
Students will take a Self-Assessment that requires them to answer questions that pertain to their own "levels" of responsibility, maturity, and rebellion. Then, they will need to reflect on what events influenced

Unit Post-Assessment
Students will use the "In Light of" Essay format to craft a multi-draft essay, in which they analyze society's expectations of them. They will answer this prompt:

> *In light of the readings in this unit and their respective messages, analyze the expectations for which you are held accountable and determine if these expectations are fair.*

In this essay, students must also consider their own levels of maturity, responsibility, and perseverance. Students are expected to support their reasoning with examples from the unit's texts and they can consider using outside sources, as necessary. If it is appropriate, the teacher can mandate a research component. The 5-Level Rubric or the MCC-Aligned Writing Rubric will be used to grade this assessment.

Teacher notes:

Possible Core Literary Resources:
- *The Book Thief* (Zusak)
- *Lone Ranger and Tonto Fistfight in Heaven* (Alexie)
- *Looking for Alaska* (Green)
- *Hole in My Life* (Gantos)
- *Freaky Green Eyes* (Oates)
- *A Northern Light* (Donnelly)
- *Catalyst* (Halse Anderson)
- *Perks of Being a Wallflower* (Chbosky)
- *A Separate Peace* (Knowles)
- *Whale Talk* (Crutcher)
- *Tales of a Madman Underground* (Barnes)

Rubrics:
- 5-Level Rubric
- MCC-Aligned Writing Rubric
- Graded Debate

Key Vocabulary:
- "growing up"
- maturity
- rebellion
- responsibility

- accountability

Windsor Public Schools
English Elective: Young Adult Literature

Purpose of the Course:

This multi-cultural, multi-genre course incorporates award-winning young adult literature into the framework of an appealing, but challenging English course. Course work will explore issues of stereotyping, "growing up," bias, transition, adult expectations rites of passage, and social justice with precise attention to literary technique. Students are expected to read independently and use the texts to identify themes that are relevant in "their world." Students will use the literature to answer, "What issues presented in these texts are important to me?" and "How does this book qualify as a literary text?" Young adult literature is becoming increasingly popular in pop culture and the adult world. Through evaluation of its features and quality, students will begin to understand its profound impact on the entire literary canon.

Name of the Unit:	**Length of the unit:**
Unit 3: Voice; Setting the Record Straight / Rite of Passage	Approximately 15 Blocks

Purpose of the Unit:

In this unit, the students will use multiple texts to build an understanding of how censorship can stifle the young adult voice; they will explore the ways they can regain their voice.

Common Core State Standards Addressed in the unit:

RL.11-12.3: Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama.

RI.11-12.2: Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis.

W.11-12.1a: Write arguments to support claims…to introduce precise, knowledgeable claims, establish the significance of the claims, distinguish the claims from alternate or opposing claims, and create an organization that logically sequences claims, counterclaims, reasons, and evidence.

W.11-12.5: Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

SL.11-12.2: Integrate multiple sources of information presented in diverse formats and media in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.

Big Ideas:	**Essential Questions:**
• Inexperience of the young adult should be embraced and matured not stifled and censored. • Young Adult Literature provides a voice that can speak to young adults "rites of passage" into adulthood. • Young adults must create their own "rites of passage" that will provide them with a voice against society's stereotypes of them.	• Is the "inexperience" of a young adult a reason to stifle and censor their voice in literature? • What is a "rite of passage" in the young adult experience? • How can adolescents regain their voice and simultaneously create their own rites of passages that will discredit the "mook" and "midriff" stereotypes?
Students will know:	**Students will be able to:**

• That Rites of Passage vary depending on one's culture/religion;
 	
• Inexperience can come across as either being naïve, or as having a lack of good judgment.
	1. Define these terms:
	  • Censorship
	  • Rationale
	  • Banned Books
	  • Mook
	  • Midriff
	  • Rite of Passage
	  • Intensification
	  • Annotated Bibliography
	  • Citation
	  • Plagiarism
	  • Documentation
	
	2. Analyze the impact of the author's choices.
	
	3. Determine two or more central ideas and analyze their development.
	
	4. Write arguments to support claims.
	
	5. Develop and strengthen writing.
	
	6. Integrate multiple sources of information to test credibility and validity.

Significant task 1: *Censorship- Writing a Rationale for Young Adult Literature*

Part one: Review of Prior Knowledge

This task will begin by students drawing upon their prior summative assessment in Unit Two, "The In Light of" essay. They will work in cooperative learning groups to discuss their findings regarding adult expectations placed upon young adults. Most likely, students will come to the conclusion that the expectations placed upon them are unfair as adolescence is a time of growth for one's personal journey overall.

Students will write a Response Journal about the following:

> *Should the "personal journeys" to adulthood expressed in young adult literature be censored or suppressed? Students will need to elaborate by incorporating evidence from two sources of young adult literature read in the class to support their stance.*

Part Two: Putting YA books on the Stand

In small groups, students will be given a currently banned Young Adult literature text. (Parents will receive a permission letter beforehand.) Students will be asked to research this novel and create a project to hypothetically bring to the Board of Censors to attempt to get their book off of the Banned Book List. They must prove that Young Adult literature is essential in expressing the variety of personal journeys of young adults. Students must create a presentation of some sort. The class will form a Board of Censors, and based upon each presentation, vote to "un-ban" or leave their on that banned text.

Part Three: Writing the Rationale

After these presentations, students will read a variety of "pro" and "con" censorship articles such as those in Chapter 12 of Literature for Young Adults. Using these sources, students will compose a Rationale (Argumentative Essay) to support Young Adult literature as an expression of personal journeys. This essay will be graded with the 5 Level Rubric. This Rationale can be used as the final assessment of the course and students can be encouraged to write and refine multiple drafts throughout the duration of the unit.

Timeline: 5-6 Blocks

Key vocabulary:

- Censorship
- Banned books
- Rationale

Resources:

- Literature for Young Adults
- All hyperlinked resources

Significant task 2: *Crossroads*

Part One

Students will view a clip of a documentary- chosen by the teacher- about various children's "rites of passages" into adulthood; they will also read Amy Lewis's *Rite of Passage* poem. After watching and reading, students will use a Parking Lot to collect thoughts related to the idea of "the personal journey" and "rites of passage into adulthood." Students will then engage in a conversation about what defines a true or meaningful "rite of passage" into adulthood in our society.

Part Two

Students will read the preface to the book Crossroads. Students will read about a new age version of the term "rites of passage." After this reading, students will discuss this new age concept of "rite of passage" and the idea of "intensification." Utilizing Various Graphic Organizers, students will generate a list that includes a variety of events that could qualify as an appropriate new age "rite of passage" and organize them according to their level of "intensification" ("a new understanding of deep universal human values…an experience…").

Part Three

Using these graphic organizers and the pre-assessment in this unit, students will categorize these issues. They can consider: relationships, bullying and violence, education, etc. Students will be asked to select an issue and create a service project around to serve as their own "rite of passage" into adulthood (they can refer www.dosomething.org for more insight). Students will create a Service Project Proposal that outlines their steps that will bring this project to fruition. They must indicate any potential "roadblocks" they may encounter in the success of this project.

Timeline: 3-5 Blocks

Key vocabulary:

- Rite of Passage
- Intensification
- Crossroads

Resources:

- Crossroads
- Amy Lewis's *Rite of Passage*
- All hyperlinked resources

Significant task 3: *Annotated Bibliography*

Students must research at least 5-6 different sources to assist them in the successful completion of their "rite to passage" service project. These sources should provide them with resources and evidence to support the need for this service. Student will need to compose an Annotated Bibliography of these sources.

Timeline: 1-2 Blocks

Key vocabulary:

- Annotated Bibliography
- Citation
- Plagiarism
- Documentation
- Research

Resources:
- Windsor High School Media Center
- www.purdueowl.org
- All hyperlinked resources

Common learning experiences:
- Independent reading
- Independent Reading Assessments
- Book talks
- Use of the Warrior Writing Center
- Writing book reviews

Common assessments including the end of unit summative assessment:

Unit Pre Assessment:
Students will read Martin Luther King's "I had a dream speech" (or some other speech that speaks to affecting positive change in society; the teacher will provide choices, if desired, or students can research and select appropriate texts). First, they must complete a Speech Explication and share their findings with the class in a Graded Presentation. In their presentation, they must address the speaker's/writer's perspective on social responsibility and our need to "take action in our society" to rebuild communities.

After presenting their findings, students will work on teams to brainstorm a variety of issues that they feel must be addressed in the "Young Adult World." They will share their list with the class. As a whole group, all students will combine their lists and come to a consensus about which issue(s) are most critical to "do something" about.

Unit Post Assessments:
Choice One
Using the guidelines outlined on the Do Something website, students will choose a "social need" in the young adult world that needs to be addressed (bullying, violence, or relationships are possible choices). Using their Service Project Proposal from Significant Task 2, they will actually put the plan into place. After completing their service, students will compose a reflection paper answering the following: "How have you developed a 'rite of passage' for yourself that debunks the "mook" and "midriff" stereotypes?" They may need to utilize their Crossroad article to support their development of an "intensification" process that their project has provided them with.

OR

Choice Two
Students will work through multiple drafts of the Rationale essay they completed for Significant Task 1.

They will engage in writing conferences with their teacher or classmates, and finally submit a professional, publishable final project. This essay should be "polished" enough to count as a "college-level paper." For MCC Partnership students, this essay is required and will be graded with the MCC-Aligned Writing Rubric.

Teacher notes:

Possible Core Literary Resources:

- *The Book Thief* (Zusak)
- *Lone Ranger and Tonto Fistfight in Heaven* (Alexie)
- *Looking for Alaska* (Green)
- *Hole in My Life* (Gantos)
- *Freaky Green Eyes* (Oates)
- *A Northern Light* (Donnelly)
- *Catalyst* (Halse Anderson)
- *Perks of Being a Wallflower* (Chbosky)
- *A Separate Peace* (Knowles)
- *Whale Talk* (Crutcher)
- *Tales of a Madman Underground* (Barnes)

Rubrics:

- 5-Level Rubric
- MCC-Aligned Writing Rubric
- Graded Presentation

Key Vocabulary:

- Censorship
- Rationale
- Banned Books
- Mook
- Midriff
- Rite of Passage
- Intensification
- Annotated Bibliography
- Citation
- Plagiarism
- Documentation

Sage Curriculum Unit Sequencing

Grade 6

Math 6 **Honors Math 6**

Unit 1 Understanding Positive and Negative Numbers (Integrated)

Unit 2 Addition, Subtraction and Multiplication of Decimals (Integrated)

Unit 3 Division of Whole Numbers, Decimals, and Fractions (Integrated)

Unit 4 Using Expressions and Equations (Integrated)

Unit 5 Applications of Geometry (Integrated)

Unit 6 Ratios and Rates (Integrated)

Unit 7 Algebraic Reasoning (Integrated)

Unit 8 Data Distributions (Math 6) **Unit 8 Samples and Populations (Honors)**

Windsor Public Schools
Curriculum Map for the Secondary Level
Grade 6

Purpose of the Course (from CCSS): In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and

rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Name of the Unit: Unit 1 Understanding Positive and Negative Numbers (Integrated)	Length of the unit: 3 weeks
Purpose of the Unit: This unit builds upon the grade 5 unit Patterns in the Base-ten System and expands it to applying and extending previous understanding of numbers to the system of rational numbers on number lines and coordinate planes. Students will understand ordering and absolute value of rational numbers. These ideas will be applied in 7th grade units where students will compute with rational numbers.	
Common Core State Standards Addressed in the unit: **6.NS. 6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.** **6.NS.7. Understand ordering and absolute value of rational numbers.** 6.NS.5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. 6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	
Big Ideas: 1. A number and it opposite combine to make zero. 2. Relationships can be represented as tables, graphs, and equations. 3. Our number system is a system of patterns. 4. The base-ten place value system extends infinitely in two directions: to tiny value as well as to large values.	Essential Questions: 1. What does a negative number represent? 2. When is the sum or difference of two numbers positive, negative or zero? 3. How do the table, graph and equation tell the same story?

Students will know:	Students will be able to:
1. definition of and notation of absolute value 2. the relative position of two opposite numbers on a number line diagram is the distance from 0 on the number line 3. locating quadrants and ordered pairs/coordinates are dependent upon the sign of the numbers 4. attributes of coordinate graphs and notation or coordinate pairs	1. graph points on number lines and coordinate planes 2. use notation to label points 3. recognize opposites 4. order rational numbers 5. write and explain statements of order and real world context

Significant task 1: Integers, Opposites, Absolute Value and Extending the Number System

This task involves a couple of investigations where students begin to understand how the extension of the number system includes quantities less than zero through the context of scores in competitive games. Students will work in small groups and begin by using a number line to investigate the location of integers and their opposites while keeping the score of a trivia game in relation to each contestant's position in the game. Next, students receive direct instruction on the attributes of rational numbers and the concept of absolute value. Students will then apply this knowledge to a different game involving the players positioning on a number line. Students will actively model and demonstrate the situations and also display their solutions on number lines using the document camera or SmartBoard. Teachers can assign their students the values in the problems.

In this task, students will:

- represent points on a number line in relation to zero
- solve problems involving opposites and interpret relative position on a number line
- develop attributes of rational numbers and the concept of absolute value
- analyze and explain the patterns of place value in the context of a number line

This task directly targets the following standards: **6.NS.6, 6.NS.7,** 6.NS.5

Timeline: 10 days
Key vocabulary: negative number, opposite, integers, rational numbers, absolute value
Resources: CMP Transition kit INV 3.1-3.2 Smart Notebook lessons: *intro to integers and order integers*

Significant task 2: Coordinate Plane

In this task students extend their knowledge of positive and negative numbers to the coordinate plane (Cartesian plane) by plotting, comparing and analyzing points they graph. Working individually students will first plot points on a coordinate plane using all four quadrants to solve a picture riddle. Students will then design their own picture riddle for their student partner to solve by listing the ordered pairs with at least one point in each quadrant. Students will then apply different transformations to compare the

positions of the points. Students will determine distances of points by applying knowledge of absolute value and solving the geometric problems.

In this task, students will:

- represent points on a coordinate plane
- analyze the relationship of ordered pairs, the plotted points and the quadrant it is located in
- apply absolute value to determine distances of points on a coordinate plane

This task directly targets the following standards: **6.NS.6, 6.NS.7,** 6.NS.8

Timeline: 5 days
Key vocabulary: coordinate plane, ordered pairs, origin, quadrants I II III IV
Resources: CMP Transition kit INV 3.3-3.5 Geometers Sketchpad

Common learning experiences:
CPS lessons to reinforce concepts and skills: identifying opposites, ordering rational numbers, using notation and graphing points.
Do-Nows
Additional Practice Transition Kit Inv 3

Common assessments including the end of unit summative assessment:

Check-up Transition Kit Inv 3
Common summative Assessment: *Positive and Negative Numbers*

Teacher notes:

- Process standards to highlight through instruction: model with mathematics, attend to precision, and look for and make use of structure.
- Predictable Misconceptions: Writing absolute value as negative, confusing x and y coordinates on coordinate graph, plotting points in the wrong quadrant

Windsor Public Schools
Curriculum Map for the Secondary Level
Grade 6

Purpose of the Course (from CCSS): In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Name of the Unit: Unit 2 Addition, Subtraction and Multiplication of Decimals (Integrated)	Length of the unit: 4 weeks

Purpose of the Unit: This unit builds upon computation with decimal knowledge and skill from grade 5 unit on computing with decimals. Students will expand their knowledge from concrete models or drawings of operations to using the standard algorithm. The computation of decimals will be reinforced and utilized in operations of rational numbers in multiple 7th grade units.

Common Core State Standards Addressed in the unit:

6.NS.3. Fluently add, subtract, multiply and divide multi-digit decimals using the standard algorithm for each operation.

Big Ideas:	Essential Questions:
1. Benchmarks are helpful in estimation. 2. In the base ten number system numbers to the left of the digit are ten times larger and numbers to the right are ten times less. 3. Multiplying and dividing by powers of ten is related to place value. 4. Patterns can be used to develop an algorithm.	1. What benchmarks are helpful to estimate? 2. How does computation with decimals compare to computations with whole numbers? 3. How does a digit's placement in a number affect its value?
Students will know: 1. the algorithms for addition, subtraction, and multiplication of decimals 2. strategies for estimating when working with operations on decimals	Students will be able to: 1. use a standard algorithm to: 1. add (multi-digit decimals) 2. subtract (multi-digit decimals) 3. multiply (multi-digit decimals) 2. solve problems involving decimals 3. estimate sums and products for problems with decimals

Significant task 1: Making Sense of Decimal Addition and Subtraction

This task is grounded in several investigations from *CMP2 Bits and Pieces 3* and establishes a foundation for students to understand decimal addition and subtraction and to relate it to previous fraction operation work. Students use number lines and shopping prices to create a context for understanding, and then relate fraction operations to decimals. Place value is stressed to help students avoid errors in computation. Students will then develop fluency for multiplying with multi-digit factors using the algorithm. Teachers will differentiate in this task providing increasingly more complex computation for students as they master addition and subtraction with multi digit decimal addends using the standard algorithm.

In this task, students will:

- use shopping scenarios to estimate the cost of items in a store and to determine if the student has enough money to pay for the items
- relate decimal addition and subtraction to fractions with denominators of 10, 100, and 1000

- develop an algorithm for adding and subtracting decimal numbers, including money

Timeline: 8 days
Key vocabulary: sum, difference, fact family, benchmark, place value, power of ten
Resources: CMP2: Bits and Pieces III, Inv. 1

Significant task 2: Making Sense of Multiplication

This task is also grounded in several investigations from *CMP2 Bits and Pieces 3* and helps students develop an understanding of decimal multiplication by first using estimation strategies to find reasonable answers to real situations. Students use prior knowledge of fraction multiplication to help them understand decimal products. Using what they know about the algorithm for multiplying whole numbers and using estimation skills to determine reasonable answers, students develop an algorithm for multiplying decimals. Students will then develop fluency for multiplying with multi-digit factors using the algorithm. Teachers will differentiate in this task providing increasingly more complex computation for students as they master small digit multiplication.

In this task, students will:

- estimate decimal products by solving problems presented at a fruit stand
- explore the relationship between factors and products in decimal multiplication, using estimation to decide where to correctly place the decimal point
- examine patterns to understand what happens to place value and the position of the decimal when you multiply by powers of 10
- develop an algorithm they can use to multiply any two decimal numbers

Timeline: 8 days
Key vocabulary: factor, product, power of ten
Resources: CMP2: Bits and Pieces III, Inv. 2

Common learning experiences:

CPS lessons to reinforce concepts and skills: adding, subtracting, and multiplying with multi digit decimals using the standard algorithm, estimating solutions for decimal computation.
Do-Nows

Common assessments including the end of unit summative assessment:

Common summative Assessment: *Adding, Subtracting, and Multiplying with Decimals*

Performance Assessment: The Tennis Ball Problem. This assessment sets up the problem with a brief video with several Grade 6 teachers playing a role, either on camera or behind the scenes. The situation presented is that the tennis coach at Windsor High School is given a budget for practice tennis balls for the season, and she must compute whether or not she will be able to stay within that budget. The video introduction provides the situation only, not the numbers necessary to solve the problem. Students work in small groups to generate the specific questions they must ask the teacher in order to have enough data to successfully work on the problem. Once the small groups write a list of questions, individual students then ask their questions in a large group setting, with all students writing down

pertinent data that is generated by the teachers' responses to the questions. Small groups then work together to solve the problem and present their solutions to the entire class, using posters and any materials they prefer. The performance task will be graded using the middle school performance task rubric.

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, attend to precision, and look for and express regularity in repeated reasoning.
- Students who frequently make computation errors often do so due to a lack of clear understanding of place value. For addition and subtraction problems, constantly reinforce why digits of the same place value must be aligned. Students need to understand why decimal points must be aligned, rather than doing so by rote.
- Decimal multiplication can be confusing to many students if they are simply applying a procedure without understanding. Have students frequently estimate answers to decimal products before working out the problem.

Windsor Public Schools
Curriculum Map for the Secondary Level
Grade 6

Purpose of the Course (from CCSS): In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Name of the Unit: Unit 3 Division of Whole Numbers, Decimals, and Fractions (Integrated)	Length of the unit: 4 weeks

Purpose of the Unit: This unit builds and extends on grades 4 and 5 development of division to whole number division to 2-digit divisors, developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations. The focus for grade 6 is developing the standard algorithm for division of whole numbers, decimals and fractions. Students will apply and extend previous understandings of division to divide fractions by fractions. In the grade 7, understanding extends to including integers.

