Student Achievement Committee

Wednesday, April 20, 2022 6:30 PM

BOE - Room 36 and via Zoom Meeting Platform, 129 Church Street, Bristol, CT 06010

I.	**Call to Order**	
II.	**Decision: Approval of Minutes from February 16, 2022 meeting**	
III.	**Public Comment**	
IV.	**Information: School Counseling Curriculum and Resources**	**Presenter:** Carly Fortin
V.	**Decision: K-2 Mathematics Revision**	**Presenter:** Jillian Romann
VI.	**Information: Mastery Credit Experience**	**Presenter:** Carly Fortin
VII.	**Information: Curriculum Preview, *Black and Latino Studies* elective**	**Presenter:** Leszek Ward
VIII.	**Information: Curriculum Preview, *Modern Band for Middle Grades***	**Presenter:** Dr. Sarli
IX.	**Information: Curriculum Preview, *Modern Band for High School***	**Presenter:** Dr. Sarli
X.	**Information: Curriculum Preview, *Ukulele, Song-writing, and Digital Music* (6-8)**	**Presenter:** Dr. Sarli
XI.	**Decision: Curriculum Revision, First Reading, *Chorus/Vocal Ensemble* (6-8)**	**Presenter:** Dr. Sarli
XII.	**Decision: Curriculum Revision, First Reading, *Chorus/Vocal Ensemble (*9-12)**	**Presenter:** Dr. Sarli
XIII.	**Information: Chemistry Performance**	**Presenter:** Carly Fortin & Dr. Rechenberg
XIV.	**Decision: Curriculum Revision, First Reading, *Digital Media Production***	**Presenter:** Dr. Rechenberg
XV.	**Decision: Curriculum Revision, First Reading, *Advanced Digital Media Production***	**Presenter:** Dr. Rechenberg
XVI.	**Adjournment**	

Student Achievement Committee
February 16, 2022
MINUTES - DRAFT

Present: Ken Bagley, Emily Bailey, Catherine Carbone, Kim Culkin, Michael Dietter, Jennifer Dube, Carly Fortin, Kristen Giantonio, Molly Goodine, Sara Hale, Dave Huber, Kristen Peck, Jaime Rechenberg, Azra Redzic, Jillian Romann, Samantha Sarli, Todd Sturgeon, Dante Tagariello, Melanie Vetrano, Leszek Ward, Christopher Wilson

Call to Order:
Commissioner Sturgeon called the meeting to order at 6:35pm.

Approval of Minutes from January 19, 2022
On a motion made by Commissioner Wilson and seconded by Commissioner Tagariello, it was unanimously;
VOTED: To approve the Minutes of December 15, 2021.

Information: 6th-8th Grade Theater, curriculum preview
Dr. Samantha Sarli, Supervisor of Fine Arts presented the 6th-8th Grade Theater curriculum. This new course will be exclusively offered at the Bristol Arts and Innovation Magnet School. This course will culminate in a theater performance in quarter three. It is important to note, students who do not choose theater as their concentration will still experience theater through the exploratory version of each course.

Information: Midyear Progress Update
Carly Fortin, Director of Teaching & Learning, presented data on how Bristol Public Schools monitors student learning and strategic improvement across the district. Mrs. Fortin gave an overview of the three primary strategies for monitoring student progress in Bristol's continuous improvement cycle: data cycles and review, strategic reviews, and learning walks.

There are three indicators Bristol Public Schools prioritizes to monitor progress and adjust strategies: 1) Performance Index, which is calculated by the CSDE, 2) District Priority Indicators, and 3) Alliance Benchmarks. At the district level, these are some of Bristol's most important indicators of our student learning and growth. Mrs. Fortin noted that in addition to these three measures, schools and classrooms regularly use more localized and frequent assessments to monitor student learning. Based on the data, Bristol Public Schools is exceeding our goals for this upcoming school year.

Mrs. Fortin shared another approach, which is strategic reviews. This gives school leaders, their coaches, and members of the school leadership team an opportunity to share what they're doing to impact instruction within their building.

The third method used to support continuous improvement is through learning walks. For these, the district identifies a school that has shown some significant growth based on their performance and data trends. The school teams share with leaders and coaches from across the district the strategies they put into place that they believe have led to these improvements. Dr. Huber, Principal of South Side school shared how this process has helped shape some of the practices at his school. Based on experiences from learning walks and strategic reviews, South Side school was able to immediately incorporate practices that led to even greater outcomes. Dr. Huber expressed that as a district, it is exciting to be learning from one another to benefit the students.

There being no further discussion, Commissioner Sturgeon adjourned the meeting at 7:35pm.

Respectfully submitted,

Gabby Nicoletti
Gabby Nicoletti

Bristol Public Schools

Office of Teaching & Learning

Department	School Counseling Department
Department Philosophy	Bristol Public School's School Counseling Department is committed to ensuring that all students, grades 6-12, have the knowledge and skills to be competent, confident, and innovative learners while developing skills to meet the Vision of the Graduate. The School Counseling Department seeks to provide proactive, preventative, and tiered intervention models of support to students. School Counselors support learners in the process towards post-secondary education, career pathways and make healthy life decisions that allow them to contribute to a global society.
Course	N/A
Course Description for Program of Studies	N/A
Grade Level	9-12
Pre-requisites	N/A
Credit (if applicable)	N/A

<table>
<tr><td rowspan="2">District Overarching Learning Expectations and Standards

(Grade 9-12)
Academic Domain
Career Domain
Social-Emotional Domain</td><td>Grade-Level Large Group (Assembly)</td><td>Whole Group-Class</td><td>Small Group</td><td>Individually</td></tr>
<tr><td colspan="2"><u>Tier One Supports</u>
Access to Naviance Lessons
Access to PowerSchool Portal
Supported Course Selection
Student SUCCESS Planning
Supported Transition planning
Restorative/SBDI/Circles Lessons
Ongoing Monitoring of Grades and Attendance
Student Support PLans for Grades, Attendance and Behavior</td><td colspan="2"><u>Tier Two/Three Supports</u>
Individual counseling
Small group counseling
Student behavior support plans
Referral to community services
Team/parent meetings
Peer mediations
Increased communication between home/school (ex. weekly reports)
Crisis Intervention/Assessment
Daily Check-ins/Check-outs
Access to Student Support Center
Student Home Visits
Connection with Youth/Truancy Officers</td></tr>
<tr><td>A1: Students will demonstrate skills for effective learning and achieving school success.</td><td>X</td><td>X</td><td></td><td>X</td></tr>
</table>

A2: Students will demonstrate the ability to plan a challenging program of studies to prepare for a variety of options after graduation.		X		X
A3: Students will demonstrate an understanding of the habits of mind of an engaged student in relation to all aspects of their lives.		X		
A4: Students will demonstrate the ability to integrate technology to enhance learning and to solve problems.		X		
A5: Students will demonstrate the ability to use creativity and outside experience to enrich the learning process.		X		
A6: Students will demonstrate the ability to set goals based on reflective evaluation of current performance.		X		X
C1: Students will identify personal values, personality, abilities, and interests in relation to career options and the world of work.		X		X
C2: Students will demonstrate the skills, and abilities to research, identify career options and take the necessary steps to obtain a job. Students will develop a research strategy and the tools to search and obtain employment.		X		X
C3: Students will demonstrate effective workplace habits and the ability to transfer employability skills to future career success, and from job-to-job across the lifespan.		X		X
C4: Students will demonstrate an understanding of work/life balance and how it impacts quality of life, personal and financial well-being, and lifestyle choices.		X		X
C5: Students will identify a plan to make a successful transition from school to postsecondary education and/or the world of work.		X		X

C6: Students will demonstrate an understanding of technology in the workplace.		X		
S/E1: Students will demonstrate an understanding of how individual actions can impact relationships, environments, and influence other people.		X		X
S/E2: Students will demonstrate cultural awareness when collaborating with others and taking steps to be inclusive.		X		X
S/E3: Students will demonstrate the ability to make decisions, think divergently, and take steps to achieve desired outcomes.		X		X
S/E4: Students will demonstrate an understanding of the relationship between practicing self-care and personal well-being.		X		X
S/E5: Students will demonstrate an understanding and practice personal safety skills.		X		X
S/E6: Students will demonstrate an understanding of the risks and responsible use of technology.		X		

Whole Group-Classroom (Grade 9)				
Essential Question	Standards	Concepts/Vocabulary	Activities/Tasks	Outcomes/Evidence of Learning
What are habits of mind and how can developing these habits lead to my academic success in High School and in the future?	9-A1-1: Students will implement effective organizational study skills and test-taking skills. 9-A1-2: Students will use time management skills in addressing school responsibilities.	Habits of Mind Study Skills Organizational strategies Time management Persistence Academic Integrity Test taking strategies Independent	***Pacing: 2 Sessions*** Freshmen Year Overview Presentation Naviance Lesson (9.1)- My Foundation.	Exit Ticket/Survey (Google doc)

	9-A1-3: Students will demonstrate how effort and persistence positively affect learning. 9-A2-1: Students will demonstrate the skills of independent research and investigation. 9-A3-2: Students will share knowledge effectively with others. 9-A3-3: Students will demonstrate an understanding of the value of life-long learning. 9-C3-2: Students will develop ongoing time-management skills and create a school/work schedule. 9-S/E1-3: Students will demonstrate effective leadership skills.	research/learning. Effective communication Leadership skills	Naviance Lesson (9.3): Mastering Homework Naviance Lesson (9.5)- My Learning Style	
What are healthy decision-making or problem-solving skills and how can I use these skills in High School and in the future?	9-S/E3-1: Students will develop effective coping skills when dealing with difficult decisions. 9-S/E3-2: Students will demonstrate effective decision-making skills that lead to positive interpersonal relationships. 9-S/E5-1: Students will differentiate between situations requiring peer support and those requiring adult and/or professional assistance. 9-S/E5-2: Students will apply effective problem-solving and decision making skills to make safe	Decision making Problem solving skills Coping skills Interpersonal skills Accessing support Making safe and healthy choices Healthy relationships Seeking support	***Pacing: 2 Sessions*** Freshmen Year Overview Presentation-School and community support available to students. Naviance Lesson (9.9)-Working With My Teachers School-wide SEL lessons	Exit ticket/Google survey

	and healthy choices in relationships.			
What is personal self-care, personal well-being, and personal safety? How can I practice these skills in High School during stressful moments?	9-A1-5: Students will apply techniques for reducing stress and test taking anxiety. 9-S/E1-1: Students will identify the difference between positive and negative relationships. 9-S/E4-1: Students will understand the negative impact unhealthy relationships can have on your well-being. 9-S/E4-2: Students will learn and apply locus of control to situations that trigger negative emotions.	Self-care Personal well-being Identifying triggers for stress Stress reduction techniques Relationships (healthy vs. unhealthy) Locus of control	***Pacing: 2 Sessions*** School-wide SEL lessons Lesson of Anxiety, Stress management/Coping skills. Erin's Law Presentation	Exit ticket/Google survey Individual safety plan
What are safe ways that I can use some technology tools and resources for academic work and research?	9-A4-1: Students will demonstrate appropriate skills to locate, organize, understand, analyze, and synthesize information from multiple digital sources. 9-A4-3: Students will identify, evaluate, and utilize technology tools for academic success. 9-S/E6-1: Students will understand the permanence of their digital identity.	Technology tools/ Platforms used (Google, Naviance, EdPuzzle, PearDeck etc.) Digital identity/footprint	***Pacing:*** **2 Sessions** Accessing PowerSchool Lesson Lesson on Tech tools used in HS for academic success.	Exit ticket/Google survey.
What activities and skills are involved in planning for my academic, personal, and career future?	9-A1-6: Students will demonstrate an understanding of graduation requirements.	Graduation requirements Program of Studies Aptitudes Goal Setting 4-year academic plan Postsecondary requirements	***Pacing: 4 Lessons*** Naviance Lesson (9.4)- Strengths Explorer Naviance Lesson (9.6)-	As part of their exit ticket, students will be asked to identify graduation requirements. Students will begin to

	9-A2-4: Students will connect future plans to goals to make informed program of studies choices. 9-A6-1: Students will apply knowledge of aptitudes and interests to goal setting. 9-C2-5: Students will develop a 4-year academic plan in relation to future career goals and postsecondary requirements. 9-C1-1: Students will identify personal strengths and weaknesses in relationship to postsecondary education and training requirements. 9-C1-2: Students will demonstrate skills and habits of mind essential for a job interview. 9-C2-1: Students will apply decision making skills to previous career research to set career goals. 9-A6-2: Students will use problem-solving and decision making skills to assess progress towards educational goals. 9-C3-1: Students will organize and prioritize academic courses based on a 4-year academic plan and future career choice. 9-A5-1: Students will participate in extracurricular and community experiences.	Strengths/weakness Habits of Mind Resume Decision making skills Professionalism Extracurricular experiences	Setting Goals Naviance Lesson (9.7)- My Career Clusters Naviance Lesson (9.9)- My High School Resume Understanding a high school transcript Course Selection	develop a resume. Students will tag three potential careers of interests in Naviance based on inventory results. Students will update their SSP (Grade 9)

What is cultural awareness and how can I collaborate with others to ensure that I am being inclusive?	9-A1-7: Students will demonstrate the ability to work cooperatively in a group. 9-S/E1-4: Students will demonstrate an understanding of group dynamics and how they influence relationships. 9-S/E2-1: Students will analyze the impact of individual similarities and differences in interpersonal relationships. 9-S/E2-1: Students will demonstrate respect for all cultural traditions and heritages.	Cultural awareness Collaboration Group dynamics Cultural traditions and heritages Respect	Naviance Lesson (9.11)-Teamwork Social and Personal Identity Wheel/Discussion & Activity Lesson	Exit Ticket/Google Survey

ADDITIONAL CONSIDERATIONS	
COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
" I don't need to use a planner or plan out my time. Teachers will tell me when assignments are due and give me reminders." Students may not be aware of the increased independence level required at the high school level and the need for increased organization and time management that might be required as the number of classes or assignments and activities increase.	Students can increasingly develop scheduled, timelines and plan out academic, social and extracurricular activities with independence.
"I can just talk to my friends about serious issues going on rather than seeking out an adult."	Students will consider going to trusted adults within the school and community to seek additional support for issues that require professional or adult attention.
"I have no control over the situations in my life or ways to change those circumstances."	Students can highlight situations or aspects of situations where they have control and ways that they can contribute to make positive changes to situations that are causing stress.
"No one will know what I do online as long as I delete it". Students may not understand the footprint that is left behind by posts, comments and online behavior.	Students can review their social media accounts and determine changes they would like to make immediately to posts that exist and changes they will make moving forward.

"I don't need to start thinking about a career or college until Junior or Senior year."	Students can continue to develop their career plans and complete activities that lead them to further self-explore interest areas and complete activities required for post-secondary exploration and application.
RESOURCES	
Naviance Curriculum	

Individually (Targeted Standards)			
Essential Question	Standards	Outcomes/Evidence of Learning	Concepts/Vocabulary
		Proficient: **Progressing**: **Not yet:**	
ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS		**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**	
RESOURCES			

Whole Group-Classroom (Grade 10)				
Essential Question	Standards	Concepts/Vocabulary	Activities/Tasks	Outcomes/Evidence of Learning
What are habits of mind and how can developing these habits lead to my academic success in High School and in the future?	10-A1-4: Students will effectively and proactively utilize resources to help improve academic performance, i.e. teachers, resources centers, tutors, etc. 10-A2-2: Students will make academic achievement and learning experiences high priorities while developing the ability to balance competing priorities. 10-A3-1: Students will demonstrate the ability to balance school, home, and extracurricular activities. 10-A3-4: Students will use multimodal forms of communication to communicate a coherent message. 10-A3-5: Students will seek and undertake experiences within the school and community that enhance coursework and support personal goals. 10-A5-3: Students will understand the correlation between school and the positive transition to community, postsecondary and career path. 10-C4-2: Students will manage a calendar of extracurricular activities, work, school work, etc.	Proactive Multimodal forms of communication Prioritizing Transition to community, post secondary and career path Coherent	***Pacing: 3 sessions*** Naviance Lesson (10.1)-Participating in My Life Naviance Lesson (10.3)-Working Hard Naviance Lesson (10.5)-My Success Habits School-wide SEL lessons	Exit Ticket/Google survey Students will set up one appointment with a teacher, tutor, support center or School Counselor to discuss academic support Students will complete a calendar of weekly activities and review with their School Counselor. Students will sign up for one extracurricular activity/community activity.

What are healthy decision-making or problem-solving skills and how can I use these skills in High School and in the future?	10-S/E3-4: Students will demonstrate the ability to seek, identify, and evaluate relevant information for aiding in decision-making. 10-S/E3-5: Students will demonstrate the ability to put a plan into action when faced with a problem. 10-S/E5-3: Students will know school referral options for self and others during emotional need situations and school procedures for responding to harassment. 10-S/E5-4: Students will develop strategies for resisting peer pressure from different sources. 10-A6-3: Students will evaluate and reflect on their actions and modify as necessary.	Decision-making Action planning Harassment Referral options Peer pressure Self-evaluation	***Pacing: 2 Sessions*** Naviance Lesson (10.11) - Support Networks Youth Services Peer Education Program Overview School-wide SEL Lesson	Students will identify support individuals in the school/home/community via an exit ticket/survey. Students will complete a personal self-reflection activity with a plan for actions to maintain and others to revise.
What is personal self-care, personal well-being, and personal safety? How can I practice these skills in High School during stressful moments?	10-S/E1-2: Students will recognize the impact that change and transition can have on personal development and social interactions. 10-S/E4-3: Students will develop the skills to balance and manage life events, personal issues, and school success. 10-S/E4-4: Students will demonstrate an understanding of environmental, societal, and individual stressors. 10-S/E4-5: Students will identify	Personal development Impact of transitions Environmental stressors Societal stressors Individual stressors Suicidal ideation Identifying risk-factors	***Pacing: 3 Sessions*** Erin's Law Presentation School-wide SEL lesson Lesson on stress, anxiety, depression, suicide, risk factors and support.	Student journals/reflection sheets Exit ticket/survey

	when self or others are struggling with suicidal ideation and who to go to for help.			
What are safe ways that I can use technology tools and resources for academic work and research?	10-A4-2: Students will apply technical knowledge and skills to complete real-world assignments. 10-C6-1: Students will apply knowledge of technology and social media to research and organize career goals.	Technical knowledge/skills Social media	***Pacing: 1 Session*** Lesson on Technology Tools for academic success, and online safety.	Exit ticket/Survey
What activities and skills are involved in planning for my academic, personal, and career future?	10-A1-8: Students will review, revise and update academic, career, and personal goals. 10-A2-3: Students will use assessment results in educational planning. 10-A4-4: Students will demonstrate personal responsibility for researching post-secondary schools and careers. 10-A5-2: Students will balance extracurricular commitments with academic responsibilities. 10-C1-3: Students will pursue hobbies, extracurricular activities of interest, and/or experiences within the school, especially those related to career choice. 10-C2-3: Students will research postsecondary academic requirements in relation to future goals for the purpose of academic planning.	Goal setting Educational planning Post-secondary options Post-secondary academic requirements College/career fair Financial independence Job shadow/internship Resume Career cluster	***Pacing: 4-5 Sessions*** Naviance Lesson (10.4) - What's Your Road? Naviance Lesson (10.6) - Connecting My Courses and Careers Naviance Lesson (10.8) - What Debt Looks Like Naviance Lesson (10.9) - Enhancing My Resume Naviance Lesson (10.10) - My College Options Naviance Lesson (10.15) - The Real Cost of College	Journal entries/goal setting in Naviance Exit ticket/survey Students will develop a resume in Naviance Students will use Naviance to create lists of favorite career pathways and post-secondary school choices Student will update SSP (Grade 10)

	10-C2-4: Students will attend a college and/or career fair to research postsecondary options and requirements. 10-C4-1: Students will demonstrate their own financial independence. 10-C4-3: Students will participate in job shadows and internship opportunities to explore what fields are of interest. 10-C5-1: Students will develop a system for collecting information that will be useful when writing a resume. 10-C5-2: Students will create a career plan/goals by selecting a career pathway within a career cluster. 10-C5-3: Students will attend a college and/or career fair.			
What is cultural awareness and how can I collaborate with others to ensure that I am being inclusive?	10-S/E2-2: Students will demonstrate the ability to take the perspective of others, including those from different backgrounds. 10-S/E2-3: Students will understand the characteristics of a free and democratic society in relation to acceptance of alternative viewpoints, lifestyles, and choices.	Perspective taking Free and democratic society Alternative viewpoints, lifestyles, choices	***Pacing: 2 Sessions*** School-wide SEL lesson on individual differences and respecting others' cultures, choices and lifestyles	Journal entries Exit ticket/survey

ADDITIONAL CONSIDERATIONS	
COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE**

	UNIT
"I don't need to evaluate and reflect on any of my choices or actions." Students may not understand the importance of analyzing the positive and negative outcomes of academic, social and behavioral choices they have made in order to make changes for future situations. "I don't need to develop strategies to assist me with peer pressure." Students may generally think that they have the skills to avoid situations that involve peer pressure, however, they may not have yet thought about actions they would take in various settings or situations.	Students could choose a healthy decision-making skill/problem-solving skill to think about/journal about/observe after reflecting on a past situation. Students could develop a list of scenarios where situations might arise where they have to respond to peer pressure and develop a list of verbal or behavioral actions that they might take in a given situation.
RESOURCES	
Naviance Curriculum	

Individually (Targeted Standards)			
Essential Question	Standards	Outcomes/Evidence of Learning	Concepts/Vocabulary
ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS		**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**	
RESOURCES			

Whole Group-Classroom (Grade 11)				
Essential Question	Standards	Concepts/Vocabulary	Activities/Tasks	Outcomes/Evidence of Learning
What are habits of mind and how can developing these habits lead to my academic success in High School and in the future?	11-A1-1: Students will engage actively in challenging curriculum. 11-A1-2: Students will take responsibility for academic integrity. 11-A2-3: Students will utilize resources to improve test taking ability and implement enhanced test taking strategies. 11-A1-5: Students will communicate effectively through written reports, oral presentations and discussion. 11-A3-1: Students will understand that chance is a part of growth. 11-A3-3: Students will cognitively engage in the learning process, monitoring and regulating their learning.	Habits of Mind Study Skills Organizational strategies Time management Persistence Academic Integrity Test taking strategies Independent research/learning Effective communication Leadership skills	***Pacing: 3 Sessions*** Naviance Lesson (11.4)-Challenging Myself Naviance Lesson (11.6)-My Test Prep Plan Lesson on self-advocacy/ presentation skills and effective communication	Exit Ticket/Google Survey
What are healthy decision-making or problem-solving skills and how can I use these skills in High School and in the future?	11-A6-1: Students will actively seek, evaluate and when appropriate, incorporate feedback when resolving a conflict or problem. 11-S/E1-2: Students will apply effective communication skills in conflict situations and when experiencing negative emotions.	Conflict Resolution Effective problem solving De-escalation Coping skills Impact on others Self-Control Communication Skills Empathy & Self Awareness Taking personal	***Pacing: 2 Sessions*** Naviance Lesson (11.7)- My Support Network School-wide SEL Lesson (Decision-Making and	Exit ticket/Google survey

	11-S/E3-1: Students will analyze the influence of others on their decisions. 11-S/E3-2: Students will practice taking personal responsibility for negative consequences of decisions made. 11-S/E5-1: Students will demonstrate self-control in the classroom, school and community. 11-S/E5-2: Students will identify strategies and resources for assistance with harassment and/or abusive relationships.	responsibility	Consequences of Choices)	
What is personal self-care, personal well-being, and personal safety? How can I practice these skills in High School during stressful moments?	11-S/E4-1: Students will demonstrate a positive attitude towards themselves as a unique and worthy person. 11-S/E4-2: Students will develop a deeper understanding of their personality and temperament and how it relates to effective self-care practices.	Self Exploration Positive Self Worth Temperament Self-care	***Pacing: 2 Sessions*** Naviance Lesson (11.1) - What Makes Me Unique Naviance Lesson (11.11) - Building Self Confidence in Naviance Personality Assessment	Personality Assessment results Exit ticket/Google survey
What are safe ways that I can use some technology tools and resources for academic work and research?	11-A4-1: Students will demonstrate online literacy and be able to discern if information is reliable, relevant and accurate. 11-A4-2: Students will apply technological knowledge to their everyday activities and course work.	Online Literacy Reliable Relevant Digital Identity Career Exploration	***Pacing: 2 Sessions*** Naviance Lesson (11.2)-My Career Goals Lesson on Online literacy/digital identity.	Exit Ticket/Google survey

	11-S/E6-1: Students will understand how their digital identity can impact their life outside of their digital world. 11-C6-1: Students will analyze career outlooks and opportunities for employment using appropriate technology.			
What activities and skills are involved in planning for my academic, personal, and career future?	11-A1-8: Students will review, revise and update academic, career, and personal goals. 11-A2-1: Students will review and revise their program of studies to match individual post secondary plans. 11-A2-4: Students will apply strategies to fulfill educational and career goals outlined in their student success plan. 11-A5-1: Students will choose courses that match extra curricular interests. 11-A5-2: Students will identify and access resources to pursue postsecondary goals. 11-C2-1: Students will research colleges and employment options available based on career choice. 11-S/E1-1: Students will demonstrate an understanding of all elements of effective oral and written communication.	Goal Setting Post Secondary Exploration Post Secondary Planning Resume Field of Interest Effective communication	***Pacing: 5 Sessions*** Naviance Lesson (11.8)-College Fit Naviance Lesson (11.9)-College SuperMatch Naviance Lesson (11.10)-My College Essay Naviance Lesson (11.12)-Paying For College Naviance Lesson (11.13)-Financial Aid Options or Junior Planning Presentation Naviance Lesson (11.15)- My Senior Year in Naviance College Fair at	Exit Ticket/Google form Complete Resume in Naviance Update SSP (Grade 11) Attend college fair

	11-C1-1: Students will identify skills, abilities, accomplishments, awards and personal qualities in preparation for writing a resume, interviewing and completing applications. 11-C1-2: Students will convey positive qualities and attributes during a mock or actual interview. 11-C4-1: Students will learn how to create a simple budget distinguishing between wants and needs. 11-C5-1: Students will create a resume and fill out mock job applications. 11-C5-3: Students will attend a college and/or career fair.		BCHS/BEHS	
What is cultural awareness and how can I collaborate with others to ensure that I am being inclusive?	11-A1-6: Students will use an interdisciplinary perspective to recognize culture and societal diversity. 11-A3-5: Students will work within diverse teams. 11-S/E1-3: Students will create positive and supportive diverse relationships with others to support their success. 11-S/E2-1: Students will demonstrate skills to effectively express and listen to diverse opinions, habits of mind, and beliefs in a group.	Cultural Awareness Collaboration Inclusivity Internal Bias Diversity Habits of Mind	***Pacing: 2 Sessions*** School-wide SEL Lesson on Diversity, Inclusion and Equity.	Exit ticket/Google survey

	11-S/E2-1: Students recognize that everyone has rights and responsibilities.			

ADDITIONAL CONSIDERATIONS	
COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
"Adults can't understand or help with the stresses or emotional feelings I have going on in my life." Students might not know that there are many resources in the school building that can assist with supporting students with developing skills or with assisting with making referrals for additional services. "No one will know what I do online as long as I delete it". Students may not understand the footprint that is left behind by posts, comments and online behavior. They may not fully understand the long-term impact of their digital footprint of college admission or job acquisition. "I can complete all of my college planning during Senior year." Students may not fully understand the importance of having their plan ready prior to Senior year and some of their tasks completed during their Junior year.	Students could consider going to trusted adults within the school and community to seek additional support for issues that require professional or adult attention. Students can review their social media accounts and determine changes they would like to make immediately to posts that exist and changes they will make moving forward. Students can continue to develop their career plans and complete activities that lead them to further self-explore interest areas. Students can complete activities required for post-secondary exploration and application by meeting with the School Counselor regularly and attending to deadlines.

RESOURCES
Naviance Curriculum

Individually (Targeted Standards)			
Essential Question	Standards	Outcomes/Evidence of Learning	Concepts/Vocabulary
What activities and skills are involved in planning for my academic, personal, and career future?	11-C4-3: Students will participate in job shadows and internship opportunities to	**Proficient:** Student has successfully communicated with and	Career planning Job shadowing

	explore what fields are of interest.	attended at least one job shadow day or internship. **Progressing:** Student has reached out to job sites but has not yet attended the job shadow or internship. **Not yet:** Student is still exploring potential sites but has not made contact.	
ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS		**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**	
RESOURCES			
Naviance Curriculum			

Whole Group-Classroom (Grade 12)				
Essential Question	Standards	Concepts/Vocabulary	Activities/Tasks	Outcomes/Evidence of Learning
What are habits of mind and how can developing these habits lead to my academic success in High School and in the future?	12-A1-3: Students will meet graduation requirements. 12-A1-4: Students will guide, mentor and support peers to achieve excellence in class. 12-A2-2: Students will choose to use a high level of literacy and the ability to organize knowledge and ideas to produce reasoned, written responses. 12-A3-4: Students will identify and describe their personal leadership style, strengths, and limitations. 12-A5-3: Students will demonstrate self-directed independence as a learner. 12-C1-3: Students will identify how to use time effectively in order to complete all important tasks while managing extra-curricular activities, jobs responsibilities and family. 12-C4-2: Students will plan a calendar of senior year events, including college/career material submission timelines.	Graduation Requirements Accountability Resources Understanding of literacy Personal assessment Independence Integrity Time Management Responsibilities Organizational Skills Prioritizing	***Pacing: 2 to 3 sessions*** Naviance Lesson (11.2)- My Personal Brand Naviance Lesson (11.3)-Being Career Ready	Successful completion of graduation requirements Exit ticket/Google form Completion of senior calendar
What are healthy decision-making or problem-solving skills and	12-C3-1: Students will develop problem-solving and decision-making skills in the college process.	Decision Making Process Problem Solving Accessing resources	***Pacing: 2 Sessions*** Senior Presentation -	Exit ticket/Google survey

how can I use these skills in High School and in the future?	12-S/E3-4: Students will identify resources to support decision-making about the transition from high school to their post-secondary plan. 12-S/E5-3: Students will know community referral options for self and others in emotional need when help is needed. 12-S/E5-4: Students will identify safe alternatives to risky behaviors (i.e. trying drugs, getting into a car with a drunk driver etc).	Self Reflection Risky behaviors Understanding cause and effect of choices	pathways, decision making process School-wide SEL lessons-healthy decision making-choices of actions.	
What is personal self-care, personal well-being, and personal safety? How can I practice these skills in High School during stressful moments?	12-S/E4-3: Students will demonstrate the ability to self-regulate negative emotions, control impulses, and motivate themselves in all environments. 12-S/E4-4: Students will identify ways to manage multiple stressors as they transition to post secondary education and/or work.	Self Identification/Awareness Understanding resources Mental Health Awareness Self Advocacy	***Pacing: 2 sessions*** Naviance Lesson (12.7)- Leaving Home Success Skills Erin's Law Presentation School-wide SEL Lessons-Personal safety/healthy decision making.	Exit ticket/Google survey
What are safe ways that I can use some technology tools and resources for academic work and research?	12-A4-3: Students will use a systematic and progressive process to solve a problem using technology. 12-A4-4: Students will demonstrate the ability to design a complex product that meets a set of requirements using technology.	Knowledge and usage of digital platforms Knowledge of digital resources Problem solving skills	***Pacing: 1 Session*** Lesson on digital tools for academic and personal success. Digital tools and graphics for completing Portfolio	Exit ticket/Google form Completion of Portfolio

What activities and skills are involved in planning for my academic, personal, and career future?	12-C2-3: Students will review 4-year plan, career goals and strategies and amend as necessary. 12-A3-1: Students will complete an extended project that requires planning, developing a solution or product, and presenting the results orally and in writing. 12-C2-5: Students will write a resume including skills, attributes, accomplishments, and awards. 12-C2-5: Students will complete college applications and/or job applications. 12-C3-2: Students will develop interviewing skills, resume and cover letter writing and how to follow up after an interview.	Goal setting Career Exploration Understanding of Self Understanding of strengths and skills Portfolio Applications Resume Experiential Learning Essential Skills	***Pacing: 4 Sessions*** Naviance Lesson (12.1)-My College Applications Naviance Lesson (12.4)-National Scholarship Search Naviance Lesson (12.9)-Choosing the Right School Naviance Lesson (12.10)-Completing the FAFSA Naviance Lesson (12.13)-My College Life Naviance Lesson (12.15)-My College Network	College application Applications for scholarships Completion of Resume Completion of SSP (Grade 12) and Summary Report
What is cultural awareness and how can I collaborate with others to ensure that I am being inclusive?	12-A1-7: Students will identify how cultural differences impact and influence assumptions, perceptions, and personal values. 12-A6-2: Students can articulate their own identity, experiences and biases and how these affect their ability to lead. 12-S/E1-4: Students will demonstrate skills effectively, express opinions, attitudes and beliefs in a group	Cultural Awareness Self Perception Personal Values Identity Inclusive Respectful Mindfulness Civic Responsibility Global Awareness Sensitivity	***Pacing: 2 sessions*** School-wide SEL Lessons on Equity, Inclusion and Diversity. School-wide SEL Lessons on Tolerance, Respect and Unity.	Exit Ticket/Google survey

	situation in a way that is respectful to all. 12-S/E2-2: Students will accept and appreciate individual differences in ethnicity, culture, race, religion, and lifestyle. 12-S/E2-3: Students will demonstrate their civic responsibility in building a better society.			