Common Core State Standards Addressed in the unit:

6.NS.1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.

6.NS.3. Fluently add, subtract, multiply and divide multi-digit decimals using the standard algorithm for each operation.

6.NS.2. Fluently divide multi-digit numbers using the standard algorithm.

Big Ideas: 1. Benchmarks are helpful in estimation. 2. Multiplication and division are inverse operations. 3. Division is breaking apart into equal size groups. 4. Patterns can be used to develop an algorithm.	Essential Questions: 1. What benchmarks are helpful to estimate? 2. How do operations affect numbers? 3. What strategies make solving multiplication and division problems easier? 4. How is multiplication and division related?
Students will know: 1. the algorithms for division of whole numbers, fractions and decimals 2. the relationship between fractions multiplication and division can be used to explain whether a quotient is correct (inverse operations) 3. strategies to estimate quotients	Students will be able to: 1. develop and use the standard algorithm to divide whole numbers, multi-digit decimals and fractions 2. estimate solutions to division problems to assess the reasonableness of answers 3. solve problems using division including contexts where decimals and/or fractions are used

Significant task 1: Dividing with multi-digit numbers

This task includes lessons where students will divide multi-digit numbers by using the standard algorithm for divisors with any number of digits. Students will use their understanding of place value and the previous year's work with base ten blocks and area models to describe what they are doing as they divide. To reinforce this, the teacher will introduce the first lesson as a whole group by modeling a problem where the language of the steps reference place value. Next, students will participate in modeling a problem. A different student will be called on for each step and all students will then record the steps. Students will go on to work on problems, in partners, taking turns with the place value language of each step as they record the steps. Finally students will independently complete problems using place value language as they record their steps. Students will continue their practice with this strategy over the course of the following days while the problems become increasingly more difficult.

In this task, students will:

- use language that references place value
- use the standard algorithm to divide multi-digit whole numbers

This task directly targets the following standards: 6.NS.2.

Timeline: 5 days
Key vocabulary: algorithm, divisor, dividend, place value, quotient, remainder
Resources: teacher created division worksheets

Significant task 2: Dividing With Fractions

This task includes several investigations from *CMP2 Bits and Pieces 2* where students will divide whole numbers by fractions, divide fractions by whole numbers, divide fractions by fractions and develop an efficient algorithm for all fraction division within the context of real life situations. For the first three investigations students will either be working in small groups or a whole class discussion. Students begin with understanding when division is an appropriate operation. In the first three investigations of fractions it is emphasized that students will use models to conceptually understand fraction division. Students will use models to divide a whole number by a fraction within the context of a pizza problem. Next, students will model dividing fractions by whole numbers again within the context of a food problem and sharing a fractional amount equally. Next, students will model fraction by fraction division within the context of making bows that require a fractional amount from a total fractional amount of ribbons. After the first three investigations, students will work in small groups to develop an efficient fraction division algorithm by looking at four different groups of problems: fraction divided by a whole number, whole number divided by a fraction, fraction divided by a fraction and finally problems involving mixed numbers. Students will be able to develop this algorithm based on what they have discovered by using models. Teachers will then differentiate for students as they develop fluency for dividing with fractions moving them progressively to more complex computation.

In this task, students will:

- understand when division is an appropriate operation
- use models to represent all fraction division situations
- develop a mathematical algorithm for a complex situation

This task directly targets the following standards: **6.NS.1**

Timeline: 7 days
Key vocabulary: fraction, division, numerator, denominator, mixed number, algorithm
Resources: CMP2 Bits and Pieces II INV 4

Significant task 3: Dividing with Decimals

This task includes several investigations from CMP2 Bits and Pieces 3 where students will be determining which operation is appropriate to use and use models and their context to find solutions to division problems, estimate to find approximate solutions, use the relationship between decimals and fractions to develop and understand decimal division, change decimals to fractions and use common denominators to divide, use place value to develop an algorithm for division of decimals and use the efficient algorithms to divide decimals. For all the investigations students will work in small groups or participate in whole class discussion. First, students will look at a variety of decimal problems, determine what operation to use to solve the problem and use estimation to find the answer. Next, students will use their prior knowledge of fractions and place value to change decimals to fractions and using common denominators complete the division. Lastly, students will develop the standard algorithm for decimal division by using fraction division in looking at place value. Students will examine related decimal division problems that lead to a related whole number division problem with the same solution. Teachers will then differentiate for students as they develop fluency for dividing with decimals moving them progressively to more complex computation.

In this task, students will:

- understand when division is an appropriate operation

- use fractions with common denominators to solve decimal division problems
- use a standard algorithm to divide multi-digit decimals

This task directly targets the following standards: **6.NS.3**

Timeline: 7 days
Key vocabulary: fraction, numerator, denominator, estimation, place value, algorithm
Resources: Bits and Pieces III INV 3

Common learning experiences:

Students in the advanced level math will extend the learning of division of rational numbers to also include repeating decimals and irrational numbers. This will occur at the end of significant task 3 and through the use of lesson 2.3 of Bits and Pieces I.

CPS lessons to reinforce concepts and skills: dividing with whole numbers, fractions and decimals using the standard algorithm
Do-Nows

Common assessments including the end of unit summative assessment:

Fraction Division: Bits and Pieces II Mathematical Reflections (Pg. 62)

Decimal Division: Bits and Pieces III Mathematical Reflections (pg. 49)

Common summative Assessment: *Division with Whole Numbers, Fractions, and Decimals*

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, attend to precision, and look for and express regularity in repeated reasoning.
- Starting in 2013-2014 Grade 5 will be using Bits and Pieces II INV 4 therefore in 2014-2015 Grade 6 will not be using this investigation and we need to revise task 2.
- Predictable Misconceptions might include students assuming that every quotient will be less than the factors being divided. Students may also switch dividends and divisors while setting up a problem leading to an incorrect quotient. Finally students may invert the incorrect factor or both factors while dividing with fractions.

Windsor Public Schools
Curriculum Map for the Secondary Level
Grade 6

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rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Name of the Unit: Unit 4 Using Expressions and Equations (Integrated)	Length of the unit: 4 weeks

Purpose of the Unit: Students will expand on their work from 5th grade on operations and algebraic thinking. Students will apply and extend previous understandings of arithmetic to algebraic expressions. They will reason about and solve one-variable equations (one step) and inequalities. Students will also represent and analyze quantitative relationships between dependent and independent variables. This unit will be expanded in the 7th grade to multi-variable equations and graphing. As an extension, honors students will also write and solve two-step equations and inequalities.

Common Core State Standards Addressed in the unit:

6.EE.2 Write, read, and evaluate expressions in which letters stand for numbers.
a. Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as 5 – y.
b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.
For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.
c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of lengths = 1/2.
6. EE.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
6.EE.3. Apply the properties of operations to generate equivalent expressions.
For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.
6.EE.7. Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers.
6.EE.1. Write and evaluate numerical expressions involving whole-number exponents.
6.EE.4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).
For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.
6.EE.5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.
6.EE.8. Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x > c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams. (as enrichment)
6.NS.4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least

common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express 36 + 8 as 4*(*9+2*).

Honors extension standards:

7.EE.4: Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

a. Solve word problems leading to equations of the form *px* + *q* = *r* and *p*(*x* + *q*) = *r*, where *p*, *q*, and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*

b. Solve word problems leading to inequalities of the form *px* + *q* > *r* or *px* + *q* < *r*, where *p*, *q*, and *r* are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.*

Big Ideas:	Essential Questions:
1. Properties of equality and inverse operations are used to solve equations. 2. Expressions can be written in different looking but equivalent forms. 3. Inequalities represent a constraint or condition in a real-world or mathematical problem.	1. What's happening in the equation and how do you "undo" that? 2. What are the benefits of representing a relationship in any given way? 3. How does an inequality represent a real world story?
Students will know: 1. variables are used in writing equations and expressions to represent real-world problems 2. inequalities have an infinite amount of solutions 3. substitution can determine if an inequality or equation is true 4. equivalent expressions name the same number regardless which value is substituted in 5. properties of equality and inverse operations are used to solve equations	Students will be able to: 1. write expressions and equations 2. read expressions 3. evaluate expressions 4. identify mathematical terms 5. perform order of operations 6. apply properties of operations 7. generate equivalent expressions 8. solve equations (one-step for on grade level and two-step for honors level) 9. solve real-world and mathematical problems

Significant task 1: Writing Expressions

This task will have students focusing on vocabulary used in written/verbal expressions and translating real-world situations to algebraic expressions. In small groups students will first brainstorm a list of terms associated with each operation and then as a whole group students will create a word chart. Next, students will work in small groups to translate written expressions to algebraic expressions. Students will then assess themselves by properly matching the correct algebraic expression to their answers. The student will then create their own situations from algebraic expressions. In context of life on a farm students will continue to write expressions to answer questions about which operations they will use, what the variable represents and how the expression would lead to a certain solution. Full class discussion should utilize document cameras to display work and have students justify their expressions.

In this task, students will:

- develop algebraic vocabulary
- translate written and algebraic expressions

This task directly targets the following standards: **6.EE.2, 6. EE.6**

Timeline: 5 days
Key vocabulary: expressions, variables, , sum, difference, product, and quotient
Resources: "Elementary School Supplemental Tasks", Transition kit 2.1, 2.2, 2.3

Significant task 2: Evaluate and Equivalent Expressions

Continuing with the farm theme students will apply the order of operations to problems where they will first write the expression and then substitute in a number for a variable and simplify the expression. Students will receive direct instruction on the properties of operations (commutative, associative and distributive) and in pairs or groups apply this knowledge to generate equivalent expressions by simplifying or expanding. Students will use formulas such as perimeter and area to demonstrate equivalent expressions in addition and multiplication formulas.

In this task students will:

- evaluate expressions
- apply properties of operations to simplify expressions
- apply properties of operations to find equivalent expressions

This task directly targets the following standards: 6.EE.1., **6.EE.2., 6.EE.3.,** 6.EE.4., 6.NS.4.

Timeline: 7 days
Key vocabulary: evaluate, properties of operations (associative, commutative and distributive)
Resources: *Transition kit 2.4, 2.5, 2.7 Smart Notebook lessons: Equivalent expressions, evaluating expressions*

Significant task 3: Equations and Inequalities
This task includes several situations where students will begin to understand equations are representations of two equivalent expressions. Using symbols and manipulatives students will develop an understanding of the process for solving an equation. Students will identify inverse operations and through direct instruction learn to apply them to isolate the variable in an equation. Students will apply this knowledge in solving problems in the context of speed related to distance to create a table, graph and write a rule to then generate an equation. Students will demonstrate how solving an equation or an inequality is a process for answering a question. Students will write and graph inequalities while playing a game called *More or Less* where each card drawn by a player represents a situation.

In this task, students will:

- construct tables and graphs to determine a rule and then write and equation
- solve one-step equations and inequalities (on level) and solve two-step equations and inequalities (honors level)
- write and graph inequalities

This task directly targets the following standards: **6.EE.7.,** 6.EE.5., 6.EE.8.

Timeline: 7 days
Key vocabulary: equation, inverse operation, coefficient, constant, isolate, inequality
Resources: Transition kit 2.6, Elementary School Supplemental Tasks (Balance it out)

Common learning experiences:
CPS lessons to reinforce concepts and skills: writing and evaluating expressions, solving equations/inequalities
Do-Nows

Common assessments including the end of unit summative assessment:

Common summative Assessment: *Expressions and Equations*

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, reason abstractly and quantitatively, and model with mathematics.
- Predictable Misconceptions: include lack of differentiation between expressions and equations, and remembering when to change an inequality symbol when solving.

Purpose of the Course (from CCSS): In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Name of the Unit: Unit 5 Applications of Geometry (Integrated)	Length of the unit: 4 weeks
Purpose of the Unit: This unit builds upon measuring volumes by counting unit cubes, finding the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and relating volume to the operations of multiplication and addition done in grade 5. In grade 6 students solve real-world and mathematical problems involving area of two dimensional shapes and surface area and volume of three dimensional shapes including rectangular prisms with fractional side lengths. Additionally, students will write and solve equations to determine unknown angle measures building on the last unit on equations. In grade 7, students will explore rectangles, circles, and triangles and their relationships to the three-dimensional shapes that can be created with them.	
Common Core State Standards Addressed in the unit: **6.G.1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.** 6.G.2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l\ w\ h$ and $V = b\ h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems. 6.G.3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems. 6.G.4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	
Big Ideas: 1. Area is measured in square units. 2. Volume is the amount of space inside a three-dimensional object measured in unit cubes. 3. All formulas for volume are built upon the idea that the area of the base is multiplied by the number of layers in the object (the height). 4. Surface area is simply the total area of the	Essential Questions: 1. What does volume measure? 2. What does surface area measure? 3. Where in the real world will you need measures of surface area and volume?

faces of an object.	
Students will know: 1. Strategies to compute the area of polygons including triangles and special quadrilaterals 2. the general formula to find volume of rectangular prisms 3. nets can be used as a two dimensional representation for finding surface area and building a three-dimensional object	Students will be able to 1. find the area of polygons 2. compose triangles into smallest possible rectangles 3. decompose polygons into multiple triangles and/or other shapes that students know how to find the area of 4. find the surface area and volume of rectangular prisms using multiple strategies 5. solve problems involving surface area and volume of rectangular prisms

Significant task 1: Area of special quadrilaterals and triangles

This task includes several investigations where students make connections between the areas of different shapes. Students start out in geometer's sketchpad using their knowledge of ordered pairs on coordinate grids to plot vertices to compose polygons that they will use to explore the relationship amongst areas of rectangles, parallelograms, and triangles. In following lessons students begin by looking at shapes on grids. Working in pairs students estimate area and are encouraged to look for patterns that would lead to a formula, as they've done in the past with rectangles. Next students will use the same examples to explore relationships between area of one shape and another. For example, students will first explore the relationship between area of a triangle and area of the smallest rectangle that surrounds it. (In the end students should be able to verbalize that the area of a triangle is half the area of a rectangle when the rectangle is the smallest possible rectangle that can surround the triangle.) Finally students are introduced to base and height as they apply to triangles and parallelograms. Students will explore the relationship between rectangles, triangles, and parallelograms. Specifically they will explore the relationship between the base, height, and area of parallelograms and the base, height, and area of triangles. At the end of these explorations students will have an efficient rule for finding the area of any triangle or parallelogram.

In this task, students will:

- compose or decompose shapes
- determine area of polygons including triangles and special quadrilaterals
- develop the algorithm for area of rectangle, triangle and parallelograms

This task directly targets the following standards 6.G.3 and **6.G.1**

Timeline: 6 days
Key vocabulary: area, base, coordinate grid, height, parallelogram, ordered pair, perpendicular, triangle, vertices

Resources: Geometer's Sketchpad and CMP2 Covering and Surrounding INV 3 and 4

Significant task 2: Building Boxes

In this task students will build on prior knowledge of calculating two dimensional areas to calculate surface area of a rectangular prism. To begin, students collaboratively design nets of a unit cube on grid paper to find all the nets for a cube. This lesson helps students see the connection between the area of a flat figure and a solid figure. Next, students replicate the same process for finding nets for a rectangular prism. Students work on their own first and then compare results in pairs or small groups. Students are encouraged to consider how the area of each net is related to the number of squares that would cover the rectangular box. In the third lesson, students are posed with the problem of helping an engineer who lost his notes on the dimension of a box. Students will predict the dimensions and then cut them out to test each design. Lastly, the students begin their work for the "Save-a-Tree" packaging company which will be the context of much of the next significant task. In this lesson, students are broken into several groups and each group does an analysis of a specific type of box. Practical considerations for packaging are introduced (cost, materials, etc.).

In this task, students will:

- create nets for rectangular prisms
- connect nets to surface area for rectangular prisms

This task directly targets the following standards 6.G.4.

Timeline: 6 days
Key vocabulary: dimensions, net, surface area
Resources: CMP2 Filling and Wrapping INV 1

Significant task 3: Volume of rectangular prisms including fractional dimensions

In this task students will build on prior knowledge of explorations with volume and whole number edge lengths to applying volume formulas and computing with fractional edge lengths. First, students work in groups to help a toy company decide on packaging arrangements of their blocks as they connect the dimensions of a rectangular prism to its surface area. By the end of the lesson students will begin to see that to find the surface area of a prism, they need to find the area of each of the six faces and add them. Some will see that the opposite faces are equivalent and will double the area of a face to get the area of a pair. Next, student continue connecting volume, nets and surface area to discover the general shape of a box that will minimize surface area for the "Save-a-Tree" packaging company. Lastly, students develop the formula for finding the volume of a rectangular prism. Students work in pairs to decide whether the "Save-a-Tree" company's premade boxes work for the toy company's packaging preferences. Students build from their filling in identical layers to finding the area of the bottom layer (or base) and determining how many layers total fill the base (or height). By the end of the investigation students should be able to verbalize that volume is the number of cubes in the base layer (found by length multiplied by width) multiplied by the height of the prism. In additional lessons students will work together and then independently to calculate volume of rectangular prisms, including fractional edge lengths, applying the formula discovered along with using fractional blocks i.e. ¾ inch blocks to model volume formula.

In this task, students will:

- calculate surface area and volume of rectangular prisms including fractional dimensions
- utilize area of the base to apply to volume formula

This task directly targets the following standards 6.G.2.

Timeline: 6 days
Key vocabulary: base, cube, formula, height, layer, length, volume, width
Resources: CMP2 Filling and Wrapping INV 2

Common learning experiences:

Teachers use unit cubes to model and find volume and surface area for cps lessons/questions.

Common assessments including the end of unit summative assessment:

Unit quiz-triangles, parallelograms, trapezoids

Surface Area and Volume quiz

Performance Task – Town Pools This assessment sets up the problem with the town manager needing help in determining if the Windsor's town budget for running the towns pools (Goslee and Welch) will cover the cost needed. The students work in small groups to first determine all the dimensions they need to solve the problem based on the minimal information they are given about the pools. They then find the volume of each pool by breaking up the pools shallow and deep ends into rectangular prisms to then find the volume in cubic feet of water. The students then use the quote the town manager was given based on cubic feet of water to run the pools for the season by an outside company. Students present their findings by writing a letter to the town manager explaining their calculations, solution and add any suggestions they have for the town manager in what to do to improve the pools/parks with the remaining money in the budget. The performance task will be graded using the middle school performance task rubric.

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, and use appropriate tools strategically.
- Predictable Misconceptions: Students often combine the formula for volume with the steps for solving surface area and vice versa, mislabeling (1d, 2d and 3d) i.e. Surface area as cubic units and volume as square units, finding perimeter of a shape instead of area, when applying the formula for a triangle's area not dividing the length x width by 2, when finding surface area only finding the area of half of the faces.

Curriculum Map for the Secondary Level
Grade 6

Purpose of the Course (from CCSS): In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Name of the Unit: Unit 6 Ratios and Rates (Integrated)	Length of the unit: 4 Weeks
Purpose of the Unit: This unit builds upon fraction knowledge and skill from grade 3-5 and expands it to ratio, rates and unit rates. Students are also introduced to concept of percent as a special ratio. The idea of a rate and unit rate will be reinforced in the next unit as a constant rate of change and will be applied in the grade 7 unit Applications of Proportions.	
Common Core State Standards Addressed in the unit: **6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.** ***For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*** **6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.** **6.RP.A.3a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.** **6.RP.A.3b Solve unit rate problems including those involving unit pricing and constant speed.** ***For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*** **6.RP.A.3c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.** **6.RP.A.3d Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.** 6.RP.A.2 Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*[1]	
Big Ideas:	Essential Questions:

1. Ratios, rates and percents are numbers used to make comparisons. 2. Proportions show equivalent forms of the same ratio. 3. Percent is a standard part-whole ratio where the whole is 100.	1. How can numbers be compared and contrasted? 2. How can representing a relationship in an equivalent form help to make decisions? 3. How are ratios, rates and percents related?
Students will know: 1. a ratio is a part to part or part to whole comparison 2. percent is a part-whole ratio where the whole is 100 3. a rate is a ratio showing the relationship of two different measurements 4. a unit rate is a part to whole rate where the whole is 1	Students will be able to: 1. choose an appropriate form to make comparisons 2. find equivalent forms of given ratios and rates 3. convert between part-to-part and part-to-whole ratios 4. use ratios, rates and unit rates to solve problems and make comparisons 5. calculate percents and use percents to find missing parts and wholes using various strategies

Significant task 1: Using Percents

This task is grounded in investigations from *CMP2 Bits and Pieces 3* where students use percent computations in real life situations. Previously students related fractions and decimals to percents and wrote equivalence statements. Students will work collaboratively to use percents in estimating or computing taxes, tips, and discounts. Common situations are used to provide a context to their work, and estimation using benchmarks is stressed. Teachers will monitor the students and select different strategies to be shared and discussed for each problem as a full class debrief.