ADDITIONAL CONSIDERATIONS	
COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**

RESOURCES
Naviance Curriculum

Individually (Targeted Standards)			
Essential Question	Standards	Outcomes/Evidence of Learning	Concepts/Vocabulary
What are healthy decision making or problem-solving skills and how can I use these skills in High School and in the future?	12-S/E3-5: Students will reflect on personal decisions made and evaluate the success of the decision-making process for that situation. 12-A6-3: Students will demonstrate an understanding of what influences the	**Proficient**: Student will reflect on personal decisions made and evaluate the success of the decision-making process for that situation. **Progressing**: Student has some difficulty on	Decision-making Problem-solving skills

	decision-making process.	making personal decisions and//or reflecting on outcomes of those decisions **Not yet:** Student has not made any reflection on personal decisions and has difficulty reflecting on the outcomes of any decision.	
What is personal self-care, personal well being and personal safety? How can I practice these skills during High School during stressful moments?	12-S/E4-5: Students will prepare to take charge of their own mental health as they transition to postsecondary education and/or work.	**Proficient:** Student an articulate where or how to access mental health support **Progressing:** Student has information on how to access mental health support. **Not yet**: Student is unable to articulate when, where and how to access mental health support.	Self-care Well-being Personal-safety
What activities and skills are involved in planning for my academic, personal and career future?	12-C5-2: Students will participate in an internship or job shadow experience and mock interview.	**Proficient:** Student has successfully communicated with and attended at least one job shadow day or internship term. **Progressing:** Student has reached out to job sites but has not yet attended the job shadow or internship. **Not yet:** Student is still exploring	

ADDITIONAL CONSIDERATIONS	
COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
RESOURCES	
Naviance Curriculum	

Bristol Public Schools

Office of Teaching & Learning

Department	School Counseling Department
Department Philosophy	Bristol Public School's School Counseling Department is committed to ensuring that all students, grades 6-12, have the knowledge and skills to be competent, confident, and innovative learners while developing skills to meet the Vision of the Graduate. The School Counseling Department seeks to provide proactive, preventative, and tiered intervention models of support to students. School Counselors support learners in the process towards post-secondary education, career pathways and make healthy life decisions that allow them to contribute to a global society.
Course	N/A
Course Description for Program of Studies	N/A
Grade Level	6-8
Pre-requisites	N/A
Credit (if applicable)	N/A

<table>
<tr><th rowspan="2">District Overarching Learning Expectations and Standards

(Grade 6-8)

Academic Domain
Career Domain
Social-Emotional Domain</th><th>Grade-Level Large Group (Assembly)</th><th>Whole Group-Class</th><th>Small Group</th><th>Individually</th></tr>
<tr><td colspan="2"><u>Tier One Supports</u>
Access to Naviance Lessons
Access to PowerSchool Portal
Supported Course Selection
Student SUCCESS Planning
Supported Transition planning
Restorative/SBDI/Circles Lessons
Ongoing Monitoring of Grades and Attendance</td><td colspan="2"><u>Tier Two/Three Supports</u>
Individual counseling
Small group counseling
Student behavior support plans
Referral to community services
Team/parent meetings
Peer mediations
Increased communication between home/school (ex. weekly reports)
Crisis Intervention
Daily Check-ins/Check-outs
Access to Student Support Center
Student Home Visits
Connection with Youth/Truancy Officers</td></tr>
<tr><td>A1: Students will demonstrate skills for effective learning and achieving school success.</td><td>X</td><td>X</td><td></td><td>X</td></tr>
</table>

A2: Students will demonstrate the ability to plan a challenging program of studies to prepare for a variety of options after graduation.		X		X
A3: Students will demonstrate an understanding of the habits of mind of an engaged student in relation to all aspects of their lives.		X		X
A4: Students will demonstrate the ability to integrate technology to enhance learning and to solve problems.		X		
A5: Students will demonstrate the ability to use creativity and outside experience to enrich the learning process.		X		
A6: Students will demonstrate the ability to set goals based on reflective evaluation of current performance.		X		X
C1: Students will identify personal values, personality, abilities, and interests in relation to career options and the world of work.		X		X
C2: Students will demonstrate the skills, and abilities to research, identify career options and take the necessary steps to obtain a job. Students will develop a research strategy and the tools to search and obtain employment.		X		X
C3: Students will demonstrate effective workplace habits and the ability to transfer employability skills to future career success, and from job-to-job across the lifespan.		X		X
C4: Students will demonstrate an understanding of work/life balance and how it impacts quality of life, personal and financial well-being, and lifestyle choices.		X		X
C5: Students will identify a plan to make a successful transition from school to postsecondary education and/or the world of work.		X		X

C6: Students will demonstrate an understanding of technology in the workplace.		X		
S/E1: Students will demonstrate an understanding of how individual actions can impact relationships, environments, and influence other people.		X		X
S/E2: Students will demonstrate cultural awareness when collaborating with others and taking steps to be inclusive.		X		
S/E3: Students will demonstrate the ability to make decisions, think divergently, and take steps to achieve desired outcomes.		X		X
S/E4: Students will demonstrate an understanding of the relationship between practicing self-care and personal well-being.		X		X
S/E5: Students will demonstrate an understanding and practice personal safety skills.		X		X
S/E6: Students will demonstrate an understanding of the risks and responsible use of technology.		X		

Whole Group-Classroom (Grade 6)				
Essential Question	Standards	Concepts/Vocabulary	Activities/Tasks	Outcomes/Evidence of Learning
What are habits of mind and how can developing these habits lead to my academic success in Middle School and in the future?	6-A1-1: Students will learn how to track their use of time and understand efficient use of time. 6-A1-2: Students will learn skills that assist them in taking responsibility for independent learning.	Habits of Mind Academic values Self-management Time management Independent learning Attendance Punctuality Commitment	***Pacing: 3 Sessions*** Naviance Lesson (6.5)-My Study Plan Naviance Lesson (6.11)-My Study Skills	Review of Naviance results Google survey/Exit Ticket

	6-A1-3: Students will demonstrate awareness of the relationships between learning and effort. 6-A5-1: Students will develop an understanding of the value of commitment and apply it to the learning environment. 6-A6-1: Students will identify habits of mind and behaviors that lead to success. 6-C3-1: Students will learn and understand the importance of attendance and punctuality and the connections this has to skills needed for a workplace setting. 6-C4-2: Students will create a weekly calendar of homework time, extracurricular activities, and family events.	Persistence	Naviance Lesson (6.6)-Taking Responsibility PowerSchool Connections Lesson	
What are healthy decision-making or problem-solving skills and how can I use these skills in Middle School and in the future?	6-A3-3: Students will learn skills to be able to respond effectively and appropriately to new situations. 6-S/E-1-2: Students will learn the conflict resolution process. 6-S/E-3-1: Students will analyze possible alternatives when peer pressure is influencing decisions and behaviors.	Healthy decision making Problem-solving Conflict Resolution	***Pacing: 2 Sessions*** Naviance lesson (6.15) - My MS Support Network School-wide SEL lesson	Google survey Exit Ticket
What is personal self-care, personal well-being, and	6-S/E-4-1: Students will learn positive ways to respond to negative	Conflict resolution Self-care	***Pacing: 3 Lessons***	Google Survey/Exit Ticket Create a self-care plan

personal safety? How can I practice these skills in Middle School during stressful moments?	comments and situations. 6-S/E-4-2: Students will learn self-care options for self and others when in need. 6-S/E4-3: Students will understand the importance of taking care of our bodies and personal wellness. 6-A1-5: Students will demonstrate an understanding of the concept of reducing stress and test anxiety. 6-S/E5-1: Students will demonstrate safe and responsible behavior in school and in the community. 6-S/E5-4: Students will demonstrate an understanding of peer pressure and appropriate and appropriate responses to peers during these types of situations.	Test Anxiety/Stress Stress Reduction Healthy choices Peer pressure	Self-care Lesson Calm Mindfulness Journal School-wide Erin's Law Lesson School-wide-SEL lesson	
What are safe ways that I can use some technology tools and resources for academic work and research?	6-A4-2: Students will actively and creatively use various types of technology resources for academic success. 6-C6-1: Students will learn appropriate technology use and safety both within the school and personal settings. 6-S/E5-1: Students will understand the permanence of digital footprints and digital identity. 6-S/E6-1: Students will use online	Online digital footprints Social media safety	***Pacing: 2 lessons*** Naviance Lessons (6.4) My present versus my future Digital Citizenship Lesson	Exit Ticket/Post assessment

	tools and technology responsibility and in healthy social ways to enhance learning and social interaction.			
What activities and skills are involved in planning for my academic, personal, and career future?	6-C1-1: Students will take a career interest inventory and identify potential careers of interest. 6-A1-8: Students will create a comprehensive academic, career, and personal goal plan that is captured in their Student Success Plan (SSP). 6-A6-3: Students will discuss and explore the relationship between educational goals and future career planning using technology tools.	Interest Inventories Comprehensive plans Student Success Plans	***Pacing: 3 Sessions*** Naviance Lessons (6.8) My career interests Naviance Lesson (6.9) Goal setting Naviance Lesson (6.12) What is college Encore Course Selection	Completion of Interest Inventory Completion of Gr. 6 SSP (Academic, personal, and career).
What is cultural awareness and how can I collaborate with others to ensure that I am being inclusive?	6-S/E2-1: Students will investigate ways to help and engage others in helping the school community or the Bristol community. 6-S/E2/2: Students will learn and understand the negative impacts of excluding others. 6-S/E1-3: Students will learn to identify the differences between nonverbal and verbal communication and demonstrate active listening skills.	Community service Peer relations Exclusion Forms of communication Active listening skills	***Pacing: 2 Sessions*** Oct Anti-Bullying lesson School-wide SEL lessons Community-service lesson	Naviance 6.16: What Have You Learned? (Post-Assessment) Sign: Anti-bullying contract

ADDITIONAL CONSIDERATIONS	
COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
“Students who earn As earn them by being ‘smart’”-Students may not	Students could choose one of the habits of mind to think about/journal about/observe

have a strong perception of what makes a student successful because their perception is based on their experience as a learner and their extent to which their teachers have built experiences that have shown how effort leads to success.	after reflecting on a potential area of strength or need.
"No one will know what I do online as long as I delete it". Students may not understand the footprint that is left behind by posts, comments and online behavior.	After digital footprint lesson, students can review their social media accounts and determine changes they would like to make immediately to posts that exist and changes they will make moving forward.
"I can't talk to anyone about a bullying incident or an incident when I felt left out because of my race or culture because then I will be called a snitch or it will be ignored."	After learning about the building protocols for reporting incidents, students can report an anonymous report, seek a trusted adult to discuss or address the situation with peers.
"Only struggling students work with their counselors."	Students could visit the counseling office and assigned counselor to find out the services they offer to all students.
RESOURCES	
Naviance Curriculum https://sites.google.com/a/wesvt.net/library/habits-of-mind https://www.commonsense.org/education/digital-citizenship/curriculum https://www.chsvt.org/wdp/Habits_of_Mind_Curriculum_VT_WDP.pdf	

Individually (Targeted Standards)			
Essential Question	Standards	Outcomes/Evidence of Learning	Concepts/Vocabulary
How does my personal attitude and belief system impact my thoughts about my personal successes?	6-A3-5 Students will demonstrate the ability to share positive mental attitudes and beliefs regarding their personal success.	**Proficient**: Student is able to share positive mental attitudes and beliefs regarding themself and how that impacts their thoughts and behaviors regarding personal success. **Progressing**: Student is able to share positive attitudes and	Personal Attitudes Perception of success Self-worth

		beliefs about themself, however, they are unable to connect this to thoughts of personal success. **Not yet:** Student is not able to share positive attitudes or beliefs about themself nor make connections to how personal feelings impact thoughts about personal success.	
What does it look and feel like to express a range of emotions? What happens if I don't express my emotions?	6-S/E1-1 Students will learn to express emotions as it relates to the situation or environment	**Proficient**: Student has expressed emotions in productive and healthy ways. **Progressing**: Student seeks counseling support frequently to express their emotions. **Not yet**: Student has struggled to express emotions in a healthy way resulting in conflict(s), outbursts, etc.	Emotional expression
ADDITIONAL CONSIDERATIONS			

COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
"I don't need to express my emotions." Students may not have an understanding that emotions can be expressed in a variety of ways and that emotional expression is a healthy coping skill and necessary for healthy relationships.	Students can maintain a daily/weekly journal to log feelings they have experienced. Students can journal ways that they have fostered positive connections with others, or resolved internal negative feelings by expressing emotions in a healthy way.

RESOURCES
Naviance Curriculum

Whole Group-Classroom (Grade 7)				
Essential Question	Standards	Concepts/Vocabulary	Activities/Tasks	Outcomes/Evidence of Learning
What are habits of mind and how can developing these habits lead to my academic success in Middle School and in the future?	7-A6-2: Students will accept mistakes as essential to the learning process. 7-A2-1: Students will demonstrate the ability to use increased critical thinking skills to make informed decisions. 7-A2-2: Students will use initiative and creativity to apply knowledge and skill to a variety of situations. 7-C3-2: Students will develop a daily homework/study, extracurricular activity & chore schedule, learning how to manage a schedule.	Self-awareness Responsibility Critical-thinking skills Perseverance Time-management	***Pacing: 2 sessions*** Naviance lesson (7.1) - Listening to Myself Naviance Lesson (7.5) - Habits for Success PowerSchool Connection Lesson	Student-developed schedule. Exit Ticket: Google form
What are healthy decision-making or problem-solving skills and how can I use these skills in Middle School and in the future?	7-A1-4: Students will demonstrate an understanding of when you would need academic support and who you would go to for help. 7-A4-4: Students will demonstrate increased levels of adaptability and persistence when faced with challenges. 7-A3-2: Students will develop and attempt solutions to resolving complex problems or situations.	Adaptability Persistence Complex problems Resolution	***Pacing: 2 Sessions*** Naviance lesson (7.6) What are the rules Naviance lesson (7.3) Overcoming Obstacles School-wide SEL lessons	Google survey/Exit ticket
What is personal self-care, personal well-being, and	7-S/E4-4: Students will evaluate stress level and ability to utilize healthy	Stress Coping skills	***Pacing: 3 Sessions***	Exit Ticket: What coping strategy will you try?

personal safety? How can I practice these skills in Middle School during stressful moments?	coping skills. 7-S/E5-1: Students will demonstrate ways to resist peer pressure to use drugs/alcohol or make other risky behaviors or destructive decisions.	Peer pressure Risky behaviors Destructive decision making	Naviance Lessons (7.1) Listening to myself School-wide Erin's Law Lesson Drug-alcohol lesson	Personal safety plan
What are safe ways that I can use technology tools and resources for academic work and research?	7-S/E6-1: Students will use online tools and technology responsibility and in healthy social ways to enhance learning and social interaction.	Online identity and responsibility Digital footprint	***Pacing: 1 Session*** AVID online strategies lesson	Google form/Exit ticket
What activities and skills are involved in planning for my academic, personal, and career future?	7 C2-3: Students will assess academic strengths and weaknesses, interests, and aptitudes. 7-C1-2: Students will identify personal abilities, skills, and interests and how they relate to their chosen career. 7-A1-7: Students will continue to build upon their SSP, planning a course of study that aligns to their personal interests and abilities. 7-C4-3: Students will understand the relationship between community service/extracurricular activities and career goals. 7-C5-2: Students will identify career clusters that they would want to pursue as part of their career plan.	Aptitudes Community service Extracurricular activities Career clusters	***Pacing: 2 Session*** Naviance lesson (7.10) Career Scavenger Hunt Naviance lesson (7.12) My Future Plans Encore course selection	Create an individual Electronic Vision Board Including at least one activity they hope to be involved in Update SSP (7th grade)
What is cultural awareness and how can I collaborate with others to ensure that I	7-A1-6: Students will demonstrate the ability to work cooperatively in a group using skills previously learned.	Cooperative learning Leadership Diversity awareness	***Pacing: 2 Sessions*** Naviance Lesson 7.2 -	Naviance 7.16: What Have You Learned? (Post-Assessment)

am being inclusive?	7-S/E1-4: Students will learn about positive leadership styles. 7-S/E2-2: Students will recognize individual differences in ethnicity, culture. Race, religion, and lifestyle.		What makes me unique? Naviance Lesson 7.7 - Teamwork School-wide SEL lesson	

ADDITIONAL CONSIDERATIONS	
COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
"Students who make repeated mistakes are students who fail or who are often in trouble." Students may not understand that mistakes lead to new learning and that all individuals make mistakes that lead to self-exploration, self-challenge, change, and growth. "Adults don't understand the stress and peer pressure that we deal with." Students may not be aware of the adults in their lives that are familiar with teen issues or who can be a support system to them in times of stress. "Students don't talk about race and culture at school." Students may not be aware of the ways that they can acknowledge and embrace their own race and culture or the race and culture of others within the school setting.	Students could choose a situation that they experienced where a mistake was made and think about/journal about/observe after reflecting on a potential area of self-growth or learning that developed from the situation. Students could identify a list of resources within the school and the community that could support them with issues related to stress, anxiety, and peer-related issues. Students could work with teachers to highlight all cultures throughout the school year through a club or classwork and develop projects to share characteristics about student and teacher differences based upon various cultures.

RESOURCES
Naviance Curriculum

Individually (Targeted Standards)			
Essential Question	Standards	Outcomes/Evidence of Learning	Concepts/Vocabulary

ADDITIONAL CONSIDERATIONS	
COMMON MISCONCEPTIONS	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**

RESOURCES

Whole Group-Classroom (Grade 8)				
Essential Question	Standards	Concepts/Vocabulary	Activities/Tasks	Outcomes/Evidence of Learning
What are habits of mind and how can developing these habits lead to my academic success in Middle School and in the future?	8-A3-1: Students will learn to predict outcomes based upon observations, patterns, or information provided that supports a prediction. 8-A3-4: Students will make inferences from information provided to develop a solution to a given problem or project. 8-C3-3: Students will learn how to create a S.M.A.R.T goal for academic and career success. 8-C3-4: Students will examine the importance of lifelong learning and acquiring new skills.	Predicting outcomes Observing patterns Predictions Developing solutions SMART Goals (Review) Life-long learning	***Pacing: 3 Sessions*** Naviance Lesson (8.8) - Decision Making Naviance Lesson (8.1) - Success, Risk, and Failure Naviance Lesson (8.5)-What's your Road PowerSchool Connections Lesson	Updated SSP (Grade 8) Exit Ticket/Google Survey
What are healthy decision-making or problem-solving skills and	8-S/E3-2: Students will develop an increased capacity to generate multiple alternatives before making	Decision making Alternative options Evaluating options	***Pacing: Two Sessions*** Naviance lesson (8.8)	Google survey/Exit ticket

how can I use these skills in Middle School and in the future?	decisions. 8-S/E3-3: Students will use sources of information for decision-making in the school and the community. 8-S/E3-4: Students will demonstrate the ability to evaluate options, make a choice, and develop a plan when faced with a problem.	Developing plans	-Decision Making School-wide SEL lesson	
What is personal self-care, personal well-being, and personal safety? How can I practice these skills in Middle School during stressful moments?	8-S/E4-5: Students will identify signs of depression and/or suicide in self and others and who to go to for help. 8-S/E-5-2: Students will learn and describe the types of harassment, the consequences of harassment, and how to report incidents.	Self-care Self-harm Depression Harassment	***Pacing: 2 Session*** Naviance Lesson (8.7)-My Personal School Support Network. Erin's Law Lesson	Exit ticket/Google survey
What are safe ways that I can use some technology tools and resources for academic work and research?	8-A4-3: Students will use technology to provide peer feedback on other's work in a way that is constructive and supports learning.	Peer feedback	**Pacing: 1 Session** Lesson on offering peer feedback using digital tools.	Google Form/Exit ticket
What activities and skills are involved in planning for my academic, personal, and career future?	8-C1-3: Students will identify personal values that are important to a career choice. 8-C2-2: Students will describe the relationship between career interests, high school courses, and post-secondary options. 8-A2-4: Students will research high school level plans of study.	Future goals High School options and exploration Career inventories and exploration	***Pacing: 3 Sessions, Individual meetings, and meeting with Alt. HS*** Naviance Lesson (8.4)-Connecting Interests and Careers Naviance Lesson (8.6)-My Career Path Naviance Lesson	Exit ticket/Google survey Completion of application to alternative HS Updated SSP (Grade 8) Naviance Post Assessment (8.16)-What Have You Learned?

	8-C2-1: Students will research post-secondary education requirements for their chosen career as well as learn skills needed in order to plan for post-secondary options. 8-C4-1: Students will participate in a financial literacy cost of living lesson. 8-C5-3: Students will understand the transition to high school and participate in transition activities.		(8.11)- Financial Aid options High School course selection Alternative high school presentations HS Course selection	
What is cultural awareness and how can I collaborate with others to ensure that I am being inclusive?	8-A5-3: Students will demonstrate an understanding of group dynamics and the various roles that exist in groups while ensuring that each participant has a voice and role. 8-S/E2-3: Students will identify and understand their own cultural vantage point.	Cultural vantage point Group dynamics	***Pacing: 1 Session*** Diversity awareness lesson	Exit ticket/Google survey

ADDITIONAL CONSIDERATIONS

COMMON MISCONCEPTIONS	OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT
"I can't talk about my depression and anxiety at school. I can only talk about academics." Students may not be aware of the resources available to them to address mental health issues. "If I report an incident of harassment, everyone will know. I will be known as a snitch and nothing will be done." Students may not be aware of the procedures that exist when processing harassment incidents and confidentiality obligations.	Students could review the various resources available to them from the beginning of the school year presentation regarding mental health and seek support when needed for concerns other than academics. Students will courageously report incidents to trusted adults and be reminded that their reports are confidential and schools will investigate and act upon all reports.

RESOURCES

Naviance Curriculum

Individually (Targeted Standards)			
Essential Question	Standards	Outcomes/Evidence of Learning	Concepts/Vocabulary
ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS		**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**	
RESOURCES			

Bristol Public Schools

Office of Teaching & Learning

Department	Mathematics
Department Philosophy	*Students learn by doing math, solving problems in mathematical and real-world contexts, and constructing arguments using precise language.* The Bristol mathematics curricula embeds this *learn-by-doing* philosophy by focusing on high expectations for all students and providing students with opportunities that build conceptual understanding, computational and procedural fluency, and problem solving through the use of a variety of strategies, tools, and technologies. The mathematics curriculum is responsive to the individual needs of students, while providing a structure tied to the Common Core State Standards in Connecticut. The *learn-by-doing* philosophy develops mathematically literate and productive students who can effectively and efficiently apply mathematics in their lives to make informed decisions about the world around them by doing math. To be mathematically literate, one must understand major mathematics concepts, possess computational facility, and have the ability to apply these understandings to situations in daily life. Making connections between mathematics and other disciplines is key to the appropriate application of mathematics skills and concepts to solve problems. The ability to read, discuss, and write within the discipline of mathematics is an integral skill that supports mathematical understanding, reasoning and communication. The opportunity to think critically and creatively to solve problems is important to deepen mathematical knowledge and foster innovation. A rich hands-on mathematical experience is essential to provide the foundational knowledge and skills that prepare students to be mathematically literate, productive citizens.
Course	Grade K Mathematics
Grade Level	Grade K
Pre-requisites	

Table of Contents

M-Major Cluster, S-Supporting Cluster, A-Additional Cluster

District Learning Expectations and Standards	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8** (optional)
Counting and Cardinality								
Know number names and the count sequence.								
K.CC.A.1 Count to 100 by ones and by tens.	M	M	M	M	M	M	M	M
K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).				M	M	M		M
K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).		M	M	M	M	M	M	M
Count to tell the number of objects.								
K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality.	M	M				M		M
K.CC.B.4.A When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	M					M		
K.CC.B.4.B Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.		M				M		
K.CC.B.4.C Understand that each successive number name refers to a quantity that is one larger.		M	M	M				M
K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as		M	M	M	M	M	M	M

many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.								
Compare numbers.								
K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.		M	M				M	M
K.CC.C.7 Compare two numbers between 1 and 10 presented as written numerals.		M					M	
Operations & Algebraic Thinking								
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.								
K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings1, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.				M	M	M	M	M
K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.				M	M	M	M	M
K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).					M		M	M
K.OA.A.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.					M		M	M
K.OA.A.5 Fluently add and subtract within 5.					M	M	M	M
Number & Operations in Base Ten								
Work with numbers 11-19 to gain foundations for place value.								

K.NBT.A.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.						M	M	M
Measurement & Data								
Describe and compare measurable attributes.								
K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.							A	
K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.			A				A	
Classify objects and count the number of objects in each category.								
K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.			S				S	S
Geometry								
Identify and describe shapes.								
K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.			A				A	
K.G.A.2 Correctly name shapes regardless of their orientations or overall size.			A				A	
K.G.A.3 Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").							A	

Analyze, compare, create, and compose shapes.								
K.G.B.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).			S				S	
K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.			S				S	
K.G.B.6 Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"			S				S	

UNIT 1: MATH IN OUR WORLD			
Illustrative Mathematics Unit Focus: Students recognize numbers and quantities in their world. **Essential Questions:** Why do we count? How are numerals used? How can two quantities be related? **Unit Pacing: 18 days (16 required lessons, 2 flex)**			
UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
K.CC.A.1 Count to 100 by ones and by tens.	Several progressions originate in knowing number names and the count sequence. Students usually know or can learn to say the counting words up to a given number before they can use these numbers to count objects or to tell the number of objects. Students become fluent in saying the count sequence so that they have enough attention to focus on the pairings involved in counting objects.	Counting tells how many there are in a set, no matter which order the objects are counted. When counting by ones, the next number in the sequence increases the quantity by one.	Count Number Number words 0 - 20 Ones Tens
K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality.	Experience with counting allows students to discuss and come to understand the second part of K.CC.4b—that the number of objects is the same regardless of their arrangement or the order in which they were counted.	The last number said when counting a set tells the total number of objects counted. Numerals are the symbols we read and write to communicate quantities (numbers). The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	Number Number words 0 - 20 Count Name Find
K.CC.B.4.A When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	To count a group of objects, they pair each word said with one object. This is usually facilitated by an indicating act (such as pointing to objects or moving them) that keeps each word said in time		1:1 matching

	paired to one and only one object located in space.		
K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	Students first learn to match the objects in the two groups to see if there are any extra and then to count the objects in each group. Students learn that even if one group looks as if it has more objects (e.g., has some extra sticking out), matching or counting may reveal a different result.	One quantity is either greater than, less than or equal to the other.	Compare Equal to Same as Greater than More than Less than Fewer than

UNIT 1: MATH IN OUR WORLD				
Why do we count? How are numerals used? How can two quantities be related?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Exploring Our Tools				
K.CC K.G K.G.B	I can share my mathematical thinking in the classroom.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students build a shared understanding of what it means to do math and to be a part of a mathematical community, where everyone's contributions are valued. They collaborate to create norms for their work together. They are also encouraged to share their ideas and listen to others', make connections between their work and their home life, and to see themselves as productive mathematical thinkers. Students also interact with the tools that they will use in math activities and centers throughout the year. They have the opportunity to freely explore the tools and think of their mathematical purposes before choosing a tool for use in structured activities later in the section and in centers. Consider taking the time in this section to	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5

			formatively assess students' counting concepts and skills, observing students or asking them to count small groups of objects while they work, and using the Sections A-D Checkpoint document from the teacher resource pack.	
Pacing:	5 days		**Math Practices:** SMP 2, 3, 5, 6	**Assessments:** Checkpoint A-D
Section B: Recognize Quantities				
K.CC K.CC.B.4 K.G	I can subitize up to 4.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students continue to explore numbers and quantities in their classroom, focusing on small groups of objects or images they can quantify without counting. They match groups that have the same number of images and notice that the same quantity can be arranged in many different ways. Students continue to develop the language to express these ideas and to listen to ideas of their peers. Students are sometimes asked to show quantities up to 5 on their fingers. This is a chance to formatively observe if students are comfortable showing quantities on their fingers (any way is acceptable). For example, they may put up 4 fingers to show how many objects there are before saying the number word "four." This section provides continued opportunity to formatively assess students' counting concepts and skills.	**Mandatory Lessons/Activities:** iM Lessons 6, 7, 8, 9
Pacing:	4 days		**Math Practices:** SMP 3, 4, 6, 7, 8	**Assessments:** Checkpoint A-D
Section C: Are There Enough				
K.CC	I can use 1:1 matching to solve problems.		**Lesson Progression:** Students work on the concept of one-to-one	**Mandatory Lessons/Activities:** iM Lessons 10, 11, 12

K.CC.B.4 K.G		X Selected Response X Constructed Response Performance X Observation	correspondence. They match one object to one person or image to answer “are there enough” questions and to get enough objects. This matching skill will be useful in the next section and in future counting when students match one number word to one object. “Are there enough” and “can you get enough” questions encourage students to model situations. Look for ways to incorporate these prompts into other parts of the school day, for example, when classroom supplies are being distributed.	
Pacing:	3 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6	**Assessments:** Checkpoint A-D
Section D: Counting Collections				
K.CC.A.1 K.CC.B K.CC.B.4 K.CC.B.4.a K.CC.B.5 K.CC.C.6 K.G	I can count to tell how many.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students focus on counting up to 10 objects and answering “how many of _____ are there” questions. They learn a new routine, Questions About Us, and consider the question “how many of us are here today?” The routine offers opportunities to highlight one-to-one matching and the idea of keeping track of what is being counted. Students also count collections of objects from the classroom or from home. To initiate counting, ask “how many of _____ are there?” instead of saying “count the objects.” This helps to reinforce counting as a way to quantify a collection and the idea of cardinality—that the last number called tells us how many there are. Students may use counting mats, 5-frames, or other tools to help them count. Representing the numbers 6–10 on a 5-frame, for instance, helps students see the 5 + n structure of these numbers. (The 10-frame will be introduced in a future unit.) Some students may be able to subitize, or recognize how many objects there are without counting. Those who can do so accurately should not be required to count individual objects. Consider differentiating the size of collections	**Mandatory Lessons/Activities:** iM Lessons 13, 14, 15, 16

			students count based on observations of students' counting. Included in each lesson is an optional activity to support students in certain aspects of counting—verbalizing the count sequence, one-to-one tagging, and organizing objects to count.	
Pacing:	4 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Checkpoint A-D

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Some students may not understand that counting is a strategy to determine 'how many' and that the last number counted says how many. Some students may have a mismatch between the oral words and the objects counted (eg, matches objects to syllables, omits certain number names). Some students may not organize the set of objects to avoid counting objects already counted. Students may look at objects and focus on their size, arrangement, or area when making comparisons between groups rather than the number.	K.CC.A.1: CT ELDS M.60.1, K.CC.B.4: CT ELDS M.60.2, M.60.3 K.CC.C.6: CT ELDS M.60.6 Early Learning & Development Standards	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack 5-frames, Connecting cubes, Cups, Two-color counters, Pattern blocks, Collections of objects

UNIT 2: NUMBERS 1-10
Illustrative Mathematics Unit Focus: Students answer “how many” questions, count out, and compare groups within 10. Students write a number to represent how many. **Essential Questions:** Why do we count? How are numerals used? How can two quantities be related? **Unit Pacing: 27 days (21 required lessons, 4 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
K.CC.A.1 Count to 100 by ones and by tens.	Several progressions originate in knowing number names and the count sequence. Students usually know or can learn to say the counting words up to a given number before they can use these numbers to count objects or to tell the number of objects. Students become fluent in saying the count sequence so that they have enough attention to focus on the pairings involved in counting objects.	Counting tells how many there are in a set, no matter which order the objects are counted. When counting by ones, the next number in the sequence increases the quantity by one.	Count Number Number words 0 - 20 Ones Tens
K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Due to varied development of fine motor and visual development,reversal of numerals is anticipated. While reversals should be pointed out to students and correct formation modeled in instruction, the emphasis of this standard is on the use of numerals to represent quantities rather than the correct handwriting formation of the actual numeral itself. While kindergarteners may experiment with writing numbers beyond 20, this standard places emphasis on numbers 0-20. First graders will	Numerals are the symbols we read and write to communicate quantities (numbers)	Count Number Numeral Number words 0 - 20 How many Show Explain Represent

	extend the counting sequence, number recognition and writing to 120.		
K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality.	Experience with counting allows students to discuss and come to understand the second part of K.CC.4b—that the number of objects is the same regardless of their arrangement or the order in which they were counted.	The last number said when counting a set tells the total number of objects counted. Numerals are the symbols we read and write to communicate quantities (numbers). The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	Number Number words 0 - 20 Count Name Find
K.CC.B.4.b Understand that the last number name said, tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.	Students understand that the last number name said in counting tells the number of objects counted. Prior to reaching this understanding, a student who is asked "How many kittens?" may regard the counting performance itself as the answer, instead of answering with the cardinality of the set. Experience with counting allows students to discuss and come to understand the second part of K.CC.4b—that the number of objects is the same regardless of their arrangement or the order in which they were counted. This connection will continue in Grade 1 with the more advanced counting-on methods in which a counting word represents a group of objects that are added or subtracted and addends become embedded within the total.		
K.CC.B.4.c Understand that each successive number name refers to a quantity that is one larger.	Understanding that each successive number name refers to a quantity that is one larger is the conceptual start for Grade 1 counting on. Prior to reaching this understanding, a student might have to recount entirely a collection of known cardinality to which a single object has been added.		
K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10	Counting objects arranged in a line is easiest; with more practice, students learn to count objects in more difficult arrangements, such as rectangular	Counting tells how many there are in a set, no matter which order the objects are counted. The last number said when	Count Number Number words 0 - 20

things in a scattered configuration; given a number from 1-20, count out that many objects.	arrays (they need to ensure they reach every row or column and do not repeat rows or columns); circles (they need to stop just before the object they started with); and scattered configurations (they need to make a single path through all of the objects). Later, students can count out a given number of objects, which is more difficult than just counting that many objects, because counting must be fluent enough for the student to have enough attention to remember the number of objects that is being counted out.	counting a set tells the total number of objects counted.	
K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	Students first learn to match the objects in the two groups to see if there are any extra and then to count the objects in each group. Students learn that even if one group looks as if it has more objects (e.g., has some extra sticking out), matching or counting may reveal a different result.	One quantity is either greater than, less than or equal to the other.	Compare Equal to Same as Greater than More than Less than Fewer than
K.CC.C.7 Compare two numbers between 1 and 10 presented as written numerals.	Students use their knowledge of the count sequence to decide which number is greater than the other (the number farther along in the count sequence). Comparing numbers progresses in Grade 1 to adding and subtracting in comparing situations (finding out “how many more” or “how many less”and not just “which is more” or “which is less”).		