In this task, students will:

- compute tax on items such as magazines and books
- work with several other students to decide on a lunch order for the group
- use their lunch order to compute sales tax and a reasonable tip, using 10% and 20% as benchmarks to help them mentally compute possible tips
- work with discounts to determine savings generated by coupons and sales

Timeline: 4 days
Key vocabulary: tax, tips, discounts
Resources: CMP2 Bits and Pieces III, INV 4.1, 4.2, 4.3

Significant task 2: Making Comparisons

This task is grounded in *CMP2 Comparing and Scaling* and calls for students to work in groups analyzing

several problems where comparisons are needed. The students will develop the concept of a ratio as a way to compare to relationships. Previously, students have used percents and fractions to make comparisons and model relationships. In this task students will use part-to-part ratios to make comparisons and model relationships. Through the context of taste testing, school surveys, and horticulture students will apply their new knowledge of ratios to solve problems. Full class discussion should focus on students' reasoning and justification for conclusions to the problems.

In this task, students will:

- develop and apply the concept of a ratio to make comparisons between two variables
- solve problems using ratios to make comparisons
- decide which type of comparison is best for problems: difference, percent, fraction or ratio

This task directly targets the following standards: 6.RP.A.1, 6.RP.A.3A, 6.RP.A.3D

Timeline: 4 days
Key vocabulary: percent, difference, ratio, fraction,
Resources: CMP2 Comparing and Scaling INV 1.1, 1.2, 1.3

Significant task 3: Comparing Ratios, Percents, and Fractions

This task is grounded in *CMP2 Comparing and Scaling* and students will again work in groups to apply the knowledge and skills from the previous two tasks to solve more complex problems using ratios and other comparisons (fractions, percents, and differences). Through the context of preparing drinks for a camp lunch, choosing a table to maximize the amount of pizza one can consume, and a zoologist preparing food mixtures for chimps of various ages students will further develop their understanding of ratios as a comparison. Full class discussion should again focus on reasoning and justification. In particular, the pizza problem lends itself to various strategies groups may use and time should be spent highlighting those strategies.

In this task, students will:

- apply the concept of a ratio to make comparisons between two variables
- find equivalent forms of given ratios and rates to scale comparisons up and down
- use tables to show equivalent ratios
- solve problems using ratios to make comparisons
- decide which type of comparison is best for problems: difference, percent, fraction or ratio

This task directly targets the following standards: 6.RP.A.1, 6.RP.A.3

Timeline: 6 days
Key vocabulary: percent, difference, ratio, fraction,
Resources: CMP2 Comparing and Scaling INV 2.1, 2.2, 2.3

Significant task 4: Comparing and Scaling Rates (Unit Rate)

This task is also grounded in *CMP2 Comparing and Scaling* and students will again work in groups to now develop the concept of a unit rate. First, students will solve problems using rates for various calculators

they might purchase for their school. This will require using a unit rate while the concept has not been formally developed. Next students will formally define a unit rate while applying their knowledge of rates and equations in the context of a CD sale from two competing stores. Finally, students will work through several problems (oranges on sale, mpg, maple syrup production, water consumption, etc.) to apply their knowledge of unit rates to solve problems. Full class discussion should again focus on developing two forms of the unit rate for each scenario and the variation in the application of each to solve problems.

In this task, students will:

- develop the concept of a unit rate
- write two forms of a unit rate for a given relationship
- use unit rates to make comparisons
- solve problems using unit rates

This task directly targets the following standards: 6.RP.A.2, 6.RP.A.3, 6.RP.A.3B

Timeline: 5 days
Key vocabulary: percent, difference, ratio, fraction, unit rate
Resources: CMP2 Comparing and Scaling INV 3.1, 3.3, 3.4

Common learning experiences:

There are many sections with in the ACE problems of Comparing and Scaling that will reinforce fraction sense and comparisons of fractions and decimals.

CPS lessons to reinforce concepts and skills: ratios, rates, unit rate, converting between decimals, fractions and percents, solving simple percent problems
Do-Nows

Common assessments including the end of unit summative assessment:

Common summative Assessment: *Ratio and Rates*

Performance Assessment: Cavaliere's Pizza The task begins with a video clip in which the principal acts out a scene wherein he presents payment for pizzas for the 6th grade end of year trips. This payment is conditional upon the fact that students order from one of three places in town and that they figure the cost per person for each of the pizzerias. Next students brainstorm what Mr. Cavaliere wants to see/know. Student questions should include how many pizzas are needed which depends on which place they order from, how much each pizza costs including the cost of whole pizzas and the ratio cost, as well as how many students are in 6th grade? Students then perform the calculations in small groups and present their findings using chart paper. The final twist is a video clip showing one of the secretaries sharing that Mr. Cavaliere has allotted them an exact monetary amount and that if this amount provides them with extra money they must let him know their plans as to what they'd like it to be spent on or if the amount is not enough how much more they will need. The performance task will be graded using the middle school performance task rubric.

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, reason abstractly and quantitatively, and construct viable arguments and critique the reasoning of others.
- Some students have difficulty finding two unit rates for a given relationship. For example, they see that it might be 20 mpg but not see that it could also be .05 gallons used for 1 mile.

Windsor Public Schools
Curriculum Map for the Secondary Level
Grade 6

Purpose of the Course (from CCSS): In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Name of the Unit: Unit 7 Algebraic Reasoning (Integrated)	Length of the unit: 5 weeks

Purpose of the Unit: This is the first unit where independent and dependent variables are modeled using tables, graphs and equations. This unit is concrete in nature and provides the prerequisite skills for the Connecting Tables, Graphs and Equations Unit in grade 7 and the Linear Relationships Unit in grade 8 ultimately leading to a formal study of linear and quadratic relationships in Algebra 1.

Common Core State Standards Addressed in the unit:

6.EE.9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.*

6.EE.6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

6.EE.7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.

6.RP.A.3a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.

6.RP.A.3b Solve unit rate problems including those involving unit pricing and constant speed. *For*

example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?	
Big Ideas: 1. Patterns can be used to develop an algorithm. 2. Relationships can be represented as tables, graphs, and equations. 3. Relationships with a constant rate of change can be modeled with a linear function.	Essential Questions: 1. How can patterns be generalized? 2. How do the table, graph and equation tell the same story? 3. How can you represent a relationship in an algebraic rule?
Students will know: 1. attributes of dependent and independent variables 2. strategies to identify unit rates in tables, situations, graphs, and equations 3. attributes of tables, graphs and equations to model linear relationships 4. attributes of constant and variable rates of change 5. attributes of continuous verses discrete relationships	Students will be able to: 1. recognize problem situations in which two or more quantitative variables are related to each other 2. identify quantitative variables in situations 3. identify continuous verses discrete relationships 4. describe patterns of change between two variables that are shown in words, tables, and graphs of data 5. construct tables and graphs to display relations among variables 6. observe relationships between two variables as show in a table, graph, or equation and describe how the relationship can be seen in each of the other forms of representation 7. write algebraic equations relating variables 8. use tables, graphs, and equations to solve problems

Significant task 1: Variables, Tables, and Coordinate Graphing

This task includes several investigations where students begin to make connections between tables and graphs through the context of a big tour. Students begin by looking at the relationships and patterns of change between two variables. Working small groups, students investigate the relationship b/t elapsed time and the # of jumping jacks they can do. Next, students receive direct instruction in the attributes of a line plot/scatter plot and the difference between independent and dependent variables. Armed with this new found knowledge students continue working in small groups or pairs to solve several problems involving continuous and discrete data, various rates of change all while building connections

between tables and graphs. The theme of the bike tour continues throughout as students analyze distance traveled over different days of the tour to answer questions about what might have happened along the way. Full class discussion should utilize the document camera so student generated tables and graphs can be critiqued by their peers and so students can construct arguments about their work.

In this task, students will:

- construct tables and graphs to model relationships between independent and dependent variables
- solve problems involving rates of change
- develop the attributes of a line plot/scatter plot
- explore the difference between continuous and discrete rates of change

This task directly targets the following standards: 6.EE.9

Timeline: 8 days
Key vocabulary: variable, coordinate graph, dependent variable, independent variable, x-axis, y-axis, scale, coordinate pair, continuous, discrete
Resources: CMP2 Variables and Patterns INV 1

Significant task 2: Analyzing Graphs and Tables

In this task students continue working in small groups or pairs to use tables and graphs to solve problems. In this task students will be using the representations to make decisions related to the big tour including choosing a rental company for the bikes and determining rental rates a company might choose. The context allows students to informally use their new knowledge and skill related to tables and graphs to analyze a system of linear relationships. Students will also explore how pairs of variables might be related and choose the graph that best represents the story of the relationship. Students practice reading the patterns of change shown by the overall shape of the graph (not specific numerical values) which leads into the next task related to how to quantify these rates of change in an equation. Full class discussion should continue to center on the use of the document camera so student generated strategies to analyze the systems can be critiqued by their peers and so students can construct arguments about their work.

In this task, students will:

- construct tables and graphs to model relationships between independent and dependent variables
- solve problems involving various rates of change
- apply the attributes of a line plot/scatter plot
- continue to explore the difference between continuous and discrete rates of change

This task directly targets the following standards: 6.RP.A.3A, 6.EE.9

Timeline: 6 days
Key vocabulary: variable, coordinate graph, dependent variable, independent variable, x-axis, y-axis, scale, coordinate pair, continuous, discrete

Resources: CMP2 Variables and Patterns INV 2

Significant task 3: Rules and Equations

In this task students continue working in small groups or pairs to extend their knowledge and skill related to tables and graphs to write equations that also model linear relationships. In this task students will solve various comparison problems by writing equations for two options presented and making connections to how those equations would be represented in a table and/or graph. Problems presented center on destinations of the bike tour and ensuring that profit will be made overall for the tour. Full class discussion should continue to center on the use of the document camera so student generated strategies to analyze the systems can be critiqued by their peers and so students can construct arguments about their work.

In this task, students will:

- construct tables, graphs and equations to model linear relationships between independent and dependent variables
- solve problems involving various rates of change
- apply the attributes of a line plot/scatter plot

This task directly targets the following standards: 6.RP.A.3B, 6.EE.6, 6.EE.7, & 6.EE.9
Timeline: 6 days
Key vocabulary: variable, coordinate graph, dependent variable, independent variable, x-axis, y-axis, scale, coordinate pair, continuous, discrete, rule, equation,
Resources: CMP2 Variables and Patterns INV 3

Common learning experiences:

A good problem to use to model a continuous verses discrete relationship is found on Pg. 17 #4. In this problem a child's height has been recorded from birth to age 18 and the class can have a discussion on how this would be a continuous relationship where the points on the graph would be connected.

For students who have difficulty graphing on the coordinate plane, use various Pizzazz connect-the-dots graphs for additional practice.

On Pg. 42 there is a step-graph shown. This would be good exposure in a warm-up or homework assignment.

Common assessments including the end of unit summative assessment:

Mathematical Reflection 1 (Pg. 29)

Mathematical Reflection 2 (Pg. 48)

Mathematical Reflection 3 (Pg. 63)

Common summative Assessment: *Algebraic Reasoning*

Teacher notes:

- Process standards to highlight through instruction: model with mathematics, use appropriate tools strategically, and look for and make use of structure.
- Some students will have difficulty contrasting continuous relationships and discrete relationships. Class discussions should highlight this throughout Significant Task 1 and 2. See common learning box for a suggested additional activity.
- There is quite a bit of new vocabulary in this unit. It is suggested that students build a vocabulary sheet and the class develop a work wall to aid in the use of vocabulary in class discussions and group work.
- Some students will forget to label their axis and title their graphs. This unit provides multiple times for class discussions where students will display their work. Select work that has these pieces missing and allow peers to point out why it is important to include these labels.

Windsor Public Schools
Curriculum Map for the Secondary Level
Grade 6

Purpose of the Course (from CCSS): In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Name of the Unit: Unit 8 Data Distributions (Math 6)	Length of the unit: 4 weeks

Purpose of the Unit: This unit will lay the foundation for data and statistical analysis. Students will develop understanding of data distribution to answer statistical questions, summarize the data using measures of center and display numerical data in in their context. This unit connects directly to what students will expand upon in the 7th grade in the unit Samples and Populations.

Common Core State Standards Addressed in the unit:

6.SP.3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.
6.SP.5. Summarize numerical data sets in relation to their context, such as by:
a. Reporting the number of observations.
b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.
6.SP.1. Recognize a statistical question as one that anticipates variability in the data related to the

question and accounts for it in the answers. For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.
6.SP.2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
6.SP.4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.

Big Ideas:	Essential Questions:
1. Measures of center summarize a numerical data set. 2. Measure of variation describes how the data varies. 3. Data displays are used to understand shape of distribution to be able to answer statistical questions. 4. There are strengths and weaknesses to different data representations and summary statistics.	1. What does the distribution tell me? 2. Which measure of center best describes data distribution? 3. What representation of the data will help you answer a statistical question?
Students will know: 1. measures of central tendency (mean, median, mode) 2. measures of variation (range, mean absolute deviation, IQR) 3. data can be summarized to answer statistical questions 4. attributes of dot plots, histograms and box plots	Students will be able to: 1. find measures of central tendency 2. find measures of variation 3. summarize and describe distributions by shape, center and variability 4. display numerical data on number lines, dot plots, histograms and box plots 5. solve problems and make predictions using summary statistics and displays of data as evidence

Significant task 1: Measures of central tendency and variation

This significant task will be spread across three investigations in the Data About Us book. In the first investigation students will examine data of students’ name lengths in line plots/dot plots compared to bar graphs. Using this data the students will find median, mode and range to describe the distribution. Students will then explore multiple strategies for finding the median and also create data sets that will fit determined values of both median and mode. Next, students will understand how they can use the mean to describe a set of data using information from the US Census. Students will find the mean of their class household size and compare it to the US Census average. The end of this task will have students use different data displays to answer questions about mean, median, mode and range to examine how to summarize the data using this found information. Throughout these tasks students will work in cooperative groups to solve the problems. Class discussions will focus on strategies to find the measures of central tendency and variability.

In this task, students will be able to:

- find measures of central tendency
- find measures of variation
- summarize and describe data sets using shape, patterns, center and variability
- display and analyze numerical data with dot plots

CCSS targeted in this task: 6.SP.1, 6.SP.2, **6.SP.3**, 6.SP.4, **6.SP.5**

Timeline: 8 days

Key vocabulary: mode, median, mean, outlier, range, line plot/dot plot
Resources: CMP Data About Us: Inv 1.1, 1.2, 3.1, 3.3

Significant task 2: Box plots and Histograms

This task is an investigation where students construct histograms and box plots to display and analyze numerical data. Students begin by understanding that a box plot is comprised of a five number summary (minimum, maximum, median, lower quartile and upper quartile), interquartile range, and how to construct a box plot given a specific set of data values through direct instruction. Students are then asked to construct a new box plot if values are added to the data set and analyze how this affects the mean, median and mode, and the five number summary. Next, students construct a histogram for a given set of data values and analyze what the histogram shows about the data. Again, direct instruction in the construction and attributes of the histogram will be presented. To end the task, students construct several box plots and histograms while describing the distributions. This part of the task will be done in small groups with class discussions focused on the construction of the graphs and peer assessment using the document camera.

In this task, students will:

- construct box plots
- construct histograms
- determine and interpret the five number summary
- determine and interpret the interquartile range
- understand how to find mean absolute deviation and its relationship to the values in a data set

This task directly targets the following standards: **6.SP.4 and 6.SP.5**

Timeline: 8 days

Key Vocabulary: box plot, minimum, maximum, upper quartile, lower quartile, median, interquartile range, mean absolute deviation, histogram and variability

Resources: CMP Common Core Investigation Guide: Investigation 5 Transition Kit

Common learning experiences: Box Plot Tool - http://illuminations.nctm.org/ActivityDetail.aspx?ID=77 Histogram Tool -- http://illuminations.nctm.org/ActivityDetail.aspx?ID=78
Common assessments including the end of unit summative assessment: Check up 1, 2, and 3 in CMP Assessment Resources Check up Inv. 5 Transition Kit

Teacher notes: • Process standards to highlight through instruction: reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, and use appropriate tools strategically. • When constructing and analyzing box plots students get confused about the length of the quartiles. Students think that if a quartile is longer it contains more data points instead of connecting that the length is a measure of the spread of the same number of data points in each quartile.

Windsor Public Schools
Curriculum Map for the Secondary Level
Grade 7 (on level), Grade 6 (honors)

Purpose of the Course (from CCSS): In Grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) **drawing inferences about populations based on samples.**

Name of the Unit: Unit 7 Samples and Populations (Integrated 6 Honors/Math 7)	Length of the unit: 4 weeks
Purpose of the Unit: This unit takes data representation skills developed in grade 6 and expands on the rigor, complexity and analysis in which the students solve problems comparing multiple distributions of data. Students also develop sampling techniques in order to generate samples of data that would be representative of a population and thus be able to generalize findings that describe that population and make predictions. This is the summative unit in grades 7 and in honors 6th grade. Honors 7th grade students (pre-algebra) have thus already completed this unit, and instead have an accelerated 8th grade unit focused on geometry (congruency, similarity and Pythagorean theorem).	
Common Core State Standards Addressed in the unit: **The unit also instructs the grade 6 standards for data analysis (CC.6.SP.1-5); however the target is to instruct to the grade 7 standards.**	

CC.7.SP.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

CC.7.SP.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.

CC.7.SP.4 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.

CC.7.SP.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.

Big Ideas:	Essential Questions:
1. There are strengths and weaknesses to different data representations and summary statistics. 2. In order to compare two sets of data you must have representations that are developed with the same parameters. 3. In order to generalize your findings to a population from a sample there must be random sampling to generate a representative sample minimizing any bias in the collection process.	1. What does the distribution tell me? 2. How do I compare two sets of data? 3. What are the strengths and weaknesses of sampling techniques?
Students will know:	Students will be able to:
1. measures of center and spread: mean, median (quartile 2), mode, range, quartile 1, quartile 3, minimum, maximum, percentile and inter-quartile range 2. attributes and effects of outliers on measures of center and spread 3. attributes of representations of data: box plots, histograms, dot plots, bar graphs 4. types of sampling and their pros and cons: random, systematic, convenience and voluntary response	1. describe a distribution in terms of shape, center and spread 2. create histograms and boxplots with and without technology 3. compare distributions of data using visual representations and summary statistics 4. analyze and describe the effect of an outlier on summary statistics and visual representations 5. evaluate sampling techniques for bias 6. conduct simulations to gather data to

5. types of bias present in sampling: voluntary response, leading questions, and convenience 6. simple Probability and simulations 7. proportions and percent	solve problems 7. conduct a study in which a hypothesis is developed, data is gathered, and then representations and analysis are used to form a conclusion

Significant task 1: Measures of central tendency and variation

This significant task will be spread across three investigations in the Data About Us book. In the first investigation students will examine data of students' name lengths in line plots/dot plots compared to bar graphs. Using this data the students will find median, mode and range to describe the distribution. Students will then explore multiple strategies for finding the median and also create data sets that will fit determined values of both median and mode. Next, students will understand how they can use the mean to describe a set of data using information from the US Census. Students will find the mean of their class household size and compare it to the US Census average. The end of this task will have students use different data displays to answer questions about mean, median, mode and range to examine how to summarize the data using this found information. Throughout these tasks students will work in cooperative groups to solve the problems. Class discussions will focus on strategies to find the measures of central tendency and variability.

In this task, students will be able to:

- find measures of central tendency
- find measures of variation
- summarize and describe data sets using shape, patterns, center and variability
- display and analyze numerical data with dot plots

CCSS targeted in this task: 6.SP.1, 6.SP.2, **6.SP.3**, 6.SP.4, **6.SP.5**

Timeline: 4 days

Key vocabulary: mode, median, mean, outlier, range, line plot/dot plot
Resources: CMP Data About Us: Inv 1.1, 1.2, 3.1, 3.3

Significant task 2: Which Peanut Butter is Better?