UNIT 2: NUMBERS 1-10				
Why do we count? How are numerals used? How can two quantities be related?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Count and Compare Groups of Objects				
K.CC K.CC.A.1 K.CC.A.3 K.CC.B.4 K.CC.B.4.bK .CC.B.5 K.CC.C.6 K.G.B	I can count to tell how many. I can compare two sets.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** In this section, students count to answer "how many" questions and develop their understanding of the connection between quantities and spoken number words. Students are encouraged to use their fingers to count. They may also continue to use any tools and resources from earlier work, such as counting mats and 5-frames, as well as bring objects from home to count. As students count and rearrange objects, students notice that the arrangement of objects does not affect the number of objects (conservation of number). They will continue to build this understanding over time. Students also develop their comparison skills. They start with quantities that are very different and can be compared visually, such as 7 and 2, and relate the comparisons to the terms "more" and "fewer," which may be new. (Students do not need to produce grammatically accurate language, but the teacher should use "fewer" or "less" as appropriate in context.) Display and write the number associated with a quantity whenever possible. Students will begin recognizing, representing, and writing numbers in	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5, 6

			the second half of the unit.	
Pacing:	6 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Checkpoint A
Section B: Count and Compare Groups of Images				
[K.CC.A.3](#) [K.CC.B](#) [K.CC.B.4](#) [K.CC.B.4.b](#) [K.CC.B.5](#) [K.CC.C.6](#)	I can count to tell how many. I can compare two sets.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students begin this section by counting images for the first time. This can be more challenging, as images cannot be rearranged, and students may not have limited experience with keeping track of counted items. Students encounter groups of images in lines, arrays, 5-frames, number cube arrangements, and on fingers. They may be able to determine the cardinality of some groups of images without counting (subitize), which is a valid way to answer "how many" questions. Images arranged on 5-frames and images of fingers allow students to work with the structure of "5 and some more." Repeated experience with this structure can help students see that they can count on from 5 to determine how many images there are. Here, students also answer "are there enough" questions. *"Are there enough cartons of milk for each student? How do you know?"* 	**Mandatory Lessons/Activities:** iM Lessons 7, 8, 9, 10, 11
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Checkpoint B

Section C: Connect Quantities and Numbers				
K.CC K.CC.A.1 K.CC.A.3 K.CC.B K.CC.B.4 K.CC.B.5 K.CC.C.6	I can show how many in a variety of ways.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Previously, students counted and made connections between quantities and spoken number words. In this section, students write numbers to represent quantities. To develop students' familiarity with written numbers, consider providing a reference sheet with numbers and quantities in 5-frames. Students also explore new counting tasks: counting images arranged in a circle, and counting objects or drawing images to represent given numbers. Images arranged in a circle are harder to quantify than those in lines, arrays, or frames because there is no defined starting or stopping point. It requires students to develop a method to keep track of which images they have counted. Creating or drawing a collection with a specified number of items is also more demanding as students need to keep track of the number they are representing and how many they have already counted. In many activities, students have opportunities to look for and make use of structure to help them with the tasks at hand (MP7).	**Mandatory Lessons/Activities:** iM Lessons 12, 13, 14, 15, 16
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Checkpoint C
Section D: Compare Numbers				
K.CC K.CC.A.3 K.CC.B.4 K.CC.B.4.c K.CC.B.5 K.CC.C.6 K.CC.C.7	I can compare two sets. I can compare written numbers.	X Selected Response X Constructed Response	**Lesson Progression:** In this section, students develop their capacity to compare written numbers. As they count, students can see that the numbers get larger and that there is 1 more each time. Here, they determine "1 more" and "1 less" than a given number or group of objects, strengthening their understanding of	**Mandatory Lessons/Activities:** iM Lessons 17, 18, 19, 20, 21

		<table><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table>	the relationships between numbers and the foundation for comparing numbers. Students may compare written numbers in several ways: ● Create representations of each number and use the representations to compare. ● Use number sense (for instance, that 10 is a "big" number) or mental images of numbers (for instance, 4 relates to 4 fingers). ● Use the knowledge of the count sequence: that numbers that come later in the count sequence are greater. Students who use number sense or mental images may be able to easily compare some numbers but not others. For instance, they may know that 9 is close to 10 or all the fingers in two hands and 4 is associated with fingers in one hand, so 9 is more than 4.	
Pacing:	6 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7	**Assessments:** Checkpoint D

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Some students may not understand that counting is a strategy to determine 'how many' and that the last number counted says how many. Some students may have a mismatch between the oral words and the objects counted (eg, matches objects to syllables,	K.CC.A.1: CT ELDS M.60.1 K.CC.A.3: CT ELDS M.60.4 K.CC.B.4: CT ELDS M.60.2, M.60.3, M.60.5 K.CC.B.5: CT ELDS M.60.2, M.60.3 K.CC.C.6: CT ELDS M.60.6 K.CC.C.7: CT ELDS M.60.6	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

omits certain number names). Some students may not organize the set of objects to avoid counting objects already counted. Some students might not see zero as a number. Students may look at objects and focus on their size, arrangement, or area when making comparisons between groups rather than the number.	Early Learning & Development Standards		

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack 5-frames, Connecting cubes, Cups, Two-color counters, Pattern blocks

UNIT 3: FLAT SHAPES ALL AROUND US			
Illustrative Mathematics Unit Focus: Students identify, describe, analyze, compare, and compose two-dimensional shapes. **Essential Questions:** How do we describe objects in our world? How can we name, describe, and analyze two-dimensional shapes? How can we create new shapes using existing shapes? **Unit Pacing: 24 days (14 required lessons, 8 flex, 2 assessment and reaction)**			
UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
K.CC.A.1 Count to 100 by ones and by tens.	Several progressions originate in knowing number names and the count sequence. Students usually know or can learn to say the counting words up to a given number before they can use these numbers to count objects or to tell the number of objects. Students become fluent in saying the count sequence so that they have enough attention to focus on the pairings involved in counting objects.	Counting tells how many there are in a set, no matter which order the objects are counted. When counting by ones, the next number in the sequence increases the quantity by one.	Count Number Number words 0 - 20 Ones Tens
K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Due to varied development of fine motor and visual development,reversal of numerals is anticipated. While reversals should be pointed out to students and correct formation modeled in instruction, the emphasis of this standard is on the use of numerals to represent quantities rather than the correct handwriting formation of the actual numeral itself.	Numerals are the symbols we read and write to communicate quantities (numbers)	Count Number Numeral Number words 0 - 20

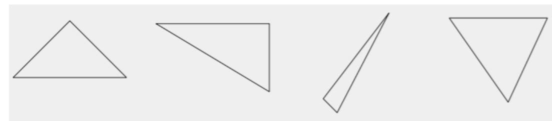
	While kindergarteners may experiment with writing numbers beyond 20, this standard places emphasis on numbers 0-20. First graders will extend the counting sequence, number recognition and writing to 120.		
K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality.	Experience with counting allows students to discuss and come to understand the second part of K.CC.4b—that the number of objects is the same regardless of their arrangement or the order in which they were counted.	The last number said when counting a set tells the total number of objects counted. Numerals are the symbols we read and write to communicate quantities (numbers). The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	Number Number words 0 - 20 Count
K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.	Counting objects arranged in a line is easiest; with more practice, students learn to count objects in more difficult arrangements, such as rectangular arrays (they need to ensure they reach every row or column and do not repeat rows or columns); circles (they need to stop just before the object they started with); and scattered configurations (they need to make a single path through all of the objects). Later, students can count out a given number of objects, which is more difficult than just counting that many objects, because counting must be fluent enough for the student to have enough attention to remember the number of objects that is being counted out.	Counting tells how many there are in a set, no matter which order the objects are counted. The last number said when counting a set tells the total number of objects counted.	Count Number Number words 0 - 20
K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	Students first learn to match the objects in the two groups to see if there are any extra and then to count the objects in each group. Students learn that even if one group looks as if it has more objects (e.g., has some extra sticking out),	One quantity is either greater than, less than or equal to the other.	Compare Equal to Same as Greater than More than Less than

	matching or counting may reveal a different result.		Fewer than
K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.	Students refine their informal language by learning mathematical concepts and vocabulary so as to increasingly describe their physical world from geometric perspectives, e.g., shape, orientation, spatial relations (MP4). They increase their knowledge of a variety of shapes, including circles, triangles, squares, rectangles, and special cases of other shapes such as regular hexagons, and trapezoids with unequal bases and non-parallel sides of equal length. Students also begin to name and describe three-dimensional shapes with mathematical vocabulary, such as "sphere," "cube," "cylinder,"and "cone." Finally, in the domain of spatial reasoning, students discuss not only shape and orientation, but also the relative positions of objects, using terms such as "above," "below," "next to," "behind," "in front of," and "beside."	We can describe objects in our world using geometric ideas, such as names of shapes and positional words.	Above Below In front of Behind Beside Next to Square Circle Triangle Rectangle Hexagon Cube Cone Cylinder Sphere
K.G.A.2 Correctly name shapes regardless of their orientations or overall size.	Students learn to name shapes such as circles, triangles, and squares, whose names occur in everyday language, and distinguish them from nonexamples of these categories, often based initially on visual prototypes.	Naming shapes is not dependent on their position, orientation or size.	
K.G.B.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	The need to explain their decisions about shape names or classifications prompts students to attend to and describe certain features of the shapes. That is, concept images and names they have learned for the shapes are the raw material from which they can abstract common features.	Two- and three-dimensional shapes can be named, described and analyzed using attributes, such as number and lengths of sides and number of angles/vertices.	
K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	The need to explain their decisions about shape names or classifications prompts students to attend to and describe certain features of the shapes. That is, concept images and names they have learned for the shapes are the raw material from which they can abstract common features.		Round Circle Rectangle Side Square Straight

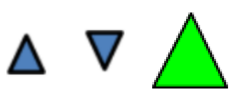
	This also supports their learning to represent shapes informally with drawings and by building them from components (e.g., manipulatives such as sticks). With repeated experiences such as these, students become more precise (MP6).		Triangle Trapezoid Hexagon
K.G.B.6 Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”	A second important area for kindergartners is the composition of geometric figures. Students not only build shapes from components,but also compose shapes to build pictures and designs. Initially lacking competence in composing geometric shapes, they gain abilities to combine shapes–first by trial and error and gradually by considering components–into pictures. At first, side length is the only component considered. Later experience brings an intuitive appreciation of angle size. Students combine two-dimensional shapes and solve problems such as deciding which piece will fit into a space in a puzzle, intuitively using geometric motions (slides, flips, and turns, the informal names for translations, reflections, and rotations, respectively). They can construct their own outline puzzles and exchange them, solving each other’s.	New shapes can be created by putting together existing shapes.	
K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.	Kindergartners easily directly compare lengths in simple situations, such as comparing people’s heights, because standing next to each other automatically aligns one endpoint. However, in other situations they may initially compare only one endpoint of objects to say which is longer. Discussing such situations (e.g., when a child claims that he is “tallest” because he is standing on a chair) can help students resolve and coordinate perceptual and conceptual information when it conflicts.	Different attributes can be measured, such as length or weight. We measure to determine the amount of a measurable attribute for a given object.	Longer Shorter Taller More of Less of

K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	Students in Kindergarten classify objects into categories, initially specified by the teacher and perhaps eventually elicited from students. For example, in a science context, the teacher might ask students in the class to sort pictures of various organisms into two piles: organisms with wings and those without wings. Students can then count the number of specimens in each pile. Students can use these category counts and their understanding of cardinality to say whether there are more specimens with wings or without wings.	We sort and classify objects to organize them in groups by common attributes to see relationships among the groups.	Alike Different Shape Size Sort Count

UNIT 3: FLAT SHAPES ALL AROUND US				
How do we describe objects in our world? How can we name, describe, and analyze two-dimensional shapes? How can we create new shapes using existing shapes?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Exploring Shapes in Our Environment				
K.CC.A.1 K.CC.A.3 K.CC.B K.CC.B.5 K.G.A.1 K.G.A.2 K.G.B.4 K.G.B.5 K.MD.A.2 K.MD.B.3	I can name, describe, and compare shapes.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students work to name, describe, and compare shapes in their environment more precisely. They focus on identifying circles, rectangles, squares, and triangles. Students begin by identifying objects that look like flat shapes in books and in their surroundings. At this point, they are not yet expected to differentiate flat shapes from solid ones. For example, they may relate a tissue box to a rectangle. The difference between flat and solid shapes will be investigated in a later unit. Likewise, students may not yet recognize distinctions in flat shapes with some similar features, such as a circle and an oval. Clarify that a	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5, 6, 7, 8, 9

			shape is or is not as named, while acknowledging the connections students might be making. (“This shape is curved like a circle, but it is not a circle.”) To help expand students’ mental image of shape categories, the shapes seen here are varied in size, type, and orientation.  When comparing shapes, students use their own language to describe how shapes are the same and different. They also consider the side length of rectangles and use “longer than” and “shorter than” to describe relative length. They learn that a square is a special kind of rectangle with all four sides having the same length (though are not required to know this definition).	
Pacing:	9 days		**Math Practices:** SMP: 3, 5, 6	**Assessments:** Checkpoint A
Section B: Making Shapes				
[K.CC.A.3](#) [K.CC.B.4.c](#) [K.CC.B.5](#) [K.CC.C.6](#) [K.G.A.1](#) [K.G.A.2](#) [K.G.B.6](#)	I can put shapes together to form new shapes. I can use positional language to describe shapes in my world.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students develop spatial reasoning by manipulating shapes and solving geometric puzzles while using geometric language from earlier work. Students use pattern blocks to compose geometric figures, explore shapes in different orientations, find shapes that match exactly, and complete puzzles that require reorienting shapes. Throughout the section, students use their own language to describe how the shapes they are working with are alike and different, including descriptions of the side lengths of shapes in their comparison.	**Mandatory Lessons/Activities:** iM Lessons 10, 11, 12, 13, 14
Pacing:	5 days		**Math Practices:**	**Assessments:**

			SMP: 3, 5, 6, 7, 8	Checkpoint B

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
One of the most common misconceptions in geometry is the belief that orientation, size, or color are tied to shape identification. Students may see the first of the figures below as a triangle, but claim to not know the name of the second or third.  Students may struggle to see a new shape from a composite shape. For example, a triangle and a square create a composite shape - pentagon. Students may see only the triangle and square not the pentagon. Students struggle to identify attributes of a shape that determines the shape name. Students may incorrectly use mathematical vocabulary when comparing objects. When comparing length, students may say bigger or smaller, instead of longer or shorter.	K.CC.A.1: CT ELDS M.60.1 K.CC.A.3: CT ELDS M.60.4 K.CC.B.4: CT ELDS M.60.2, M.60.3, M.60.5 K.CC.B.5: CT ELDS M.60.2, M.60.3 K.CC.C.6: CT ELDS M.60.6 K.CC.C.7: CT ELDS M.60.6 K.MD.A.2: CT ELDS M.60.9, M.60.10 K.MD.B.3: CT ELDS M.60.12 K.G.A.1: CT ELDS M.60.13, M.60.14 K.G.A.2: CT ELDS M.60.13, M.60.14 K.G.B.6: CT ELDS M.60.15 Early Learning & Development Standards	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES

Kendall Hunt Blackline masters and materials from Teacher Resource Pack Picture books, counters, 5-frames, collections of objects, colored pencils or crayons, counting mats, bags, play dough or modeling clay, straws, clipboards, string, pattern blocks, construction paper, glue, cardstock, paint, paper plates, paper

UNIT 4: UNDERSTANDING ADDITION AND SUBTRACTION
Illustrative Mathematics Unit Focus: Students relate counting to addition and solve addition and subtraction story problems within 10. **Essential Questions:** What does addition mean? What does subtraction mean? **Unit Pacing: 26 Days (19 required lessons, 2 assessment, 5 flex days)**

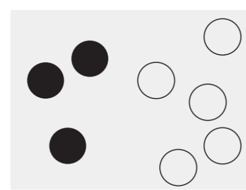
UNWRAPPED STANDARDS

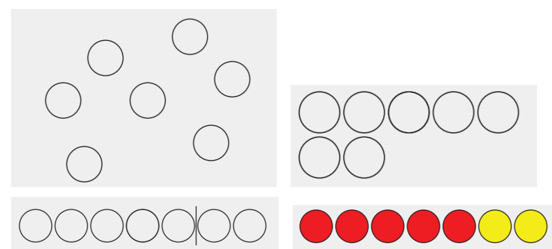
Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
K.CC.A.1 Count to 100 by ones and by tens.	Several progressions originate in knowing number names and the count sequence. Students usually know or can learn to say the counting words up to a given number before they can use these numbers to count objects or to tell the number of objects. Students become fluent in saying the count sequence so that they have enough attention to focus on the pairings involved in counting objects.	Counting tells how many there are in a set, no matter which order the objects are counted. When counting by ones, the next number in the sequence increases the quantity by one.	Count Number Number words 0 - 20 Numeral Ones Tens Forward
K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Being able to count forward, beginning from a given number within the known sequence, is a prerequisite for the more advanced counting-on methods in Grade 1, in which a counting word represents a group of objects that are added or subtracted and addends become embedded within the total.	Counting tells how many there are in a set, no matter which order the objects are counted. The last number said when counting a set tells the total number of objects counted.	
K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Due to varied development of fine motor and visual development,reversal of numerals is anticipated. While reversals should be pointed out to students and correct formation modeled in instruction, the emphasis of this standard is on the use of numerals to represent quantities rather than the correct handwriting formation of	Numerals are the symbols we read and write to communicate quantities (numbers)	

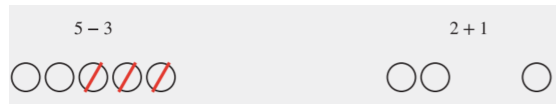
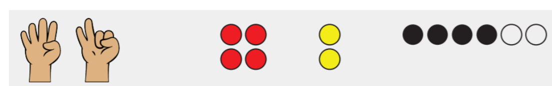
	the actual numeral itself. While kindergarteners may experiment with writing numbers beyond 20, this standard places emphasis on numbers 0-20. First graders will extend the counting sequence, number recognition and writing to 120.		
K.CC.B.4.c Understand that each successive number name refers to a quantity that is one larger.	Understanding that each successive number name refers to a quantity that is one larger is the conceptual start for Grade 1 counting on. Prior to reaching this understanding, a student might have to recount entirely a collection of known cardinality to which a single object has been added.	Numerals are the symbols we read and write to communicate quantities (numbers). The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	
K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.	Counting objects arranged in a line is easiest; with more practice, students learn to count objects in more difficult arrangements, such as rectangular arrays (they need to ensure they reach every row or column and do not repeat rows or columns); circles (they need to stop just before the object they started with); and scattered configurations (they need to make a single path through all of the objects). Later, students can count out a given number of objects, which is more difficult than just counting that many objects, because counting must be fluent enough for the student to have enough attention to remember the number of objects that is being counted out.	Counting tells how many there are in a set, no matter which order the objects are counted. The last number said when counting a set tells the total number of objects counted.	
K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings*, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	Students act out adding and subtracting situations by representing quantities in the situation with objects, their fingers, and math drawings. To do this, students must mathematize a real-world situation, focusing on the quantities and their relationships rather than non-mathematical aspects of the situation. Situations can be acted out and/or presented with pictures or words. Math drawings facilitate reflection and discussion because they remain after the problem is solved. These concrete methods that show all of the	Addition means adding to or putting together parts to find the total or sum. Subtraction involves taking from or taking apart a given amount to find the difference.	Add Subtract Putting together Adding to Taking apart Taking from Plus In all Join Are left Minus

	objects are called Level 1 methods. Students learn and use mathematical and non-mathematical language, especially when they make up problems and explain their representation and solution. The teacher can write expressions (e.g., 3-1) to represent operations, as well as writing equations that represent the whole situation before the solution (e.g., 3 - 1=?) or after (e.g., 3 - 1= 2). Expressions like 3- 1 or 2+ 1 show the operation, and it is helpful for students to have experience just with the expression so they can conceptually chunk this part of an equation.		
K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	Students in Kindergarten work with the following types of addition and subtraction situations: Add To with Result Unknown; Take From with Result Unknown; and Put Together/Take Apart with Total Unknown and Both Addends Unknown (see the dark shaded types in Table 2). Add To/Take From situations are action-oriented; they show changes from an initial state to a final state. These situations are readily modeled by equations because each aspect of the situation has a representation as number, operation (or), or equal sign (, here with the meaning of “becomes,” rather than the more general “equals”).		

UNIT 4: UNDERSTANDING ADDITION AND SUBTRACTION				
What does addition mean? What does subtraction mean?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Count to Add and Subtract				

K.CC.A.1 K.CC.B.5 K.OA.A.1	I can model addition and subtraction in many ways.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students learn to see adding as putting together two groups and counting the total number of objects, and subtracting as taking away a number of objects from a group and counting what remains. They represent combining and removing with physical objects. No stories or contexts are used here so that students can focus on the actions of putting together, adding to, and taking from. The language “add,” “put together,” “subtract,” and “take away” is used throughout the section to describe addition and subtraction. Students learn to interpret a phrase such as “5 and 3” to mean combining two groups (5 in one group and 3 in the other) and a phrase such as “5 take away 3” to mean finding what remains after removing 3 objects from a group of 5. They also hear language that describes the result of those actions, such as: “5 and 3 is 8” and “5 take away 3 is 2.” No symbolic notation is used at this point. Students also encounter and count groups of images in scattered configurations for the first time. This task highlights the need to keep track of what has been counted.  To keep track of the dots in this example, students may count all the black dots first and then the white dots or cross off dots as they count. They may also count in no particular order. Students see that although they may count the dots in a different order, they arrive at the same total.	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5
Pacing:	5 days		**Math Practices:** SMP: 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-down 3 Checkpoint A

<table>
<tr><th colspan="5">Section B: Representing and Solving Story Problems</th></tr>
<tr>
<td>K.CC.A.1
K.CC.A.3
K.CC.B.5
K.OA.A.1
K.OA.A.2</td>
<td>I can represent and solve addition and subtraction problems.</td>
<td><table>
<tr><td>X</td><td>Selected Response</td></tr>
<tr><td>X</td><td>Constructed Response</td></tr>
<tr><td></td><td>Performance</td></tr>
<tr><td>X</td><td>Observation</td></tr>
</table></td>
<td>Lesson Progression:
Students represent and solve story problems with playgrounds and parks as contexts. The types of problems are limited to Add To, Result Unknown and Take From, Result Unknown. Students begin by acting out and representing stories that don’t include a question. Questionless story problems encourage students to think about the context and the action in the story without feeling pressure to solve the problem. There were 5 students jumping rope at recess. 2 more students came out to play with them. As questions are posed, students represent the problems with objects, math tools, drawings and numbers, and focus on explaining how their representation connects to the story. While they may represent a problem in any way that makes sense to them, students notice that organized drawings or objects make it easier to see the connections.

Students are also introduced to the concept of 0 representing a count of no objects. This idea may be abstract to students, so it is introduced in a Take From, Result Unknown story problem, where taking objects away leaves no remaining objects. The term “expression” is introduced here. Students begin to see expressions as a way to record quantities being combined or removed. For instance, as a student describes what happens with their
counters, the teacher writes the words “7 take away 3” and “7 - 3 ,” and says “7 take away 3” and “7 minus 3.” Students are not expected to interpret expressions at this time.</td>
<td>Mandatory Lessons/Activities:
iM Lessons 6,7, 8, 9, 10, 11, 12,</td>
</tr>
</table>

<table>
<tr><td>Pacing:</td><td>7 days</td><td></td><td>Math Practices:
SMP: 1, 2, 3, 4, 5, 6, 7, 8</td><td>Assessments:
Cool-down 11
Checkpoint B</td></tr>
<tr><td colspan="5">Section C: Addition and Subtraction Expressions</td></tr>
<tr><td>K.CC.A.1
K.CC.A.2
K.CC.A.3
K.CC.B.4.c
K.OA.A.1
K.OA.A.2</td><td>I can represent and solve addition and subtraction problems.</td><td>X Selected Response
X Constructed Response
Performance
X Observation</td><td>Lesson Progression:
In this section, students formally work with expressions for the first time. They match expressions such as 3+2 and 8 - 1 to story problems and drawings and articulate why an expression represents a given problem or drawing. While students fill in addition and subtraction expressions, they are not expected to produce expressions independently in this section.

Students then transition from expressions that represent story problems or drawings to expressions without a context. To find the value of expressions, students may add or subtract in a way that makes sense to them, reasoning with fingers, objects, or drawings. With repeated experience, students begin to notice regularity when adding and subtracting (MP8). For instance, they see that adding 1 results in the next number in the count sequence and that adding 0 results in the same number.
</td><td>Mandatory Lessons/Activities:
iM Lessons 14, 15, 16, 17,</td></tr>
<tr><td>Pacing:</td><td>4 days</td><td></td><td>Math Practices:
SMP: 1, 2, 3, 4, 5, 6, 7, 8</td><td>Assessments:
Cool-down 16
Checkpoint C</td></tr>
</table>

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may count all objects when joining groups instead of knowing the amount of one group and counting on the amount of the second group to find the total. Students may incorrectly think that subtraction is commutative, i.e. 8-5=5-8.	K.CC.A.1: CT ELDS M.60.1 K.CC.A.2: CT ELDS M.60.1 K.CC.A.3: CT ELDS M.60.4 K.CC.B.4: CT ELDS M.60.2, M.60.3, M.60.5 K.CC.B.5: CT ELDS M.60.2, M.60.3 K.OA.A.1: CT ELDS M.60.7, M.60.8 K.OA.A.2: CT ELDS M.60.7, M.60.8 Early Learning & Development Standards	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Connecting Cubes, pattern blocks, 5-frames, counters, two-color counters, crayons, markers

UNIT 5: COMPOSING AND DECOMPOSING NUMBERS TO 10
Illustrative Mathematics Unit Focus: Students compose and decompose numbers within 10. **Essential Questions:** How can we represent a given number? What does addition mean? What does subtraction mean? **Unit Pacing: 31 days (15 required lessons, 16 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
K.CC.A.1 Count to 100 by ones and by tens.	Several progressions originate in knowing number names and the count sequence. Students usually know or can learn to say the counting words up to a given number before they can use these numbers to count objects or to tell the number of objects. Students become fluent in saying the count sequence so that they have enough attention to focus on the pairings involved in counting objects.	Counting tells how many there are in a set, no matter which order the objects are counted. When counting by ones, the next number in the sequence increases the quantity by one.	Count Number Number words 0 - 20 Numeral Ones Tens Forward
K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Being able to count forward, beginning from a given number within the known sequence, is a prerequisite for the more advanced counting-on methods in Grade 1, in which a counting word represents a group of objects that are added or subtracted and addends become embedded within the total.	Counting tells how many there are in a set, no matter which order the objects are counted. The last number said when counting a set tells the total number of objects counted.	
K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a	Counting objects arranged in a line is easiest; with more practice, students learn to count objects in	Counting tells how many there are in a set, no matter which order the objects	

rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	more difficult arrangements, such as rectangular arrays (they need to ensure they reach every row or column and do not repeat rows or columns); circles (they need to stop just before the object they started with); and scattered configurations (they need to make a single path through all of the objects). Later, students can count out a given number of objects, which is more difficult than just counting that many objects, because counting must be fluent enough for the student to have enough attention to remember the number of objects that is being counted out.	are counted. The last number said when counting a set tells the total number of objects counted.	
K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings*, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	Students act out adding and subtracting situations by representing quantities in the situation with objects, their fingers, and math drawings. To do this, students must model a real-world situation, focusing on the quantities and their relationships rather than non-mathematical aspects of the situation. Situations can be acted out and/or presented with pictures or words. Math drawings facilitate reflection and discussion because they remain after the problem is solved. These concrete methods that show all of the objects are called Level 1 methods. Students learn and use mathematical and non-mathematical language, especially when they make up problems and explain their representation and solution. The teacher can write expressions (e.g., 3-1) to represent operations, as well as writing equations that represent the whole situation before the solution (e.g., 3 - 1=?) or after (e.g., 3 - 1= 2). Expressions like 3- 1 or 2+ 1 show the operation, and it is helpful for students to have experience just with the expression so they can conceptually chunk this part of an equation	Addition means adding to or putting together parts to find the total or sum. Subtraction involves taking from or taking apart a given amount to find the difference.	Add Subtract Putting together Adding to Taking apart Taking from Plus In all Join Are left Minus Decompose Break apart
K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by	Students in Kindergarten work with the following types of addition and subtraction situations: Add	Addition means adding to or putting together parts to find the total or sum.	

using objects or drawings to represent the problem.	To with Result Unknown; Take From with Result Unknown; and Put Together/Take Apart with Total Unknown and Both Addends Unknown (see the dark shaded types in Table 2). Add To/Take From situations are action-oriented; they show changes from an initial state to a final state. These situations are readily modeled by equations because each aspect of the situation has a representation as number, operation (or), or equal sign (, here with the meaning of "becomes," rather than the more general "equals").	Subtraction involves taking from or taking apart a given amount to find the difference.	
K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).	Put Together/Take Apart situations with Both Addends Unknown play an important role in Kindergarten because they allow students to explore various compositions that make each number. This will help students to build the Level 2 embedded number representations used to solve more advanced problem subtypes.	A given number can be represented by putting together parts of the number or breaking apart the number in different ways.	
K.OA.A.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	In Kindergarten, teachers help children lay the foundation for understanding the base-ten system by drawing special attention to 10. They decompose 10 into pairs such as 1+ 9, 2+ 8, 3+ 7 and find the number that makes 10 when added to a given number such as 3.	A given number can be represented by putting together parts of the number or breaking apart the number in different ways.	
K.OA.A.5 Fluently add and subtract within 5.	Experience with decompositions of numbers and with Add To and Take From situations enables students to begin to fluently add and subtract within 5.	Addition means adding to or putting together parts to find the total or sum. 3. Subtraction involves taking from or taking apart a given amount to find the difference.	

UNIT 5: COMPOSING AND DECOMPOSING NUMBERS TO 10				
How can we represent a given number? What does addition mean? What does subtraction mean?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Make and Break Apart Numbers to 9				
K.CC.A.1 K.CC.A.2 K.OA.A.2 K.OA.A.3 K.OA.A.5	I can make and break apart numbers in more than one way and record my thinking.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students compose and decompose numbers to 9. They work with physical objects, such as counters and connecting cubes, that can help to show ways to make and break apart numbers. As they progress through the lessons, students come to understand that there are different ways to compose and decompose a given number. They write expressions to record compositions and decompositions.	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4
Pacing:	4 days		**Math Practices:** SMP: 3, 5, 6, 7, 8	**Assessments:** Cool-down 3 Checkpoint A
Section B: More Types of Story Problems				
K.CC.A.1 K.CC.A.2 K.OA.A.1 K.OA.A.2 K.OA.A.3	I can represent and solve addition and subtraction problems.	X Selected Response X Constructed Response Performance	**Lesson Progression:** Students represent and solve Put Together/Take Apart story problems—first where the total is unknown, and later where both addends are unknown. Students also see equations and learn the term for the first time. *Jada made 6 paletas with her brother.* *They made two flavors, lime and coconut.*	**Mandatory Lessons/Activities:** iM Lessons 5, 6, 7, 8, 9,

		X Observation	*How many of the paletas were lime?* *Then how many of the paletas were coconut?* Problems where both addends are unknown may be more challenging because there is no action in the story and more than one solution is possible. Students work to find multiple solutions but are not expected to find all the solutions in kindergarten. To represent and solve story problems, students continue to use math tools and drawings, and to explain how their representation shows the story. They may use methods such as clearly separating the groups, using 2 colors, or using letter, word, and number labels to make their drawings easier for others to understand. Students also write expressions independently to record the solutions to the story problems. Equations are introduced as a way to record the quantities and solutions in story problems. For instance, as a student explains a solution to the paleta problem, the teacher writes "6=2+4" and says: "Jada made 6 paletas, 2 in coconut flavor and 4 in lime flavor. We can write that as 6 is 2 plus 4." All equations in this unit are written with the total first (on the left side of the equal sign). Equations are read as "6 is 2 plus 4," rather than "6 equals 2 plus 4." Note that students are not expected to interpret equations at this time.	
Pacing:	7 days		**Math Practices:** SMP: 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-down 8 Checkpoint B
Section C: Make and Break Apart 10				
K.CC.A.3 K.CC.B.5 K.OA.A.1 K.OA.A.2 K.OA.A.3	I can make and break apart numbers in more than one way and record my thinking.	X Selected Response X Constructed	**Lesson Progression:** This section focuses exclusively on composing and decomposing 10. This number is foundational to the understanding of place value and the work on numbers and operations in later grades.	**Mandatory Lessons/Activities:** iM Lessons 10, 11, 12, 13, 14, 15

K.OA.A.4		<table><tr><td></td><td>Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table>	Previously, students developed their understanding of the numbers 6–9 by relating it to 5 and using 5-frames. Here, students use a 10-frame—by putting together two 5-frames—and their fingers as tools to represent numbers and make and break apart 10 in different ways. The blank squares in the 10-frame and the fingers that are down allow students to see or count how many more are needed to make 10. Throughout the section, students continue to build their familiarity with equations. They connect compositions and decompositions of 10 represented on their fingers and on 10-frames to addition equations and write missing numbers in such equations. Students are not expected to write equations independently in kindergarten. And although students may start to learn combinations that make 10 from memory, fluency with sums of 10 is not required until grade 1.	
Pacing:	6 days		**Math Practices:** SMP: 3, 5, 6, 7, 8	**Assessments:** Cool-down 13 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students often think there is only one way to break a number down into parts.	K.CC.A.1: CT ELDS M.60.1 K.CC.A.2: CT ELDS M.60.1 K.CC.B.5: CT ELDS M.60.2, M.60.3 K.OA.A.1: CT ELDS M.60.7, M.60.8 K.OA.A.2: CT ELDS M.60.7, M.60.8 K.OA.A.3: CT ELDS M.60.7, M.60.8	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

	K.OA.A.4: CT ELDS M.60.7, M.60.8 K.OA.A.5: CT ELDS M.60.7, M.60.8 Early Learning & Development Standards		

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Connecting cubes, number cards 0-10, crayons, pattern blocks, two-color counters, glue, scissors, cups, 10-frames

UNIT 6: NUMBERS 0-20

Illustrative Mathematics Unit Focus: Students answer “how many” questions and count out groups within 20. They understand that numbers 11 to 19 are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. They write numbers within 20.

Essential Questions:
How can we represent a given number?

Unit Pacing: 24 days (11 required lessons, 11 flex, 2 assessment and reaction)

UNWRAPPED STANDARDS

Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
K.CC.A.1 Count to 100 by ones and by tens.	Several progressions originate in knowing number names and the count sequence. Students usually know or can learn to say the counting words up to a given number before they can use these numbers to count objects or to tell the number of objects. Students become fluent in saying the count sequence so that they have enough attention to focus on the pairings involved in counting objects.	Counting tells how many there are in a set, no matter which order the objects are counted. When counting by ones, the next number in the sequence increases the quantity by one.	Count Number Number words 0 - 20 Numeral Ones
K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Being able to count forward, beginning from a given number within the known sequence, is a prerequisite for the more advanced counting-on methods in Grade 1, in which a counting word represents a group of objects that are added or subtracted and addends become embedded within the total.	Counting tells how many there are in a set, no matter which order the objects are counted. The last number said when counting a set tells the total number of objects counted.	
K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Due to varied development of fine motor and visual development,reversal of numerals is anticipated. While reversals should be pointed out to students and correct formation modeled in instruction,	Numerals are the symbols we read and write to communicate quantities (numbers)	

	the emphasis of this standard is on the use of numerals to represent quantities rather than the correct handwriting formation of the actual numeral itself. While kindergarteners may experiment with writing numbers beyond 20, this standard places emphasis on numbers 0-20. First graders will extend the counting sequence, number recognition and writing to 120.		
K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality.	Experience with counting allows students to discuss and come to understand the second part of K.CC.4b—that the number of objects is the same regardless of their arrangement or the order in which they were counted.	The last number said when counting a set tells the total number of objects counted. Numerals are the symbols we read and write to communicate quantities (numbers). The quantity of a set does not change based on the arrangement, size, or type of object (conservation).	
K.CC.B.4.a When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	To count a group of objects, they pair each word said with one object. This is usually facilitated by an indicating act (such as pointing to objects or moving them) that keeps ea ch word said in time paired to one and only one object located in space.		
K.CC.B.4.b Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.	Students understand that the last number name said in counting tells the number of objects counted. Prior to reaching this understanding, a student who is asked “How many kittens?” may regard the counting performance itself as the answer, instead of answering with the cardinality of the set. Experience with counting allows students to discuss and come to understand the second part of K.CC.4b—that the number of objects is the same regardless of their arrangement or the order in which they were counted. This connection will continue in Grade 1 with the more advanced counting-on methods in which a counting word represents a group of		

	objects that are added or subtracted and addends become embedded within the total.		
K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	Counting objects arranged in a line is easiest; with more practice, students learn to count objects in more difficult arrangements, such as rectangular arrays (they need to ensure they reach every row or column and do not repeat rows or columns); circles (they need to stop just before the object they started with); and scattered configurations (they need to make a single path through all of the objects). Later, students can count out a given number of objects, which is more difficult than just counting that many objects, because counting must be fluent enough for the student to have enough attention to remember the number of objects that is being counted out.	Counting tells how many there are in a set, no matter which order the objects are counted. The last number said when counting a set tells the total number of objects counted.	
K.NBT.A.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	In Kindergarten, teachers help children lay the foundation for understanding the base-ten system by drawing special attention to 10. Children learn to view the whole numbers 11 through 19 as ten ones and some more ones. Children can count out a given teen number of objects, e.g., 12, and group the objects to see the ten ones and the two ones. The numerals 11, 12, 13, ..., 19 need special attention for children to understand them. The first nine numerals 1, 2, 3, ..., 9, and 0 are essentially arbitrary marks. These same marks are used again to represent larger numbers. Children need to learn the differences in the ways these marks are used. For example, initially, a numeral such as 16 looks like "one, six," not "1 ten and 6 ones." Layered place value cards can help children see the 0 "hiding" under the ones	A given number can be represented by putting together parts of the number or breaking apart the number in different ways. A group of ten consists of ten "ones". Teen numbers are composed of a group of ten ones and some more ones.	Number words 10-19 Compose Decompose Equation Ones Teen number

	place and that the 1 in the tens place really is 10 (ten ones).		
K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings*, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	Students act out adding and subtracting situations by representing quantities in the situation with objects, their fingers, and math drawings. To do this, students must model a real-world situation, focusing on the quantities and their relationships rather than non-mathematical aspects of the situation. Situations can be acted out and/or presented with pictures or words. Math drawings facilitate reflection and discussion because they remain after the problem is solved. These concrete methods that show all of the objects are called Level 1 methods. Students learn and use mathematical and non-mathematical language, especially when they make up problems and explain their representation and solution. The teacher can write expressions (e.g., 3-1) to represent operations, as well as writing equations that represent the whole situation before the solution (e.g., 3 - 1=?) or after (e.g., 3 - 1= 2). Expressions like 3-1 or 2+ 1 show the operation, and it is helpful for students to have experience just with the expression so they can conceptually chunk this part of an equation	Addition means adding to or putting together parts to find the total or sum. Subtraction involves taking from or taking apart a given amount to find the difference.	Add Subtract Putting together Adding to Taking apart Taking from Plus In all Altogether Join Minus Decompose Break apart
K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	Students in Kindergarten work with the following types of addition and subtraction situations: Add To with Result Unknown; Take From with Result Unknown; and Put Together/Take Apart with Total Unknown and Both Addends Unknown (see the dark shaded types in Table 2). Add To/Take From situations are action-oriented; they show changes from an initial state to a final state.	Addition means adding to or putting together parts to find the total or sum. Subtraction involves taking from or taking apart a given amount to find the difference.	

	These situations are readily modeled by equations because each aspect of the situation has a representation as number, operation (or), or equal sign (, here with the meaning of “becomes,” rather than the more general “equals”).		
K.OA.A.5 Fluently add and subtract within 5.	Experience with decompositions of numbers and with Add To and Take From situations enables students to begin to fluently add and subtract within 5.		

UNIT 6: NUMBERS 0-20				
How can we represent a given number?				
CCSS Standard s #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Count Groups of 11-20 Objects				
K.CC.A.1 K.CC.A.2 K.CC.A.3 K.CC.B.4 K.CC.B.4.a K.CC.B.4.b K.CC.B.5 K.OA.A.1 K.OA.A.2 K.OA.A.5	I can count to tell how many.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** In this section, students count groups of 11–20 objects using strategies they developed earlier when working with smaller sets of objects. Students participate in Counting Collections as the first activity in each lesson. They think about how organizing the objects can help ensure an accurate count and may use a counting mat or a 10-frame. Students also recognize that the number of objects in a group does not change, regardless of the way they are arranged. Display written numbers for students whenever they share their count. In later sections, after seeing numbers displayed repeatedly, students will practice recognizing, tracing, and writing numbers 11–20. They will relate these numbers to addition expressions and equations. No expressions or	**Mandatory Lessons/Activities:** iM Lessons 1, 3, 4,

<table>
<tr><td></td><td></td><td rowspan="2"></td><td>equations are used in this section.</td><td></td></tr>
<tr><td>Pacing:</td><td>3 days</td><td>Math Practices:
SMP: 1, 2, 3, 4, 5, 6, 7, 8</td><td>Assessments:
Checkpoint A</td></tr>
<tr><td colspan="5">Section B: 10 Ones and Some More</td></tr>
<tr><td>K.CC.A.3
K.CC.B.4.a
K.CC.B.5
K.NBT.A.1
K.OA.A.1</td><td>I can compose and decompose numbers and record my thinking.</td><td rowspan="2"><table><tr><td>X</td><td>Selected Response</td></tr><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table></td><td>Lesson Progression:
Students see the numbers 11–19 as 10 ones and some more ones. They compose and decompose teen numbers and record the compositions and decompositions with objects, drawings, and expressions.

Students use fingers and 10-frames to represent these numbers, but with more emphasis on the 10-frames as the lessons progress. To represent a teen number, they fill a 10-frame and show some more ones, which they may arrange in different ways. To determine the number of objects, students may count all or count on from 10 (though the latter is not an expectation in kindergarten).

Students compose and decompose teen numbers by starting with the parts (“10 and 5 is 15”) and starting with the total (“15 is 10 and 5”). For the first time, students see equations with the addends on the left side of the equal sign (10+5=15). They complete equations that show missing parts or a missing total to represent teen numbers as 10 ones and some more ones (_+_=12 and 10+7=_).

Starting from this section, students have access to a reference sheet that shows numbers 11–20 with dots in 10-frames, which they can use to identify written numbers. Students can count the dots to determine which written number is on the card.</td><td>Mandatory Lessons/Activities:
iM Lessons : 5, 6, 7, 8, 9, 10</td></tr>
<tr><td>Pacing:</td><td>6 days</td><td>Math Practices:
SMP: 1, 2, 3, 4, 5, 6, 7, 8</td><td>Assessments:
Cool-downs 5 and 8</td></tr>
</table>

				Checkpoint B
Section C: Count Groups of 11-20 images				
K.CC.A.1 K.CC.A.2 K.CC.A.3 K.CC.B.4 K.CC.B.4.a K.CC.B.4.b K.CC.B.5 K.NBT.A.1 K.OA.A.1 K.OA.A.4	I can count to tell how many.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students count groups of up to 20 images arranged in lines, arrays, circles, and on 10-frames. Images arranged in a circle can be tricky to count, motivating a greater need to keep track of what has been counted. Students use their understanding that teen numbers are composed of 10 ones and some ones to help them count and keep track of groups of up to 20 images and then to write numbers to represent such quantities. Throughout this section, students should have continued access to the reference sheet that shows numbers 11–20 with dots in 10-frames.	**Mandatory Lessons/Activities:** iM Lessons: 11, 12
Pacing:	2 days		**Math Practices:** SMP: 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-down 12 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may reverse the order of the digits for teen numbers writing 81 instead of 18.	K.CC.A.1: CT ELDS M.60.1 K.CC.A.2: CT ELDS M.60.1 K.CC.A.3: CT ELDS M.60.4 K.CC.B.4: CT ELDS M.60.2, M.60.3, M.60.5 K.CC.B.5: CT ELDS M.60.2, M.60.3 K.OA.A.1: CT ELDS M.60.7, M.60.8 K.OA.A.2: CT ELDS M.60.7, M.60.8 K.OA.A.5: CT ELDS M.60.7, M.60.8 K.NBT.A.1: CT ELDS M.60.7, M.60.8	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

	Early Learning & Development Standards		

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack 10-frames, collection of objects, crayons, colored pencils, markers, connecting cubes, counting mats, 5-frames, number cards 0-10, pattern blocks, glue or tape, scissors, two-color counters

UNIT 7: SOLID SHAPES ALL AROUND US
Illustrative Mathematics Unit Focus: Students identify, describe, analyze, compare, and compose two- and three-dimensional shapes. Counting, addition, and subtraction are revisited in the geometric contexts. **Essential Questions:** How do we describe objects in our world? How can we name, describe, and analyze two- and three-dimensional shapes? How can we create new shapes using existing shapes? What can be measured? Why do we measure? **Unit Pacing: 21 days (16 required lessons, 3 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS

Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
K.CC.A.1 Count to 100 by ones and by tens.	Several progressions originate in knowing number names and the count sequence. Students usually know or can learn to say the counting words up to a given number before they can use these numbers to count objects or to tell the number of objects. Students become fluent in saying the count sequence so that they have enough attention to focus on the pairings involved in counting objects.	Counting tells how many there are in a set, no matter which order the objects are counted. When counting by ones, the next number in the sequence increases the quantity by one.	Count Number Number words 0 - 20 Ones Tens
K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Due to varied development of fine motor and visual development,reversal of numerals is anticipated. While reversals should be pointed out to students and correct formation modeled in instruction, the emphasis of this standard is on the use of numerals to represent quantities rather than the correct handwriting formation of	Numerals are the symbols we read and write to communicate quantities (numbers)	Count Number Numeral Number words 0 - 20 How many Show Explain

	the actual numeral itself. While kindergarteners may experiment with writing numbers beyond 20, this standard places emphasis on numbers 0-20. First graders will extend the counting sequence, number recognition and writing to 120.		Represent
K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	Counting objects arranged in a line is easiest; with more practice, students learn to count objects in more difficult arrangements, such as rectangular arrays (they need to ensure they reach every row or column and do not repeat rows or columns); circles (they need to stop just before the object they started with); and scattered configurations (they need to make a single path through all of the objects). Later, students can count out a given number of objects, which is more difficult than just counting that many objects, because counting must be fluent enough for the student to have enough attention to remember the number of objects that is being counted out.	Counting tells how many there are in a set, no matter which order the objects are counted. The last number said when counting a set tells the total number of objects counted.	Count Number Number words 0 - 20
K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	Students first learn to match the objects in the two groups to see if there are any extra and then to count the objects in each group. Students learn that even if one group looks as if it has more objects (e.g., has some extra sticking out), matching or counting may reveal a different result.	One quantity is either greater than, less than or equal to the other.	Compare Equal to Same as Greater than More than Less than Fewer than
K.CC.C.7 Compare two numbers between 1 and 10 presented as written numerals.	Students use their knowledge of the count sequence to decide which number is greater than the other (the number farther along in the count sequence). Comparing numbers progresses in Grade 1 to adding and subtracting in comparing situations (finding out "how many more" or "how many less"and not just "which is more" or "which is less").		
K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings*, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	Students act out adding and subtracting situations by representing quantities in the situation with objects, their fingers, and math drawings. To do this, students must mathematize a real-world	Addition means adding to or putting together parts to find the total or sum.	Add Subtract Putting together Adding to

	situation, focusing on the quantities and their relationships rather than non-mathematical aspects of the situation. Situations can be acted out and/or presented with pictures or words. Math drawings facilitate reflection and discussion because they remain after the problem is solved. These concrete methods that show all of the objects are called Level 1 methods. Students learn and use mathematical and non-mathematical language, especially when they make up problems and explain their representation and solution. The teacher can write expressions (e.g., 3-1) to represent operations, as well as writing equations that represent the whole situation before the solution (e.g., 3 - 1=?) or after (e.g., 3 - 1= 2). Expressions like 3- 1 or 2+ 1 show the operation, and it is helpful for students to have experience just with the expression so they can conceptually chunk this part of an equation.	Subtraction involves taking from or taking apart a given amount to find the difference.	Taking apart Taking from Plus In all Join Are left Minus
K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	Students in Kindergarten work with the following types of addition and subtraction situations: Add To with Result Unknown; Take From with Result Unknown; and Put Together/Take Apart with Total Unknown and Both Addends Unknown (see the dark shaded types in Table 2). Add To/Take From situations are action-oriented; they show changes from an initial state to a final state. These situations are readily modeled by equations because each aspect of the situation has a representation as number, operation (or), or equal sign (, here with the meaning of "becomes," rather than the more general "equals").		
K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).	Put Together/Take Apart situations with Both Addends Unknown play an important role in Kindergarten because they allow students to explore various compositions that make each number. This will help students to build the Level 2 embedded number representations used to solve more advanced problem subtypes.	A given number can be represented by putting together parts of the number or breaking apart the number in different ways.	

K.OA.A.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	In Kindergarten, teachers help children lay the foundation for understanding the base-ten system by drawing special attention to 10. They decompose 10 into pairs such as 1+ 9, 2+ 8, 3+ 7 and find the number that makes 10 when added to a given number such as 3.	A given number can be represented by putting together parts of the number or breaking apart the number in different ways.	
K.OA.A.5 Fluently add and subtract within 5.	Experience with decompositions of numbers and with Add To and Take From situations enables students to begin to fluently add and subtract within 5.	Addition means adding to or putting together parts to find the total or sum. 3. Subtraction involves taking from or taking apart a given amount to find the difference.	
K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	Students often initially hold undifferentiated views of measurable attributes, saying that one object is "bigger" than another whether it is longer, or greater in area, or greater in volume, and so forth. For example, two students might both claim their block building is "the biggest." Conversations about how they are comparing—one building may be taller (greater in length) and another may have a larger base (greater in area)—help students learn to discriminate and name these measurable attributes. As they discuss these situations and compare objects using different attributes, they learn to distinguish, label, and describe several measurable attributes of a single object.	Different attributes can be measured, such as length or weight. We measure to determine the amount of a measurable attribute for a given object.	Heavier Lighter Weight Capacity Hold more Hold less
K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.	Kindergartners easily directly compare lengths in simple situations, such as comparing people's heights, because standing next to each other automatically aligns one endpoint. However, in other situations they may initially compare only one endpoint of objects to say which is longer. Discussing such situations (e.g., when a child claims that he is "tallest" because he is standing on a chair) can help students resolve and coordinate perceptual and conceptual information when it conflicts.		

K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	Students in Kindergarten classify objects into categories, initially specified by the teacher and perhaps eventually elicited from students. For example, in a science context, the teacher might ask students in the class to sort pictures of various organisms into two piles: organisms with wings and those without wings. Students can then count the number of specimens in each pile. Students can use these category counts and their understanding of cardinality to say whether there are more specimens with wings or without wings.	We sort and classify objects to organize them in groups by common attributes to see relationships among the groups.	Alike Different Shape Size Sort Count
K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.	Students refine their informal language by learning mathematical concepts and vocabulary so as to increasingly describe their physical world from geometric perspectives, e.g., shape, orientation, spatial relations (MP4). They increase their knowledge of a variety of shapes, including circles, triangles, squares, rectangles, and special cases of other shapes such as regular hexagons, and trapezoids with unequal bases and non-parallel sides of equal length. Students also begin to name and describe three-dimensional shapes with mathematical vocabulary, such as "sphere," "cube," "cylinder,"and "cone." Finally, in the domain of spatial reasoning, students discuss not only shape and orientation, but also the relative positions of objects, using terms such as "above," "below," "next to," "behind," "in front of," and "beside."	We can describe objects in our world using geometric ideas, such as names of shapes and positional words.	Above Below In front of Behind Beside Next to Flat shapes Square Circle Triangle Rectangle Hexagon Solid shapes Cube Cone Cylinder Sphere Pyramid Point Roll Corners
K.G.A.2 Correctly name shapes regardless of their orientations or overall size.	Students learn to name shapes such as circles, triangles, and squares, whose names occur in everyday language, and distinguish them from nonexamples of these categories, often based initially on visual prototypes.	Naming shapes is not dependent on their position, orientation or size.	
K.G.A.3 Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	In the domain of shape, students learn to match two-dimensional shapes even when the shapes have different orientations. The need to explain their decisions about shape names or	Two- and three-dimensional shapes can be named, described and analyzed using attributes, such as number and lengths of sides and number of angles/vertices.	

	classifications prompts students to attend to and describe certain features of the shapes. That is, concept images and names they have learned for the shapes are the raw material from which they can abstract common features. They identify faces of three-dimensional shapes as two-dimensional geometric figures and explicitly identify shapes as two-dimensional (“flat” or lying in a plane) or three-dimensional ("solid").		
K.G.B.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	The need to explain their decisions about shape names or classifications prompts students to attend to and describe certain features of the shapes. That is, concept images and names they have learned for the shapes are the raw material from which they can abstract common features.		
K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	The need to explain their decisions about shape names or classifications prompts students to attend to and describe certain features of the shapes. That is, concept images and names they have learned for the shapes are the raw material from which they can abstract common features. This also supports their learning to represent shapes informally with drawings and by building them from components (e.g., manipulatives such as sticks). With repeated experiences such as these, students become more precise (MP6).		Round Circle Rectangle Side Square Straight Triangle Trapezoid Hexagon Sphere Cylinder Cube Cone Pyramid
K.G.B.6 Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"	A second important area for kindergartners is the composition of geometric figures. Students not only build shapes from components,but also compose shapes to build pictures and designs. Initially lacking competence in composing geometric shapes, they gain abilities to combine shapes–first by trial and error and gradually by considering components–into pictures. At first, side length is the only component considered. Later experience brings an intuitive appreciation of angle size. Students combine two-dimensional shapes and solve problems such as deciding	New shapes can be created by putting together existing shapes.	

	which piece will fit into a space in a puzzle, intuitively using geometric motions (slides, flips, and turns, the informal names for translations, reflections, and rotations, respectively). They can construct their own outline puzzles and exchange them, solving each other's.		

UNIT 7: SOLID SHAPES ALL AROUND US				
How do we describe objects in our world? How can we name, describe, and analyze three-dimensional shapes? How can we create new shapes using existing shapes? What can be measured? Why do we measure?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Compose and Count with Flat Shapes				
K.CC.A.1 K.CC.A.3 K.CC.B.5 K.CC.C.6 K.CC.C.7 K.G.B.5 K.G.B.6 K.OA.A.1 K.OA.A.2 K.OA.A.3 K.OA.A.4 K.OA.A.5	I can put shapes together to form new shapes. I can represent and solve addition and subtraction problems.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** In this section, students strengthen their understanding of number concepts while working with pattern blocks. The work here allows the teacher to ensure that students have proficiency in counting and counting out to 20, writing and comparing numbers, and solving story problems. In solving story problems, students match equations to the quantities in the problems, and complete equations so that they match the problems. For the first time, they hear equations read with the term "equals" rather than "is." For example, 9 - 3 = 6 is read "9 minus 3 equals 6." In this section, students see equations written with both the total written first and the addends written first. Students consider ways to make the number 10 in	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5, 6

			the context of building shapes and completing puzzles with pattern blocks. Along the way, they think about attributes of pattern blocks.	
Pacing:	6 days		**Math Practices:** SMP: 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Checkpoint A
Section B: Describe, Compare, and Create Solid Shapes				
K.CC.A.1 K.CC.B.5 K.G.A.1 K.G.A.2 K.G.A.3 K.G.B.4 K.G.B.5 K.G.B.6 K.MD.A.1 K.MD.A.2 K.MD.B.3 K.OA.A.5	I can compare the weight and capacity of objects. I can describe and compare three-dimensional shapes. I can sort objects into categories.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** This section introduces students to solid shapes. Students begin by distinguishing solid shapes from flat shapes. They then learn about weight as an attribute of solid shapes and compare weights, and work with tactile materials or objects to develop their understanding of three-dimensional shapes. Throughout the section, students hear and use the terms “flat” and “solid” to describe two- and three dimensional shapes, but they also use their own language to talk about shapes. When comparing weights, the terms “heavy,” “light,” “heavier,” and “lighter” are used. While students are introduced to the names of solid shapes, they are not expected to use the formal terms. For example, they may say “ball” to refer to a sphere. Initially, students build solid shapes with clay. Later, they do so out of given components, using positional words and names of shapes as they build and describe their creations. They also describe attributes of solid shapes as they compare and sort them. At the end of the section, students create a model of their classroom and use solid shapes to represent objects in their world.	**Mandatory Lessons/Activities:** iM Lessons 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
Pacing:	10 days		**Math Practices:** SMP: 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-down 8 Checkpoint B

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may use two-dimensional vocabulary when describing three-dimensional shapes. For example, students may say a cube is a square or that a sphere is a circle. Students may think weight and capacity are associated with the size of an object.	K.CC.A.1: CT ELDS M.60.1 K.CC.A.3: CT ELDS M.60.4 K.CC.B.4: CT ELDS M.60.2, M.60.3, M.60.5 K.CC.B.5: CT ELDS M.60.2, M.60.3 K.CC.C.6: CT ELDS M.60.6 K.CC.C.7: CT ELDS M.60.6 K.OA.A.1: CT ELDS M.60.7, M.60.8 K.OA.A.2: CT ELDS M.60.7, M.60.8 K.OA.A.3: CT ELDS M.60.7, M.60.8 K.OA.A.4: CT ELDS M.60.7, M.60.8 K.OA.A.5: CT ELDS M.60.7, M.60.8 K.MD.A.2: CT ELDS M.60.9, M.60.10 K.MD.B.3: CT ELDS M.60.12 K.G.A.1: CT ELDS M.60.13, M.60.14 K.G.A.2: CT ELDS M.60.13, M.60.14 K.G.A.3: CT ELDS M.60.13, M.60.14 K.G.B.4: CT ELDS M.60.13, M.60.14 K.G.B.5: CT ELDS M.60.15 K.G.B.6: CT ELDS M.60.15 Early Learning & Development Standards	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Pattern blocks, colored pencils, crayons, markers, 10-frames, connecting cubes, two-color counters, cups, clay, geoblocks, solid shapes, containers of different sizes, sticky notes, bags, sticks, folders

Bristol Public Schools

Office of Teaching & Learning

Department	Mathematics
Department Philosophy	*Students learn by doing math, solving problems in mathematical and real-world contexts, and constructing arguments using precise language.* The Bristol mathematics curricula embeds this *learn-by-doing* philosophy by focusing on high expectations for all students and providing students with opportunities that build conceptual understanding, computational and procedural fluency, and problem solving through the use of a variety of strategies, tools, and technologies. The mathematics curriculum is responsive to the individual needs of students, while providing a structure tied to the Common Core State Standards in Connecticut. The *learn-by-doing* philosophy develops mathematically literate and productive students who can effectively and efficiently apply mathematics in their lives to make informed decisions about the world around them by doing math. To be mathematically literate, one must understand major mathematics concepts, possess computational facility, and have the ability to apply these understandings to situations in daily life. Making connections between mathematics and other disciplines is key to the appropriate application of mathematics skills and concepts to solve problems. The ability to read, discuss, and write within the discipline of mathematics is an integral skill that supports mathematical understanding, reasoning and communication. The opportunity to think critically and creatively to solve problems is important to deepen mathematical knowledge and foster innovation. A rich hands-on mathematical experience is essential to provide the foundational knowledge and skills that prepare students to be mathematically literate, productive citizens.
Course	Grade 2 Mathematics
Grade Level	Grade 2
Pre-requisites	Grade 1

Table of Contents

M-Major Cluster, S-Supporting Cluster, A-Additional Cluster

District Learning Expectations and Standards	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9 (optional)
Operations & Algebraic Thinking									
Represent and solve problems involving addition and subtraction.									
2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	M	M	M	M		M			M
Add and subtract within 20.									
2.OA.B.2 Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers.	M	M	M		M			M	M
Work with equal groups of objects to gain foundations for multiplication.									
2.OA.C.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.								S	
2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.								S	
Number & Operations in Base Ten									
Understand place value.									

2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:					M	M	M		M
2.NBT.A.1.A 100 can be thought of as a bundle of ten tens — called a "hundred."					M				
2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.	M	M	M	M	M	M	M	M	
2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.					M	M	M		M
2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.					M		M		
Use place value understanding and properties of operations to add and subtract.									
2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	M	M	M	M		M	M		M
2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.		M				M	M		
2.NBT.B.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.							M	M	M
2.NBT.B.8 Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.					M	M	M	M	

2.NBT.B.9Explain why addition and subtraction strategies work, using place value and the properties of operations.		M					M		M
Measurement & Data									
Measure and estimate lengths in standard units.									
2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.			M			M			M
2.MD.A.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.			M						
2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.			M						
2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.			M						M
Relate addition and subtraction to length.									
2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.			M	M					M
2.MD.B.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.			M	M	M				
Work with time and money.									

2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.						S			
2.MD.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?						S			
Represent and interpret data.									
2.MD.D.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.			S						S
2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	S	S					S		
Geometry									
Reason with shapes and their attributes.									
2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.1 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.						A			
2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.								A	
2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three						A			

thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.									