This significant task is grounded in investigation 1 of the Samples and Population book. Students are introduced to a large data set from Consumer Reports on the attributes of 37 varieties of peanut butter. The students are presented with the task of identifying those attributes which would lead to the selection of the best peanut butter as measured by the consumer's overall quality ratings. Over the course of the week students will be working in collaborative groups to create various visual representations including box plots and histograms both by hand and in with the graphing calculator. The focus is on taking the graphing skills developed in grade 6 and expanding students' capacity to compare distributions and explore the effects of outliers within the context of the peanut butter's attributes (regular/natural, creamy/chunky, salted/unsalted, name brand/store brand). By the end of the week, each group would have developed the necessary visual representations and summary descriptions of all of the attributes to create an argument to present to the class for the best type of peanut butter to choose. During the investigation students will also develop additional skills to create side by side comparison graphs, use the graphing calculator to construct box plots and histograms, and

the correct number of categories to use when creating a histogram.

CCSS targeted in this task: CC.7.SP.1, CC.7.SP.4

Timeline: 6 days
Key vocabulary: box plot, histogram, outlier, mean, median (quartile 2), mode, range, quartile 1, quartile, minimum, maximum, percentile and inter-quartile range
Resources: CMP2 Samples and Populations Investigation 1

Significant task 3: What Sample is Best?

This significant task is grounded in investigation 2 & 3 of the Samples and Population book. This investigation has portions that would most likely be introduced as a whole class with then either turn and talk moments or small group collaboration. Throughout the first half of the investigation the context is various surveys (honesty, hours of sleep, movie watching etc.) while developing an understanding of different types of sampling and bias. Students are also applying their percent, proportion and graphing skills developed earlier in the year. In the second half of the investigation, students will be in collaborative groups conducting two simulations which will demonstrate that without some type of randomization in your survey/sampling design you will tend to over represent a particular group. This will lead them to the final problem in the investigation where they will collaboratively develop a randomized simulation design to determine the number of chocolate chips needed for a recipe in order for a bakery to confidently market "five giant chocolate chips in every cookie!"

CCSS targeted in this task: CC.7.SP.1, CC.7.SP.2, & CC.7.SP.4

Timeline: 6 days
Key vocabulary: random, systematic, convenience and voluntary response samples, sample, population, simulation
Resources: CMP2 Samples and Populations Investigation 2.1, 2.2, 2.3, & 3.2

Common learning experiences:

Extra practice for both tasks can be found in the CMP Common Core Transition Kit – Investigation 5

Common assessments including the end of unit summative assessment:

Mathematical Reflections for Investigation 2 & 3 after Significant task 2 (Pg. 46 & 61).

Performance Assessment: Research 101 In this end of year assessment students will be working collaboratively to research and defend a question or issue of interest to them. Given a wide latitude of choice in topics, students will need to generate a question or series of questions that can be answered with data analysis of one variable (two variable study begin in grade 8), formulate a hypothesis, generate a sampling design that is sound, conduct analysis of the data including a visual representation

and come to some conclusion to their question with reflection of their hypothesis. Teachers will serve as a general expert available to consult with student groups. Student will generate a final defense and presentation of their issue/questions and will have choice in presentation options (video, poster, report etc). The final product will be assessed using the department rubric for performance based assessments with the audience being defined as the students on their interdisciplinary team. (Cross curriculum possibility here)

Teacher notes:

- Process standards to highlight through instruction: reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, and use appropriate tools strategically.
- When constructing and analyzing box plots students get confused about the length of the quartiles. Students think that if a quartile is longer it contains more data points instead of connecting that the length is a measure of the spread of the same number of data points in each quartile.
- For this unit, do not post the big ideas unless you post after the big idea is developed. Otherwise you will let the cat out of the bag so to speak.

Windsor Public Schools
Curriculum Map for the Secondary Level
Geometry

Purpose of the Course: This course is designed to emphasize the study of the properties and applications of common geometric figures in two and three dimensions. It includes inductive and deductive thinking skills used in problem solving real world situations. Powers of abstract reasoning, spatial visualization and logical reasoning patterns are improved through this course. Algebra is used throughout the course.

Name of the Unit: Unit 1 Transformations & the Introduction of Construction	Length of the unit: 15 blocks

Purpose of the Unit:
This is a foundational unit designed to reactive prior knowledge and introduce new vocabulary unique to this course. It has been a year and a half since students have worked formally with geometry concepts. In this unit students will to create and describe rigid transformations such as combinations of rotations, reflections and translations. The unit will also introduce the tools used in geometry: protractor, compass, straight edge and patty paper. The unit also defines angle relationships, including those formed by parallel lines and transversals.

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

G.CO.1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.

G.CO.5. Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.

G.CO.9. Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.

G.CO.2. Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).

G.CO.3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.

G.CO.4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.

G.CO.12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.

Big Ideas:	Essential Questions:
1. Shapes are constructed using points, lines, and planes. 2. Angles within triangles or angles created by intersecting, parallel, or perpendicular lines have special relationships 3. Transformations produce similar figures, congruent figures, and in application produce symmetry in design.	1. How are points, lines and planes used to build shapes? 2. How does knowing the measure of one angle help determine the measure of another angle? 3. How are geometric transformations related to congruence, similarity, and symmetry?
Students will know:	Students will be able to:
1. definitions of basic geometry terms 2. angle relationship names and meanings 3. construction techniques 4. difference between parallel and perpendicular 5. coordinate rules for reflection, rotation, and translation	1. use proper notation to name, draw and classify figures (lines, angles, plane figures) 2. make calculations using angle relationships 3. construct angles, segments, angle bisectors and perpendicular bisectors 4. calculate slopes to determine if lines are parallel, perpendicular or neither 5. identify transformations given a coordinate rule 6. construct compositions of transformations

Significant task 1: Composition of Transformations

Students will begin this task by analyzing each individual transformation on a coordinate plane. They will investigate each transformation to discover the coordinate rules for translation, rotation, and reflection. This will be conducted through power point presentations, individual class work with transformed figures on a coordinate plane, and conclude with full class discussions. As a result, students will also be able to identify the type of transformation applied to a figure based on the coordinate rule. Following this development the students will use these rules and create a composition of transformations project (see Performance Task).

This task directly targets the following standards: G.CO.2, G.CO.4, G.CO.3, G.CO.5.

Timeline: 4 blocks

Key Vocabulary: translation, reflection, rotation, isometry, composition, transformation, coordinate plane, image, pre-image, rigid, non-rigid, horizontal, vertical, counter-clockwise, clockwise

Resource Activities: Geometry-C transformation power points, 5.2 coordinate rules for translation, 5.1 coordinate rules for reflection, 5.3 coordinate rules for rotation, Transformation Project Rubric, Transformation Project Outline

Significant task 2: Geometric Reasoning and basic geometric definitions

This task is grounded in investigations from Chapter 1 of Discovering Geometry with a focus on inductive reasoning. The investigations will focus on the concepts of defining and classifying angles, triangles, polygons and parts of circles. Additionally students will be introduced to constructing angles and line segments building on their understanding gained in significant task 1. Students should work in small groups or with partners during the investigations. Full class discussions following the discovery task should focus on the inductive reasoning used in each investigation.

This task directly targets standards: G.CO.1, G.CO.4., G.CO.12.

Timeline: 5 blocks

Key vocabulary: line, line segment, plane, point, ray, collinear, coplanar, midpoint, bisect, angle, vertex, degree, measure, protractor, compass, congruent, angle bisector, adjacent angles, linear pair, vertical angles, complementary, supplementary, counterexample, inductive reasoning, deductive reasoning, right angle, acute angle, obtuse angle, skew, parallel, perpendicular, convex polygons, concave polygons, diagonal, perimeter, equilateral polygon, equiangular polygon, regular polygon, scalene, isosceles, equilateral triangle, base, base angles, vertex angle, right triangle, obtuse triangle, acute triangle, trapezoid, kite, parallelogram, square, rectangle, rhombus, circle, radius, center, chord, diameter, tangent, endpoints, concentric circles, arc, semicircle, minor arc, major arc, central angle

Resources: Discovering Geometry chapter 1 investigations (virtual pool, defining angles, special polygons, triangles, special quadrilaterals, circle terms), Discovering Geometry chapter 2 investigations (shape shifters, overlapping segments), Prentice Hall Practice and Problem solving work book 1-6, Discovering Geometry chapter 3 investigations (duplicating a segment, duplicating an angle, constructing a perpendicular bisector, constructing angle bisectors)

Significant task 3: Distance and Midpoint

The main focus of this task will be using a coordinate geometry approach to calculate midpoint and distance. Students will be reintroduced to the Pythagorean Theorem to help them discover the distance formula. In partners, students will be given line segments on a coordinate plane and asked to calculate the distance. Students will use the line segment as the hypotenuse of a right triangle and be guided through an informal proof to develop the distance formula. Next, students will apply this new formula to calculate the distance between two given coordinate points and identify its midpoint.

This task directly targets standards: G.CO.9., G.CO.12.

Timeline: 3 blocks

Key vocabulary: midpoint, distance, Pythagorean theorem, hypotenuse, leg, triangle, right triangle, coordinate, ordered pair, line segment

Resources: Discovering Geometry 9.5 investigation the distance formula or On Core 1-2 The Distance Formula, Prentice Hall Practice and Problem Solving workbook 1-7

Significant Task 4: Parallel Lines and Transversals

The last task focuses on linear relationship exploration that will continue within the context of slope relations. After viewing parallel and perpendicular lines through this algebraic lens, students will discover the special angle relationships that are formed by two parallel lines crossed by a transversal. This will be done through a student directed investigation with a partner. Each pair will use a straightedge to create two parallel lines and a transversal line and label the resulting angles 1-8. Students will use their protractor and measure each angle. They will then compare the angles in pairs and will discover which angles are congruent or supplementary. A full class discussion will follow so students can learn the proper conjectures to the comparisons they uncovered. These concepts of angles and line segments will be extended using perpendicular, angle bisector, and parallel line constructions.

This task directly targets the following standards: G.CO.9.

Timeline: 3 blocks

Key vocabulary: parallel lines, perpendicular lines, negative reciprocal, transversal, alternate interior angles, alternate exterior angles, corresponding angles, same-side interior angles, same-side exterior angles.

Resources: Discovering Geometry chapter 2 investigations (linear pair/vertical angles conjectures, which angles are congruent)

Common learning experiences:

- Journals 1.1-2.5
- Warm ups focused on introducing a topic
- Drop box geometry college unit 1 basics
- Drop box geometry honors chapter 1 Geometry Basics
- Prentice Hall Gold Geometry-practice and problem solving workbook chapter 1
- McDougal Littell Geometry Practice workbook chapter 1
- Geometry Study Guide for Reteaching and Practice chapters 1-3

Common assessments including the end of unit summative assessment:

- **Performance Task: Transformation Project** (after significant task 1) Students will create their own composition of transformations. Students will work individually to create their own figure to be placed in one of the four quadrants on a coordinate plane which will then be translated, rotated, and reflected into the other 3 quadrants. Students will go through peer assessment

during class to ensure their figure and coordinate rules follow the project directions. The project will be completed on a poster board along with a typed description of their project. Students will be presented to the class allowing students to reflect on their knowledge of the different isometries in the coordinate plane. For this task the mathematics will be graded using a task specific rubric. Students will also be graded using the problem solving rubric (school wide).

- End of Unit Test

Teacher notes:

- Process standards to highlight through instruction: construct viable arguments and critique the reasoning of others, use appropriate tools strategically, and attend precision.
- Some students will confuse midpoint formula and distance formula. (Add strategies to assist this problem)
- Students should make study aids to facilitate learning vocabulary such as a word wall, vocabulary notebook, or flash cards.
- Blocks for all units are defined as 90 minute periods.

Windsor Public Schools
Curriculum Map for the Secondary Level
Geometry

Purpose of the Course: This course is designed to emphasize the study of the properties and applications of common geometric figures in two and three dimensions. It includes inductive and deductive thinking skills used in problem solving real world situations. Powers of abstract reasoning, spatial visualization and logical reasoning patterns are improved through this course. Algebra is used throughout the course.

Name of the Unit: Unit 2 Triangle Congruence & Proof	Length of the unit: 12 blocks

Purpose of the Unit:

This unit is designed to develop the concept of congruent triangles through the use of rigid transformations. In the course of the unit, we will explore triangle properties through constructions to determine how and why angles and segments of triangles are related, and prove that triangles are congruent.

Common Core State Standards Addressed in the unit:

G.CO.10 Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180 degrees; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of

a triangle meet at a point

G.CO.6. Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.

G.CO.7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.

G.CO.8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.

G.CO.13 Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Big Ideas:	Essential Questions:
1. Characteristics allow us to name and categorize shapes. 2. Angles within triangles or angles created by intersecting, parallel, or perpendicular lines have special relationships. 3. Formulas and theorems in mathematics are proven.	1. How can two dimensional objects be described? 2. Will any three sides form a triangle? 3. How does knowing the measure of one angle help determine the measure of another angle? 4. How do you know that a formula or theorem is valid?
Students will know:	Students will be able to:
1. isosceles triangle properties 2. triangle inequalities 3. triangle congruence triplets 4. the differences among constructions, sketches and drawings of geometric figures	1. discover properties of an isosceles triangles 2. prove triangles are congruent using ASA, SAS, SSS and AAS 3. solve problems using triangle properties 4. construct triangles by duplicating segments and angles 5. discover the triangle sum conjecture

Significant task 1: Properties of Triangles

In the first task of this unit students will discover the triangle sum conjecture by completing an investigation in class with partners. The investigation will involve a pre-constructed triangle and its correlation to a straight angle. This discovery will help facilitate the solving of missing angles. Students will also test the triangle sum conjecture on their own constructions of triangles based on a segment

and angle they duplicate using a compass and straightedge. The properties of isosceles triangles will be studied. Students will gain the knowledge of the isosceles triangle conjecture and explore the attendant results of splitting an isosceles triangle along its line of symmetry.

Students will then discover the triangle inequality conjecture. Individually, students will get 4 sets of 3 line segments of different lengths and be told to construct a triangle with each set of sides. Students will learn the relationship of the sides of a triangle to one another and how a triangle's side length relates to its opposite interior angle. A full class discussion to form higher order cognitive connections will conclude this activity to ensure understanding of the inequality properties of triangles.

This task directly targets the following standards: G.CO.10, G.CO.13

Time line: 6 blocks

Key vocabulary: perpendicular bisector, vertex angle, base angle, legs, isosceles triangle, triangle sum conjecture, isosceles triangle conjecture, equilateral triangles, median, altitude, triangle inequality conjecture, side-angle inequality conjecture, triangle exterior angle conjecture, exterior angle, adjacent angle,

Resource Activities: Discovering Geometry chapter 3 investigations (construction of triangles, Discovering Geometry chapter 4 investigations (triangle sum, isosceles triangle conjecture, what is the shortest path from A to B, Where are the largest and smallest angles, Exterior angles of a triangle), On Core Mathematics: Triangle Sum Theorem 3-5

Significant Task 2: Establishing triangle congruence

Students will ascertain the triangle congruence shortcuts (SSS, SAS, ASA, and AAS) through construction based investigation. The class will be broken into 6 different groups. Each group will be given 3 parts of a triangle they must use to construct two different triangles using a compass and straightedge. A full class discussion will follow allowing students to share their results. Students will conclude that out of the 6 ideas tested (SSS, SAS, ASA, SAA, SSA, and AAA) there were only 2 (AAA, SSA) that allowed for the construction of different triangles. Following this class activity students will practice identifying if two marked triangles are congruent or if not enough information is provided.

This task directly targets the following standards: G.CO.6, G.CO.7, G.CO.8., G.CO.13

Timeline: 2 blocks

Key vocabulary: AAS, ASA, SSS, SAS, flow chart, paragraph proof, two column proof, CPCTC, corresponding, congruent

Resources: Discovering Geometry chapter 4.4 and 4.5 investigations, Prentice Hall Gold Geometry

Practice and Problem Solving workbook 4.2-4.3

Significant Task 3: Proving Triangle Congruence Properties

In the last task of this unit students will build on their logical structure of a deductive argument through the exploration of flow charts, paragraph and two column proofs. To begin, students will be placed in to small groups. Each group will be given a different proof with a list of reasons and statements that are not in order. They will cut out the statements and reasons and as a group restructure the order and paste the correctly completed proof on to a post it paper to share with the class. Each group will share their findings with the class.

Students will gradually be exposed to solving proofs starting with matching statements with their corresponding reasons and concluding with completing open ended proofs. A key definition students will use is CPCTC (corresponding parts of congruent triangles are congruent). This will allow students to establish pairs of angles or pairs of sides are congruent by proving two triangles are congruent and applying CPCTC.

This task directly targets the following standards: G.CO.6, G.CO.7, G.CO.8., G.CO.13

Timeline: 4 blocks

Key vocabulary: AAS, ASA, SSS, SAS, flow chart, paragraph proof, two column proof, CPCTC, corresponding, congruent

Resources: Drop box Geometry Honors chapter 4.7 and 4.8 notebook, Prentice Hall Gold Geometry Practice and Problem Solving Workbook 4.4, 4.7, On Core Mathematics Using Congruence 3-4, Study Guide Reteaching and Practice 4-2 and 4-3

Common learning experiences:

- Warm up should focus on the triangle properties
- Construction activities from Discovering Geometry chapter 3.7
- Journals 4.1-4.7
- Study Guide Reteaching and Practice chapter 4
- Prentice Hall Gold Geometry chapter 4
- Littell Geometry Practice workbook chapter 4
- Drop box Geometry honors chapter 4
- Drop box Geometry college unit 2

Common assessments including the end of unit summative assessment:

- End of unit Test

Teacher notes:

- Process standards to highlight through instruction: reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, use appropriate tools strategically, and attend to precision.
- Students find constructions challenging – the use of patty paper helps to address this issue.
- Students will develop at a different pace in regards to solving proofs. Differentiate this process by using fill in the blank proofs, proofs that need to be arranged in order, and open ended proofs.
- Students will need to develop their understanding of triangle properties. Help students see the connections between the triangle properties and proving triangles are congruent.

Windsor Public Schools
Curriculum Map for the Secondary Level
Geometry

Purpose of the Course: This course is designed to emphasize the study of the properties and applications of common geometric figures in two and three dimensions. It includes inductive and deductive thinking skills used in problem solving real world situations. Powers of abstract reasoning, spatial visualization and logical reasoning patterns are improved through this course. Algebra is used throughout the course.

Name of the Unit: Unit 3 Polygon Properties & Proofs	Length of the unit: 13 blocks

Purpose of the Unit:

This unit is designed to develop and apply properties of all polygons. The development of quadrilateral properties will be done using constructions and through proofs involving properties of parallelograms. Also, the angle sum property of triangles is extended to polygons in general

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)
G-CO Experiment with transformations in the plane

- **G.CO.11 Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals**
- G.CO.13 Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Big Ideas:	Essential Questions:

1. What makes polygons alike or different can be determined by an array of geometric properties. 2. All polygons can be built using triangles. 3. Angles within triangles or angles created by intersecting, parallel, or perpendicular lines have special relationships. 4. Formulas and theorems in mathematics are proven.	1. How can triangles be used to build all other polygons? 2. How does knowing the measure of one angle help determine the measure of another angle? 3. How do you know that a formula or theorem is valid?
Students will know: 1. polygon angle sums 2. parallelogram properties including properties of square, rectangles, and rhombi 3. trapezoid and kite properties	Students will be able to: 1. calculate missing angle measure 2. develop hierarchy of parallelograms 3. identify quadrilaterals based on given properties 4. differentiate between isosceles and non-isosceles trapezoids 5. construct polygons given a specified set of properties

Significant task 1: Polygon Sum Conjecture and its Exterior Angles

Students will develop the polygon sum formula working in small groups. Each group will be assigned a certain polygon (pentagon, hexagon, etc.). Within the group, each member will construct their own version of their polygon and measure its interior angles using a protractor. Each group will share their findings with the class that will be recorded in a chart. At the conclusion of the activity students will have discovered the polygon sum formula. Students will apply this formula to calculate the measure of missing angles, determine the number of sides of a polygon given the total angle measurement, and determine individual angles in any regular polygon.

Students will also discover the exterior sum of any polygon is 360 degrees. This will be done using the jigsaw method. Four or five groups will be formed, each assigned with a different polygon. Each group will extend each side of their polygon for form exterior angles. Students will measure each angle using their protractor to determine the sum of the exterior angles. After the students complete the jigsaw the class will conclude with a whole group discussion making connections between the interior sum conjecture and the exterior sum conjecture.