UNIT 1: ADDING, SUBTRACTING, AND WORKING WITH DATA
Illustrative Mathematics Unit Focus: Students represent and solve story problems within 20 through the context of picture and bar graphs that represent categorical data. Students build toward fluency with addition and subtraction. **Essential Questions:** How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? What does the equal sign mean in a number sentence? Why is it important to learn basic facts? Why do we collect, organize, represent and analyze data? **Unit Pacing: 25 days (14 required lessons, 9 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS

Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	Grade 2 students build upon their work in Grade 1 in two major ways. They represent and solve situational problems of all three types which involve addition and subtraction within 100 rather than within 20, and they represent and solve two-step situational problems of all three types. Because some grade 2 students are still developing proficiency with the most difficult subtypes, two-step problems should not involve these subtypes. Most work with two-step problems should involve single-digit addends.	Recognizing how a real-world situation fits into a common operation category helps to solve the problem. Real-world and mathematical situations can be represented using drawings and equations. An unknown can be in any position in a mathematical situation. The equal sign tells us that the quantities on either side have the same value or balance.	Add Addend Sum Difference Subtract Compare Unknown number Equation Symbol Tape diagram
2.OA.B.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	The word "fluent" is used in the Standards to mean "fast and accurate." Fluency in each grade involves a mixture of just knowing some answers, knowing some answers from patterns (e.g., "adding 0 yields the same number") and knowing some answers from the use of strategies. Fluency is not a matter of instilling facts divorced from	Knowing the basic facts helps us to solve more difficult computation problems accurately and efficiently.	Add Subtract Sum DIfference Strategies Fluently Compose

	their meanings, but rather as an outcome of a multi-year process that heavily involves the interplay of practice and reasoning.		Decompose
2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students need to build on their flexible strategies for adding within 100 from Grade 1 to fluently add and subtract within 100 in Grade 2. Students gain computational fluency, using efficient and accurate methods for computing, as they come to understand the role and meaning of arithmetic operations in number systems. Efficient mental processes become automatic with use.	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or “undoes” addition.	Place value Operations Compose Decompose Addition Subtraction Relationship Solve Equation Unknown Expression
2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	Students in Grade 1 begin to organize and represent categorical data using marks or picture graphs. In grade 2, students represent data in picture and bar graphs. A bar graph representing categorical data displays no additional information beyond the category counts. In such a graph, the bars are a way to make the category counts easy to interpret visually. Students could discuss ways in which bar orientation (horizontal or vertical), order, thickness, spacing, shading, colors, and so forth make the bar graphs easier or more difficult to interpret.	We collect, organize, represent, and analyze data in order to answer a question or solve a problem. We can organize data in specific ways to help us interpret the data more easily.	Picture graph Bar graph Data set Table Compare Represent Title Label Horizontal Vertical

UNIT 1: ADDING, SUBTRACTING, AND WORKING WITH DATA				
How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? What does the equal sign mean in a number sentence? Why is it important to learn basic facts? Why do we collect, organize, represent and analyze data?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Add and Subtract Within 20				
2.NBT.B.5 2.OA.B.2	I can fluently add and subtract within 20. I can add and subtract within 100 using a variety of strategies.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** This opening section gives teachers opportunities to assess students' fluency with addition and subtraction facts within 10 and how they approach adding and subtracting. The first several lessons focus on making a ten as a strategy to add and subtract, which helps students gain fluency with facts within 20 and supports the work with larger numbers (such as composing and decomposing numbers as a way to add and subtract). In the last lesson of the section, students use strategies learned in grade 1 to add within 50. Some activities take place in centers, enabling teachers to also introduce routines and structures while helping students develop mental strategies for adding and subtracting.	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5
Pacing:	5 days		**Math Practices:** SMP 3, 5, 6, 7, 8	**Assessments:** Cool-down 3 Checkpoint A
Section B: Ways to Represent Data				
2.MD.D.10 2.NBT.B.5 2.OA.B.2	I can represent and interpret data using picture and bar graphs. I can represent and solve a variety of	X Selected Response	**Lesson Progression:** Students explore situations and problems that involve categorical data and learn new ways to represent such data.	**Mandatory Lessons/Activities:** iM Lessons 7, 8, 9, 10, 11

	word problems using addition and subtraction.	<table><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table>	Students begin by representing data about their class in a way that makes sense to them. Then, they are introduced to picture graphs and bar graphs. Students learn the conventions of these graphs as they create them. They discuss the types of questions that can be asked and answered by the graphs, including those that require combining and comparing different categories.	
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 4, 6	**Assessments:** Cool-downs 9, 10 Checkpoint B
Section C: Diagrams To Compare				
2.MD.D.10 2.NBT.A.2 2.NBT.B.5 2.OA.A.1 2.OA.B.2	I can represent and solve a variety of word problems using addition and subtraction.	<table><tr><td>X</td><td>Selected Response</td></tr><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table>	**Lesson Progression:** Students have previously represented and reasoned about quantities in story problems. In grade 1, students compared quantities using diagrams with discrete partitions. In the previous section, they reasoned about quantities in bar graphs. Here, students learn to use tape diagrams as another way to make sense of the relationship between two quantities and between addition and subtraction. Students explore Compare story problems with an unknown difference, an unknown larger number, or an unknown smaller number. Tape diagrams help students to visualize these structures and support them in reasoning about strategies to use to solve problems, such as counting on or counting back. Students also write equations to reason about questions that ask "how many more?" and "how many less?" They recognize that different equations and diagrams can be used to represent the same difference between two numbers.	**Mandatory Lessons/Activities:** iM Lessons 13, 14, 15, 16
Pacing:	4 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 13, 15 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students might rely on a keyword or phrase in a problem to suggest an operation that will lead to an incorrect solution. For example, they might think that the word more always means that addition must be used to find a solution. Students may not completely solve a multi-step problem believing they are finished after completing one part. Students may misunderstand the meaning of the equal sign even if they have proficient computational skills. Students may not attend to the place value of the digits and believe that the 4 in 46 represents 4, not 40. This may also cause them to make errors in composing and decomposing tens. Students may not have a conceptual understanding of place value so they would think 61 – 47 = 26, because they subtract the 7 in 47 from the 1 in 61 instead of decomposing a ten. When answering a question such as, "*How many students in the class were born in January or in February?*", students may not understand that they need to combine these data points to determine the total.	2.OA.A.1: 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 1.OA.A.1 2.OA.B.2: 1.OA.C.6 2.NBT.B.5: 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 2.OA.B.2 2.MD.D.10: 1.MD.C.4	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources
RESOURCES			

Kendall Hunt
Blackline masters and materials from Teacher Resource Pack
Connecting cubes or counters, chart paper, glue, markers, scissors, stickers, tape, collection of objects

UNIT 2: ADDING AND SUBTRACTING WITHIN 100
Illustrative Mathematics Unit Focus: Students add and subtract within 100 using strategies based on place value, properties of operations, and the relationship between addition and subtraction. They then use what they know to solve story problems. **Essential Questions:** How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? What does the equal sign mean in a number sentence? Why is it important to learn basic facts? **Unit Pacing: 22 days (12 required lessons, 8 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	Grade 2 students build upon their work in Grade 1 in two major ways. They represent and solve situational problems of all three types which involve addition and subtraction within 100 rather than within 20, and they represent and solve two-step situational problems of all three types. Because some grade 2 students are still developing proficiency with the most difficult subtypes, two-step problems should not involve these subtypes. Most work with two-step problems should involve single-digit addends.	Recognizing how a real-world situation fits into a common operation category helps to solve the problem. Real-world and mathematical situations can be represented using drawings and equations. An unknown can be in any position in a mathematical situation. The equal sign tells us that the quantities on either side have the same value or balance.	Add Addend Sum Difference Subtract Compare Unknown number Equation Symbol Tape diagram
2.OA.B.2 Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.	The word "fluent" is used in the Standards to mean "fast and accurate." Fluency in each grade involves a mixture of just knowing some answers, knowing some answers from patterns (e.g., "adding 0 yields the same number") and knowing some answers from the use of strategies. Fluency is not a matter of instilling facts divorced from their meanings, but rather as an outcome of a	Knowing the basic facts helps us to solve more difficult computation problems accurately and efficiently.	Add Subtract Sum DIfference Strategies Fluently Compose Decompose

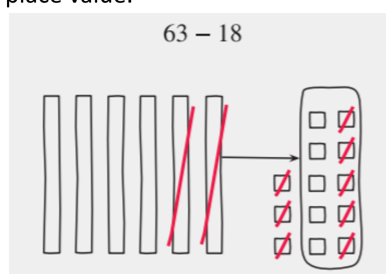
	multi-year process that heavily involves the interplay of practice and reasoning.		
2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students need to build on their flexible strategies for adding within 100 from Grade 1 to fluently add and subtract within 100 in Grade 2. Students gain computational fluency, using efficient and accurate methods for computing, as they come to understand the role and meaning of arithmetic operations in number systems. Efficient mental processes become automatic with use.	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or "undoes" addition.	Place value Operations Compose Decompose Addition Subtraction Relationship Solve Equation Unknown Expression
2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.	This work affords opportunities for students to see that they may have to compose more than one ten, and as many as three new tens.	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or "undoes" addition.	Place value Operations
2.NBT.B.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	Students in grade 1 add any two-digit number with a multiple of 10, and subtract multiples of 10 from multiples of 10. In second grade students should continue to develop proficiency with mental computation of multiples of 10 and 100.	The digit in the ones place will remain the same when finding 10 more or 10 less. The digits in the tens place and the ones place will remain the same when finding 100 more or 100 less.	Place value Operations Mentally add/subtract
2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.	In Grade 1, students add within 100 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Grade 1 students also begin to record the strategy with a written numerical method (drawings and, when appropriate, equations) and explain the reasoning used. Grade	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler.	Place value Properties Operations Explain

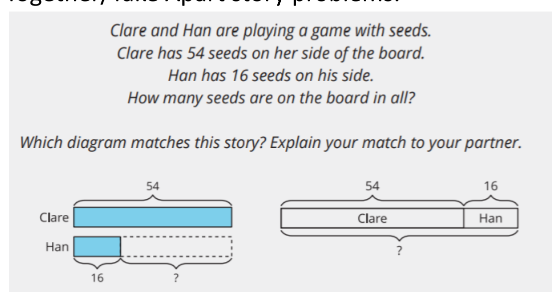
	2 students further refine their ability to explain calculation strategies based on their place value understanding.	Subtraction is the opposite of or "undoes" addition.	

UNIT 2: ADD AND SUBTRACT WITHIN 100				
How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? What does the equal sign mean in a number sentence? Why is it important to learn basic facts?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Add and Subtract				
2.MD.D.10 2.NBT.A.2 2.NBT.B.52 2.NBT.B.9 2.OA.A.1 2.OA.B.2	I can add and subtract within 100 using a variety of strategies. I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students find the value of unknown addends using methods that are based on place value and are introduced to base-ten blocks. They continue to rely on the relationship between addition and subtraction to solve problems involving differences. Students begin by solving Compare story problems. They use any methods and tools that make sense to them—including diagrams and connecting cubes—to find differences between two-digit numbers. Students then analyze the structure of base-ten blocks and use them to find unknown addends (MP7). Unlike connecting cubes, base-ten blocks cannot be pulled apart, which helps emphasize the structure of two-digit numbers in base ten. To reason about an unknown addend, they may add tens and ones to the known addend until they reach the value of the sum. They may also start with the total amount and subtract tens from tens and ones from ones to reach the known addend. The numbers encountered here do not require	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3

<table>
<tr><td></td><td></td><td rowspan="2"></td><td>students to decompose a ten when they subtract by place value.</td><td></td></tr>
<tr><td>Pacing:</td><td>3 days</td><td>Math Practices:
SMP 1, 2, 3, 4, 5, 6, 7, 8</td><td>Assessments:
Cool-downs 1, 3
Checkpoint A</td></tr>
<tr><td colspan="5">Section B: Decompose to Subtract</td></tr>
<tr><td>2.NBT.B.52
2.NBT.B.62
2.NBT.B.8
2.NBT.B.9
2.OA.B.2</td><td>I can add and subtract within 100 using a variety of strategies.

I can represent and solve a variety of word problems using addition and subtraction.</td><td><table><tr><td>X</td><td>Selected Response</td></tr><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table></td><td>Lesson Progression:
Students subtract one- and two-digit numbers from two-digit numbers within 100. To reason about differences of two numbers, they use methods based on place value, base-ten blocks and diagrams, and properties of operations. The numbers here require students to decompose a ten when subtracting by place.

Students also make sense of different representations of subtraction by place, including those that show their peers’ reasoning. For example, to find the value of 63 - 18 , students might use base-ten blocks or drawings to represent tens and ones. In this case, they might decompose 1 ten from 63 and exchange it for 10 ones, making 5 tens and 13 ones. From here, some students may first take away 8 ones, and then 1 ten. Others may take away 1 ten, then 8 ones. When students discuss different approaches and explain why they result in the same value, they deepen their understanding of the properties of operations and place value.

The reasoning here builds a foundation for students to understand the standard algorithm for</td><td>Mandatory Lessons/Activities:
iM Lessons 5, 6, 7, 8, 9</td></tr>
</table>

			subtraction, but students should not be encouraged to use the notation for the standard algorithm at this point. Allow them to build conceptual understanding by reasoning with base-ten blocks and drawings and articulating their thinking.	
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 8, 9 Checkpoint B
Section C: Represent and Solve Story Problems				
2.NBT.B.52 2.NBT.B.62 2.NBT.B.8 2.OA.A.1 2.NBT.B.9 2.OA.B.2	I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students apply their knowledge to solve story problems that involve addition and subtraction within 100. The story problems include all types—Add To, Take From, Put Together/Take Apart, and Compare— and have unknowns in all positions. Previously, students worked with diagrams that represent Compare problems. Throughout this section, students also make sense of diagrams that could represent Put Together/Take Apart story problems.  As students relate quantities in context and diagrams that represent them, they practice reasoning quantitatively and abstractly (MP2). Throughout the section, students are invited to interpret and solve problems in the ways that make sense to them (MP1). Math tools such as connecting cubes and base-ten blocks should be made available to encourage methods based on place value and the properties of operations to	**Mandatory Lessons/Activities:** iM Lessons 11, 12, 13, 14

			solve the problems.	
Pacing:	4 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 11, 14 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may not attend to the place value of the digits and believe that the 4 in 46 represents 4, not 40. This may also cause them to make errors in composing and decomposing tens. Students might rely on a keyword or phrase in a problem to suggest an operation that will lead to an incorrect solution. For example, they might think that the word more always means that addition must be used to find a solution. Students may not completely solve a multi-step problem believing they are finished after completing one part. Students may misunderstand the meaning of the equal sign even if they have proficient computational skills. Students may not have a conceptual understanding of place value so they would think 61 – 47 = 26, because they subtract the 7 in 47 from the 1 in 61 instead of decomposing a ten.	2.OA.A.1: 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 1.OA.A.1 2.OA.B.2: 1.OA.C.6 2.NBT.B.5: 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 2.OA.B.2 2.NBT.B.6: 2.NBT.A.1, 2.NBT.B.7 2.NBT.B.8: 2.NBT.A.1 2.NBT.B.9: 1.OA.B.3, 1.OA.B.4	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES

Kendall Hunt Blackline masters and materials from Teacher Resource Pack Connecting cubes, base-ten blocks, counters, paper clips, chart paper, markers

UNIT 3: MEASURING LENGTH			
Illustrative Mathematics Unit Focus: Students measure and estimate lengths in standard units and solve measurement story problems within 100. **Essential Questions:** Why do we use standard units of measurement? How do we decide on a unit of measure and a tool when measuring an object? How are the size of the unit and the resulting measure related? Why do we collect, organize, represent and analyze data? **Unit Pacing: 23 days (14 required lessons, 7 flex, 2 assessment and reaction)**			
UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as	It is vital that students learn that "one" represents the space from the beginning of the ruler to the	Standard units help us communicate a measure to others in a consistent way.	Measure Estimate

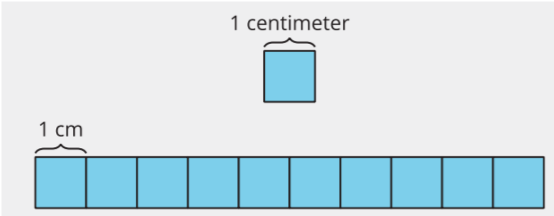
rulers, yardsticks, meter sticks, and measuring tapes	hash mark, not the hash mark itself. To learn measurement concepts and skills, students might use both simple rulers (e.g., having only whole units such as centimeters or inches) and physical units (e.g., manipulatives that are centimeter or inch lengths).	The unit of measure and tool must have the same attribute (e.g. length) we are measuring and be the most appropriate for the given situation.	Length Unit Inch Feet Centimeter Meter Ruler
2.MD.A.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	Students can learn that the larger the unit, the fewer number of units in a given measurement. That is, for measurements of a given length there is an inverse relationship between the size of the unit of measure and the number of those units. This is the time that measuring and reflecting on measuring the same object with different units, both standard and nonstandard, is likely to be most productive. Students can also use the concept of unit to make inferences about the relative sizes of objects; for example, if object A is 10 regular paper clips long and object B is 10 jumbo paper clips long, the number of units is the same, but the units have different sizes, so the lengths of A and B are different		
2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.	Although "guess and check" experiences can be useful, research suggests explicit teaching of estimation strategies (such as iteration of a mental image of the unit or comparison with a known measurement) and prompting students to learn reference or benchmark lengths (e.g., an inch-long piece of gum, a 6-inch dollar bill), order points along a continuum, and build up mental rulers.	There is a relationship between the size of the unit and the number of units required to cover the length. Lengths can be estimated.	
2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	Second graders learn to combine and compare lengths using arithmetic operations. That is, they can add two lengths to obtain the length of the whole and subtract one length from another to find out the difference in lengths.	Length is measured by using an appropriate tool. Numerals on a measuring tool indicate the number of length units. Lengths can be compared.	Measure Length Standard unit Difference Determine Compare

2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	This work supports students' understanding of solving one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.	Addition and subtraction strategies can be used to solve real-world measurement problems. A symbol can be used to represent an unknown number.	Units Length Equation Symbol Unknown
2.MD.D.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	A display of measurement data must present the measured values with their appropriate magnitudes and spacing on the measurement scale in question. One method for doing this is to make a line plot. This activity connects with other work students are doing in measurement in Grade 2: representing whole numbers on number line diagrams, and representing sums and differences on such diagrams.	We collect, organize, represent, and analyze data in order to answer a question or solve a problem.	Measurement Units Line plot Data

UNIT 3: MEASURING LENGTH				
Why do we use standard units of measurement? How do we decide on a unit of measure and a tool when measuring an object? How are the size of the unit and the resulting measure related? Why do we collect, organize, represent and analyze data?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Metric Measurement				
2.MD.A.1 2.MD.A.2	I can estimate and measure length using a variety of tools. I can represent and solve a variety of	X Selected Response	**Lesson Progression:** This section introduces two metric units: centimeter and meter. Students use base-ten blocks, which have lengths of 1 centimeter and 10	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5, 6

<table>
<tr>
<td>2.MD.A.3
2.MD.A.4
2.MD.B.5</td>
<td>word problems using addition and subtraction.</td>
<td rowspan="2"><table><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table></td>
<td>centimeters, to measure objects in the classroom and to create their own centimeter ruler. Students iterate the 1-centimeter unit just as they had done with nonstandard units in grade 1.

Students relate the side length of a centimeter cube to the distance between tick marks on their ruler. They see that each tick mark notes the distance in centimeters from the 0 mark, and that the length units accumulate as they move along the ruler and away from 0.



Students then compare the ruler they created to a standard centimeter ruler. They learn the importance of placing the end of an object at 0 and discuss how the numbers on the ruler represent lengths from 0.

Students also learn about a longer unit in the metric system, meter, and use it to estimate lengths. They have opportunities to choose measurement tools and to do so strategically (MP5), by considering the lengths of objects being measured. Students also measure the length of longer objects in both centimeters and meters, which prompts them to relate the size of the unit to the measurement.

To close the section, students apply their knowledge of measurement to compare the lengths of objects and solve Compare story problems involving lengths within 100, measured in metric units.</td>
<td></td>
</tr>
<tr>
<td>Pacing:</td>
<td>6 days</td>
<td>Math Practices:
SMP 1, 2, 3, 5, 6, 7, 8</td>
<td>Assessments:
Cool-downs 3, 5, 6</td>
</tr>
</table>

				Checkpoint A
Section B: Customary Measurement				
2.MD.A.1 2.MD.A.2 2.MD.A.3 2.MD.B.5	I can estimate and measure length using a variety of tools. I can describe the relationship between the size of the units used and the resulting measurements when measuring the same object. I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students apply measurement concepts and skills from earlier to measure and estimate lengths in two customary units: inches and feet. As in the previous section, students make choices about the tool to use based on the length of the object being measured (MP5) and measure the length of the same object in both feet and inches. They begin to generalize that when they use a longer length unit, fewer of those units are needed to span the full length of the object. This understanding is a foundation for their work with fractions in grade 3 and beyond. To solidify their understanding of measurement concepts, students also solve one- and two-step story problems involving addition and subtraction of lengths within 100, expressed in customary units. Some problems involve measurements using a “torn tape” where the 0 cannot be used as a starting point.	**Mandatory Lessons/Activities:** iM Lessons 8, 9, 10, 11, 12
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 5, 6, 7, 8	**Assessments:** Cool-downs 8, 9, 12 Checkpoint B
Section C: Line Plot				
2.MD.A.1 2.MD.A.3 2.MD.A.4 2.MD.B.5 2.MD.D.9	I can create line plots to display measurement data and use the data to solve problems.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students apply their understanding of measurement and data to create and interpret line plots. Students learn that the horizontal scale is marked off in whole-number length units, the same ones used to collect the data. They recognize that the numbers on the number line represent lengths and each “x” above a number represents an object of that length. They label line plots with titles and the measurement unit used. Throughout	**Mandatory Lessons/Activities:** iM Lessons 14, 15, 16

			the section, students connect the features of the line plot to the tools they use to measure.	
Pacing:	3 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 15 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may believe that the numbers on a ruler are counting the tick marks instead of the units or spaces between the marks. Some students might think that they can only measure length with a ruler starting at the left edge or 0 instead of starting at another number and determining the number of length units used from end to end. Students may assume that a key word or phrase in a problem suggests the same operation will be used every time. Students may try to represent categorical data (i.e “Favorite Pets”or “Pizza Toppings”) on a line plot. When creating a line plot, students may not space the tick marks equally along the line and may also omit numbers not included in the data set.	2.MD.A.1: 1.MD.A.2 2.MD.A.2: 2.MD.A.1, 2.MD.A.3 2.MD.A.3: 2.MD.A.1 2.MD.A.4: 2.MD.A.3 2.MD.B.5 : 2.MD.A.4	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt

Blackline masters and materials from Teacher Resource Pack Base ten blocks, centimeter cubes, connecting cubes, straws, string, scissors, rulers (centimeters and inches), measuring tape, meter sticks, tape, objects of various lengths, colored pencils, inch tiles, markers, yard sticks

UNIT 4: ADDITION AND SUBTRACTION ON A NUMBER LINE
Illustrative Mathematics Unit Focus: Students learn about the structure of a number line and use it to represent numbers within 100. They also relate addition and subtraction to length and represent the operations on the number line diagram. **Essential Questions:** How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? What does the equal sign mean in a number sentence? How can a number line be used to represent numbers and equations? **Unit Pacing: 21 days (12 required lessons, 7 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS

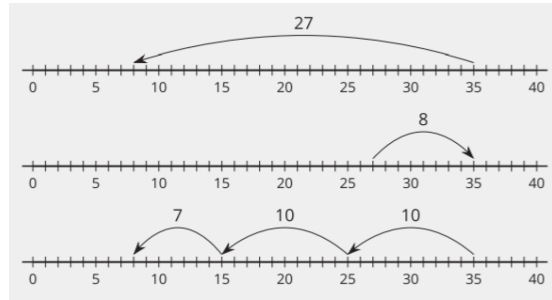
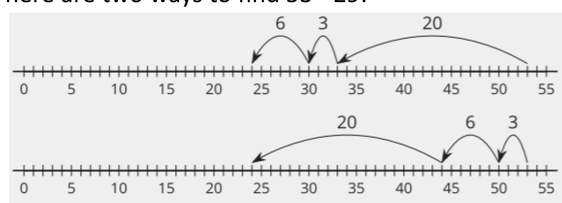
Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	Grade 2 students build upon their work in Grade 1 in two major ways. They represent and solve situational problems of all three types which involve addition and subtraction within 100 rather than within 20, and they represent and solve two-step situational problems of all three types. Because some grade 2 students are still developing proficiency with the most difficult subtypes, two-step problems should not involve these subtypes. Most work with two-step problems should involve single-digit addends.	Recognizing how a real-world situation fits into a common operation category helps to solve the problem. Real-world and mathematical situations can be represented using drawings and equations. An unknown can be in any position in a mathematical situation. The equal sign tells us that the quantities on either side have the same value or balance.	Add Addend Sum Difference Subtract Compare Unknown Equation Expression Symbol Tape diagram
2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.	Students begin to work towards multiplication when they skip count by 5s, by 10s, and by 100s. This skip counting is not yet true multiplication because students don't keep track of the number of groups they have counted.	Skip counting by a specific number creates a repeating pattern.	Skip-count Pattern

2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students need to build on their flexible strategies for adding within 100 from Grade 1 to fluently add and subtract within 100 in Grade 2. Students gain computational fluency, using efficient and accurate methods for computing, as they come to understand the role and meaning of arithmetic operations in number systems. Efficient mental processes become automatic with use.	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or "undoes" addition.	Place value Operations Compose Decompose Addition Subtraction Relationship Equation Unknown Expression
2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	This work supports students' understanding of solving one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.	Addition and subtraction strategies can be used to solve real-world measurement problems. A symbol can be used to represent an unknown number.	Units Length Equation Symbol Unknown
2.MD.B.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	To use a number line diagram to understand number and number operations, students need to understand that number line diagrams have specific conventions: the use of a single position to represent a whole number and the use of marks to indicate those positions. They need to understand that a number line diagram is like a ruler in that consecutive whole numbers are 1 unit apart, thus they need to consider the distances between positions and segments when identifying missing numbers.	On a number line, the size of the part is measured by the distance from zero to the numbered point.	Whole number Length Number line Sum Difference

<table>
<tr><th colspan="5">UNIT 4: ADDITION AND SUBTRACTION ON A NUMBER LINE</th></tr>
<tr><td colspan="5">How do we decide what operation to use when solving a real-world problem?
How can we show mathematical situations in word problems?
What does the equal sign mean in a number sentence?
How can a number line be used to represent numbers and equations?</td></tr>
<tr><th>CCSS Standards #</th><th>Learning Targets</th><th>Summative Assessment Strategy</th><th>Lesson Progression and Connection to Math Practices</th><th>Common Learning Experiences and Assessments</th></tr>
<tr><th colspan="5">Section A: The Structure of a Number Line</th></tr>
<tr><td>2.MD.B.6
2.NBT.A.2
2.NBT.B.5</td><td>I can represent whole numbers within 100 as lengths from 0 on a number line.</td><td rowspan="2"><table><tr><td>X</td><td>Selected Response</td></tr><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table></td><td>Lesson Progression:
Students begin to use the number line as a tool for understanding numbers and number relationships. They learn that the number line is a visual representation of numbers shown in order from left to right, with equal spacing between each number.

Students see that each number tells the number of length units from 0, just like on the ruler. This means that the numbers to the left are smaller (fewer units away from 0) and those farther to the right are larger (more units away from 0).

Students learn that whole numbers can be represented with tick marks and points on the number line. They then locate, label, and compare numbers on a number line. They also estimate numbers that could be represented by points on a number line.</td><td>Mandatory Lessons/Activities:
iM lessons 1, 2, 3, 4, 5</td></tr>
<tr><td>Pacing:</td><td>5 days</td><td>Math Practices:
SMP 3, 5, 6, 7, 8</td><td>Assessments:
Cool-downs 3, 4, 5
Checkpoint A</td></tr>
<tr><th colspan="5">Section B: Add and Subtract on a Number Line</th></tr>
<tr><td>2.MD.B.5
2.MD.B.6</td><td>I can represent sums and differences on a number line.</td><td><table><tr><td>X</td><td>Selected Response</td></tr></table></td><td>Lesson Progression:
Students reason about sums and differences on the number line. They begin by using directional</td><td>Mandatory Lessons/Activities:
iM Lessons 7, 8, 9, 10, 11, 12, 13</td></tr>
</table>

2.NBT.A.2 2.NBT.B.5 2.OA.A.1	I can represent and solve a variety of word problems using addition and subtraction.	X Constructed Response Performance X Observation	arrows: an arrow pointing right represents addition, and an arrow pointing left represents subtraction. Students write equations that correspond to given number-line representations, as well as represent given equations on the number line. Later, students revisit the idea of subtraction as an unknown-addend problem and represent the unknown addend with a jump to the right. For example, here are three ways they may reason about 35 - 27 on the number line:  As students analyze various representations of a difference on the number line, they consider when certain strategies may be more efficient than others. They also consider reasoning strategies that are based on place value and the properties of operations (for example, adding tens and then ones, or adding ones and then tens). For example, here are two ways to find 53 - 29:  At the end of the section, students use the number line to make sense of and solve story problems. Grade 2, Unit 4 6 Grade 2 They compare this representation with others used in earlier units.	
Pacing:	7 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 8, 9, 11, 13 Checkpoint B

COMMON MISCONCEPTIONS	PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT	ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY	OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT
Students may incorrectly think that subtraction is commutative, i.e. 8-5=5-8. Students may think that the unknown in an equation has to fall after the equal sign. Students sometimes believe that the equal sign indicates the answer comes next or calls for doing the mathematical operation. Students may confuse the direction of the arrows when representing both addition and subtraction problems on the number line. Students might rely on a key word or phrase in a problem to suggest an operation that will lead to an incorrect solution. For example, they might think that the word left always means that subtraction must be used to find a solution.	2.MD.B.5 2.MD.A.4 2.MD.B.6: 2.MD.B.5 2.NBT.B.5 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 2.OA.B.2 2.OA.A.1 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 1.OA.A.1	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

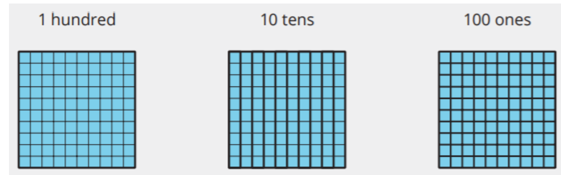
RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Base-ten blocks, erasers, inch tiles, paper clips, sticky notes, string, counters, number cubes, markers, markers (dry-erase), Sheet protectors, glue, scissors, base-ten blocks, colored pencils, paper, rulers

UNIT 5: NUMBERS TO 1,000			
Illustrative Mathematics Unit Focus: Students extend place value understanding to three-digit numbers. **Essential Questions:** How is our number system organized? How can understanding place value help us? **Unit Pacing: 19 days (11 required lessons, 6 flex, 2 assessment and reaction)**			
UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
2.OA.B.2 Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.	The word "fluent" is used in the Standards to mean "fast and accurate." Fluency in each grade involves a mixture of just knowing some answers, knowing some answers from patterns (e.g., "adding 0 yields the same number") and knowing some answers from the use of strategies. Fluency is not a matter of instilling facts divorced from their meanings, but rather as an outcome of a multi-year process that heavily involves the interplay of practice and reasoning.	Knowing the basic facts helps us to solve more difficult computation problems accurately and efficiently.	Add Subtract Sum DIfference Strategies Fluently Compose Decompose
2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. a)100 can be thought of as a bundle of ten tens - called a "hundred." b) The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	This lays the groundwork for understanding the structure of the base-ten system as based on repeated bundling in groups of 10 and understanding that the unit associated with each place is 10 of the unit associated with the place to its right.	Our number system is a base-ten system. Any group of 10 in a given place value can be represented as one in the next greater place value (10 ones is 1 ten, 10 tens is 1 hundred).	Digit Hundreds Tens Ones
2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.	Skip-counting is a fundamental skill that helps students develop an understanding of the numeric patterns in mathematics. These patterns help us compute fluently and efficiently. Numerical patterns also help us develop algebraic	Skip counting by a specific number creates a repeating pattern. To recognize and extend a pattern, we look for how the terms are related and	Skip-count

	reasoning. Skip-counting from multiples by multiples is a low-level form of skip-counting that may not fully develop students' understanding. We can also skip count by 10's off of the multiple of tens, such as asking students to skip count by tens starting at 17.	then continue that relationship for the next term.	
2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	Representations such as manipulative materials, math drawings, and layered three-digit place value cards afford connections between written three-digit numbers and hundreds, tens, and ones... Unlayering three-digit place value cards... reveals the expanded form of the number.	Understanding place value enables us to represent, compare and order numbers and perform computations.	Base ten numeral Number names Expanded form
2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	Comparing the magnitude of three-digit numbers uses the understanding that 1 hundred (the smallest three-digit number) is greater than any amount of tens and ones represented by a two-digit number. For this reason, three-digit numbers are compared by first inspecting the hundreds place (e.g., 845 > 799; 849 < 855). Drawings help support these understandings.		Hundreds Tens Ones Compare
2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Fluency is grounded in understanding. Provide many activities that will help students develop a strong understanding of number relationships, addition and subtraction so they can develop, share and use efficient strategies for mental computation. An efficient strategy is one that can be done mentally and quickly. Students gain computational fluency, using efficient and accurate methods for computing, as they come to understand the role and meaning of arithmetic operations in number systems. Efficient mental processes become automatic with use. Students need to build on their flexible strategies for adding within 100 in Grade 1 to fluently add and subtract within 100, add up to four two-digit numbers, and find sums and differences less than or equal to 1000 using numbers 0 to 1000.	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or “undoes” addition.	Place Value Operations Add Subtract Sum Difference Equation

2.NBT.B.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	Students should first work to understand 10 more and 10 less than 3-digit numbers. This can be done in a variety of ways, and should be connected to base ten representations so that students can understand which place values change and why when we add or subtract a ten from a number. As students show proficiency with adding and subtracting 10, we can begin to focus on adding and subtracting 100 from a number. Again, use of base ten models will help students understand what is happening mathematically. Then, students should work related equations to reinforce the patterns within these computations.	The digit in the ones place will remain the same when finding 10 more or 10 less. The digits in the tens place and the ones place will remain the same when finding 100 more or 100 less.	Place Value Operations Mentally add/subtract Sum Difference Equation
2.MD.B.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	To use a number line diagram to understand number and number operations, students need to understand that number line diagrams have specific conventions: the use of a single position to represent a whole number and the use of marks to indicate those positions. They need to understand that a number line diagram is like a ruler in that consecutive whole numbers are 1 unit apart, thus they need to consider the distances between positions and segments when identifying missing numbers	Number lines can help us visualize the magnitude of a number as the distance from zero.	Whole number Length Number line Sum Difference Equal Partition

UNIT 5: NUMBERS TO 1,000				
How is our number system organized? How can understanding place value help us?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: The Value of Three Digits				

2.OA.B.2 2.NBT.A.1 2.NBT.A.2 2.NBT.A.3 2.NBT.B.5 2.MD.B.6	I can read, write and represent numbers to 1,000.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** This section introduces the unit of a hundred. Students begin by analyzing the large square base-ten block, and its corresponding base-ten diagram, to recognize 100 as 1 hundred, 10 tens, or 100 ones.  Students learn that the digits in three-digit numbers represent amounts of hundreds, tens, and ones. They use this insight to write numbers and represent quantities in different forms—base-ten numerals, words, and expanded form. Students see that they can compose a hundred with 10 tens, just as they can compose a ten with 10 ones, and that a quantity can be expressed in many ways. Composing larger units from smaller units allows students to express a quantity using the fewest number of each unit, which reinforces the meaning of the digits in a three-digit number and prepares students to add and subtract such numbers later. It also lays the foundation for generalizing the relationship between the digits of other numbers in the base-ten system in future grades.	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5, 6
Pacing:	6 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 3, 5, 6 Checkpoint A
Section B: Compare and Order Numbers Within 1,000				
2.NBT.A.1 2.NBT.A.2 2.NBT.A.3 2.NBT.A.4 2.NBT.B.8	I can compare and order three-digit numbers. I can represent whole numbers up to 1,000 as lengths from 0 on a number line.	X Selected Response X Constructed Response	**Lesson Progression:** Students use number line diagrams to deepen their understanding of numbers to 1,000. They begin by skip-counting on the number line to build a sense of the relative position of numbers to 1,000. They recall the structure of the number line from a	**Mandatory Lessons/Activities:** iM Lessons 8, 9, 10, 11, 12

2.MD.B.6		Performance X Observation	previous unit and use it, along with their understanding of place value, to locate, compare, and order numbers on the number line. This number line, for example, is divided into intervals of 10 units, representing 10 tens from 500 to 600. In a task, students may be asked to locate the number 540 and estimate the location of the number 546. As students locate or estimate the location of three-digit numbers on number lines such as these, they show an understanding of a number's relative distance from zero and the place value of the digits. This understanding helps them to compare and order three-digit numbers. Students see that the numbers get larger as they move from left to right on the line. To compare and order three-digit numbers written as base-ten numerals, students also continue to use base-ten blocks, base-ten diagrams, or other representations that make sense to them. They write the comparisons using the symbols, >, <, and =.	
Pacing:	5 days		**Math Practices:** SMP 3, 5, 6, 7, 8	**Assessments:** Cool-downs 8, 11, 12 Checkpoint B

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Some students may not move beyond thinking of the number 358 as 300 ones plus 50 ones plus 8 ones to the concept of 8 ones, 5 tens and 3 hundreds.	2.OA.B.2: 1.OA.C.6 2.NBT.A.1: 1.NBT.B.2, 2.NBT.A.2 2.NBT.A.3: 2.NBT. A.1 2.NBT.A.4: 2.NBT. A.1	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

Students may use place value blocks incorrectly assuming the value of each block is one instead of using the values hundreds, tens, or ones. Students may mistakenly use bigger than or smaller than rather than greater than or less than when comparing numbers. Students may count the lines on a number line instead of counting the spaces to represent a number.	2.NBT.B.5: 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 2.OA.B.2 2.NBT.B.8: 2.NBT.A.1		

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Base-ten blocks, number cubes, chart paper, number cards 0–10, dry erase markers, sheet protectors, collections of objects, sticky notes

UNIT 6: GEOMETRY, TIME, AND MONEY

Illustrative Mathematics Unit Focus: Students reason with shapes and their attributes and partition shapes into equal shares, building a foundation for fractions. They relate halves, fourths, and skip-counting by 5 to tell time, and solve story problems involving the values of coins and dollars.

Essential Questions:
How can polygons be described and classified?
How does partitioning help us reason about shapes?
How are clocks useful?
How can we determine the value of coins and bills?
How can we represent a given amount of money?

Unit Pacing: 26 days (16 required lessons, 8 flex, 2 assessment and reaction)

UNWRAPPED STANDARDS

Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.	Skip-counting is a fundamental skill that helps students develop an understanding of the numeric patterns in mathematics. These patterns help us compute fluently and efficiently. Numerical patterns also help us develop algebraic reasoning. Skip-counting from multiples by multiples is a low-level form of skip-counting that may not fully develop students' understanding. We can also skip count by 10's off of the multiple of tens, such as asking students to skip count by tens starting at 17.	Skip counting by a specific number creates a repeating pattern. To recognize and extend a pattern, we look for how the terms are related and then continue that relationship for the next term.	Skip count
2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students need to build on their flexible strategies for adding within 100 from Grade 1 to fluently add and subtract within 100 in Grade 2. Students gain computational fluency, using efficient and accurate methods for computing, as they come to understand the role and meaning of arithmetic operations in number systems. Efficient mental processes become automatic with use.	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or "undoes" addition.	Place value Operations Compose Decompose Addition Subtraction Relationship Equation Unknown Expression

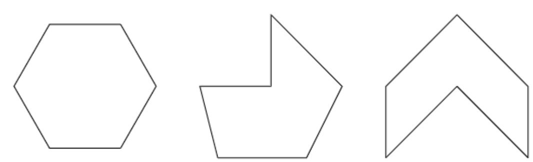
2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.* Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	Students learn to name and describe the defining attributes of categories of two-dimensional shapes, including circles, triangles, squares, rectangles, rhombuses, trapezoids, and the general category of quadrilateral. They describe pentagons, hexagons, septagons, octagons, and other polygons by the number of sides, for example, describing a septagon as either a "seven-gon" or simply "seven-sided shape" Because they have developed both verbal descriptions and a rich store of associated mental images, they are able to draw shapes with specified attributes, such as a shape with five sides or a shape with six angles. They use length to identify the properties of shapes (e.g., a specific figure is a rhombus because all four of its sides have equal length). They recognize right angles, and can explain the distinction between a rectangle and a parallelogram without right angles and with sides of different lengths (sometimes called a "rhomboid").	Polygons can be described and classified using attributes, such as number of sides and angles.	Attribute Angle Face Triangle Quadrilateral Pentagon Hexagon Cube Rhombus
2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	Another type of composition and decomposition is essential to students' mathematical development—spatial structuring. Students need to conceptually structure an array to understand two-dimensional regions as truly two-dimensional. This involves more learning than is sometimes assumed. Students need to understand how a rectangle can be tiled with squares lined up in rows and columns. At the lowest level of thinking, students draw or place shapes inside the rectangle, but do not cover the entire region. Only at the later levels do all the squares align vertically and horizontally, as the students learn to compose this two-dimensional shape as a collection of rows of squares and as a collection of columns of squares	Partitioning a shape into smaller parts allows us to describe the shape in different ways.	Partition Equal Rectangle Column Row
2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of,	Students learn to combine their composition and decomposition competencies to build and operate on composite units (units of units),	Partitioning a shape into smaller parts allows us to describe the shape in different ways.	Partition Circle Halves

etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	intentionally substituting arrangements or composites of smaller shapes or substituting several larger shapes for many smaller shapes, using geometric knowledge and spatial reasoning to develop foundations for area, fraction, and proportion. For example, they build the same shape from different parts, e.g., making with pattern blocks, a regular hexagon from two trapezoids, three rhombuses, or six equilateral triangles. They recognize that the hexagonal faces of these constructions have equal area, that each trapezoid has half of that area, and each rhombus has a third of that area.		Thirds Fourths Half of A third of A fourth of Equal shares Whole
2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	It is vital that students learn that "one" represents the space from the beginning of the ruler to the hash mark, not the hash mark itself. To learn measurement concepts and skills, students might use both simple rulers (e.g., having only whole units such as centimeters or inches) and physical units (e.g., manipulatives that are centimeter or inch lengths).	Standard units help us communicate a measure to others in a consistent way. The unit of measure and tool must have the same attribute (e.g. length) we are measuring and be the most appropriate for the given situation.	Measure Estimate Length Unit Inch Feet Centimeter Meter Ruler
2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	Students have experience in telling and writing time from analog and digital clocks to the hour and half hour in Grade 1 and to the nearest five minutes, using a.m. and p.m. in Grade 2. Now students will tell and write time to the nearest minute and measure time intervals in minutes. Provide analog clocks that allow students to move the minute hand. Students need experience representing time from a digital clock to an analog clock and vice versa.	Clocks help us keep track of time and plan and sequence events.	Analog Digital Clock Hands Time Hour Minute A.M. P.M.
2.MD.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?	Students also combine competencies from different domains as they solve measurement problems involving money amounts using addition and subtraction. For example, "How much change from $1.00 will Han have if he buys a bag of chips for 46¢? " Students may use tape or number line diagrams for solving such problems.	Specific coins and bills each have a unique value that is determined by their markings. The size and color do not indicate a coin's value. A given amount of money can often be generated using different combinations	Dollar Cents Quarter Dime Nickel Penny Symbols: $, ¢

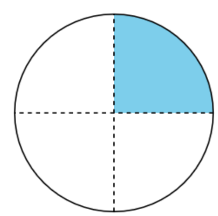
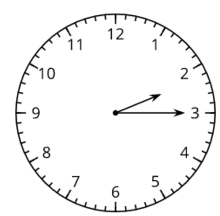
		of coins and bills, but the value will remain the same.	

UNIT 6: GEOMETRY, TIME, AND MONEY

How can polygons be described and classified?
How does partitioning help us reason about shapes?
How are clocks useful?
How can we determine the value of coins and bills?
How can we represent a given amount of money?

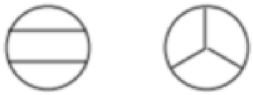
CCSS Standards #	Learning Targets	Summative Assessment Strategy	Lesson Progression and Connection to Math Practices	Common Learning Experiences and Assessments
Section A: Attributes of Shapes				
2.G.A.1 2.MD.A.1	I can identify and draw shapes with specific attributes.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students identify and draw triangles, quadrilaterals, pentagons, and hexagons. Students are likely familiar with triangles and hexagons given their previous work with pattern blocks. Here, they see that hexagons include any shape with six sides and six corners, and may look different from the pattern block they worked with in the past. For example, each of these shapes is a hexagon:  Students learn to name a shape by counting the sides and corners and come to see that, in any shape, the number of corners is the same as the number of sides. (The term “corners” is used in lieu of “vertices” because the latter requires an understanding of angles, which is developed in grade 4.)	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4

			Students come to recognize that some shapes such as rectangles and squares have “square corners,” the informal language for 90-degree angles. As they identify and draw shapes with given attributes, they measure length in centimeters and inches, revisiting previously learned skills. At the end of the section, students relate two-dimensional (flat) shapes to three-dimensional (solid) shapes. They see that flat shapes make up the faces of solid shapes and identify solid shapes based on the flat shapes that constitute them.	
Pacing:	4 days		**Math Practices:** SMP 3, 5, 6, 7, 8	**Assessments:** Cool-downs 1, 3 Checkpoint A
Section B: Halves, Thirds, and Fourths				
2.G.A.1 2.G.A.2 2.G.A.3 2.NBT.A.2	I can partition shapes into halves, thirds and fourths. I can identify and describe halves, thirds and fourths.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students learn that shapes can be partitioned into two, three, or four equal pieces called halves, thirds, and fourths or quarters. Students begin by composing shapes using pattern blocks, initially using any combination. Later, they use a single type of pattern block, which allows them to see the composed shape as partitioned into equal pieces. In grade 1, students partitioned shapes into two and four equal pieces, and described each piece as a half or a fourth or quarter. (To prepare students to tell time to the quarter hour in the next section, be sure that they hear and use fourths and quarters interchangeably.) Here, they add the term “thirds” to their vocabulary and partition rectangles into halves, thirds, and fourths. Students then identify equal-size pieces in shapes, which are partitioned in different ways to build an understanding that equal-size pieces of the same	**Mandatory Lessons/Activities:** iM Lessons 6, 7, 8, 9

			whole do not need to be the same shape. They come to understand that if the whole is partitioned into the same number of equal pieces, the names of the pieces are the same. Students also learn that 2 halves, 3 thirds, and 4 fourths each make up one whole. Although students are expected to use the language of fractions (halves, thirds, and fourths), they are not expected to use the word “fraction” or see fractions in numerical form until grade 3.	
Pacing:	4 days		**Math Practices:** SMP 3, 5, 6, 7, 8	**Assessments:** Cool-downs 8, 9 Checkpoint B
Section C: Time on the Clock				
[2.G.A.1](#) [2.MD.C.7](#) [2.NBT.A.2](#)	I can tell time to the nearest five minutes.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students use their understanding of fourths and quarters to tell time. In grade 1, students learned to tell time to the hour and half-hour. Here, they make a connection between the analog clock and circles partitioned into halves or fourths.   Students use the phrases “half past,” “quarter past,” and “quarter till” to tell time. They skip-count by 5 to tell time in 5-minute intervals. Students recognize that the hour hand on an analog clock moves towards the next hour as time passes. They represent time on analog clocks by	**Mandatory Lessons/Activities:** iM Lessons 11, 12, 13

			drawing the hour and minute hands and writing the time with digits. Students recognize that, as time passes, the hour hand on an analog clock moves towards the next hour. They learn that each hour comes around twice a day on a 12-hour clock, and is labeled with “a.m.” and “ p.m.” to distinguish between times of day. Towards the end of this section, students relate a.m. and p.m. times to their daily activities.	
Pacing:	3 days		**Math Practices:** SMP 3, 5, 6, 7, 8	**Assessments:** Cool-downs 12, 13 Checkpoint C
Section D: The Value of Money				
2.G.A.1 2.MD.C.8 2.NBT.A.2	I can determine the value of a collection of coins. I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students learn about money concepts while continuing to develop fluency with addition and subtraction within 100. They identify coins such as quarters, dimes, nickels, and pennies, and find the total value of different coin combinations.Students learn that 1 dollar has the same value as 100 cents and solve problems involving dollars and cents. Although students will not need to use decimal notation to represent money, they are expected to appropriately use the symbols $ and ¢. Students are likely to have some previous experience with dollars and cents. Encourage them to share their experiences throughout the section. Consider creating an anchor chart of pictures of each coin and its value so that all students can access the content. As much as possible, give students access to real or plastic coins to support their reasoning.	**Mandatory Lessons/Activities:** iM Lessons 15, 16, 17, 18, 19
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 18, 19 Checkpoint D

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Some students might confuse the hour and minute hands. For the time of 3:45, they may say the time is 9:15. Also, some students name the numeral closest to the hands, regardless of whether this is appropriate. For instance, for the time of 3:45 they say the time is 3:09 or 9:03. Students might count coins as individual objects. Also some students think that the value of a coin is directly related to its size, so the bigger the coin, the more it is worth. Some students may think that a shape is named differently due to its orientation. They may see a rectangle with the longer side as the base, but claim that the same rectangle with the shorter side as the base is a different shape.  Students may believe that a shape divided into three parts represents thirds even though they are not equal parts.	2.NBT.B.5: 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 2.OA.B.2 2.G.A.1: 1.G.A.1 2.G.A.3: 1.GA.3, 2.GA.2 2.MD.A.1: 1.MD.A.2 2.MD.C.7: 1.MD.B.3	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

			
RESOURCES			
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Materials from previous activities and centers, rulers, geoblocks, scissors, tape, tools for creating a visual display, pattern blocks, construction paper, colored pencils, paper, chart paper, glue, picture books, card stock			

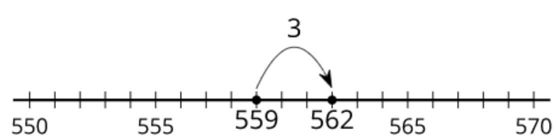
UNIT 7: ADDING AND SUBTRACTING WITHIN 1,000
Illustrative Mathematics Unit Focus: Students use place value understanding, the relationship between addition and subtraction, and properties of operations to add and subtract within 1,000. **Essential Questions:** How is our number system organized? How can understanding place value help us? How do the properties of operations make computation simpler? **Unit Pacing: 23 days (14 required lessons, 7 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS

Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.	This lays the groundwork for understanding the structure of the base-ten system as based on repeated bundling in groups of 10 and understanding that the unit associated with each place is 10 of the unit associated with the place to its right.	Our number system is a base-ten system. Any group of 10 in a given place value can be represented as one in the next greater place value (10 ones is 1 ten, 10 tens is 1 hundred).	Digit Hundreds Tens Ones
2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.	Students begin to work towards multiplication when they skip count by 5s, by 10s, and by 100s. This skip counting is not yet true multiplication because students don't keep track of the number of groups they have counted.	Skip counting by a specific number creates a repeating pattern.	Skip count
2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	Representations such as manipulative materials, math drawings, and layered three-digit place value cards afford connections between written three-digit numbers and hundreds, tens, and ones... Unlayering three-digit place value cards... reveals the expanded form of the number.	Understanding place value enables us to represent, compare and order numbers and perform computations.	Base ten numerals Number names (0 - 1,000) Expanded form Hundreds Tens Ones
2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones	Comparing the magnitude of three-digit numbers uses the understanding that 1 hundred (the smallest three-digit number) is greater than any		Hundreds Tens Ones

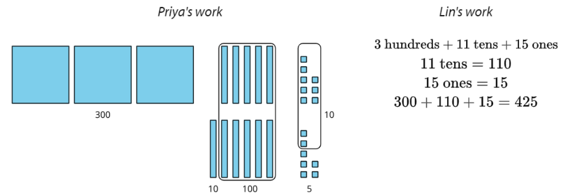
digits, using >, =, and < symbols to record the results of comparisons.	amount of tens and ones represented by a two-digit number. For this reason, three-digit numbers are compared by first inspecting the hundreds place (e.g., 845 > 799; 849 < 855). Drawings help support these understandings.		Compare
2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students need to build on their flexible strategies for adding within 100 from Grade 1 to fluently add and subtract within 100 in Grade 2. Students gain computational fluency, using efficient and accurate methods for computing, as they come to understand the role and meaning of arithmetic operations in number systems. Efficient mental processes become automatic with use.	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or "undoes" addition.	Place value Operations Compose Decompose Addition Sum Subtraction Difference Relationship Equation Unknown Expression
2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.	This work affords opportunities for students to see that they may have to compose more than one ten, and as many as three new tens.	Understanding place value enables us to represent, compare and order numbers and perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or "undoes" addition.	Place value Operations Addition Sum
2.NBT.B.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	Students apply their understanding of three-digit numbers from 2.NBT.A.1 to adding and subtracting like place values. Students can explain their addition and subtraction within 1,000 using physical tools, drawings, and number lines by illustrating adding like units and showing newly composed or decomposed units. Drawings can also help explain written methods.	Understanding place value enables us to perform computations. Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. Subtraction is the opposite of or "undoes" addition.	Place value Operations Compose Decompose Concrete model Strategy Drawing Written method

2.NBT.B.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	Students in grade 1 add any two-digit number with a multiple of 10, and subtract multiples of 10 from multiples of 10. In second grade students should continue to develop proficiency with mental computation of multiples of 10 and 100.	The digit in the ones place will remain the same when finding 10 more or 10 less. The digits in the tens place and the ones place will remain the same when finding 100 more or 100 less.	Place value Operations Mentally add/subtract
2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.	In Grade 1, students add within 100 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and	Understanding place value enables us to represent, compare and order numbers and perform computations.	Place value Properties Operations

UNIT 7: ADDING AND SUBTRACTING WITHIN 1,000				
How is our number system organized? How can understanding place value help us? How do the properties of operations make computation simpler?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Add and Subtract within 1,000 without Composition or Decomposition				
2.NBT.A.2 2.NBT.A.4 2.NBT.B.5 2.NBT.B.7 2.NBT.B.8 2.NBT.B.9	I can add and subtract within 1,000 using a variety of strategies.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students add and subtract within 1,000 using methods where they do not explicitly compose or decompose a ten or a hundred. The number line is used early in this section to help students recognize that when numbers are relatively close, they can count on or count back to find the value of the difference. For example, they may count on from 559 to 562 to find 562 - 559.  Students also analyze counting sequences of	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4

			three-digit numbers that increase or decrease by 10 or 100. They observe patterns in place value before adding and subtracting multiples of 10 or 100. Students then engage with problems and expressions that encourage them to reason about sums and differences using the relationship between addition and subtraction and the properties of operations. Later in the section, students analyze and make connections between methods that use different representations, such as number lines, base-ten diagrams, and equations. They then use methods or representations that make sense to them to add and subtract three-digit numbers.	
Pacing:	4 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 2, 3 Checkpoint A
Section B: Add within 1,000 using Place Value Strategies				
2.NBT.B.5 2.NBT.B.6 2.NBT.B.7 2.NBT.B.8 2.NBT.B.9	I can add and subtract within 1,000 using a variety of strategies.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students use strategies based on place value to add three-digit numbers. They learn that it is sometimes necessary to compose a hundred from 10 ones to find the value of such sums. Students begin with sums that allow them to decide when to make a ten. They then work with larger values in the tens place and determine when to compose a hundred. As the lessons progress, they encounter sums of two- and three-digit numbers that involve composing two units. Throughout the section, students analyze and use representations such as base-ten blocks, base-ten diagrams, expanded form, and other equations to build conceptual understanding and show place value reasoning. They also develop their understanding of the properties of operations as	**Mandatory Lessons/Activities:** iM Lessons 6, 7, 8, 9, 10

<table>
<tr><td></td><td></td><td></td><td>they observe that the order in which they add the units doesn’t affect the value of the sum.

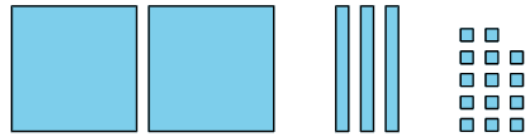
What is the same and what is different about how Priya and Lin found 358 + 67?


$$300 + 100 + 10 + 10 + 5$$
$$400 + 20 + 5 = 425$$

Later in the section, students add within 1,000 using any method they have learned and thinking flexibly about the numbers they are adding.</td><td></td></tr>
<tr><td>Pacing:</td><td>5 days</td><td></td><td>Math Practices:
SMP 1, 2, 3, 4, 5, 6, 7, 8</td><td>Assessments:
Cool-downs 10
Checkpoint B</td></tr>
<tr><td colspan="5">Section C: Subtract within 1,000 using Place Value Strategies</td></tr>
<tr><td>2.NBT.A.1
2.NBT.A.2
2.NBT.A.3
2.NBT.B.7
2.NBT.B.8
2.NBT.B.9</td><td>I can add and subtract within 1,000 using a variety of strategies.</td><td><table><tr><td>X</td><td>Selected Response</td></tr><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table></td><td>Lesson Progression:
As they have done when adding, students subtract numbers within 1,000 using place value strategies that involve decomposing a ten, a hundred, or both. This work builds on their previous experience of subtracting two-digit numbers by place value and decomposing a ten.

Students use base-ten blocks to subtract hundreds from hundreds, tens from tens, and ones from ones, which offers a concrete experience of exchanging a ten for 10 ones or a hundred for 10 tens as needed.

Along the way, they begin to think strategically about how to decompose the minuend when using base-ten blocks or diagrams. They learn that by</td><td>Mandatory Lessons/Activities:
iM Lessons 12, 13, 14, 15, 16</td></tr>
</table>

			analyzing the value of the digits in each place, they can initially represent the minuend in a way that would require decomposing fewer units when subtracting by place. For example, this is a helpful way to represent 244 if we are subtracting a number with more than 4 ones, such as when finding 244 - 67:  **Base ten diagram. 2 hundreds, 3 tens, 14 ones.** Throughout the section, students compare the steps they use to decompose units and the different ways to represent and record the units being decomposed. The section ends with students choosing subtraction methods flexibly. They apply their understanding of place value, the relationship between addition and subtraction, and the properties of operations, to analyze number relationships and decide how to find the value of differences within 1,000**.**	
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 16 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may not have a conceptual understanding of place value so that they would think 234 is 2+3+4 rather than 200+30+4 and may not see the relevance of the zeros. Students may not have a conceptual understanding of place value so they would think 561 – 147 = 426, because they subtract the 7 in 147 from the 1 in 561 instead of regrouping. When adding three-digit numbers, students may not know what to do with newly composed tens or hundreds. They may try to write both digits in a single place or ignore the newly composed units. When subtracting three-digit numbers, students may not correctly decompose from a higher place value.	2.NBT.A.3: 2.NBT.A.1 2.NBT.A.4: 2.NBT.A.1 2.NBT.B.5: 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6, 1.OA.B.2 2.NBT.B.7: 2.NBT.A.1 2.NBT.B.8: 2.NBT.A.1 2.NBT.B.9: 2.NBT.A.1	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Base-ten blocks, number cubes, paper clips, two-color counters, materials from previous centers, number cards 0-10

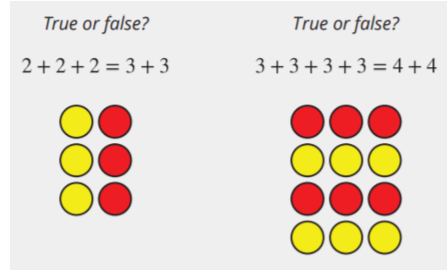
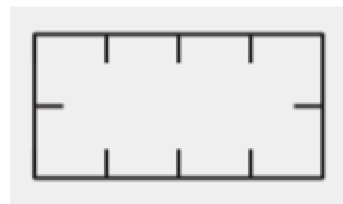
UNIT 8: EQUAL GROUPS
Illustrative Mathematics Unit Focus: Students work with equal groups of objects to gain foundations for multiplication. **Essential Questions:** Why is a group of objects odd or even? How can I represent an array of objects using numbers and symbols? How does partitioning help us reason about shapes? **Unit Pacing: 15 days (11 required lessons, 2 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
2.OA.B.2 Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.	The word "fluent" is used in the Standards to mean "fast and accurate." Fluency in each grade involves a mixture of just knowing some answers, knowing some answers from patterns (e.g., "adding 0 yields the same number") and knowing some answers from the use of strategies. Fluency is not a matter of instilling facts divorced from their meanings, but rather as an outcome of a multi-year process that heavily involves the interplay of practice and reasoning.	Knowing the basic facts helps us to solve more difficult computation problems accurately and efficiently.	Add Subtract Sum Difference Strategies Fluently Compose Decompose
2.OA.C.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	Even and odd can be explained in a variety of ways. Students should be able to use various representations to explain if a number is even or odd. They then connect their models to equations to prove a number is even or odd. For example, 10 is even as it is equivalent to 5 + 5.	An even number is the sum of two equal addends.	Odd Even Equation Sum Addend Object Pairing Equal
2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	An array is an arrangement of objects in rows and columns. Each row has the same number of objects in it. One can repeatedly add the values in an array to find the total. In grade 3, students will connect the act of finding the total number of objects to multiplication.	An array can be represented by a repeated addition problem.	Rows Columns Rectangular arrays Equation Sum Addend

2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	Students need to understand how a rectangle can be tiled with squares lined up in rows and columns. Students learn to compose this two-dimensional shape as a collection of rows of squares and as a collection of columns of squares. In third grade, students will build upon these concepts as they study area measurement.	Partitioning a shape into smaller parts allows us to describe the shape in different ways.	Partition Rectangle Column Row

UNIT 8: EQUAL GROUPS				
Why is a group of objects odd or even? How can I represent an array of objects using numbers and symbols? How does partitioning help us reason about shapes?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Odd and Even				
2.OA.B.2 2.OA.C.3	I can determine whether a number is even or odd and write an equation to justify my answer.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students learn about odd and even numbers, building on their experience with sharing objects with another person or with making pairs out of a set of objects. They begin by noticing that some groups of objects can be made into two equal groups without a "leftover" and other groups can be made into two equal groups with "1 leftover." The same pattern can be seen when pairing objects. After learning the terms, students focus on explaining why a group has an even number or an odd number of members. They do so by showing whether the objects can be made into two equal groups or be paired without a leftover, or whether they can skip-count by 2 to count the entire collection. The representations used here support students as they progress from explaining even and odd	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4

			numbers informally to doing so more formally. They also pave the way for students to make sense of representations of multiplication in grade 3. Early lessons encourage the teacher to record student thinking using diagrams of equal groups or by arranging objects in rows and columns. Both recording strategies help students see and count pairs of objects. Students begin to see how objects arranged in rows and columns can show equal groups or pairs. They will learn more about this arrangement and the term "array" in the next section. To focus the work on building a foundation for multiplication and division, counters or connecting cubes should be available to students throughout the section, including during cool-downs.	
Pacing:	4 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 1, 3, 4 Checkpoint A
Section B: Rectangular Arrays				
2.G.A.2 2.OA.B.2 2.OA.C.3 2.OA.C.4	I can represent an array as the sum of equal addends and skip count to find the total. I can partition a rectangle into rows and columns of same size squares and find the total number of squares in the array.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students learn that a rectangular array contains objects arranged into rows and columns, with the same number of objects in each row and the same in number in each column. Using this structure, students can skip count by the number in each row or in each column to find the total number of objects. They can also write equations with equal addends representing the number of objects in a row or a column. Later in the section, students relate their work with arrays to the partitioning of shapes into equal parts.	**Mandatory Lessons/Activities:** iM Lessons 7, 8, 9, 10, 11, 12

			 Students build rectangles by arranging square tiles into rows and columns, and then partition rectangles into rows and columns. *Use 8 tiles to build a rectangle. Arrange them in 2 rows.Partition this rectangle to match the rectangle you made.*  Rectangles in this section have up to 5 rows and 5 columns. Students are not expected to name the fractional units created by partitioning shapes. The focus is on using the structure of the rows and columns created by the partitions to count the total number of equal-size squares. This work serves as a foundation for students' future study of multiplication and area measurement.	
Pacing:	6 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 9, 11 Checkpoint B

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students might memorize that even numbers end in 0, 2, 4, 6, 8 or odd numbers end in 1, 3, 5, 7, and 9 but not understand the meaning of evenness. These students may not be able to use objects, drawings, or equations to show why a given amount is odd or even. Students will determine whether a number is odd or even by the first digit in the number instead of the digit in the ones place. Students may confuse the terms row and columns and interchange them when writing a repeated addition sentence. The focus should be on the repeated addition of the representation.	2.OA.B.2: 1.OA.C.6, 1.OA.A.1 2.OA.C.3: 1.OA.D.7 2.OA.C.4: 1.OA.D.7	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Connecting cubes or counters, chart paper, crayons or colored pencils, dry erase markers, sheet protectors, inch tiles, rulers

Bristol Public Schools

Office of Teaching & Learning

Department	Mathematics
Department Philosophy	*Students learn by doing math, solving problems in mathematical and real-world contexts, and constructing arguments using precise language.* The Bristol mathematics curricula embeds this *learn-by-doing* philosophy by focusing on high expectations for all students and providing students with opportunities that build conceptual understanding, computational and procedural fluency, and problem solving through the use of a variety of strategies, tools, and technologies. The mathematics curriculum is responsive to the individual needs of students, while providing a structure tied to the Common Core State Standards in Connecticut. The *learn-by-doing* philosophy develops mathematically literate and productive students who can effectively and efficiently apply mathematics in their lives to make informed decisions about the world around them by doing math. To be mathematically literate, one must understand major mathematics concepts, possess computational facility, and have the ability to apply these understandings to situations in daily life. Making connections between mathematics and other disciplines is key to the appropriate application of mathematics skills and concepts to solve problems. The ability to read, discuss, and write within the discipline of mathematics is an integral skill that supports mathematical understanding, reasoning and communication. The opportunity to think critically and creatively to solve problems is important to deepen mathematical knowledge and foster innovation. A rich hands-on mathematical experience is essential to provide the foundational knowledge and skills that prepare students to be mathematically literate, productive citizens.
Course	Grade 1 Mathematics
Grade Level	Grade 1
Pre-requisites	Grade K

Table of Contents

M-Major Cluster, S-Supporting Cluster, A-Additional Cluster

District Learning Expectations and Standards	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8 (optional)
Operations and Algebraic Thinking								
Represent and solve problems involving addition and subtraction.								
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.		M	M	M	M	M		M
1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.		M	M			M		M
Understand and apply properties of operations and the relationship between addition and subtraction.								
1.OA.B.3 Apply properties of operations as strategies to add and subtract.2 Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)		M	M					
1.OA.B.4 Understand subtraction as an unknown-addend problem. For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.	M	M	M			M		
Add and subtract within 20.								
1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	M	M	M	M	M	M		

1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).	M	M	M	M	M	M	M	M
Work with addition and subtraction equations.								
1.OA.D.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.		M	M	M	M		M	M
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ - 3, 6 + 6 = _.		M	M	M	M			M
Number and Operations in Base Ten								
Extend the counting sequence.								
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.		M	M	M	M	M	M	M
Understand place value.								
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:				M	M			
1.NBT.B.2.A 10 can be thought of as a bundle of ten ones — called a "ten."			M	M				

1.NBT.B.2.B The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.			M	M				
1.NBT.B.2.C The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).				M				
1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.				M	M	M		M
Use place value understanding and properties of operations to add and subtract.								
1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.				M	M	M	M	M
1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.				M	M	M	M	
1.NBT.C.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.				M	M			
Measurement and Data								
Measure lengths indirectly and by iterating length units.								
1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.						M		

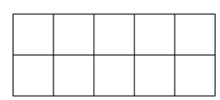
1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.						M		
Tell and write time.								
1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.							A	
Represent and interpret data.								
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	S	S						
Geometry								
Reason with shapes and their attributes.								
1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.							A	
1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.							A	
1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of.							A	

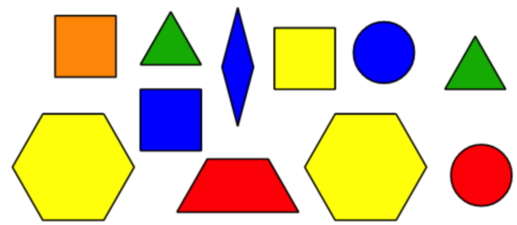
Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.								