This task directly targets standards: G.CO.11

Timeline: 3 blocks

Key vocabulary: interior, exterior, quadrilateral, pentagon, hexagon, heptagon, octagon, nonagon, decagon, dodecagon, polygon sum conjecture, equiangular, equilateral, regular, exterior angle sum conjecture, supplementary

Resources: Discovering Geometry chapter 5 investigations (is there a polygon sum formula, is there an exterior angle sum)

Significant task 2: Properties of Parallelograms, Rectangles, Squares, and Rhombi

Through a teacher lead discussion, students will learn the properties of parallelograms, rectangles, squares, and rhombi. Students will be given graphic organizers to help differentiate among the special parallelograms. Students will further their understanding of these properties by comparing and contrasting different quadrilaterals in a small group setting. The activity involves a variety of quadrilaterals some with markings and some without. The students are to classify the quadrilaterals based on the distinguished markings or will need to add in the markings given then name of a specific quadrilateral. Understanding these properties is vital when we prove quadrilateral properties at the end of this unit and when students work on their mystery quadrilateral project.

Students will also complete a task on the construction of a square and rectangle by applying their previous knowledge of copying a line segment and perpendicular bisectors. They will then explain the similarities and differences between their constructions.

This task directly targets standards: G.CO.11, G.CO.13

Timeline: 4 days

Key vocabulary: parallelogram, opposite, diagonal, bisect, perpendicular bisector, congruent, rhombus, square, rectangle, equiangular, equilateral, supplementary

Resources: Prentice Hall Geometry Practice and Problem Solving workbook 6-3, 6-4, 6-5, and 6-7, McDougal Littell Geometry Practice workbook 8.6, Mystery Quadrilateral Rubric, Mystery Quadrilateral Project

Significant Task 3: Kites and Trapezoid Properties

This task consists of two activities. In this first activity students will investigate the diagonals and angles of kites using patty paper in small groups. They start by drawing two connected segments of different lengths on the piece of patty paper. Student will continue this activity through individual guided instructions to develop the properties of kite.

Following this activity, students will break into partners to discover the properties of trapezoids. Students will use a straightedge to draw two parallel lines of different lengths. The students will use their protractors to find the sum of measures of each pair of consecutive angles between the parallel lines. This activity will be extended to investigate isosceles trapezoids. A full class discussion will follow these investigations allowing students to share their new properties and also apply them to practice problems provided by the teacher.

This task directly targets the following standards: G.CO.11

Timeline: 2 days

Key vocabulary: trapezoid, midsegment, isosceles trapezoid, kite, vertex, nonvertex perpendicular bisector, diagonal, base angles, consecutive, supplementary, average

Resources: Discovery Geometry chapter 5 investigations (what are some properties of kites, what are some properties of trapezoids), Study Guide for Reteaching and Practice 5-5

Significant Task 4: Proving Quadrilateral Properties

In the last task of this unit students will continue to build on their logical structure of a deductive argument through the exploration of flow charts, paragraph and two column proofs on quadrilateral properties. To begin, students will be placed in to small groups. Each group will be given a different proof with a list of reasons and statements that are not in order. They will cut out the statements and reasons and as a group restructure the order and paste the correctly completed proof on to a post it paper to share with the class. Each group will share their findings with the class.

Their analysis will include finding errors in completed proofs, filling in missing reasons or statements, or arranging a list of reasons and statements in the proper sequence. This will conclude with students having the ability to create their own proofs on the end of the unit Test.

This task directly targets the following standards: G.CO.11

Timeline: 4 days

Key vocabulary: two column proofs, flow charts, paragraph proofs, ASA, SAS, SSS, AAS, CPCTC

Resources: Study Guide for Reteaching and Practice 5-1 and 5-2, On Core Mathematics 4-2, 4-3, 4-4

Common learning experiences:

- Warm ups should focus on quadrilateral properties, polygon sum conjectures, and proving quadrilateral properties
- Journals 5.1-5.7
- On-Core Mathematics- Geometry http://www.sascurriculumpathways.com/portal/ lessons, presentations, interactives
- Drop box geometry college unit 4 polygons
- Drop box geometry honors chapter 5
- Prentice Hall Gold Geometry-practice and problem solving workbook chapter 6
- McDougal Littell Geometry Practice workbook chapter 8
- Geometry Study Guide for Reteaching and Practice chapters 5

Common assessments including the end of unit summative assessment:

- **Performance Task: Mystery quadrilateral** Students will conclude this unit by completing a performance assessment called Mystery Quadrilaterals. Students will be broken up into small groups and given a rubric instructing the breakdown of the project. Each group will be given the same introduction about a crime committed by a quadrilateral but a different list of suspects (ordered pairs) to ensure each group works independently from the class. Each suspect contains

4 ordered pairs that are to be graphed and analyzed using slope and distance. Once the group classifies that polygon, that suspect is cleared. In the end each group will have narrowed down their list and identify the criminal. Each group will turn in a completed packet with all of their calculations and explanations. Students will also be graded using the problem solving rubric (school wide)

- End of Unit Test

Teacher Notes:

- Process standards to highlight through instruction: reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, use appropriate tools strategically, and attend precision.
- The mystery quadrilateral activity can be differentiated by assigning each group only one quadrilateral (different than each other group) to investigate and the culprit can be identified as a class.
- Students will commonly interchange rectangle and square. Students should have a graphic organizer displaying the progression of parallelograms and its subcategories.
- Students will develop at a different pace in regards to solving proofs. Differentiate this process by using fill in the blank proofs, proofs that need to be arranged in order, and open ended proofs.

Windsor Public Schools
Curriculum Map for the Secondary Level
Geometry

Purpose of the Course: This course is designed to emphasize the study of the properties and applications of common geometric figures in two and three dimensions. It includes inductive and deductive thinking skills used in problem solving real world situations. Powers of abstract reasoning, spatial visualization and logical reasoning patterns are improved through this course. Algebra is used throughout the course.

Name of the Unit: Unit 4 Dilations and Similarity	Length of the unit: 10 blocks

Purpose of the Unit:

This unit is designed to develop the concept of similar figures through the use of non-rigid transformations (dilation). Students will cultivate criteria that can be used to show two triangles are similar. This concept of similarity will be applied to real world problems and mathematical theorems.

Common Core State Standards Addressed in the unit: (Provide the link to the specific standards.)

- **G-SRT.5. Use triangle congruence and similarity criteria to solve problems and to prove**

relationships in geometric figures.

- G-SRT.1. Verify experimentally the properties of dilations:
- G-SRT.1a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.
- G-SRT.1b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.
- G-SRT.2. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all pairs of angles and the proportionality of all pairs of sides.
- G-SRT.3. Use the properties of similarity transformations to establish the AA criterion for similarity of triangles.
- G-SRT.4. Prove theorems about triangles using similarity transformations.
- G.C.1. Prove that all circles are similar.

Big Ideas:	Essential Questions:
1. Transformations produce similar figures, congruent figures, and in application produce symmetry in design. 2. Similar shapes have the same general shape, congruent corresponding angle measures, and have corresponding sides scaled proportionally. 3. Formulas and theorems in mathematics are proven.	1. How are geometric transformations related to congruence, similarity, and symmetry? 2. How do you know if shapes are similar or congruent? 3. How do you know that a formula or theorem is valid?
Students will know:	Students will be able to:
1. the definition of similarity 2. the Pythagorean Theorem 3. strategies to prove triangles are similar	1. write and solve proportions 2. construct similar figures 3. find the center of dilations and perform dilations 4. calculate scale factor from a dilation 5. prove triangles are similar

Significant task 1: Constructing Dilations and Similarity

Students will start off this task by investigating the characteristics of similar polygons created by dilation. Students will be broken into partners where they will analyze two similar hexagons. Through guided

steps students will measure the angles and sides to discover similar polygons have corresponding congruent angles and proportional sides. After a brief class discussion on their discovery students will move on to creating their own dilations.
Continuing with their partners, students will use their compass and straightedge to complete two packets on drawing dilations that focus on student directed investigations. Students will create dilations given scale factors and also determine scale factors given a set of similar figures.

This task directly targets the following standards: G-SRT.1, G-SRT.1a, G-SRT.1b, G-SRT.2, G.C.1.

Timeline: 4 blocks

Key vocabulary: dilation, scale factor, center of dilation, non-rigid transformation, similarity, corresponding, proportional, ratio

Resources: Discovering Geometry chapter 11 investigations (what makes polygons similar, dilations on the coordinate plane), On Core Mathematics 5-2 and 5-4

Significant task 2: Triangle Similarity shortcuts and Indirect measurement

Students will investigate triangle similarity and determine how much information is sufficient to prove triangles are similar. This ties into unit 2 where students investigated triangle congruency using a very similar format of testing all the possible shortcuts. This task will be conducted individually. The first shortcut students will try to prove is AA (starting with AA will eliminate ASA and SAA to be conducted). Everyone will draw a triangle on a piece of paper. The class will then try to construct a second triangle making sure 2 of their corresponding angles are congruent. After evaluating corresponding sides and angles the class will discuss their findings. The same concept will be done with SSS and SAS.

Students will use their new conjectures to determine missing sides and angles in triangles. They will also be able to determine if two triangles are similar given certain pieces of information. Students will use their knowledge of similar triangles to calculate the height of objects through indirect measure.

This task directly targets the following standards: G-SRT.2, G-SRT.3, G-SRT.4, G-SRT.5

Timeline: 4 blocks

Key vocabulary: AA, SSS, SAS, proportional parts, corresponding, indirect measure,

Resources: Discovering Geometry chapter 11 investigations (Are AA SSS SAS similarity shortcuts, Mirror Mirror), On Core Mathematics 5-5

Significant Task 3: Proportions with Area and Volume

Students will conduct an investigation on the relationship between areas of similar figures. This activity will be done in class with a partner. Through a series of steps students will compare similar polygons dimensions with their resulting areas. In the end each partnership will discover the proportional areas conjecture. Students will then move on to proportions with volume. Through a comparable sequence each partnership will discover the proportional volume conjecture. At the conclusion of these activities

a full class discussion will be held to examine how to properly interchange scale factor, area proportions, and volume proportions.

This task directly targets the following standards: G-SRT.5, G-SRT.2.

Timeline: 2 blocks

Key vocabulary: proportional parts, corresponding, indirect measure, proportional areas conjecture, ratios, surface area, volume, cone, cylinder, prism, pyramid, proportional volume conjecture, height, slant height

Resources: Discovering Geometry chapter 11 investigations (Area Ratios, Surface area ratios, volume ratios), McDougal Littell practice workbook 6.4 and 6.5

Common learning experiences:

- Warm ups related to similar figures
- Students need to review writing and solving proportions as an introduction of this unit
- Journals
- Drop box geometry college unit 3
- Drop box geometry honors chapter 11
- Prentice Hall Gold Geometry-practice and problem solving workbook chapter 7
- McDougal Littell Geometry Practice workbook chapter 6
- Geometry Study Guide for Reteaching and Practice chapters 7
- On Core Mathematics chapter 5

Common assessments including the end of unit summative assessment:

- End of Unit assessment

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, model with mathematics, and look for and express regularity in repeated reasoning.
- Students might need a refresher on proportions and the cross product before you begin the unit.
- Students might need to use a formula sheet when dealing with area and volume proportions.
- Students struggle with proof – suggestions are eagerly accepted, but scaffolding is needed.

Geometry

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Name of the Unit: Unit 5 Circle Properties	Length of the unit: 8 blocks
Purpose of the Unit: This unit is designed to guide the understanding of how circle properties are developed using triangle and angle properties. Constructions with inscribed polygons are used to verify the interconnected nature of polygon and circle properties.	

Common Core State Standards Addressed in the unit:

- **G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.**
- **G.C.2 Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.**
- **G.C.5 Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.**
- G.CO.1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
- G.C.3 Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.

Big Ideas:	Essential Questions:
1. The constant pi is defined as the ratio of the circumference of a circle to its diameter. 2. Arc length and circumference of a circle can be calculated and applied to real life	1. How are chords, arcs, angles, and tangents of a circle related? 2. How can the properties of a circle be used in real world situations?

situations.	
Students will know: 1. properties of circles 2. relationships between arcs and angles 3. difference between arc length and arc measure	Students will be able to: 1. name and draw parts of circles 2. make calculations using angle relationships 3. calculate arc length and arc measure

Significant task 1: Tangent and Chord Properties

Students will investigate tangent properties in partners. Each partner will use their compass, straightedge, and protractor to discover the tangent conjecture and tangent segment conjecture. A full class discussion will immediately follow allowing students to make the connection of kites to the tangent segment conjecture.

Students will then move on to chord properties and work on them with their partner. The information on central angles, minor arcs, major arcs, semicircles, chord properties will be given in a classroom lecture. Once students have recorded these properties they will explore inscribed angles in small groups and discover the inscribed angles theorem using a compass, straightedge, and protractor.

This task directly targets the following standards: G.CO.1, G.C.2, G.C.3

Timeline: 4 days

Key vocabulary: tangent, chord, central angle, arc, minor arc, major arc, inscribed angle, concentric circles, radius, diameter, semicircle, tangent conjecture, tangent segment conjecture, center,

Resources: Discovering Geometry chapter 6 investigations (going off a tangent, tangent segments, defining angles in a circle, chords and their central angles, chords and the center of the circle, perpendicular bisector of a chord), Geometry Teachers Activities Kit 4-11

Significant task 2: Proving circle conjectures

Students will build on task 1 of this unit and develop a deeper understanding of inscribed angle relationships and cyclic quadrilateral properties. In partners students will construct circles, chords, and inscribed angles to discover two more conjectures involving inscribed angles, the cyclic quadrilateral conjecture, and parallel lines intercepted arc conjecture. Following this activity students will be given an in class assignment to be completed individually where they will apply tangent and chord properties to calculate missing central angles, inscribed angles, minor arcs, major arcs, chord lengths and be able to justify their solution by explaining which conjecture or definition they used and why.

This task directly targets the following standards: G.CO.1, G.C.2, G.C.3,

Timeline: 2 days

Key vocabulary: inscribed angle, cyclic quadrilateral, inscribed angles intercepting arcs conjecture, angles inscribed in a semicircle conjecture, parallel lines intercepted arcs conjecture,

Resources: Discovering Geometry chapter 6 investigations (inscribed angle properties, inscribed angles intercepting the same arc, cyclic quadrilaterals, arcs by parallel lines), Discovering Geometry chapter 6.4, Geometry Teachers Activities Kit 4-8 and 4-9A, Littell Geometry Practice Work book 10.3,

Significant Task 3: Arc Length and the Equation of a Circle

Through a whole class discussion, arc length will be explored. Students will learn how to differentiate between arc length and arc measure. By comparing a variety of circles with different central angles, the class will discover that arc length is a proportional part of the circumference.

Lastly the equation of a circle will briefly be examined by utilizing the Pythagorean Theorem. Students will get into small groups and work on a student directed activity provided by the common core on deriving the equation of a circle. Students will be responsible for understanding the parts of the equation of a circle and be able to construct a circle given a specific equation.

This task directly targets the following standards: G.CO.1, G.C.2, G.C.5, G.GPE.1

Timeline: 2 days

Key vocabulary: circumference, arc length, arc measure, π, equation of a circle, Pythagorean theorem. Center, radii, revolutions, velocity, diameter, ratio,

Resources: Discover Geometry chapter 6 investigations (a taste of pi), Discovering Geometry Condensed lessons 6.7 Arc Length, Drop Box power point Geometry Honors 6.7, On Core Mathematics 8.1

Common learning experiences:

- In preparation for the next unit, warm ups need to focus on calculating the area of shapes students have seen prior to this year (triangles, rectangles, parallelograms, trapezoids, and circles)
- Journals 6.1-6.7
- Study Guide Reteaching and Practice chapter 9
- Prentice Hall Gold Geometry chapter 10.6-10.8, chapter 12
- Littell Geometry Practice workbook chapter 10
- Drop box Geometry honors chapter 6
- Drop box Geometry college unit 6 circles and conics
- On Core Mathematics chapter 7

Common assessments including the end of unit summative assessment
• End of Unit Test

Teacher notes:
• Process standards to highlight through instruction: reason abstractly and quantitatively, model with mathematics, and attend to precision • Before starting the significant tasks of this unit, review basic circle vocabulary from unit 1 • Students should make study aids to facilitate learning vocabulary • Students attend to precision • Students should be strongly advised to use proportions to calculate arc length. • Students are prone to confuse arc length and arc measure

Windsor Public Schools
Curriculum Map for the Secondary Level
Geometry

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Name of the Unit: Unit 6 Areas and Volumes	Length of the unit: 11 blocks
Purpose of the Unit: In this unit students will explore and define two dimensional and three dimensional objects. Students will discover formulas for finding area and surface area and use them to solve real world applications. The comparison and contrast of surface area and volume will deepen student understanding of solids.	

Common Core State Standards Addressed in the unit:
C.9-12.G.GMD.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.*
CC.9-12.G.GMD.4 Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional

objects.

CC.9-12.G.MG.1 Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).*

CC.9-12.G.MG.2 Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).*

Big Ideas:	Essential Questions:
1. All formulas for volume are built upon the idea that the area of the base is multiplied by the number of layers in the object (the height. 2. Volume is the amount of space inside a three-dimensional object measured in unit cubes 3. Formulas and theorems in mathematics are proven.	1. What does volume measure? 2. Where in the real world will you need to measure volume? 3. How do time, mass, volume, and density relate to each other? 4. How do you know that a formula or theorem is valid?
Students will know:	Students will be able to:
1. names of three dimensional and two dimensional shapes 2. the formulas for finding surface area and volume of cylinders, pyramids, cones, spheres, and prisms.	1. derive the volume formulas from area formulas 2. use volume to make calculations of cylinders, pyramids, cones, and spheres 3. differentiate between surface area and volume

Significant task 1: Area Formulas Reviewed and Applied

There are two formulas that will be new to the class. One formula will be finding the area of a regular polygon. Students will derive this formula with a partner. By investigating polygons and the isosceles triangles formed within the shapes, students will acquire the formula that produces the total area. A full class discussion will follow to make sure students understand all of the properties of the apothem.

The second formula that will be new is the sector of a circle. This will be investigated as a whole class. Students will compare and contrast the sector of a circle formula to the arc length formula.

This task directly targets the following standards: CC.9-12.G.GMD, CC.9-12.G.MG.1

Timeline: 2 blocks

Key vocabulary: base, height, apothem, perimeter, triangle, diagonal, regular, arc length, sector, circle, radius, diameter,

Resources: Littell Geometry Practice workbook 11.1 practice, Littell Geometry Practice workbook 11.5 practice, Prentice Hall Geoemtry Practice and Problem solving 10-1 and 10-7, Discovering Geometry chapter 8 investigations (area formula for regular polygon)

Significant task 2: Surface Area

Students will extend their knowledge of two dimensional areas to three dimensions in finding surface area of cylinders, prisms, cones, and spheres and other complex 3D figures. A brief class discussion on the differences among the solid figures will take place before surface area calculations begin. This will allow students to recall previous knowledge of 3D figures and key vocabulary words such as base, lateral face, height, and slant height.

In the first task students will be assigned is to calculate the surface area of a shoe box using any method they choose. The class will be broken into small groups. Each group will record their calculations on post it paper and will share their findings with the class. As a class, students will derive the surface area formula for a prism. Following this activity the other SA formulas will be introduced. In their small groups, students will find the surface area of a variety of solids provided by the teacher. This activity will extend to students comparing the surface area of different solids in real world situations (some examples would include soup cans, tents, basketballs, and books).

This task directly targets the following standards: CC.9-12.G.GMD.4, CC.9-12.G.MG.

Timeline: 4 blocks

Key vocabulary: surface area, solid, lateral surface area, faces, base, lateral face, cylinder, cone, prism, pyramid, slant height, height

Resources: Geometry Teacher Activities Kit 6-7, Drop Box geometry honors 8.7 power point, Discovering Geometry Condensed lessons 8.7

Significant Task 3: Volume and Density

Students will keep building on this unit and will develop volume formulas and use them to solve modeled real world problems. First students will be introduced to new vocabulary. This will be done through a power point presentation to allow students to visually see the difference between oblique solids and right solids. Students will develop the volume formulas working backwards. Students will be broken into small groups. Each group will be assigned a different solid with its measurements and volume. (2 different prisms, 2 different pyramids, a cone, a cylinder, and a sphere). The groups will analyze their 3D image and justify how the volume was calculated and record it on post it paper. Each group will present their findings to the class and leave their posters scattered around the room to be used as references. Real world problems involving solids such as ice cream cones, doorstops, pools, and ice trays will be investigated using their knowledge of volume. The unit will conclude with a Performance Task focused on maximizing volume and minimizing surface area using any solid of their

choosing.