UNIT 1: ADDING, SUBTRACTING, AND WORKING WITH DATA			
Illustrative Mathematics Unit Focus: Students add and subtract within 10 and represent and interpret categorical data. **Essential Questions:** How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? How is subtraction related to addition? How do the properties of operations help us add and subtract? Why do we collect, organize, represent and analyze data? **Unit Pacing: 19 days (11 required lessons, 6 flex, 2 assessment and reaction)**			
UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Students extend their problem solving work from kindergarten in three major and interrelated ways, by: • Representing and solving a new type of problem situation (Compare); • Representing and solving the subtypes for all unknowns in all three types; • Using Level 2 and Level 3 methods to extend addition and subtraction problem solving beyond 10, to problems within 20. In particular, the OA progression in Grade 1 deals with adding two single-digit addends, and related subtractions.	Recognizing how a real-world situation fits into a common operation category helps to solve the problem. We can show mathematical situations in word problems using objects, drawings, and equations.	Addition Subtraction Equation Symbol Unknown Part Add Whole Equals = Sum Plus + Number sentence Subtract Difference Minus − Tier 2
1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	Unlike counting down, counting on reinforces that subtraction is an unknown-addend problem. Learning to think of and solve subtractions as unknown addend problems makes subtraction as easy as addition (or even easier), and it emphasizes the relationship between addition and subtraction.	Subtraction is the opposite of or “undoes” addition.	Count on Count back Equals = Sum Plus + Number sentence Difference Minus −

			Addends Number line
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).	Students might use the commutative property of addition to change ? + 6 = 15 to 6 + ? = 15, then count on or use methods to compose 4 (to make ten) plus 5 (ones in the 15) to find 9. Students might reverse the action in the situation represented by ? - 6 = 9 so that is becomes 9 + 6 = ?. Or they might use their knowledge that the total is the first number in a subtraction equation and the last number in an addition equation to rewrite the situation equation as a solution equation: ? - 6 = 9 becomes 9 + 6 = ? or 6 + 9 = ?.	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler	Fluent Equals = Sum Plus + Number sentence Difference Minus − Addends Tier 2 Compare
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Through practice and structured learning time, students learn patterns in spoken number words and in written numerals, and how the two are related. This is the foundation of thinking about place value and the meaning of the digits in a numeral.	Rote counting is a repeating pattern. The cardinality of a group is the total number of objects in the group.	Ten One Hundred Numeral Tier 2 Count Write
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	Students' data work in Grade 1 has important connections to addition and subtraction. Students in grade 1 can ask and answer questions about categorical data based on a representation of the data.Students can also ask and answer questions leading to other kinds of addition and subtraction problems (1.OA), such as compare problems or problems involving the addition of three numbers (for situations with three categories). There is no single correct way to represent categorical data-and the Standards do not require Grade 1 students to use any specific format. However, students should be familiar with mark schemes. Another format that might be useful in Grade 1 is a picture graph in which one picture represents one object. (Note that picture graphs are not an expectation in the Standards until	We collect, organize, represent, and analyze data in order to answer a question or solve a problem. Data can be represented (recorded with models, drawings, or graphic organizers) in more than one way.	Tally chart Survey Data Graph Picture Picture graph Bar graph Models Drawings Graphic organizers

	Grade 2.)		

UNIT 1: ADDING, SUBTRACTING, AND WORKING WITH DATA				
How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? How is subtraction related to addition? How do the properties of operations help us add and subtract? Why do we collect, organize, represent and analyze data?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Adding and Subtracting within 10				
[1.OA.C.5](#) [1.OA.C.6](#)	I can fluently add and subtract within 10.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** In this section, students engage with addition and subtraction within 10 through activities and centers. The work here allows teachers to assess students' understanding of addition and subtraction, as well as their fluency with facts within 5, a kindergarten goal. There is an emphasis on adding and subtracting 1 or 2 to encourage students to count on or count back, which helps to build their awareness of how addition and subtraction relates to counting. To support this development, give students access to two-color counters and 10-frames throughout this section.  	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5
Pacing:	5 days		**Math Practices:**	**Assessments:**

<table>
<tr><td></td><td></td><td></td><td>SMP 5. 6. 7</td><td>Cool down 2
Checkpoint A</td></tr>
<tr><td colspan="5">Section B: Show Us Your Data</td></tr>
<tr><td>1.MD.C.4
1.NBT.A.1
1.OA.C.5</td><td>I can represent and interpret data.</td><td rowspan="2"><table><tr><td>X</td><td>Selected Response</td></tr><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table></td><td>Lesson Progression:
In this section, students organize and represent data. They begin by sorting objects into categories of their choice, describing their categories, and counting the number of objects in each category.

Next, students learn to collect data by conducting a survey. No specific data representations are required in grade 1, so students record and organize data in a way that makes sense to them. They may represent the results using objects, symbols, tally marks, or numbers. Students then make sense of one another’s representations (MP1).</td><td>Mandatory Lessons/Activities:
iM Lessons 7, 8, 9</td></tr>
<tr><td>Pacing:</td><td>3 days</td><td>Math Practices:
SMP 1, 2, 3, 4, 6</td><td>Assessments:
Checkpoint B</td></tr>
<tr><td colspan="5">Section C: What Does the Data Tell Us</td></tr>
<tr><td>1.MD.C.4
1.OA.A.1
1.OA.C.5
1.OA.C.6</td><td>I can represent and interpret data.</td><td><table><tr><td>X</td><td>Selected Response</td></tr><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table></td><td>Lesson Progression:
The focus of this section is on interpreting data represented in different ways and on asking and answering questions about them.

Students analyze representations of data and respond to “how many in each category” and “how many in all” questions. They consider which representation (tallies or numbers) is most helpful in answering certain types of questions. They also think about questions that could be asked given a</td><td>Mandatory Lessons/Activities:
iM Lessons 11, 12, 13</td></tr>
</table>

			representation of data.  Students begin responding to written questions in this section. To support students with the reading demand, consider reading the questions aloud or arranging students to work with a partner.	
Pacing:	3 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6	**Assessments:** Cool downs 11, 12 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may reverse the digits when writing a two-digit number, for example writing “12” instead of “21” for twenty-one. When answering questions about data displays, students may not understand that “or” means to account for both categories. For example, “How many students chose dogs or cats” means that students should count dogs and cats together. Students may be confused by the vocabulary of comparison situations. Students think that “more than” implies addition and “fewer than” implies subtraction, but in comparison questions this is not always true.	1.OA.A.1: K.OA.A.2 1.OA.C.5: K.CC.B.4 1.OA.C.6 : 1.OA.B.3, 1.OA.B.4, 1.OA.C.5, K.OA.A.2, K.OA.A.3, K.OA.A.4, K.OA.A.5 1.MD.C.4 : 1.OA.A.1, 1.OA.A.2, K.MD.B.3 1.NBT.A.1: K.CC.A.1	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Connecting cubes, dot cubes, mathematical community poster, pattern blocks, two-color counters, Inch tiles, colored pencils or crayons, chart paper, sets of books,

UNIT 2: ADDITION AND SUBTRACTION STORY PROBLEMS
Illustrative Mathematics Unit Focus: Students solve new types of story problems within 10 using the relationship between addition and subtraction. They develop an understanding of the meaning of the equal sign and connect story problems to equations. **Essential Questions:** How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? How is subtraction related to addition? What does the equal sign mean in a number sentence? How do the properties of operations help us add and subtract? **Unit Pacing: 27 days (17 required lessons, 8 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS

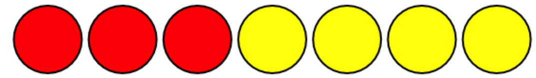
Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Students extend their work in three major and interrelated ways, by: • Representing and solving a new type of problem situation (Compare); • Representing and solving the subtypes for all unknowns in all three types; • Using Level 2 and Level 3 methods to extend addition and subtraction problem solving beyond 10, to problems within 20. In particular, the OA progression in Grade 1 deals with adding two single-digit addends, and related subtractions.	Recognizing how a real-world situation fits into a common operation category helps to solve the problem. We can show mathematical situations in word problems using objects, drawings, and equations.	Addition Subtraction Equation Symbol Unknown Part Add Whole Equals = Sum Plus + Number sentence Subtract Difference Minus −
1.OA.B.3 Apply properties of operations as strategies to add and subtract. Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make	First grade methods for adding and subtracting might involve decomposing an addend and composing it with the other addend to form an equivalent but easier problem. This relies on properties of operations. Students do not necessarily have to justify their representations or	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler.	Add Part Whole Equals = Sum Plus +

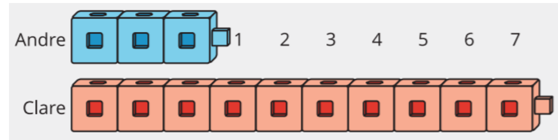
a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)	solutions using properties, but they can begin to learn to recognize these properties in action and discuss their use after solving.		Number sentence Subtract Difference Minus −
1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	Unlike counting down, counting on reinforces that subtraction is an unknown-addend problem. Learning to think of and solve subtractions as unknown addend problems makes subtraction as easy as addition (or even easier), and it emphasizes the relationship between addition and subtraction.	Subtraction is the opposite of or “undoes” addition.	Count on Count back Equals = Sum Plus + Number sentence Difference Minus − Addends Number line
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).	Students might use the commutative property of addition to change ? + 6 = 15 to 6 + ? = 15, then count on or use methods to compose 4 (to make ten) plus 5 (ones in the 15) to find 9. Students might reverse the action in the situation represented by ? - 6 = 9 so that is becomes 9 + 6 = ?. Or they might use their knowledge that the total is the first number in a subtraction equation and the last number in an addition equation to rewrite the situation equation as a solution equation: ? - 6 = 9 becomes 9 + 6 = ? or 6 + 9 = ?.	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler	Fluent Equals = Sum Plus + Number sentence Difference Minus − Addends Tier 2 Compare
1.OA.D.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.	Critical to this standard is the understanding that the equal sign (=) represents a relationship and not an action. It establishes that the quantity on the left side is the same as the quantity on the right side of the equal sign. Reading “=” as *same as* rather than *equals* is one way to reinforce this important concept.	The equal sign tells us that the quantities on either side have the same value or balance.	True False Equals = Sum Plus + Equation Difference Minus − Addends
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points,	Students’ data work in Grade 1 has important connections to addition and subtraction. Students in grade 1 can ask and answer questions about categorical data based on a representation of the	We collect, organize, represent, and analyze data in order to answer a question or solve a problem.	Tally chart Survey Data Graph

how many in each category, and how many more or less are in one category than in another.	data.Students can also ask and answer questions leading to other kinds of addition and subtraction problems (1.OA), such as compare problems or problems involving the addition of three numbers (for situations with three categories). There is no single correct way to represent categorical data-and the Standards do not require Grade 1 students to use any specific format. However, students should be familiar with mark schemes. Another format that might be useful in Grade 1 is a picture graph in which one picture represents one object. (Note that picture graphs are not an expectation in the Standards until Grade 2.)	Data can be represented (recorded with models, drawings, or graphic organizers) in more than one way.	Picture Picture graph Bar graph Models Drawings Graphic organizers

UNIT 2: ADDITION AND SUBTRACTION STORY PROBLEMS				
How do we decide what operation to use when solving a real-world problem? How can we show mathematical situations in word problems? How is subtraction related to addition? What does the equal sign mean in a number sentence? How do the properties of operations help us add and subtract?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Add To/Take From Story Problems				
1.OA.A.1 1.OA.C.6 1.OA.D.7	I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students revisit familiar problem types (Add To and Take From) where they can physically act out the problems with objects or drawings. They work formally with equations for the first time, writing addition and subtraction equations that match story problems. They write equations such as $2+7=\boxed{9}$ and learn the convention of drawing a box around the answer to the question in the story problem.	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4

			Students also work with Add To, Change Unknown problems for the first time. In writing equations to match these problems, students see that the answer to the question doesn't necessarily come after the equal sign. For example: *Kiran has 6 books.* *His friend gives him some more books.* *Now, he has 8 books.* *How many books did Kiran's friend give him?* Students solve this problem by counting on from 6 to 8 and write the equation $6 + \boxed{2} = 8$ to represent the story. Students come to see counting on as a way to solve Add To, Change Unknown problems.	
Pacing:	4 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-down 4 Checkpoint A
Section B: Put Together/Take Apart Problems				
1.OA.A.1 1.OA.B.3 1.OA.C.6 1.OA.D.7	I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students solve "Put Together/Take Apart" problems in which the total, one addend, or both addends are unknown. This builds on work from kindergarten when students composed numbers up to 10 in different ways. Students consider problems in the context of Shake and Spill, a game that uses two-color counters. For example: *Elena is playing Shake and Spill. She has 7 counters. What are some ways to show some red and some yellow?*	**Mandatory Lessons/Activities:** iM Lessons 6, 7, 8, 9

			 This problem type enables students to see the same situation represented by different equations, such as those where the total is written before the equal sign (7 = 4 + 3) and those illustrating the commutative property (4 + 3 = 7 and 3 + 4 = 7). When students analyze and connect quantities in story problems with the structure of equations, they are thinking quantitatively and abstractly (MP2). Note that students do not need to use the terms “commutative property” or “associative property.” These are referred to as the “add in any order” property.	
Pacing:	4 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 7, 8 Checkpoint B
Section C: Compare Story Problems				
1.MD.C.4 1.OA.A.1 1.OA.C.5 1.OA.C.6 1.OA.D.7	I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students solve Compare, Difference Unknown problems, reinforcing their understanding of the relationship between addition and subtraction. Students begin by considering how many to add to a quantity to make the two quantities equal, such as, "How many cubes do we need to add so that both towers have the same number of cubes?" Once they are familiar with this language, students answer “how many more” and “how many fewer” questions. For example, "How many more cubes does Clare have than Andre?"	**Mandatory Lessons/Activities:** iM Lessons 11, 12, 13, 14, 15

			 In this case, students may count the extra cubes in Clare's tower to find the answer. They may start at 3 and count up to 10 or start at 10 and count back to 3. Students analyze both addition (7 + 3 = 10) and subtraction (10 - 3 = 7) equations that can be used to represent the same problem. When students reason about questions, quantities, and relationships in story problems and write equations to represent them, they make sense of problems to solve them (MP1) and reason quantitatively and abstractly (MP2).	
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool down 12 Checkpoint C
Section D: All Kinds of Story Problems				
1.OA.A.1 1.OA.B.4 1.OA.C.6 1.OA.D.7 1.OA.D.8	I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students bring together the work of the unit to solve and compare a variety of problem types, write equations to represent problems, and make sense of equations with a symbol for the unknown. (They are not required to use symbols in the equations they write.) Students also reason in the other direction: writing stories and questions that correspond to given equations, and using drawings, numbers, and words to find the answers.	**Mandatory Lessons/Activities:** iM Lessons 17, 18, 19, 20
Pacing:	4 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool downs 18, 19 Checkpoint D

ADDITIONAL CONSIDERATIONS

COMMON MISCONCEPTIONS	PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT	ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY	OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT
Students may be confused by the vocabulary of comparison situations. Students think that “more than” implies addition and “fewer than” implies subtraction, but in comparison questions this is not always true. Students may incorrectly think that subtraction is commutative, i.e. 8-5=5-8. Students may think that the unknown in an equation has to fall after the equal sign. Students sometimes believe that the equal sign indicates the answer comes next or calls for doing the mathematical operation.	1.OA.A.1: K.OA.A.2 1.OA.B.3: K.OA.A.2 1.OA.C.5: K.CC.B.4, 1.OA.C.6: 1.OA.B.3, 1.OA.B.4, 1.OA.C.5, K.OA.A.2, K.OA.A.3, K.OA.A.4, K.OA.A.5 1.MD.C.4: 1.OA.C.6, 1.OA.A.1, 1.OA.D.8, 1.OA.A.2, K.MD.B.3	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack 10-frames Connecting cubes, two-color counters, tools for creating a visual display, cups, colored pencils or crayons, number cubes, number cards 0-10

UNIT 3: ADDING AND SUBTRACTING WITHIN 20
Illustrative Mathematics Unit Focus: Students add and subtract within 20. Students apply the properties of operations and the relationship between addition and subtraction. **Essential Questions:** How is subtraction related to addition? What does the equal sign mean in a number sentence? How do the properties of operations help us add and subtract? **Unit Pacing: 33 days (21 required lessons, 10 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS

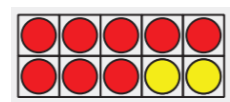
Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Students extend their work in three major and interrelated ways, by: • Representing and solving a new type of problem situation (Compare); • Representing and solving the subtypes for all unknowns in all three types; • Using Level 2 and Level 3 methods to extend addition and subtraction problem solving beyond 10, to problems within 20. In particular, the OA progression in Grade 1 deals with adding two single-digit addends, and related subtractions.	Recognizing how a real-world situation fits into a common operation category helps to solve the problem. We can show mathematical situations in word problems using objects, drawings, and equations.	Addition Subtraction Equation Symbol Unknown Part Add Whole Equals = Sum Plus + Subtract Difference Minus − Count on Count back Compare
1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	When adding more than two addends, students need to understand that the numbers can be grouped in many different ways. This is an informal introduction into the commutative and associative properties for addition. At this grade, students do not need to know the formal names of the properties but they need to understand that when adding three addends that they should look for friendly numbers to add first. For example, when adding 2 + 9 + 8, add the 2 + 8 to make ten and then add the 9. Students need to		

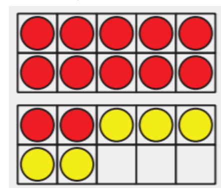
	see addition problems written both vertically and horizontally.		
1.OA.B.3 Apply properties of operations as strategies to add and subtract. Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)	First grade methods for adding and subtracting might involve decomposing an addend and composing it with the other addend to form an equivalent but easier problem. This relies on properties of operations. Students do not necessarily have to justify their representations or solutions using properties, but they can begin to learn to recognize these properties in action and discuss their use after solving.	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler.	
1.OA.B.4 Understand subtraction as an unknown-addend problem. For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.	Put Together/Take Apart problems with Addend Unknown afford students the opportunity to see subtraction as the opposite of addition in a different way than as reversing the action, namely as finding an unknown addend. The meaning of subtraction as an unknown-addend addition problem is one of the essential understandings students will need in middle school in order to extend arithmetic to negative rational numbers.	Subtraction is the opposite of or "undoes" addition.	
1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	Unlike counting down, counting on reinforces that subtraction is an unknown-addend problem. Learning to think of and solve subtractions as unknown addend problems makes subtraction as easy as addition (or even easier), and it emphasizes the relationship between addition and subtraction.		
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10	Students might use the commutative property of addition to change ? + 6 = 15 to 6 + ? = 15, then count on or use methods to compose 4 (to make ten) plus 5 (ones in the 15) to find 9. Students might reverse the action in the situation	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler	

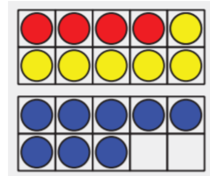
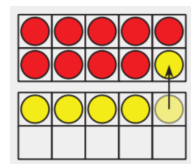
+ 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13.	represented by ? - 6 = 9 so that is becomes 9 + 6 = ?. Or they might use their knowledge that the total is the first number in a subtraction equation and the last number in an addition equation to rewrite the situation equation as a solution equation: ? - 6 = 9 becomes 9 + 6 = ? or 6 + 9 = ?.		
1.OA.D.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.	Critical to this standard is the understanding that the equal sign (=) represents a relationship and not an action. It establishes that the quantity on the left side is the same as the quantity on the right side of the equal sign. Reading "=" as *same as* rather than *equals* is one way to reinforce this important concept.	The equal sign tells us that the quantities on either side have the same value or balance.	True False Equals = Sum Plus + Equation Difference Minus − Addends
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ - 3, 6 + 6 = _.	This standard is critical in developing students' problem-solving skills, algebraic foundations, and understanding of addition and subtraction. This work is grounded in the understanding of the meaning of the equal sign and the relationship between operations. Students should leverage understanding of part-part-whole relationships to write and find the unknown in an equation. This concept is an extension of the decomposing of numbers and students will use their understanding of decomposition of numbers when finding the missing part. Students begin to write equations with unknowns as they solve problems. Later, given an equation with an unknown, students explain their reasoning as they find the missing value.	The equal sign tells us that the quantities on either side have the same value or balance.	Addends Equals = Sum Plus + Equation Difference Minus −
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Through practice and structured learning time, students learn patterns in spoken number words and in written numerals, and how the two are related. This is the foundation of thinking about place value and the meaning of the digits in a numeral.	Understanding place value enables us to represent, compare and order numbers and perform computations.	Ten One Hundred Numeral Count Numbers 0-120

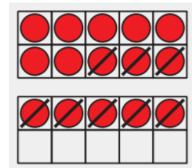
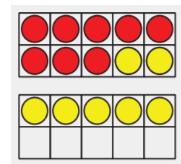
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones.	More generally, first graders learn that the two digits of a two-digit number represent amounts of tens and ones, e.g., 67 represents 6 tens and 7 ones. Saying 67 as "6 tens, 7 ones" as well as "sixty-seven" can help students focus on the tens and ones structure of written numerals.	Our number system is a base-ten system. Any group of 10 in a given place value can be represented as one in the next greater place value (10 ones is 1 ten).	Tens Ones Digit Zero Group Bundle
1.NBT.B.2.A 10 can be thought of as a bundle of ten ones — called a "ten."	Ten ones become a ten just as ten tens become a hundred and ten hundreds become a thousand. Students need ample practice bundling. Using varied tools is important. Consider ten frames, beans on sticks, cm cubes in dixie cups, etc. Base ten blocks can be problematic early in first grade because students must understand that they cannot be grouped but are instead exchanged.		
1.NBT.B.2.B The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	Students were exposed to this idea in kindergarten, and is a natural extension of the idea of bundling tens. Once this is understood deeply students should transfer this idea to numbers 21-29, 31-39, and so on. Students should see that all of these are related.	Understanding place value enables us to represent, compare and order numbers and perform computations.	

UNIT 3: ADDING AND SUBTRACTING WITHIN 20				
How is subtraction related to addition? What does the equal sign mean in a number sentence? How do the properties of operations help us add and subtract?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Develop Fluency with Addition and Subtraction within 10				
1.OA.A.1 1.OA.B.3 1.OA.B.4 1.OA.C.5 1.OA.C.6	I can fluently add and subtract within 10.	X Selected Response X Constructed Response	**Lesson Progression:** This section focuses on developing students' fluency with addition and subtraction within 10. All but a few sums within 10 can be found by counting on by 1, 2, or 3, or by making a sum of 10, so being able to count on up to 3 and make 10 are helpful	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5, 6

1.OA.D.7 1.OA.D.8		Performance X Observation	steps toward fluency. Students have a chance to self-assess the sums they know from memory and those they are still working on. (Fluency is not expected until the end of the school year). Note that the term “sum” has so far been used to refer to a number—the total we have when adding two or more numbers. Here, the term is also used to refer to an addition expression like 5 + 4 because it represents the sum of two quantities. The 10-frame can help students visualize sums of 10. For example, this 10-frame may allow students to recall several related facts:  For example, looking at this 10-frame may allow students to recall that 8 + 2 = 10 , 2 + 8 = 10 , 10- 8 = 2, and 10 - 2 = 8. Changing one counter from red to yellow illustrates 7 + 3 = 10, and changing a counter from yellow to red illustrates 9 + 1 = 10 . Seeing ways to make 10 will support students in later work of adding and subtracting within 20 and within 100. It may also support students in recognizing that 7 + 3 = 10 if we change one counter from red to yellow. The focus on ways to make 10 supports students in later work of adding and subtracting within 20 and within 100. Students are introduced to Add To, Start Unknown story problems. Because the starting number is unknown, students may find this challenging. Encourage them to act out the stories and apply what they have learned about adding within 10 to solve these problems.	
Pacing:	6 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 5, 6 Checkpoint A

Section B: Use the Structure of a Ten to Add and Subtract				
1.OA.A.1 1.OA.B.3 1.OA.B.4 1.OA.C.5 1.OA.C.6 1.OA.D.7 1.OA.D.8	I can solve addition and subtraction problems using a variety of strategies.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students begin exploring the structure of the base-ten system and place value as they work with teen numbers. They see that ten ones are put together to compose a new unit, a ten. Students see that teen numbers are a unit of ten plus some number of ones. Double 10-frames are the main representation in this section because they encourage students to see the unit of ten in teen numbers. The double 10-frame allows students to easily see when the ten is complete, whereas with connecting cube towers, the individual cubes need to be counted to confirm that a tower is a unit of 10. Students use 10-frames, and the structure of teen numbers as a ten and some ones to help them add and subtract with teen numbers. Students only work with expressions that do not require composing or decomposing a ten (for example, 13 -2, 12 + 5)  They see that the unit of ten does not change, and relate that to subtracting ones from ones, which will be a focus in the next unit.	**Mandatory Lessons/Activities:** iM Lessons 8, 9, 10, 11, 12, 13
Pacing:	7 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 8, 10 Checkpoint B
Section C: Add within 20				
1.OA.A.1 1.OA.A.2 1.OA.B.3 1.OA.B.4	I can solve addition and subtraction problems using a variety of strategies.	X Selected Response X Constructed Response	**Lesson Progression:** Students make use of the base-ten structure and related facts to add two or three addends within 20. Students are encouraged to use sums of 10 and their understanding of the commutative and associative properties (referred to collectively as	**Mandatory Lessons/Activities:** iM Lessons 15, 16, 17, 18, 19, 20

1.OA.C.5 1.OA.C.6 1.OA.D.7 1.OA.D.8		Performance X Observation	the 'add in any order' property to students) to discover the usefulness of grouping numbers to find a sum of 10 when adding. Initially the addends that make a ten appear next to each other(4+6+7) and eventually they do not (6 + 7 + 4) , which encourages students to see that they can group addends in different ways to make the problem easier by making a ten first.  Students find the sum of two addends using methods where they count on or use related facts they know. For example, for 9+5, students can think of 10 + 4 by thinking of the problem as 9 + 1 + 4 = 10 + 4.  Students may use other facts they know to find sums. For example, given 7+ 8, students may think of it as 7 + 7 + 1 if they know 7 + 7. There is not a focus on these methods because making a ten is a generalizable strategy and will be very important in students' later work with larger numbers.	
Pacing:	6 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 17, 20 Checkpoint C
Section D: Subtract within 20				
1.NBT.A.1 1.OA.A.1 1.OA.A.2 1.OA.B.3 1.OA.B.4	I can solve addition and subtraction problems using a variety of strategies.	X Selected Response X Constructed Response	**Lesson Progression:** In this section students subtract within 20, using both take away and counting on methods. Students use the relationship between addition and subtraction and their understanding of the usefulness of making a ten. Students work with	**Mandatory Lessons/Activities:** iM Lessons 22, 23, 24, 25, 26

1.OA.C.5 1.OA.C.6 1.OA.D.7 1.OA.D.8		Performance X Observation	both subtraction expressions and missing addend equations. Presented with 15 - 8 they may take away 5 to get to 10 and then take away another 3 to find the difference of 7.  They may also use counting on and add 2 to 8 to get 10 and then add another 5 to get 15 and see the difference is 7. 	
Pacing:	6 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 25 Checkpoint D

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may incorrectly think that subtraction is commutative, i.e. 8-5=5-8. Students believe that the equal sign indicates the answer comes next or calls for doing the mathematical operation. Students may think that the unknown in an equation has to fall after the equal sign.	1.OA.A.1: K.OA.A.2 1.OA.A.2: 1.OA.A.1 1.OA.B.3: K.OA.A.2 1.OA.B.4: K.OA.A.2 1.OA.C.5: K.CC.B.4, 1.OA.C.6: 1.OA.B.3, 1.OA.B.4, 1.OA.C.5, K.OA.A.2, K.OA.A.3, K.OA.A.4, K.OA.A.5 1.OA.D.8: 1.OA.D.7	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt

Blackline masters and materials from Teacher Resource Pack Bags (brown paper), envelopes, scissors, 10-frames, connecting cubes or two-color counters, two-color counters, crayons, cups, two-color counters, double 10-frames, number cards 0–10, tools for creating a visual display

UNIT 4: NUMBERS TO 99

Illustrative Mathematics Unit Focus: Students develop an understanding of place value for numbers up to 99.

Essential Questions:
How is our number system organized?
How can understanding place value help us?

Unit Pacing: 31 days (17 required lessons, 12 flex, 2 assessment and reaction)

UNWRAPPED STANDARDS

Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Through practice and structured learning time, students learn patterns in spoken number words and in written numerals, and how the two are related. This is the foundation of thinking about place value and the meaning of the digits in a numeral.	Understanding place value enables us to represent, compare and order numbers and perform computations.	Count Numerals 0-120 Number words 0-120
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones.	More generally, first graders learn that the two digits of a two-digit number represent amounts of tens and ones, e.g., 67 represents 6 tens and 7 ones. Saying 67 as "6 tens, 7 ones" as well as "sixty-seven" can help students focus on the tens and ones structure of written numerals.	Our number system is a base-ten system. Any group of 10 in a given place value can be represented as one in the next greater place value (10 ones is 1 ten).	Tens Ones Digit Group Bundle Number words 0-120
1.NBT.B.2.C The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	Once students have a firm grasp of the concept of teen numbers being made up of 1 ten and some ones, they continue to explore multiples of ten as groups of ten with no ones leftover. This prepares students for understanding place value with numbers greater than 20.		
1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	Grade 1 students use their base-ten work to help them recognize that the digit in the tens place is more important for determining the size of a two-digit number. Correctly placing the < and >	Understanding place value enables us to represent, compare and order numbers and perform computations.	Greater than > Less than < Equal to = Digit

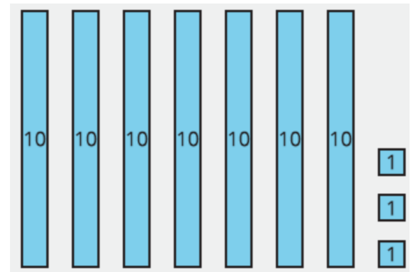
	symbols is a challenge for early learners. Accuracy can improve if students think of putting the wide part of the symbol next to the larger number.		Tens Ones
1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	Students begin to develop understanding and skill with adding beyond the basic facts through the use of concrete representations. They progress to making generalizations and developing their own strategies for adding one- and two-digit numbers. Include problems that provide a context for addition as often as possible. Equations should be written both horizontally and vertically. Students should work with various models and representations to develop understanding of the mathematics, including blocks (physical or drawing), ten frames, partial sums, and symbols (equations). There is no specific progression of representations. Instead, students should connect understanding from one representation to the next. Regardless of the representation being used by students, teachers should connect representations to a symbolic recording (equation). First graders should not be exposed to or taught the traditional algorithm for addition.	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler.	Add Compose Decompose Tens Ones One-digit number Two-digit number
1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	[Students] may explain their reasoning by saying that they have one more or one less ten than before.	The digit in the ones place will remain the same when finding 10 more or 10 less of another number.	Ten More Less Place value
1.NBT.C.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	Differences of multiples of 10, such as 70 – 40 can be viewed as 7 tens minus 4 tens and represented with concrete models such as objects bundled in tens or drawings. Children use the relationship between subtraction and addition when they view 80 – 70 as an unknown addend addition problem, 70 + ? = 80, and reason that 1 ten must be added to 70 to make 80, so 80 –70 = 10.	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler.	Subtract Less Place Value

<table>
<tr><th colspan="5">UNIT 4: NUMBERS TO 99</th></tr>
<tr><td colspan="5">How is our number system organized?
How can understanding place value help us?</td></tr>
<tr><th>CCSS Standards #</th><th>Learning Targets</th><th>Summative Assessment Strategy</th><th>Lesson Progression and Connection to Math Practices</th><th>Common Learning Experiences and Assessments</th></tr>
<tr><th colspan="5">Section A: Units of Ten</th></tr>
<tr><td>1.NBT.A.1
1.NBT.B.2
1.NBT.B.2.c
1.NBT.C.4
1.NBT.C.5
1.NBT.C.6
1.OA.C.5
1.OA.C.6
1.OA.D.8</td><td>I can count to tell how many.