Students will learn about displacement through a hands on activity involving a container of water and an irregular shaped solid. Each group will have a container of water and a rock and will attempt to calculate their rocks volume without a scale. This activity will lead to a class discussion about density that will tie in to real world application problems.

Timeline: 5 blocks

Keywords: density, displacement slant height, prism, pyramid, cylinder, cone, sphere, hemisphere, lateral area, total surface area, polyhedron, face, edges, vertex, tetrahedron, oblique prism, right prism, altitude,

Resources: Drop Box Geometry Honors 10.1 power point, Prentice Hall Geometry Practice and Problem solving workbook 11-4, Geometry Teachers Activity Kit 6-8, Cereal Box Rubric, Cereal Box Activity: Maximizing Area while Minimizing Surface Area

Common learning experiences:

- Warm ups should focus on area, surface area, volume, and density
- Journals 8.1-8.7 and 10.1-10.6
- Drop box geometry college unit 7 area, and unit 8 surface area/volume
- Drop box geometry honors chapter 8 and chapter 10
- Prentice Hall Gold Geometry-practice and problem solving workbook chapter 10 and 11
- McDougal Littell Geometry Practice workbook chapter 11 and 12
- Geometry Study Guide for Reteaching and Practice chapters 11 and 12
- On Core Mathematics chapter 9 and 10

Common assessments including the end of the unit summative assessment:

- End of Unit Test
- **Performance Task: Maximizing Container Activity** Students will be assigned a task to design a cereal box container that maximizes volume while minimizing surface area given certain parameters. Students will take an ordinary box of cereal of their choosing, but it must be brand new. They will calculate the dimensions of the box and then calculate the surface area and the volume of the box. In manufacturing, the cardboard used in a cereal box costs the company profits. The students' goal is to re-design the cereal box such that we have the same volume but a more efficient (smaller) surface area (we want to minimize the surface area of the box while keeping the same volume of cereal). Once the students find the smallest surface area with the same volume, they will construct a new box for their cereal using the original package, cut and tape. For this task the mathematics will be graded using a task specific rubric. Students will also be graded using the problem solving rubric (school wide)

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, model with mathematics, and look for and make use of structure
- Students confuse surface area and volume of pyramids and cones because they interchange slant height and height. Emphasize height must always be perpendicular with the base.
- Students confuse height of the base with the height of the solid. Emphasize the "h" in the solid formulas always represents the distance between the bases.
- Students should be strongly advised to use proportions to calculate sector area.

Windsor Public Schools
Curriculum Map for the Secondary Level
Geometry

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Name of the Unit: Unit 7 Trigonometric Ratios & Pythagorean Theorem	Length of the unit: 10 blocks
Purpose of the Unit: This unit is designed to build on prior knowledge of the Pythagorean Theorem and right triangle properties. As an extension, students will develop the basic trigonometric ratios as well as get introduced to the unit circle.	

Common Core State Standards Addressed in the unit:

CC.9-12.G.SRT.8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

CC.9-12.G.SRT.6 Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles

CC.9-12.G.SRT.7 Explain and use the relationship between the sine and cosine of complementary angles.

Big Ideas:	Essential Questions:
1. Trigonometric ratios are used to find	1. How can trigonometric ratios determine

missing angles in right triangles. 2. Formulas and theorems in mathematics are proven.	angle measures? 2. How do you know that a formula or theorem is valid?
Students will know: 1. if a triangle is a right triangle, acute, or obtuse based on its side lengths 2. how to use special right triangles to determine angle measurement 3. definitions of basic trig ratios 4. how to write trig ratios and use them to determine side length or angle measure	Students will be able to: 1. solve problems using special right triangles 2. explain how special right triangle relationships and trig relationships derive from Pythagorean theorem 3. solve problems using trig ratios

Significant task 1: Pythagorean Theorems application to all triangles

There are two activities involved with significant task 1. In the first task students will re-discover the Pythagorean Theorem using a construction activity. Students will work in partners. Each partner will be given a work sheet with a right triangle and three squares attached to each side of the triangle. Through guided instructions students will use scissors, a compass, and a straightedge to confirm the validity of the Pythagorean Theorem. Following this activity students will apply the Pythagorean Theorem to solve real world problems involving baseball fields, ladders, and carpets as well as finding unknown lengths in polygons and solids.

The second task students will be applying the Pythagorean theorem to all triangles. Students will be working in partners and will need string, rulers, paper clips and protractors. The class will be given 10 different groups of triangle side lengths. Each group of side lengths will be made into a triangle. Using the protractor the students will determine if the triangle is obtuse, acute, or right. They will also apply the side lengths into the Pythagorean Theorem. A full class discussion will conclude this activity to ensure that students will be able to recognize obtuse, acute, and right triangles based on side lengths.

This task directly targets the following standards: **CC.9-12.G.SRT.8**

Timeline: 2 blocks

Key vocabulary: special right triangle, radical, square root, converse, Pythagorean Theorem, acute, obtuse, right, leg, hypotenuse,

Resources: Discovering Geometry chapter 9 investigations (the three sides of a right triangle, is the converse true), Study Guide for Reteaching and Practice 8-3, Prentice Hall Geometry Practice and Problem solving workbook 8-1

Significant task 2: Special Right Triangles

Collaboratively, students will work in small groups to investigate and discuss 30-60-90 and 45-45-90

triangle relationships. This will be done in two activities. The first activity will have students investigate isosceles right triangles (45-45-90). Students will draw 8 different isosceles right triangles starting with the legs being 1cm, then 2cm, and so on. Using the Pythagorean theorem students will calculate the hypotenuse of each triangle. Using a table, students will derive the relationship between the leg and the hypotenuse of all isosceles right triangles.

In the second task students will be investigating 30-60-90 triangles in their small groups. This activity will being with a full class introduction. Students will dissect an equilateral triangle into two congruent triangles by constructing a perpendicular bisector. Students will use a protractor and ruler to confirm they have created a 30-60-90 triangle and will discover the shorter leg is half the length of the hypotenuse. Once this is established students will continue in their small groups. They will draw more 30-60-90 triangles, record their lengths in a chart, and in the end discover the 20-60-90 triangle conjecture.

Students will complete a performance assessment project called The Pythagorean Spiral to display their understanding of special right triangles.

This task directly targets the following standards: CC.9-12.G.SRT.8 , CC.9-12.G.SRT.6

Timeline: 4 blocks

Key vocabulary: isosceles right triangles, leg, hypotenuse, 30-60-90 triangle conjecture, radicals, radicand, simplify, square root

Resources: Discovering Geometry chapter 9 investigations (isosceles right triangles, 30-60-90 triangles), Pythagorean Spiral Rubric, Pythagorean Spiral Project

Significant Task 3: Trigonometric Ratios

A teacher led discussion of sine, cosine, and tangent relationships will begin this task. Students will be given graphic organizers that include information of SohCahToa, angle of elevation, and angle of depression. This graphic organizer will include the definitions of sine, cosine, and tangent, their ratios and how they pertain to a right triangle, and an example of each completely done out.

After this introduction students will break up into small groups. Each group will be given a different set of problems involving sailboats, light houses, ladders, and buildings. Using trigonometric ratios the groups will be able to figure out angle of elevation, angle of depression, building heights, and ocean distance.

This task directly targets the following standards: CC.9-12.G.SRT.8, CC.9-12.G.SRT.6, CC.9-12.G.SRT.7

Timeline: 2 blocks

Key Vocabulary: sine, cosine, tangent, SOHCAHTOA, inverse functions, angle of elevation, angle of depression

Resources: Discovering Geometry Condensed Lessons 12.1 and 12.2, Study Guide for Reteaching and Practice (8-5, 8-6 and 8-7), Prentice Hall Geometry Practice and Problem solving workbook 8-4 practice

Significant Task 4: The Unit Circle

In the last task students will get introduced to the Unit Circle. The activity will be done in small groups. Students will be given a mini lab activity where they will create the unit circle by following a series of steps and applying their knowledge of special right triangles. While they construct the unit circle they will record their sine, cosine, and tangent values in the table provided in the packet. At the conclusions of this activity a full class discussion will be held. This will allow the class to share their discoveries of the unit circle and how it relates to the previous topics we learned about throughout this chapter. This is only a brief introduction. Students will work on application problems when they take Pre-Calculus.

This task directly targets the following standards: CC.9-12.G.SRT.8, CC.9-12.G.SRT.6, CC.9-12.G.SRT.7.

Timeline: 2 blocks

Key Vocabulary: tangent, cosine, sine, unit circle, radical, x-value, y-value, ordered pair, Pythagorean theorem

Resources: Drop Box Geometry Honors Unit 12 (unit circle lab packet)

Common Learning experiences:

- In preparation for the probability in unit 8, warm ups need to include calculating simple probability
- Journals 9.1-9.5 and 12.1-12..3
- Drop box geometry college unit 9 trig
- Drop box geometry honors chapter 9 and chapter 12
- Prentice Hall Gold Geometry-practice and problem solving workbook chapter 8
- McDougal Littell Geometry Practice workbook chapter 7
- Geometry Study Guide for Reteaching and Practice chapters 8
- On Core Mathematics chapter 6
- Geometry Teachers Activities Kit 4-15

Common Assessments including the end of the unit summative assessment:

- End of Unit Test
- **Performance Task: The Pythagorean Spiral** Students will work in partners and use their creativity to make a spiral pattern involving the Pythagorean Theorem and special right triangles. Students will use poster board, markers, color pencils, rulers, compasses, and protractors. To begin students will create a right triangle based on dimensions designated by the teacher. Using the Pythagorean Theorem they will calculate the length of the hypotenuse. Using the hypotenuse of the original triangle and having that represent a leg now, a new right triangle will be created. This will start the spiral affect. At least 18 triangles must be constructed. Students will be responsible for having all calculations neatly recorded on a separate sheet of paper to be turned in with their final poster. The students will be graded

using a task specific rubric as well as the problem solving rubric (school wide).

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, model with mathematics, and look for and make use of structure.
- Students are not careful about legs vs hypotenuse in Pythagorean thm
- Briefly review simplifying radicals before significant task 2
- Students need to learn how to use sin, cos, tan as well as inverse functions on their calculators.
- Students struggle to identify angle of depression since the line of sight is not normally drawn in.

Windsor Public Schools
Curriculum Map for the Secondary Level
Geometry

Purpose of the Course: This course is designed to emphasize the study of the properties and applications of common geometric figures in two and three dimensions. It includes inductive and deductive thinking skills used in problem solving real world situations. Powers of abstract reasoning, spatial visualization and logical reasoning patterns are improved through this course. Algebra is used throughout the course.

Name of the Unit: Unit 8 Probability	Length of the unit: 8 blocks

Purpose of the Unit:

This unit is designed to have students use set theory to help calculate basic probabilities and investigate the role of permutations and combinations in probability. Students will also learn how to determine the probability of mutually exclusive events, overlapping events, independent events, and dependent events. Previously, students studied simple probability and independent compound events in grade 7 through the construction of samples spaces, tree diagrams and area models.

Common Core State Standards Addressed in the unit:

S.CP.1 Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not").

S.CP.3 Understand the conditional probability of A given B as P(A and B)/P(B), and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.

S.CP.6 Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the answer in terms of the model.

S.CP.2 Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.

S.CP.4 Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.

S.CP.5 Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.

S.CP.7 Apply the Addition Rule, P(A or B) = P(A) + P(B) - P(A and B), and interpret the answer in terms of the model.

Big Ideas:	Essential Questions:
1. As you perform more trials, the experimental probability of a situation will converge with the theoretical probability 2. Probabilities can be used to make predictions	1. When will the theoretical and experimental probabilities be the same? 2. How can you represent a situation to find all possible outcomes? 3. Does the probability of one event affect the probability of another? How?
Students will know:	Students will be able to:
1. formula to calculate conditional probability 2. difference between experimental and theoretical probability 3. difference between independent and dependent events	1. express probabilities as ratios, percent's or decimals 2. determine when events are independent or dependent 3. distinguish between experimental and theoretical probability

Significant task 1: Theoretical verse Experimental Probability

Before students break into partners, the whole class will review theoretical probability. Theoretical probability is the likelihood an event will occur and what most students think of when they hear probability. The class will come up with the theoretical probability of rolling a dice and getting each number once, even numbers, and odd numbers. This information will be written on the board.

Next, students will break into partners and test the theoretical probability we came up with by rolling a dice. Each group will roll a dice 20 times and record their results in a frequency table. Each group will share their results with the rest of the class by recording their results on post it paper. Students will learn that the probability they calculated is experimental probability. There will be a whole class discussion to ensure students understand that theoretical probability is what happens in an ideal situation and experimental probability is what happens when you actually perform an event.

Students will have the ability to test out the theoretical probability of getting heads or tails when flipping a quarter. This activity can be found in the Discovering Geometry Probability Supplement book located in lesson 10.1 on Randomness. As a result of students understanding the difference between theoretical probability and experimental probability, students will calculate probabilities of real life events.

This task directly targets standards: S.CP.1, S.CP.5

Timeline: 3 blocks

Key vocabulary: random processes, fair, event, outcomes, simple event, compound, conditional probability, probability, theoretical probability, experimental probability, set, element, empty set, universal set

Significant task 2: Independent verse Dependent Events

Students will start the class by being introduced to tree diagrams. Students will break up into partners and complete a student directed investigation on finding the probability of getting a toy in a box of cereal. Students will complete tree diagrams that represent an option of getting one of 2 toys, one of 3 toys, and one of 4 toys. Through the investigation students will discover how to apply the multiplication rule and how to calculate probability of independent events.

Next each group will be given a deck of cards. Their task is to calculate the probability of picking a diamond with the first card and a black suit with the second card. Each time they choose a card it is not allowed to go back into the deck. They will complete 10 trials and record their results in a chart. Each group will share their results with the class. Through a class discussion students will learn that each trial affected the outcome of the following trial because the total changed which means they are dependent events. Following this activity students will get back with their partners and apply the multiplication rule to a similar dependent event provided by the teacher. The example can be found in lesson 10.2 in Discovering Geometry Probability Supplement.

Lastly, students will be introduced to mutually exclusive events and the addition rule. In partners, students will investigate the addition rule by creating Venn diagrams that compare a student's choice to take math, science, neither, or both. Students will be able to derive the general addition rule at the conclusions of this activity.

This task directly targets standards: S.CP.1, S.CP.3, S.CP.6, S.CP.2, S.CP.7

Timeline: 4 blocks

Key vocabulary: tree diagram, independent event, dependent event, multiplication rule, addition rule, complement, conditional probability, mutually exclusive, Venn diagrams, tree diagram

Common learning experiences:

- warm ups that focus on simple probability, theoretical probability, experimental probability, conditional probability, independent events, and dependent events
- drop box Geometry College unit 5 Probability
- Discovering Geometry Probability Supplement
- Essentials for High School Mathematics chapter 19
- On Core Mathematics Probability unit

Common assessments including the end of unit summative assessment:

- End of Unit Test

Teacher notes:

- Process standards to highlight through instruction: reason abstractly and quantitatively, model with mathematics, and look for and express regularity in repeated reasoning.
- Students will might need to begin the unit by reviewing that probability is a ratio
- Graphic organizers showing sets, subsets, unions, complements, and intersections will be help students differentiate the terms
- Refer to Basic Probability in the Discovering Geometry Probability Supplement book for helping students be re-introduced to probability

Windsor Public Schools
Curriculum Map
Algebra 2

Purpose of the Course: This course is a study of functions and their applications. Topics covered will include operations with functions and their inverses, linear functions, systems of linear equations and inequalities. The course will focus on linear, quadratic, exponential, logarithmic, polynomial, rational, and radical functions. This class will prepare students for Pre-Calculus and other advanced courses.

Name of the Unit: Unit 1 Functions and Linear Programming	Length of the unit: 16 blocks
Purpose of the Unit: This unit is designed to do a comprehensive review of functions to set up the rest of the units on specialized functions. Concepts with linear functions will be reviewed and expanded upon to include piecewise functions containing linear pieces and linear programming. Inverse functions will be introduced, in addition to working with the absolute value function.	

Common Core State Standards Addressed in the unit:

CC.9-12.F.BF.1 Write a function that describes a relationship between two quantities.*

CC.9-12.F.BF.1c (+) Compose functions.

CC.9-12.F.BF.4 Find inverse functions

CC.9-12.F.BF.4a Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse.

CC.9-12.F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*

CC.9-12.A.CED.1 Create equations and inequalities in one variable and use them to solve problems.

CC.9-12.F.IF.7b Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.

CC.9-12.A.CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

CC.9-12.F.IF.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.

CC.9-12.F.BF.1b Combine standard function types using arithmetic operations.

CC.9-12.F.BF.4b (+) Verify by composition that one function is the inverse of another.

CC.9-12.F.BF.4d (+) Produce an invertible function from a non-invertible function by restricting the domain.

CC.9-12.F.BF.4c (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.

CC.9-12.A.REI.11 Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*

CC.9-12.A.CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.

CC.9-12.F.BF.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

Big Ideas:	Essential Questions:
1. Relationships can be represented as tables, graphs, and equations. 2. Properties of equality and inverse operations are used to solve equations. 3. Functions describe relationships between two quantities that vary.	1. What are the advantages and disadvantages of different representations of functions? 2. What's happening in the equation and how do you "undo" that? 3. What defines a function?
Students will know:	Students will be able to:
1. properties of linear inequalities 2. properties of linear systems/inequalities 3. properties of piecewise functions 4. function notation 5. function operations; including composition 6. strategies to identify function inverses 7. properties of absolute value equations, inequalities, and functions	1. write, solve, and graph linear inequalities 2. solve and graph compound inequalities 3. solve systems using a graphing calculator 4. use function notation 5. add, subtract, multiply, divide, and compose functions 6. find and use properties of inverse functions 7. solve absolute value equations 8. solve and graph absolute value inequalities 9. graph and analyze absolute value functions

	10. graph piecewise functions with linear pieces

Significant task 1: Functions and Their Inverses

In significant task 1, students will participate in small group discussions where they will be using a variety of contexts to review what they have already learned on functions, including what is a function, function notation, and function representations. As a whole class, domain and range will be discussed through various applications, such as the height of a ball versus time.

As a whole class, students will review combining functions using addition, subtraction, multiplication and division. The students will be introduced to function composition using the concept of an off shore oil well leak. In order to solidify the concept of composition, students will perform an investigation In small groups, called looking up, where they will determine how much of an image they can see in a mirror as they walk towards and away from it.

Next, using a graphing calculator activity, students will individually discover the properties of inverse functions. In addition, using the context of distance and time for an airplane flight, as a whole class discussion students will compare (time, distance) data points to (distance, time) data points to enhance the properties they discovered with the graphing calculator. Through an algebraic discovery activity, in pairs students will be given an equation and the partner will hold the equation's inverse. Students will need to find their correct partner and use composition to discover the Inverse Composition Theorem. Students will then practice individually proving that functions are inverses of each other using the theorem discovered in the partner activity.

In this task, students will:

- discuss what a function is and the representations of a function
- use function notation to model different contexts
- add, subtract, multiply, divide, and compose functions
- find and prove inverse functions

This significant task targets the following CCSS Standards: F.BF.1, F.BF.4

Timeline: 4-5 blocks
Key vocabulary: function, inverse, composition, domain, range, verbal representation, algebraic representation, graphic representation, table representation, function notation, vertical line test, horizontal line test, one – to – one , inverse composition theorem
Resources: Discovering Advanced Algebra – lesson 4.8 "Looking Up", lesson 5.5 "Airplane Flight", Holt Sections – 2.3 – 2.5 teacher created resources
Materials: mirrors, measuring tapes

Significant task 2: Piecewise Functions

In this significant task, students will be seeing a piecewise function and restricted domain for the first

time. This task will be done as whole class instruction. The teacher will demonstrate how to decipher a restricted domain and relate each domain to a graphical representation of each linear piece. Students will use their previous knowledge of linear functions to create tables of values based on the restricted domain and then graph line segments correlating to these tables. The concept of varying water usage to determine the cost of a water bill will be investigated in relation to piecewise functions.

In this task, students will:

- discuss restricted domain
- use tables of values to graph piecewise functions
- determine if the inverse of a piecewise function is a function

This significant task targets the following CCSS Standards: F.IF.7b
Timeline: 1- 2 blocks
Key vocabulary: restricted domain, piecewise, included value, excluded value, line segment, line, table of values, horizontal line test
Resources: Holt Section 2.6, Water Bill Problem

Significant task 3: Linear Programming

This significant task will begin with students reviewing how to graph linear inequalities as a whole class. This will segue into graphing systems of linear inequalities and finding a feasible region and the vertices that bound the feasible region. Systems of inequalities as word problems will be introduced through linear programming where students will be writing constraints and using objective functions to find maxima and/or minima. Students will work in cooperative groups to solve increasingly more challenging systems problems involving business applications. Teachers could differentiate giving different groups different problems with varying complexity and then have each group present their analysis to the class.

In this task, students will:

- graph linear inequalities
- graph systems of linear inequalities
- write constraints
- identify the feasible region
- identify the vertices (by hand and with graphing calculators)
- write objective functions
- use vertices to determine maxima and/or minima of the objective function

This significant task targets the following CCSS Standards: F.IF.7, A.CED.1, A.REI.11, A.CED.3

Timeline: 4 – 5 blocks
Key Vocabulary: linear inequality, system of linear inequalities, feasible region, vertices, vertex, minimum, maximum, objective function, constraints
Resources: common teacher created resources in the Algebra 2 drop box, Holt Section – 3.5

Significant task 4: Absolute Value Functions, Equations, and Inequalities

This significant task is for the most part procedural in nature. As a whole class, students will solve compound inequalities and graph the solutions on a number line. To introduce the concept students will be presented with a bag of chips and scale and determine the weight which will segway into a discussion about tolerance in manufacturing. Students will then practice solving compound inequalities

in pairs. Next, students will review the concept of absolute value and apply the definition to solve absolute value equations. Through whole class instruction, students will solve and graph absolute value inequalities.

Using a graphing discovery, students will then develop an understanding of the absolute value parent function, f(x) = |x|. Domain and range will be discussed using the graph as a model. Students will conduct a transformation activity in pairs to investigate how transformations look in an equation and how they affect the graph.

In this task, students will:

- Solve absolute value equations and inequalities
- Graph absolute value functions
- Investigate transformations from the parent function of absolute value
- Sketch functions by identifying transformations from the parent function

This significant task targets the following CCSS Standards: F.IF.7b, F.BF.3

Timeline: 3-4 blocks
Key vocabulary: absolute value, domain, range, transformation, translation, reflection, vertical stretch/shrink
Resources: teacher created resources in Algebra 2 Drop Box, Holt Section 1.7-1.8

Common learning experiences:

- Holt: Algebra 2 – sections 1.1 – 1.3, 1.7 – 1.8, 2.3 – 2.5, 3.1 – 3.5 for homework options

Common assessments including the end of unit summative assessment:

- Assess water bill problem from significant task 2 (should be graded as class work)
- Mid-Unit Test after significant task 2.
- **Performance Assessment: Linear Programming** – Students will work individually to determine which combination of products a small company should produce to earn the most profit. Students will need to use the linear programming process they learned in significant task 3 to complete the task. The product is a business portfolio that contains a detailed letter explaining the process used, a professional graph, and detailed mathematical work. The task should take 1-2 class days. Teachers may want to take the class to a computer lab to use EXCEL when making the graphs for the product. The mathematics will be graded using a task specified rubric. The task will also be graded using the problem solving school wide rubric.
- Unit Test after significant task 4 – to include all concepts from unit with an emphasis on significant tasks 3 and 4.

Teacher notes:

- Process standards to highlight through instruction: create viable arguments and critique the reasoning of others, modeling with mathematics, attend to precision, and look for and express regularity in repeated reasoning.

- In this course all of the significant tasks have a range of number of blocks. Teachers need to be mindful of the overall number of blocks for the unit when planning otherwise if you use the high range for each task you will run out of time to complete the unit.
- Some students will have difficulty determining an appropriate domain and range for a function.
- Some students will have difficulty with function composition, especially when quadratic functions are used.
- Some students will forget to check both parts of the Inverse Composition Theorem.
- Some students will not use the "starting point" in the given domain, when graphing piecewise functions. (Example: for a domain of x<2, students will start the graph with 1 instead of an open circle on 2.)
- Students will extend their graphs beyond the restricted domain of a piecewise function.
- Some students may need an extensive review of graphing linear functions and inequalities, as well as finding solutions to systems of equations.
- Students will be seeing absolute value equations for the first time.
- Some students will forget to find the second solution of an absolute value equation or inequality.

Windsor Public Schools
Curriculum Map
Algebra 2

Purpose of the Course: This course is a study of functions and their applications. Topics covered will include operations with functions and their inverses, linear functions, systems of linear equations and inequalities. The course will focus on linear, quadratic, exponential, logarithmic, polynomial, rational, and radical functions. This class will prepare students for Pre-Calculus and other advanced courses.

Name of the Unit: Unit 2 Quadratic Functions	Length of the unit: 16 blocks

Purpose of the Unit: This unit is designed to deepen the student's knowledge of quadratic functions. This is the first specialized function of the course. The graph of a quadratic function will be analyzed by finding the key characteristics. Algebraic techniques will be reviewed and expanded upon to solve quadratic equations. Complex numbers will also be introduced.

Common Core State Standards Addressed in the unit:

CC.9-12.F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*

CC.9-12.N.CN.7 Solve quadratic equations with real coefficients that have complex solutions.

CC.9-12.F.IF.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.

CC.9-12.F.IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a

graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.

CC.9-12.N.CN.1 Know there is a complex number i such that $i^2 = \sqrt{-1}$, and every complex number has the form $a + bi$ with a and b real.

CC.9-12.A.CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

CC.9-12.A.REI.4 Solve quadratic equations in one variable

CC.9-12.A.REI.4b Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b

Big Ideas:	Essential Questions:
1 Relationships can be represented as tables, graphs, and equations. 2 Properties of equality and inverse operations are used to solve equations. 3 Not all rates of change between two variables are constant. 4 An imaginary number represents the square root of a negative number.	1. What are the advantages and disadvantages of different representations of functions? 2. What's happening in the equation and how do you "undo" that? 3. How can you represent a relationship in an algebraic rule? 4. What is an imaginary number?
Students will know:	Students will be able to:
1. key characteristics of graphs-domain, range, end behavior, intercepts, & intervals (increasing/decreasing & positive/negative, minima/maxima) 2. transformations of parent functions 3. forms of a quadratic equation 4. strategies for solving quadratics: completing the square, factoring and zero product property, quadratic formula 5. attributes of complex numbers 6. how to use the discriminant and what it tells	1. graph, identify, and show key characteristics (by hand and/or with technology) 2. identify transformations and sketch 3. apply complete the square to transform from standard form to vertex form 4. determine the number and type of solutions 5. find the roots of a quadratic equation using Zero Product Property or quadratic formula 6. combine complex numbers with addition, subtraction, multiplication, and use of the complex conjugate

Significant task 1: The Graph of a Quadratic Function

This significant task will introduce students to standard and vertex forms of a quadratic function. This significant task is based on the model of a flight of a baseball after it is hit, where students analyze the shape of the graph to determine if the baseball player can hit a home run in certain ball parks. As a whole class and through the use of graphing calculators, students will identify the key characteristics of the graph; vertex as maxima/minima, intercepts, axis of symmetry, increasing/decreasing intervals, positive/negative intervals, domain and range. In this significant task, students will build a foundation of identifying and writing key characteristics for later units. In addition, students will work with a partner and use their previous knowledge of transformations from Unit 1 to identify and sketch graphs of quadratic functions.

In this task, students will:

- Determine when a function is quadratic and why it is different than a linear function and similar to an absolute value function.
- Graph quadratic functions with graphing calculator and identify all the key characteristics.
- Use vertex form to identify transformations from the parent function.

This significant task targets the following CCSS Standards: F.IF.7, F.IF.5

Timeline: 4-6 blocks
Key vocabulary: quadratic function, parabola, vertex, minimum, maximum, axis of symmetry, increasing/decreasing intervals, positive/negative intervals, domain, range, standard form, vertex form, vertical stretch or shrink, vertical shift, horizontal shift, reflection
Resources: teacher created resources – Algebra 2 Dropbox

Significant task 2: What's the Best Method?

In this significant task, students will solve quadratic equations using the properties of equality and inverses, factoring and the zero product property, completing the square, and the quadratic formula. Students need to be able to understand when each method is more efficient in finding the solutions/roots. In small groups, students will discover when each method of solving is the most efficient. Afterwards, a full class discussion will be held to focus on the various methods and what types of equations lend themselves to particular methods as well as the pros and cons of each method.

In this task, students will:

- Solve quadratic equations using properties of equality and inverses.
- Factor quadratic expressions.
- Use the zero product property to solve factored quadratic equations.
- Complete the square to find solutions to quadratic equations in standard form.
- Use the quadratic formula to solve any quadratic equation.
- Understand when each method is the most efficient when solving a quadratic equation.

This significant task targets the following CCSS Standards**:** A.REI.4

Timeline: 6-8 blocks
Key vocabulary: square root, inverse operations, factor, zero product property, greatest common factor, root, completing the square, discriminant, quadratic formula
Resources: teacher created resources – in Algebra 2 Drop Box, you-tube video for quadratic formula song, Holt Sections 5.1 – 5.5

Significant task 3: Quadratic Functions with Complex Roots

In this significant task, students will first be introduced to imaginary numbers by solving a quadratic equation that requires taking a square root of a negative number. Students will connect the properties of the discriminant to the types of solutions that exist for the equation. Individually, students will generate the cycles of *i*, using the graphing calculator, to help them determine that i^2 is -1. Students will be introduced to complex numbers by solving a quadratic equation by either completing the square or the quadratic formula. This will tie back to the most efficient method from significant task 2. Students will then be introduced to combining complex numbers using addition, subtraction, multiplication, and the use of complex conjugates. Students will practice in partners combining complex numbers to become proficient in the computation.

In this task, students will:

- Try to solve a quadratic equation where it is necessary to take the square root of a negative number.
- Use the discriminant to determine the type of solutions/roots that exist.
- Generate the cycle of *i*.
- Combine complex numbers with addition, subtraction, multiplication, and the use of complex conjugates.

This significant task targets the following CCSS Standards: : N.CN.7, N.CN.1,

Timeline: 2 blocks
Key vocabulary: imaginary number, complex number, complex conjugate, discriminant, complex root
Resources: teacher created resources – Algebra 2 Dropbox, Holt Section 5.6

Common learning experiences:

- Holt sections 5.1-5.6 for homework options
- You-Tube videos for quadratic formula songs

Common assessments including the end of unit summative assessment:

- Unit Test
- **Performance Assessment: Spotlight** – Students will work in small groups to gather data, using cardboard tubes and their eyes to represent a spotlight and will model the spotlights projection on the wall. They will vary the distance of the spotlight which will affect the diameter of the spotlight projection. This data will be used to form a relationship between distance vs. diameter and distance vs. area of the spotlight. The relationships found will help students determine

where a spotlight should be placed for a performance at the Bushnell by solving the quadratic model developed with their data. Students will develop a visual presentation that explains the solution to the problem. The mathematics will be graded using a task specified rubric. The task will also be graded using the problem solving school wide rubric.

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, model with mathematics, make sense and use of structure, and look for and express regularity in repeated reasoning.
- Some students may be inexperienced with a graphing calculator, so class time may be spent on how to use calculation features on the graphing calculator.
- This is the first time students will see and use interval notation. Teachers need to be sure to thoroughly explain what the notation means.
- Increasing/decreasing and positive/negative intervals are difficult for some students to understand and may require using different colored pencils to highlight these intervals on the graph.
- Some students forget to read graphs from left to right.
- Some students forget there are sometimes two solutions to a quadratic equation.
- Students have trouble factoring, especially when the leading coefficient is not 1.
- This is the first time students are exposed to imaginary numbers.
- Students forget to change i^2 into -1 when simplifying expressions.
- Students forget to change the sign in the complex conjugate.

Windsor Public Schools
Curriculum Map
Algebra 2

Purpose of the Course: This course is a study of functions and their applications. Topics covered will include operations with functions and their inverses, linear functions, systems of linear equations and inequalities. The course will focus on linear, quadratic, exponential, logarithmic, polynomial, rational, and radical functions. This class will prepare students for Pre-Calculus and other advanced courses.

Name of the Unit: Unit 3 Polynomial Functions	Length of the unit: 10 blocks
Purpose of the Unit: The purpose of the unit is to expand upon students' knowledge of polynomials beyond linear and quadratic functions. Graphs of higher degree polynomials will be analyzed by finding the key characteristics, in addition to introducing the concept of end behavior. Algebraic techniques and the graphing calculator will be used to find solutions to any polynomial equation. Students will find	

polynomial models of real world data sets by running regressions with the graphing calculator.

Common Core State Standards Addressed in the unit:

CC.9-12.F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*

CC.9-12.F.IF.7c Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior

CC.9-12.F.IF.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.

CC.9-12.F.IF.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*

CC.9-12.F.BF.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them

CC.9-12.A.REI.11 Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*

CC.9-12.F.BF.1 Write a function that describes a relationship between two quantities.*

CC.9-12.N.CN.9 (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials

CC.9-12.A.SSE.2 Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.

CC.9-12.A.APR.1 Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

CC.9-12.A.APR.3 Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial

CC.9-12.A.APR.4 Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples (Honors and High Honors levels only)
CC.9-12.A.APR.5 (+) Know and apply that the Binomial Theorem gives the expansion of $(x + y)^n$ in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle. (The Binomial Theorem can be proved by mathematical induction or by a combinatorial argument.) (Honors and High Honors levels only)

CC.9-12.A.APR.2 Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x – a$ is $p(a)$, so $p(a) = 0$ if and only if $(x – a)$ is a factor of $p(x)$. (Honors and High Honors levels only)

Big Ideas:	Essential Questions:
1 Relationships can be represented as tables, graphs, and equations. 2 Properties of equality and inverse operations are used to solve equations. 3 The degree of the polynomial indicates the number of solutions or roots for a given function.	1. What are the advantages and disadvantages of different representations of functions? 2. What's happening in the equation and how do you "undo" that? 3. What does the degree of a polynomial tell you about the equation and graph of the function?
Students will know: 1. key Characteristics of Graph: domain, range, end behavior, intercepts, & intervals (increasing/decreasing, positive/negative), local minima and maxima 2. transformations of parent functions 3. The Fundamental Theorem of Algebra 4. attributes of polynomial equations 5. attributes of systems of polynomials 6. types of polynomial regression 7. The Binomial Theorem	Students will be able to: 1. graph, identify, and show key characteristics (by hand and/or with technology) 2. identify transformations and sketch 3. identify the types of solutions and find the zeros graphically. 4. solve equations using roots and factoring techniques. 5. solve systems graphically using technology. 6. determine an appropriate polynomial model and interpolate/extrapolate. 7. expand polynomials in the form $(x + y)^n$

Significant task 1: Graphing Polynomials Functions

This significant task will introduce students to polynomial functions and the key characteristics of their graphs. Students are only familiar with linear and quadratic functions at this point, teachers will have to introduce students of degree 3 polynomials and higher, making a point of identifying even and odd functions. As a whole class, students will be introduced to the concept of end behavior of a function.

Through a graphing calculator investigation, small groups of students will identify the effect on the graph when changing the parameters of the function, focusing on the leading coefficient and the degree to determine the effect on the shape of the graph, number of turning points, and end behavior. Next, students will expand on their knowledge of transformations to be able to sketch the transformed graphs from the cubic and Quartic parent functions.

In this task, students will:

- Name polynomial functions by degree and number of terms.
- Describe the shape of a graph based on the degree (number of turning points).
- Identify the end behavior of polynomial functions (same direction or opposite directions).
- Locate the turning points and classify as local minima/maxima.
- Identify domain and range.
- Write increasing and decreasing intervals in interval notation.
- Find x-intercepts and write positive and negative intervals.
- Graph polynomials with an emphasis on quadratic, cubic, and quartic and identify all of the key characteristics of the graph.
- Identify transformations from the appropriate parent function and sketch.

This significant task targets the following CCSS Standards: F.IF.7, F.IF.7c

Timeline: 2-3 blocks
Key vocabulary: linear, quadratic, cubic, quartic, quintic, monomial, binomial, trinomial, polynomial, turning point, local minimum, local maximum, (absolute min/max), end behavior, domain, range, interval notation, increasing/decreasing interval, zero, positive/negative intervals, even/odd function, vertical stretch or shrink, vertical shift, horizontal shift, reflection.
Resources: LTF – interval notation investigation, teacher created resources – Algebra 2 Dropbox , Holt Sections 7.1-7.2

Significant task 2: “What’s the Best Method to Solve a Polynomial Equation?”

In this significant task, students will find solutions of a variety of polynomial equations with a focus on precision of procedure and connecting the solutions to the graph of the function. As a whole class, students will first use the root feature on their calculators to solve simple polynomial equations, with a focus on taking even/odd roots and the number of solutions. Students will expand on their knowledge of factoring quadratics to now solve higher degree polynomials with greatest common factors (GCF) and factoring by grouping, then applying the zero product property. Students will also solve by “grouping.”

Individually, students will connect the degree of a polynomial to the number of x-intercepts on the graph. Students will then be introduced to the Fundamental Theorem of Algebra as a whole class. Using the Fundamental Theorem of Algebra, students will determine when double roots and complex roots occur. In addition, students will find the real solutions by locating the x-intercepts using the graphing calculator. Lastly, in small groups, students will determine when to use the most efficient method in solving any polynomial equation.

In this task, students will:

- Use the root feature on calculator to solve simple polynomial equations
- Solve using GCF and zero product property higher degree polynomial equations

- Solve by grouping
- Solve by graphing and locating x-intercepts by applying the Fundamental Theorem of Algebra

This significant task targets the following CCSS Standards: F.IF.7, F.IF.8, N.CN.9, A.APR.3

Timeline: 3 blocks
Key vocabulary: root, square root, cubed root, nth root, grouping, greatest common factor, zero product property, Fundamental Theorem of Algebra, double root, complex root, real solution
Resources: teacher created resources – Algebra 2 Dropbox, Holt Sections 7.3 – 7.5

Significant Task 3: Modeling with Polynomials

Students have been introduced to creating scatterplots and linear regressions in Algebra 1. In this significant task, students will expand on their prior knowledge of scatterplots and regression equations to include fitting the best polynomial model to a variety of real world data sets. Students will compare the shape of the scatterplot and the correlation coefficient from the calculator to help determine the most appropriate model. Students will complete an analysis of real world problems (study time and class grades, deer populations, chlorine in pools, funeral costs, mortgage debt) in small groups, including interpolation and extrapolation.

In this task, students will:

- Use the graphing calculator to create scatterplots of data
- Use the graphing calculator to run regression equations
- Analyze regression equations to determine the best model for the data

This significant task targets the following CCSS Standards: F.BF.1

Timeline: 2 blocks
Key vocabulary: regression equation, correlation coefficient, scatterplot, linear regression, quadratic regression, cubic regression, quartic regression, interpolation, extrapolation
Resources: teacher created resources – Algebra 2 Dropbox, Holt Sections 5.7 and 7.2

Common learning experiences:

- Holt Sections 5.7 and 7.1-7.5 for homework options

Common assessments including the end of unit summative assessment:

- Unit Test
- Midterm Exam

Teacher notes:

- Process standards to highlight through instruction: reasoning abstractly and quantitatively, model with mathematics, use appropriate tools strategically, and make sense and use of

structure.

- Some students still may have difficulty determining domain and range.
- Some students have some difficulty understanding and determining end behavior.
- Students have difficulty with factoring and factoring by grouping.
- A teacher led demonstration may be needed to review with students how to create scatterplots and find regression equations using the graphing calculator.

Windsor Public Schools
Curriculum Map
Algebra 2

Purpose of the Course: This course is a study of functions and their applications. Topics covered will include operations with functions and their inverses, linear functions, systems of linear equations and inequalities. The course will focus on linear, quadratic, exponential, logarithmic, polynomial, rational, and radical functions. This class will prepare students for Pre-Calculus and other advanced courses.

Name of the Unit: Unit 4 Radical Functions	Length of the unit: 14 blocks

Purpose of the Unit:

The purpose of the unit is to expand upon the students' knowledge of functions to include radical functions. Students only have a basic understanding of the properties of square roots from previous math courses. The graphs of radical functions will be analyzed by finding key characteristics, as in previous units. Students will use algebraic techniques to simplify expressions with integer and rational exponents, and then use those concepts to simplify radical expressions. Students will solve radical equations, where some equations will have extraneous solutions.

Common Core State Standards Addressed in the unit:

CC.9-12.F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

CC.9-12.F.IF.7b Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.

CC.9-12.A.REI.2 Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

CC.9-12.F.IF.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.

CC.9-12.F.BF.4c (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.

CC.9-12.F.IF.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.

CC.9-12.F.BF.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

Big Ideas:	Essential Questions:
1 Relationships can be represented as tables, graphs, and equations. 2 Properties of equality and inverse operations are used to solve equations. 3 Radicals and exponents are inverse operations.	1. What are the advantages and disadvantages of different representations of functions? 2. What's happening in the equation and how do you "undo" that? 3. How are radicals and exponents related?
Students will know:	Students will be able to:
1. key characteristics of graph: domain, range, end behavior, intercepts, & intervals (increasing/decreasing & positive/negative) 2. transformations of parent functions 3. radicals are inverses of quadratic and cubic functions 4. radical expressions 5. radical equations (leads or quadratic equations)	1. graph, identify, and show key characteristics (by hand and/or with technology) 2. identify transformations and sketch 3. write the inverse (radical) equation given a polynomial. 4. simplify radical expression 5. solve radical equations (including equations with extraneous solutions)

Significant task 1: Graphing Radical Functions

This significant task will introduce students to square root and cubed root functions by finding the inverse of quadratic or cubic functions. With a partner students will explore the graphs of both square root and cubed root functions and identify each graph's key characteristics as they have done with previous functions. Students should use the table feature of their graphing calculator to assist them with their graphs. Through a graphing calculator investigation students should apply their knowledge of transformation to include radical functions. A full class discussion should follow the partner investigation to summarize their findings and refer back to previous functions and compare.

In this task, students will:

- Use the properties of inverse functions to develop graphs of radical functions.
- Graph radical functions and identify the key characteristics including domain and range, end behavior, increasing and decreasing intervals, and positive and negative intervals.
- Investigate the transformations from the parent function of radical functions
- Identify transformations from the appropriate parent function and sketch.

This significant task targets the following CCSS Standards: F.IF.7, F.IF.7b, F.BF.3, F.BF.4c

Timeline: 2 blocks
Key vocabulary: square root function, cubed root function, domain and range
Resources: Teacher created resources – Algebra 2 Dropbox, Holt Section 8.6, On Core Mathematics – Algebra 2 Sections 5-1 – 5-3

Significant task 2: Simplifying Radical Expressions

In this significant task, the teacher will demonstrate properties of exponents to simplify expressions. When discussing the properties, exponents should be introduced with integers and students should be allowed practice time. Once the students are proficient with integer exponents, rational exponents can be introduced. Rational exponents should then be connected to radical expressions for the students. Students will then simplify radical expressions. Students will combine radical expressions with addition, subtraction, multiplication, and rationalize the denominator.

This significant task is mainly procedural in nature. Teachers should introduce new concepts to small groups of students as they master earlier procedures as a way to differentiate and allow students to move at their own pace.

In this task, students will:
- Simplify expressions using exponent properties
- Simplify radical expressions using rational exponents
- Combine radical expressions with addition, subtraction, multiplication, and rationalizing the denominator

This significant task targets the following CCSS Standards: F.IF.8

Timeline: 5 – 6 blocks
Key vocabulary: Base, Exponent, Product Rule, Quotient Rule, Negative Exponent Property, Power Rule, Power of a Product, Power of a Quotient, Rational Exponent, rationalize the denominator, conjugate
Resources: Teacher created resources– Algebra 2 Dropbox, Holt Sections 2.2, 8.7

Significant task 3: Solving Radical Equations

The teacher will demonstrate to the class how to solve a radical equation. Students will be introduced to extraneous solutions and there will be an emphasis on checking solutions to determine if a solution is extraneous. Students will then apply inverse operations to remove the radical from the equation. A variety of real world problems will be used to add context to radical equations.

This significant task is mainly procedural in nature. Again, teachers should introduce new concepts to small groups of students as they master earlier procedures as a way to differentiate and allow students

to move at their own pace.

In this task, students will:

- Solve radical equations
- Check for extraneous solutions
- Apply radical equations to real world problems

This significant task targets the following CCSS Standards: A.REI.2

Timeline: 2 – 3 blocks
Key vocabulary: extraneous solutions
Resources: Teacher created resources– Algebra 2 Dropbox, Holt 8.8, On Core Mathematics – Algebra 2 Section 5-7

Common learning experiences:

- Holt 2.2, 8.7, 8.8 homework options

Common assessments including the end of unit summative assessment:

- Unit Test

Teacher notes:

- Process standards to highlight through instruction: reasoning abstractly and quantitatively, model with mathematics, use appropriate tools strategically, attend to precision, and make sense and use of structure.
- Teachers may have to review properties of inverse equations as a whole class.
- This is the students' first encounter with exponent properties so extra practice may be necessary.
- Some students confuse the Product Property for simplifying exponent expressions and the Power Property when they try to multiply numerical bases instead of just combining the exponents appropriately.
- Students try to distribute exponents to sums and differences.
- Students forget to distribute the exponent to lead coefficients.
- Students may try to add lead coefficients when using the Product Property and subtract lead coefficients when using the Quotient Property when simplifying expressions.
- Students struggle with simplifying radical expressions where the lead coefficient isn't a perfect power.
- Even though a strong emphasis is put on checking for an extraneous solutions, students may forget to check their solutions.

Windsor Public Schools
Curriculum Map
Algebra 2

Purpose of the Course: This course is a study of functions and their applications. Topics covered will

include operations with functions and their inverses, linear functions, systems of linear equations and inequalities. The course will focus on linear, quadratic, exponential, logarithmic, polynomial, rational, and radical functions. This class will prepare students for Pre-Calculus and other advanced courses.

Name of the Unit: Unit 5 Exponential and Logarithmic Functions	Length of the unit: 16 blocks

Purpose of the Unit: The purpose of the unit is to expand upon functions and their inverses to include exponential and logarithmic functions. Students will explore, analyze and compare exponential and logarithmic graphs by finding the key characteristics of each. Students will use a variety of algebraic techniques to solve exponential and logarithmic equations, where some equations may have extraneous solutions. Students will expand on their work in Algebra 1 to apply exponential functions to growth and decay situations to include compound and continuous interest and effective yield.

Common Core State Standards Addressed in the unit:

CC.9-12.F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*

CC.9-12.F.IF.7e Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude

CC.9-12.F.IF.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.

CC.9-12.F.LE.4 For exponential models, express as a logarithm the solution to $ab^{(ct)} = d$ where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.

CC.9-12.F.IF.8b Use the properties of exponents to interpret expressions for exponential functions. For example, identify percent rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^{(t/10)}$, and classify them as representing exponential growth or decay

CC.9-12.F.BF.4a Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. For example, $f(x) = 2(x^3)$ for $x > 0$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$ (x not equal to 1).

CC.9-12.F.BF.4c (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.

CC.9-12.F.IF.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*

CC.9-12.F.BF.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them

CC.9-12.A.CED.1 Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions*

CC.9-12.F.BF.5 (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.

CC.9-12.A.REI.11 Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

CC.9-12.F.BF.1 Write a function that describes a relationship between two quantities.*

Big Ideas:	Essential Questions:
1 Relationships can be represented as tables, graphs, and equations. 2 Properties of equality and inverse operations are used to solve equations. 3 Linear functions have a constant difference whereas exponential functions have a constant ratio. 4 Logarithms are the inverse functions of Exponential functions.	1. What are the advantages and disadvantages of different representations of functions? 2. What's happening in the equation and how do you "undo" that? 3. How can one differentiate an exponential model from a linear model? 4. What is a logarithm?
Students will know:	Students will be able to:
1. key characteristics of graph: domain, range, asymptotes, end behavior, intercepts, & intervals (increasing/decreasing & positive/negative) 2. exponential growth and decay 3. base e and natural log 4. transformations from a parent function 5. exponential/logarithmic forms 6. change of base formula 7. logarithmic properties 8. compound interest 9. effective yield 10. systems of equations	1. graph, identify, and show key characteristics (by hand and/or with technology) 2. interpret, classify, and graph any exponential or log function 3. identify transformations and sketch 4. evaluate a logarithm 5. solve exponential/log equations 6. apply properties to solve log equations 7. solve using compound interest formulas 8. interpret exponential growth or decay equations 9. solve systems of equations by hand and with technology

Significant task 1: Graphing Exponential and Logarithmic Functions

This significant task will expand upon students' prior knowledge of exponential functions as well as introduce logarithmic functions. Teachers should present logarithmic functions as the inverse of

exponential functions to the whole class, highlighting the properties of inverse relationships. This will be the first time students are exposed to asymptotes. In small groups or pairs, students will explore the graphs of both exponential and logarithmic functions and identify each graph's key characteristics as they have done with previous functions and including growth or decay. Students should use the table feature of their graphing calculator to understand what an asymptote is and its location on the graph.

Next, students will complete an investigation in small groups on the natural base "e" and its graph to include inverse properties to graph the inverse of "e" which is the natural log, *ln*. Finally, through a graphing calculator investigation, students will apply their knowledge of transformation to include exponential and logarithmic functions. In both investigations, a full class discussion should follow the partner investigation to summarize their findings and refer back to previous functions and compare.

In this task, students will:

- Graph exponential functions and identify the key characteristics including; asymptotes, end behavior, increasing and decreasing intervals, and positive and negative intervals, growth or decay.
- Use the properties of inverse functions to develop graphs of logarithmic functions and then identify key characteristics including; asymptotes, end behavior, increasing and decreasing intervals, and positive and negative intervals, growth or decay.
- Investigate base *e* and its graph.
- Use inverse properties to graph the inverse of *e*, the natural log *ln*.
- Investigate the transformations from the parent function of both exponential and logarithmic functions.
- Identify transformations from the appropriate parent function and sketch.

This significant task targets the following CCSs Standards: F.IF.4, F.IF.7, F.IF.7e, F.BF.3, F.BF.5

Timeline: 4 - 6 blocks
Key vocabulary: horizontal asymptote, vertical asymptote, logarithm, e, natural logarithm
Resources: Teacher created resources – Algebra 2 Dropbox, Holt 6.2, 6.3, and 6.6, On Core Mathematics – Algebra 2 "The Base *e*"

Significant task 2: Solving Exponential and Logarithmic Equations

In this significant task, a whole class discussion should be used to develop the definition of a logarithm. Students will use this definition to evaluate logarithmic expressions on their own. Students will be introduced to the Change of Base formula to evaluate logarithms when the base is not 10.

Students will simplify expressions using the Properties of Logarithms, students struggle with this concept extra practice may be needed. This will transition into solving logarithmic equations using the One – to – One Property. Students will solve logarithmic and exponential equations when different positions are missing using the appropriate method.

This significant task is mainly procedural in nature. Teachers should introduce new concepts to small groups of students as they master earlier procedures as a way to differentiate and allow students to move at their own pace.

In this task, students will:

- Write exponential equations as logarithms and vice versa.
- Use the Change of Base formula to evaluate logarithms.
- Simplify expressions using The Properties of Logarithms.
- Solve logarithmic equations when either the base or exponent is missing.
- Solve exponential equations when the exponent is missing.
- Solve logarithmic and exponential equations when the solution is missing.
- Solve systems of equations with exponential and logarithmic functions. (Honor and High Honors – required, College – optional based on time)

This significant task targets the following CCSS Standards: F.IF.8, F.LE.4, F.BF.4a

Timeline: 6 – 8 blocks
Key vocabulary: Exponential Form, Logarithmic Form, base 10, base, exponent, solution, Change of Base Formula, Product Property, Quotient Property, Power Property, Exponential – Logarithmic Inverse Property, One – to – One Property
Resources: Teacher created resources Algebra 2 – Dropbox, Holt Sections 6.4 and 6.7

Significant task 3: Applications and Modeling

In this significant task students will apply all of the skills learned previously in this unit to real world problems. Small groups of students will discover how to write an exponential model based on the initial value and its growth/decay rate. Students will make predictions based on their discovery and analyze them against actual values. Students will then be introduced to the Compound Interest Formula and will work in small groups to practice evaluating finance problems. Next, students will be introduced to the Continuous Compounding Formula and in small groups or pairs will make comparisons about predictions using both the Compound Interest Formula and the Continuous Compounding Formula. Finally, students will calculate exponential regressions to find rates of effective yield or inflation and students will model real world situations with exponential regressions. Other applications include population growth or decay, weight gain/loss, bacteria growth etc.

In this task, students will:

- Write and evaluate exponential growth and decay models to make predictions.
- Use the Compound Interest Formula to calculate finance problems.
- Use the Continuous Compounding Formula to calculate finance problems.
- Analyze exponential models to calculate effective yield.
- Determine exponential models that best fit the data by calculating an exponential regression.

This significant task targets the following CCSS Standards: F.IF.8b, A.CED.1

Timeline: 4 blocks
Key vocabulary: Growth/Decay Rate, Compound Interest Formula, Continuous Compounding Formula, Effective yield, inflation rate, exponential regression
Resources: Teacher created resources Algebra 2 – Dropbox, Holt Sections 6.1, 6.2, and 6.7

Common learning experiences:

- On Core Mathematics – Algebra 2 Units 6 and 7

- Homework Options: Holt Chapter 6

Common assessments including the end of unit summative assessment:

- Unit Test
- Performance Task – The Importance of Sunscreen: In small groups, students will simulate the reproduction of cancerous cells using M&M candies. Each group will start with 2 candies in a cup, shake and pour out the candies. For every candy with an "M" face up, 2 more candies will be added to the cup, simulating how quickly cancerous cells reproduce. After 15 trials, students will develop a graph and an equation both by hand and with the graphing calculator, and use these equations to answer a variety of questions. The product of the task is to develop a script for a commercial or public service announcement discussing why sunscreen is so important and use some of the ideas they learned from the simulation and questions. The mathematics will be graded using a task specified rubric. The task will also be graded using the problem solving school wide rubric.

Teacher notes:

- Process standards to highlight through instruction: make sense of problems and persevere in solving them, model with mathematics, use appropriate tools strategically, and look for and express regularity in repeated reasoning.
- Some students struggle to understand the meaning of an asymptote on the graph. When graphing by hand some students may cross the asymptote and extend the graph beyond its domain or range.
- When exponential functions are reflected over the x – axis some students struggle to identify whether the function represents exponential growth or decay.
- Some students may struggle to identify the missing pieces of an exponential and logarithmic equation.
- Students may struggle with solving exponential and logarithmic equations.
- Some students forget to rewrite a log equation into an exponential equation before solving for the missing "piece."
- Some students will forget to check for extraneous solutions to a logarithmic equation.
- Some students struggle with writing exponential functions; they forget how to write the growth factors if the function is doubling, tripling, etc.
- Some students struggle with using the compound interest formulas and determining when to use the continuous compounding formula.

Windsor Public Schools
Curriculum Map
Algebra 2

Purpose of the Course: This course is a study of functions and their applications. Topics covered will include operations with functions and their inverses, linear functions, systems of linear equations and

inequalities. The course will focus on linear, quadratic, exponential, logarithmic, polynomial, rational, and radical functions. This class will prepare students for Pre-Calculus and other advanced courses.

Name of the Unit: Unit 6 Rational Functions	Length of the unit: 12 blocks
Purpose of the Unit: The purpose of this unit is to expand upon the students' knowledge of functions to include rational functions. Students have developed an understanding of vertical and horizontal asymptotes from the previous unit that will assist students in graphing rational functions. Graphs of rational functions will be analyzed by finding the key characteristics. Students will use previously learned factoring techniques to simplify rational expressions. Students will solve rational equations and check for domain restrictions.	

Common Core State Standards Addressed in the unit:

CC.9-12.F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

CC.9-12.F.IF.7d (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.

CC.9-12.A.REI.2 Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

CC.9-12.F.IF.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.

CC.9-12.F.BF.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

CC.9-12.A.APR.6 Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.

CC.9-12.A.APR.7 (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.

Big Ideas:	Essential Questions:
1 Relationships can be represented as	1. What are the advantages and

tables, graphs, and equations. 2 Properties of equality and inverse operations are used to solve equations. 3 The meanings of each operation on fractions are the same as the meanings for the operations on whole numbers.	disadvantages of different representations of functions? 2. What's happening in the equation and how do you "undo" that? 3. How does computation with fractions compare to computations with whole numbers?
Students will know: 1. key characteristics of graph: domain, range, asymptotes, holes, end behavior, intercepts, & intervals (increasing/decreasing & positive/negative) 2. transformations from the parent function 3. rational expressions – sums, differences, products, & quotients 4. simple rational equations	Students will be able to: 1. graph, identify, and show key characteristics (by hand and/or with technology) 2. identify transformations and sketch 3. simplify rational expressions 4. solve rational equations

Significant task 1: Graphing Rational Functions

In this significant task, students will first develop a basis for graphs of rational functions using the context of a breaking point. Engineers need to know the weight that a beam can safely support. In small groups students will investigate this concept through experiment using spaghetti and pennies to determine the breaking point of the spaghetti at different lengths hanging off of a table. By graphing the data points, the students develop the shape of a rational function.

Next, a whole class discussion will be used to explore the graph of the parent function, $y = 1/x$ where they will identify key characteristics of the graph to include horizontal and vertical asymptotes. Transformations will be used to discover other rational functions that contain asymptotes that have been translated from its parent function. Lastly, in pairs, students will perform a graphing calculator investigation to develop a deeper understanding of asymptotes and discover holes on the graph of a rational function.

In this task, students will:

- Graph rational functions and identify the key characteristics including; asymptotes, holes, end behavior, increasing and decreasing intervals, and positive and negative intervals.
- Investigate the transformations from the parent function of rational functions.
- Sketch functions by identifying transformations from the parent function and using key characteristics of the graph.

This significant task targets the following CCSS Standards: F.IF.7, F.IF.7d

Timeline: 3 – 4 blocks

Key vocabulary: rational function, horizontal asymptote, vertical asymptote, holes
Resources: Teacher created resources Algebra 2 – Dropbox, Discovering Advanced Algebra sections 9.6 and 9.7, Holt Section 8.2
Materials: pennies, spaghetti, string, tape, canisters

Significant task 2: Operations with Rational Expressions

In this significant task, students will add, subtract, multiply, and divide two rational expressions to produce one rational function to graph and analyze as in significant task 1. Students will use their understanding of operations with fractions to simplify the rational expressions. The focus of this task is procedural in nature and is a time to differentiate in terms of complexity of content. Students can be challenged to work with more complex rational expressions that utilize the skills outlined below.

In this task, students will:

- Add, subtract, multiply, and divide rational expressions
- Review factoring
- Simplify rational expressions in order to find x-intercepts, asymptotes, and holes
- Graph resulting rational functions and identify the key characteristics including; asymptotes, holes, end behavior, increasing and decreasing intervals, and positive and negative intervals.

This significant task targets the following CCSS Standards: A.APR.6, A.APR.7

Timeline: 3-5 blocks
Key vocabulary: common denominator, reciprocal
Resources: Discovering Advanced Algebra section 9.8, Holt Sections 8.3 and 8.4

Significant task 3: Solving Rational Equations

Significant task 3 is focused around how a flight across the United States takes longer east to west than it does west to east because of wind speed. Students will set up a rational equation to solve and determine the wind speed of a round trip from San Francisco to Chicago. Students will use algebraic techniques, such as “fraction busting” from Algebra 1, and the graphing calculator to solve different rational equations that turn into quadratic or linear equations. Full class discussion will focus on checking for extraneous solutions.

In this task, students will:

- Solve rational equations and check for extraneous solutions.

This significant task targets the following CCSS Standards: A.REI.2

Timeline: 2-3 blocks
Key vocabulary: extraneous solutions
Resources: Pearson Algebra 2 (common core) – page 544 problem 2, Holt Section 8.5

Common learning experiences:

- On Core Mathematics – Algebra 2 Sections 4.1 – 4.3
- Homework option: Holt Sections 8.2 – 8.5

Common assessments including the end of unit summative assessment:

- Unit Test
- Final Exam

Teacher notes:

- Process standards to highlight through instruction: reasoning abstractly and quantitatively, model with mathematics, create viable arguments and critique the reasoning of others, and make sense and use of structure.
- Before starting this unit, spend a class devoted to reviewing factoring of quadratic and cubic equations; GCF, coefficient of x^2 other than 1, grouping techniques.
- This will be the first time students will work with rational functions.
- Some students may struggle with graphing a complete rational function, that includes holes and asymptotes.
- Some students confuse holes and asymptotes and how to find them algebraically.
- Some students have difficulties with factoring.
- Some students will struggle with solving rational equations.
- Some students will forget to check for extraneous solutions.