I can solve addition and subtraction problems using a variety of strategies.

I can read, write, and represent numbers to 120.</td><td rowspan="2"><table><tr><td>X</td><td>Selected Response</td></tr><tr><td>X</td><td>Constructed Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table></td><td>Lesson Progression:
In this section, students move from using a ten-frame to represent a unit of ten, as they did in the previous unit, to using connecting cubes organized in towers of 10. Students count and represent collections. The total number of objects in each collection is a multiple of 10. They develop an understanding that counting the same group by ones or by tens yields the same number. Students make sense of base-ten representations (towers of 10, base-ten drawings, words and numbers).

Students use their understanding of units of ten to add and subtract multiples of ten and see that 3 tens and 2 tens is 5 tens. This sets the stage for the next section where students extend their base-ten understanding to all two-digit numbers.
Note: “Multiple of 10” is used in teacher-facing text, but it is not language that students need to learn or use. The concept of multiples does not become necessary until Grade 4.</td><td>Mandatory Lessons/Activities:
iM Lessons 1, 2, 3, 4</td></tr>
<tr><td>Pacing:</td><td>4 days</td><td>Math Practices:
SMP 1, 2, 3, 4, 5, 6, 7, 8</td><td>Assessments:
Cool-down 4
Checkpoint A</td></tr>
<tr><th colspan="5">Section B: Units of Ten and Units of One</th></tr>
</table>

1.NBT.A.1 1.NBT.B.2 1.NBT.B.2.a 1.NBT.B.2.c 1.NBT.C.4 1.NBT.C.5 1.NBT.C.6 1.OA.A.1 1.OA.C.5 1.OA.C.6 1.OA.D.8	I can read, write, and represent numbers to 100. I can solve addition and subtraction problems using a variety of strategies.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students use the same representations from the previous section to make sense of two-digit numbers. They begin the section by counting a new collection and representing it in a way that makes sense to them.  Students are introduced to addition expressions to represent two-digit numbers. To ensure that students have a deep understanding of decomposing numbers, they are asked to consider expressions like 3 + 70 in addition to the traditional standard form 70 + 3. This flexibility is an essential part of students' later work. At the end of the section, students use their base-ten understanding of two-digit numbers to add multiples of ten to any two-digit number and mentally find 10 more or 10 less than any number. They see that the value of the tens digit changes based on the number of tens added or subtracted, but the value of the ones digit remains the same. At this point, students may begin to draw long rectangles to represent the tens and small squares to represent the ones. If students are making these types of representations, it is important to ensure that they understand that the unit of ten includes 10 ones.	**Mandatory Lessons/Activities:** iM Lessons 6, 7, 8, 9, 10, 11
Pacing:	6 days		**Math Practices:** SMP 2, 3, 5, 6, 7, 8	**Assessments:** Cool-downs 10, 11 Checkpoint B
Section C: Comparing Numbers to 99				
1.NBT.A.1	I can compare two-digit numbers.		**Lesson Progression:**	**Mandatory Lessons/Activities:**

1.NBT.B.2 1.NBT.B.3 1.NBT.C.4 1.NBT.C.5 1.NBT.C.6 1.OA.C.5 1.OA.C.6 1.OA.D.7		X Selected Response X Constructed Response Performance X Observation	In this section students compare and order numbers to 99. Students use their base-ten understanding to compare numbers and may recognize that the digit in the tens place is more important than the digit in the ones place when comparing two-digit numbers. Students are introduced to the < and > symbols. Students see the symbols and interpret them before they are asked to use them to make true comparison statements. The symbols can be tricky for students to learn, and accuracy using them can improve if students think of putting the wide part of the symbol next to the larger number.	iM Lessons 14, 15, 16, 17
Pacing:	4 days		**Math Practices:** SMP 2, 3, 5, 6, 7, 8	**Assessments:** Cool-down 16 Checkpoint C
Section D: Different Ways to Make a Numbers				
1.NBT.A.1 1.NBT.B.2 1.NBT.B.2.a 1.NBT.B.2.b 1.NBT.B.3 1.NBT.C.4	I can read, write, and represent numbers to 100. I can compare two-digit numbers.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** In this section, students dive deeper into base-ten understanding by breaking apart two-digit numbers using different amounts of tens and ones. The focus of this section is for students to see that there are different ways to decompose a number into tens and ones. Students revisit counting collections, this time with more than 9 ones, which provides an opportunity for students to consider how to represent the collection. Students then extend comparison work by using the <, =, or > signs to compare numbers broken apart in different ways.	**Mandatory Lessons/Activities:** iM Lessons 19, 20, 21
Pacing:	3 days		**Math Practices:** SMP 2, 3, 5, 6, 7, 8	**Assessments:** Cool-down 20 Checkpoint D

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN**

		MASTERY	THE UNIT
Students may memorize the counting pattern without understanding. This could cause students to have difficulty counting on from a number other than 1. When counting forwards or backwards, students may have trouble bridging the decade numbers (ex. 59 to 60). Students may not see that a bundle of ten ones is the same as a ten or that numbers 10, 20, etc. can be identified as 10 ones or a group of ten, 20 ones or two groups of ten. Students may not realize that the inequality symbols (< , >) can create true statements about any two numbers where one is greater/smaller than the other, (15 < 28 and 28 >15). When comparing, students may think that if a number has more ones it is greater (ex. thinking 19 > 24).	1.NBT.A.1: K.CC.A.1, K.CC.A.2, K.CC.B.4 1.NBT.B.2: K.NBT.A.1, 1.NBT.A.1 1.NBT.B.2.a : K.NBT.A.1, 1.NBT.A.1 1.NBT.B.2.b: K.NBT.A.1, 1.NBT.A.1 1.NBT.B.2.c: K.NBT.A.1, 1.NBT.A.1 1.NBT.B.3: K.CC.C.7, 1.NBT.B.2 1.NBT.C.4: 1.NBT.B.2, 1.OA.A.1, 1.OA.C.7 1.NBT.C.5: 1.NBT.B.2 1.NBT.C.6: 1.NBT.B.2 1.OA.C.5: K.CC.B.4, K.CC.A.1, K.CC.A.2 1.OA.C.6: K.OA.A.2, K.OA.A.3, K.OA.A.4, K.OA.A.5, 1.OA.B.3, 1.OA.B.4, 1.OA.C.5 1.OA.D.8: 1.OA.D.7	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Bags, collections of objects, cups, double 10-frames, paper plates, connecting cubes in towers of 10 and singles, two-color counters, number cards 0–10, base-ten blocks, dry erase markers, sheet protectors, paper clips

UNIT 5: ADDING WITHIN 100			
Illustrative Mathematics Unit Focus: Students use place value understanding and properties of operations to add within 100. **Essential Questions:** How is our number system organized? How can understanding place value help us? How do the properties of operations make computation simpler? **Unit Pacing: 22 days (10 required lessons, 10 flex, 2 assessment and reaction)**			
UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Students extend their work in three major and interrelated ways, by: • Representing and solving a new type of problem situation (Compare); • Representing and solving the subtypes for all unknowns in all three types; • Using Level 2 and Level 3 methods to extend addition and subtraction problem solving beyond 10, to problems within 20. In particular, the OA progression in Grade 1 deals with adding two single-digit addends, and related subtractions.	Recognizing how a real-world situation fits into a common operation category helps to solve the problem. We can show mathematical situations in word problems using objects, drawings, and equations.	Addition Subtraction Equation Symbol Unknown Part Add Whole Equals = Sum Plus + Number sentence Subtract Difference Minus −
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ - 3, 6 + 6 = _.	This standard is critical in developing students' problem-solving skills, algebraic foundations, and understanding of addition and subtraction. This work is grounded in the understanding of the meaning of the equal sign and the relationship between operations. Students should leverage understanding of part-part-whole relationships to write and find the unknown in an equation. This concept is an extension of the decomposing of	To be a true equation, quantities on both sides of the equal sign must have the same value. The total can go on the right or left side of the equal sign. An equation can have an unknown in any position.	Addends Equals = Sum Plus + Equation Difference Minus −

	numbers and students will use their understanding of decomposition of numbers when finding the missing part. Students should begin work with this standard by connecting symbolic representations to physical models, drawings, number charts, and/or number lines. Students should also connect these representations to the problems being solved as well as the equations that reflect the models and the problems.		
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Through practice and structured learning time, students learn patterns in spoken number words and in written numerals, and how the two are related. This is the foundation of thinking about place value and the meaning of the digits in a numeral.	Understanding place value enables us to represent, compare and order numbers and perform computations.	Count Numerals 0-120 Number words 0-120
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones.	More generally, first graders learn that the two digits of a two-digit number represent amounts of tens and ones, e.g., 67 represents 6 tens and 7 ones. Saying 67 as "6 tens, 7 ones" as well as "sixty-seven" can help students focus on the tens and ones structure of written numerals.	Our number system is a base-ten system. Any group of 10 in a given place value can be represented as one in the next greater place value (10 ones is 1 ten).	Tens Ones Digit Group Bundle Number words 0-120
1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	Students begin to develop understanding and skill with adding beyond the basic facts through the use of concrete representations. They progress to making generalizations and developing their own strategies for adding one- and two-digit numbers. Include problems that provide a context for addition as often as possible. Equations should be written both horizontally and vertically. Students should work with various models and representations to develop understanding of the mathematics, including blocks (physical or drawing), ten frames, partial sums, and symbols (equations). There is no specific progression of	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler.	Add Compose Decompose Tens Ones One-digit number Two-digit number

	representations. Instead, students should connect understanding from one representation to the next. Regardless of the representation being used by students, teachers should connect representations to a symbolic recording (equation). First graders should not be exposed to or taught the traditional algorithm for addition.		
1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	[Students] may explain their reasoning by saying that they have one more or one less ten than before.	The digit in the ones place will remain the same when finding 10 more or 10 less of another number.	Ten More Less Place value
1.NBT.C.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	Differences of multiples of 10, such as 70 – 40 can be viewed as 7 tens minus 4 tens and represented with concrete models such as objects bundled in tens or drawings. Children use the relationship between subtraction and addition when they view 80 – 70 as an unknown addend addition problem, 70 + ? = 80, and reason that 1 ten must be added to 70 to make 80, so 80 –70 = 10.	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler.	Subtract Less Place Value

UNIT 5: ADDING WITHIN 100				
How is our number system organized? How can understanding place value help us? How do the properties of operations make computation simpler?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Add Without Composing a Ten				
1.NBT.A.1 1.NBT.B.2 1.NBT.C.4 1.OA.A.1 1.OA.D.8	I can solve addition problems using a variety of strategies.	X Selected Response X Constructed Response	**Lesson Progression:** This section focuses on adding one-digit or two-digit numbers and two-digit numbers within 100 without composing a ten. Students build on work from previous units in which they added one-digit numbers and teen numbers without composing a ten and added multiples of 10 to	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3

		| | Performance | | X | Observation |	two-digit numbers. Students extend these ideas to add tens and tens and ones and ones. Students may initially use connecting cubes to create units of ten, and these should be available to students throughout the unit. At the end of the section, students write equations to represent their thinking. Students may write a single equation that shows the sum (52+46=98) or they may write a series of equations to represent how they solved the problem (50+40=90, 2+6=8, 90+8=98).	
Pacing:	3 days		**Math Practices:** SMP 2, 3, 5, 6, 7, 8	**Assessments:** Cool-down 3 Checkpoint A
Section B: Compose a Ten: One- and Two-Digit Numbers				
1.NBT.C.4 1.OA.C.6 1.OA.D.8	I can solve addition problems using a variety of strategies.	| X | Selected Response | | X | Constructed Response | | | Performance | | X | Observation |	**Lesson Progression:** This section introduces the idea that sometimes when adding numbers within 100, a new ten must be composed. This work builds on previous units in which students made a ten to add within 20 (for example, 9+5=10+4=14). Students may use drawings, connecting cubes and double 10-frames to represent and solve the problems. Regardless of which representations they use, the focus is on composing a new ten using 10 ones. Students may compose a new ten as they count on (68+2+4=74) or they may combine the ones and then add the tens (8+6=14, 14+60=74).	**Mandatory Lessons/Activities:** iM Lessons 5, 6, 7
Pacing:	3 days		**Math Practices:** SMP 2, 3, 5, 6, 7, 8	**Assessments:** Cool-down 7 Checkpoint B
Section C: Compose a Ten: Add within 100				
1.NBT.A.1 1.NBT.B 1.NBT.B.3 1.NBT.C.4 1.NBT.C.5 1.NBT.C.6	I can solve addition problems using a variety of strategies.	| X | Selected Response | | X | Constructed Response |	**Lesson Progression:** In this section, students apply what they learned about adding one-digit numbers and two-digit numbers with and without composing a ten in order to add any numbers within 100. They apply the associative and commutative properties as	**Mandatory Lessons/Activities:** iM Lessons 9, 10, 11, 12

1.OA.C.5 1.OA.C.6 1.OA.D.8		[ ] Performance [X] Observation	they count on and add tens and tens and ones and ones. Students see that no matter which order they use to combine parts of each of the addends the sum remains the same. Students make sense of and use equations to represent their method for adding and generalize about when a new ten needs to be composed.	
Pacing:	4 days		**Math Practices:** SMP 2, 3, 5, 6, 7, 8	**Assessments:** Cool-down 11, 12 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may not understand that when adding two-digit numbers, one adds tens to tens and ones to ones. When students compose a new ten, they may not know to combine that with the tens in the sum. Students may write both digits in the ones place, ignore the tens digit, or add the digits together. Students ignore the value of the digits (ex. 53 is 5 tens and 3 ones or 50 and 3).	1.NBT.A.1: K.CC.A.1, K.CC. A.2, K.CC.B.4 1.NBT.B.3: K.CC.C.7, 1.NBT.B.2 1.NBT.C.4: 1.OA.A.1, 1.OA.C.6, 1.NBT.B.2 1.NBT.C.5 : 1.NBT.B.2 1.NBT.C.6: 1.NBT.B.2 1.OA.C.5 : K.CC.A.1, K.CC.A.2, K.CC.B.4, K.CC.C.6 1.OA.C.6: K.OA.A.2, K.OA.A.3, K.OA.A.4, K.OA.A.5, 1.OA.B.3, 1.OA.B.4, 1.OA.C.5 1.OA.D.8: 1.OA.D.7	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Connecting cubes in towers of 10 and singles, number cards 0–10, paper clips (2-inch), two-color counters, tools for creating a visual display, number cubes, paper clips, two-color counters

UNIT 6: MEASURING LENGTH
Illustrative Mathematics Unit Focus: Students measure length and count measurement units up to 120. They solve addition and subtraction story problems with unknowns in all positions. **Essential Questions:** How can you measure the length of an object? **Unit Pacing: 21 days (13 required lessons, 6 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS

Grade Level Standard	Standard Progression	Concepts (Big Ideas/ Understandings)	Academic Vocabulary (Standard Based)
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Students extend their work in three major and interrelated ways, by: • Representing and solving a new type of problem situation (Compare); • Representing and solving the subtypes for all unknowns in all three types; • Using Level 2 and Level 3 methods to extend addition and subtraction problem solving beyond 10, to problems within 20. In particular, the OA progression in Grade 1 deals with adding two single-digit addends, and related subtractions.	Recognizing how a real-world situation fits into a common operation category helps to solve the problem. We can show mathematical situations in word problems using objects, drawings, and equations.	Addition Subtraction Equation Symbol Unknown Part Add Whole Equals = Sum Plus + Number sentence Subtract Difference Minus −
1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	When adding more than two addends, students need to understand that the numbers can be grouped in many different ways. This is an informal introduction into the commutative and associative properties for addition. At this grade, students do not need to know the formal names of the properties but they need to understand that when adding three addends that they should look for friendly numbers to add first. For example, when adding 2 + 9 + 8, add the 2 + 8 to make ten and then add the 9. Students need to see addition problems written both vertically and horizontally.		

1.OA.B.4 Understand subtraction as an unknown-addend problem. For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.	Put Together/Take Apart problems with Addend Unknown afford students the opportunity to see subtraction as the opposite of addition in a different way than as reversing the action, namely as finding an unknown addend. The meaning of subtraction as an unknown-addend addition problem is one of the essential understandings students will need in middle school in order to extend arithmetic to negative rational numbers.	Subtraction is the opposite of or "undoes" addition.	Part Add Whole Equals = Sum Plus + Number sentence Subtract Difference Minus − Addends
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).	Students might use the commutative property of addition to change ? + 6 = 15 to 6 + ? = 15, then count on or use methods to compose 4 (to make ten) plus 5 (ones in the 15) to find 9. Students might reverse the action in the situation represented by ? - 6 = 9 so that is becomes 9 + 6 = ?. Or they might use their knowledge that the total is the first number in a subtraction equation and the last number in an addition equation to rewrite the situation equation as a solution equation: ? - 6 = 9 becomes 9 + 6 = ? or 6 + 9 = ?.	Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler	Fluent Equals = Sum Plus + Number sentence Difference Minus − Addends
1.OA.D.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.	Critical to this standard is the understanding that the equal sign (=) represents a relationship and not an action. It establishes that the quantity on the left side is the same as the quantity on the right side of the equal sign. Reading "=" as *same as* rather than *equals* is one way to reinforce this important concept.	The equal sign tells us that the quantities on either side have the same value or balance.	True False Equals = Sum Plus + Equation Difference Minus − Addends
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Through practice and structured learning time, students learn patterns in spoken number words and in written numerals, and how the two are related. This is the foundation of thinking about place value and the meaning of the digits in a numeral.	Understanding place value enables us to represent, compare and order numbers and perform computations.	Ten One Hundred Numeral Count Numbers 0-120

1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	Measurement involves a comparison of an attribute of an item with a unit that has the same attribute. This standard involves the transitivity principle of indirect measurement. Students do not need to know the term, ”transitivity” but they need to apply the principle. The transitivity principle says If A > B and B > C then A > C or If A < B and B < C then A < C. If these statements are true, then you do not need to measure A and C. Transitivity can be explicitly discussed: If A is longer than B and B is longer than C, then A must be longer than C as well.	Measuring length is the process of counting the number of same-sized units, placed end-to-end without gaps or overlaps,that match the length of the object being measured.	Length Short Long Compare Shorter/shortest Longer/longest
1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.	Students begin to understand the concepts of measurement through the use of nonstandard units. Nonstandard units make it easier for the students to focus on the attribute being measured. Nonstandard units also provide the basis for a discussion on why we need standard units so there is a common way to communicate about how long an object is. At first, students may need to use multiple nonstandard units and lay them next to the object being measured. Then they count how many units to say how long the object is (the pencil is 6 paper clips). Students then can use one of the nonstandard units and iterate the unit and count how long the object is. It is important when students are using one unit that there is no space between the units as they count. This can be challenging for some students if their fine motor skills are not as developed.		Length Measure Unit

UNIT 6: MEASURING LENGTH				
How can you measure the length of an object?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: From Direct to Indirect Measurements				

1.MD.A.1 1.NBT.B.3 1.NBT.C.5 1.OA.C.5 1.OA.C.6	I can compare the length of two objects.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students expand their understanding of measurement to use indirect comparison and apply the transitive property informally to order 3 objects by length. For example, if the highlighter is longer than the pen and the pencil is shorter than the pen, then we know the highlighter is longer than the pencil. At the end of the section, students use towers of connecting cubes to indirectly compare lengths to prepare them to iterate units of measure in the next section.	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3
Pacing:	3 days		**Math Practices:** SMP 3, 5, 6	**Assessments:** Cool-down 2 Checkpoint A
Section B: Measure to 120 by Iterating Units				
1.MD.A.1 1.MD.A.2 1.NBT.A.1 1.NBT.C.5 1.OA.C.5 1.OA.C.6	I can measure length using a variety of tools. I can count to tell how many. I can read, write, and represent numbers to 120.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** In this section, students move beyond direct and indirect comparison and measure the length of objects by iterating units. Students learn the conventions of length measurement and represent length measurements with a number and a unit. They understand that the length measurement of an object is the number of same-size length units that span it without gaps or overlaps. Students use manipulatives (connecting cubes, paper clips, and base-ten cubes) as length units. Units of measure are suggested that will yield a whole number of length units. It is important for students to measure lengths in whole units as they are developing the idea that the number of units should not change if different people measure the same length with the same units. As much as possible, students should measure the length of skinny objects. Students use base-ten cubes to measure lengths that are longer than 99 units as they expand their counting and number-writing skills to 120.	**Mandatory Lessons/Activities:** iM Lessons 5, 6, 7, 8, 9

			Students consider groups of 10 and see that 10 tens is 100. Students do not discuss a hundred as a unit in grade 1, but the written notation is introduced so students can read and write numbers from 100–120.	
Pacing:	5 days		**Math Practices:** SMP 3, 5, 6	**Assessments:** Cool-downs 7, 9 Checkpoint B
Section C: All Kinds of Story Problems				
1.MD.A.2 1.NBT.A.1 1.OA.A.1 1.OA.A.2 1.OA.B.4 1.OA.C.6	I can represent and solve a variety of word problems using addition and subtraction.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** In this section, students solve all types of story problems with unknowns in all positions. They interpret and write addition and subtraction equations to represent the problems. The context of arts and crafts is used throughout the section and students may be interested in exploring more about this topic outside of math time. Students use the context of measurement which invites them to build and compare concrete objects as they solve Compare problems with Bigger or Smaller Unknown for the first time. Students interpret diagrams that represent these problems which lay the foundation for the introduction of the tape diagram in grade 2.	**Mandatory Lessons/Activities:** iM Lessons 11, 12, 13, 14, 15
Pacing:	5 days		**Math Practices:** SMP 1, 2, 3, 4, 5, 6, 7, 8	**Assessments:** Cool-downs 11, 13, 14 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may not attend to the precision of measurement, having gaps or overlaps with the units they use to measure.	1.MD.A.1: K.MD.A.2 1.MD.A.2: 1.MD.A.2 1.NBT.A.1: K.CC.A.1, K.CC.A.2, K.CC.B.4	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

Students may not line up objects end to end when comparing length. Students may not understand how to write three-digit numbers. For example, for one hundred nine students write "1009".	1.NBT.C.4: 1.NBT.B.2, 1.OA.A.1, 1.OA.C.7 1.NBT.C.5: 1.NBT.B.2 1.OA.A.1: K.OA.A.2 1.OA.A.2: 1.OA.A.1 1.OA.B.4: K.OA.A.2 1.OA.C.5: K.CC.B.4 1.OA.C.6: K.OA.A.2, K.OA.A.3, K.OA.A.4, K.OA.A.5, 1.OA.B.3, 1.OA.B.4, 1.OA.C.5		

RESOURCES
Kendall Hunt Blackline masters and materials from Teacher Resource Pack Connecting cubes, objects of various lengths, pencils, scissors, string, connecting cubes in towers of 10 and singles, number cards 0–10, paper clips (1-inch and 2-inch), tape (painter's or masking), base-ten blocks, connecting cubes, dry erase markers, sheet protectors 10-frames, cups, paper plates, colored pencils, crayons or markers, construction, paper, glue

UNIT 7: GEOMETRY AND TIME
Illustrative Mathematics Unit Focus: Students reason with shapes and their attributes, partition shapes into equal pieces and tell time to the hour and half hour. **Essential Questions:** How does partitioning help us reason about shapes? How can we name, describe, and analyze two-and three-dimensional shapes? How can we create new shapes using existing shapes? How are clocks useful? **Unit Pacing: 19 days (14 required lessons, 3 flex, 2 assessment and reaction)**

UNWRAPPED STANDARDS			
Grade Level Standard	**Standard Progression**	**Concepts (Big Ideas/ Understandings)**	**Academic Vocabulary (Standard Based)**
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Through practice and structured learning time, students learn patterns in spoken number words and in written numerals, and how the two are related. This is the foundation of thinking about place value and the meaning of the digits in a numeral.	Understanding place value enables us to represent, compare and order numbers and perform computations.	Count Numerals 0-120 Number words 0-120
1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.	Reading time on analog and digital clocks is introduced in first grade. Students in second grade read and write times to the five minutes, and students in third grade work to the nearest minute. This standard connects with students' work in 1.G.A.3 in that the half-hour partitions the circle of the analog clock face into halves.	Clocks help us keep track of time and plan and sequence events.	Hour Hour hand Minute Minute hand Analog clock Digital clock O'clock Half hour Penny Dime Coin Value Cent
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points,	Students' data work in Grade 1 has important connections to addition and subtraction. Students in grade 1 can ask and answer questions about categorical data based on a representation of the	We collect, organize, represent, and analyze data in order to answer a question or solve a problem.	Tally chart Survey Data Graph

how many in each category, and how many more or less are in one category than in another.	data.Students can also ask and answer questions leading to other kinds of addition and subtraction problems (1.OA), such as compare problems or problems involving the addition of three numbers (for situations with three categories). There is no single correct way to represent categorical data-and the Standards do not require Grade 1 students to use any specific format. However, students should be familiar with mark schemes. Another format that might be useful in Grade 1 is a picture graph in which one picture represents one object. (Note that picture graphs are not an expectation in the Standards until Grade 2.)	Data can be represented (recorded with models, drawings, or graphic organizers) in more than one way.	Picture Picture graph Bar graph Models Drawings Graphic organizers
1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.	[Students] differentiate between geometrically defining attributes (e.g., "hexagons have six straight sides") and non defining attributes (e.g., color, overall size, or orientation).For example, they might say of this shape, "This has to go with the squares, because all four sides are the same, and these are square corners. It doesn't matter which way it's turned" (MP3, MP7). They explain why the variants shown earlier (p. 6) are members of familiar shape categories and why the difficult distractors are not, and they draw examples and nonexamples of the shape categories (MP7, MP8).	Two- and three-dimensional shapes can be named, described and analyzed using attributes, such as number and lengths of sides and number of angles/vertices. Naming shapes is not dependent on their color, orientation or size.	Attribute Sides Vertex Two-dimensional shapes Square Triangle Trapezoid Rectangle Circle
1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	From the early beginnings of informally matching shapes and solving simple shape puzzles, students learn to intentionally compose and decompose plane and solid figures (e.g., putting two congruent isosceles triangles together with the explicit purpose of making a rhombus), building understanding of part-whole relationships as well as the properties of the original and composite shapes. In this way, they learn to perceive a combination of shapes as a single new shape (e.g., recognizing that two isosceles triangles can be combined to make a rhombus, and simultaneously seeing the rhombus and the two	New shapes can be created by putting together existing shapes.	Composite Two-dimensional Square Triangle Trapezoid Rectangle Half-circle Quarter-circle Three-dimensional Put together

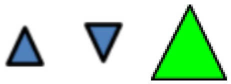
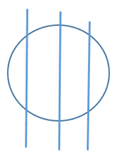
	triangles).		
1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	This standard connects the beginning concepts of equal parts (fractions) and how this relates to shapes. Equal parts and the names for halves and quarters should be a focus. Identifying the numerator and denominator is not part of this standard, and formal fraction notation should not be used at this time. Instead the focus is on how to partition a circle or rectangle into equal parts and name those equal parts.	Partitioning a shape into smaller parts allows us to describe the shape in different ways.	Whole Equal part (s) Halves Fourth Quarter Half of Fourth of Quarter of Share Divide Describe

UNIT 7: GEOMETRY AND TIME				
How does partitioning help us reason about shapes? How can we name, describe, and analyze two-and three-dimensional shapes? How can we create new shapes using existing shapes? How are clocks useful?				
CCSS Standards #	**Learning Targets**	**Summative Assessment Strategy**	**Lesson Progression and Connection to Math Practices**	**Common Learning Experiences and Assessments**
Section A: Flat and Solid Shapes				
1.G.A.1 1.G.A.2	I can sort shapes by their attributes. I can draw shapes with a given attribute. I can put shapes together to create new shapes.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** In this section, students explore and reason about attributes of two- and three-dimensional shapes. Students should be able to name shapes, (including, cone, sphere, cylinder, cube, square, rectangle, triangle, rhombus and hexagon) but they do not need to hear or produce formal definitions of the shape. Students identify defining attributes (number of straight sides and corners) of triangles, rectangles, and squares, and distinguish them from non-defining attributes (color, orientation, size). They describe why a shape belongs in a certain category using their own language. For example, “These are all triangles because they have 3 straight sides and 3 corners. This is not a triangle	**Mandatory Lessons/Activities:** iM Lessons 1, 2, 3, 4, 5, 6, 7

			because the sides don't touch." Students learn that a square is a special rectangle, because it possesses all of the defining attributes of a rectangle (4 sides, 4 square corners) and also has the defining attribute of a square (4 equal length sides). Students compose shapes from smaller shapes to deepen their understanding of two- and three-dimensional shapes.	
Pacing:	7 days		**Math Practices:** SMP 3, 5, 6, 7, 8	**Assessments:** Cool-downs 4, 5 (Lesson observations) Checkpoint A
Section B: Halves and Quarters				
1.G.A.1 1.G.A.2 1.G.A.3	I can partition shapes into halves and fourths. I can identify and describe halves and fourths.	X Selected Response X Constructed Response Performance X Observation	**Lesson Progression:** Students build on their understanding of composite shapes as they explore the idea of halves and fourths or quarters as equal pieces of a whole. Students hear and use the terms fourths and quarters to describe a shape split into four equal pieces. Students initially fold paper shapes to create two and four equal pieces, then they move on to drawing lines to split shapes. They consider the size of a fourth and a half in relation to the same whole. They use the language whole, halves, quarters, fourths, a half of, a fourth of, and a quarter of, to describe the pieces and relationship of the pieces to the whole.	**Mandatory Lessons/Activities:** iM Lessons 9, 10, 11
Pacing:	3 days		**Math Practices:** SMP 3, 5, 6, 7, 8	**Assessments:** Cool-downs 9, 10 Checkpoint B
Section C: Tell Time in Hours and Half Hours				
1.G.A.1 1.G.A.2 1.MD.B.3 1.NBT.A.1	I can tell time to the hour and half-hour.	X Selected Response X Constructed	**Lesson Progression:** Students learn to tell time in hours and half hours by relating the numbers 1–12 to a clock face and a written time. Although the lessons in this section focus on 12 hour clocks, some students may be	**Mandatory Lessons/Activities:** iM Lessons 13, 14, 15, 16

		<table><tr><td></td><td>Response</td></tr><tr><td></td><td>Performance</td></tr><tr><td>X</td><td>Observation</td></tr></table>	familiar with 24 hour clocks and may want to share their knowledge. For both hours and half hours, students begin by considering clock faces that only show an hour hand to draw their attention to the fact that the hour hand will point directly to a number or halfway in between two numbers. They connect their understanding of halves of shapes to see that the minute hand points to the 6 when it has gone halfway around the clock. Students connect the language of "o'clock" and "half past" to clock faces and written times. To build students' concept of time, consider having an alarm that goes off each half-hour to draw attention to time in hours and half hours. When the alarm goes off, students can look at the clock, draw the hands on a blank clock, and record the time using numbers.	
Pacing:	4 days		**Math Practices:** SMP 3, 5, 6, 7, 8	**Assessments:** Cool-down 15 Checkpoint C

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
Students may have trouble distinguishing the differences between the two clock hands and what they represent. One of the most common misconceptions in geometry is the belief that orientation, size, or color are tied to shape identification. Students may see the first of the figures below as a triangle, but claim to not know the name of the second or third.	1.G.A.1: K.G.B.4, K.G.B.5 1.G.A.2: K.G.B.6 1.G.A.3: 1.G.A.2 1.NBT.A.1: K.CC.A.1, K.CC.A.2, K.CC.B.4	Choose from iM leveled centers and exploration problems to differentiate for students who are ready.	iM Centers District-approved online resources

 Students may struggle to see a new shape from a composite shape. For example, a triangle and a square create a composite shape - pentagon. Students may see only the triangle and square not the pentagon. Students may partition a shape into fourths or halves but not create equal parts. (i.e. fourths) 			

RESOURCES

Kendall Hunt
Blackline masters and materials from Teacher Resource Pack
Bags (brown paper), geoblocks, solid shapes, chart paper, pattern blocks, picture books, folders, scissors, colored pencils, crayons or markers, two-color counters

Bristol Public Schools

Office of Teaching & Learning

Department	Social Studies
Department Philosophy	The primary objective of the social studies program is to prepare students to become thoughtful individuals whose academic background and skills will enable them to function successfully in an increasingly complex, multicultural, and changing world. The social studies program must provide students with an intellectual framework of knowledge, the skills necessary to process information, and the capacity to understand and appreciate people from backgrounds and cultures different from their own. Further, the program is intended to develop an informed, discriminating citizenship essential to effective participation in the democratic processes of governance and the fulfillment of the nation's democratic ideals. While history forms the foundation for social studies, concepts from other social sciences, including geography, economics, psychology, and sociology must be integrated through the department's course offerings to provide students with a firm understanding of the principles and methodologies in the social studies discipline. Students learn to use tools that allow them to think like historians, political scientists, economists, sociologists, and psychologists. We recognize that there are many differences among our students; they come to us with a variety of talents, interests, goals, and objectives in life. We are committed to the development and maintenance of a curriculum that reflects and celebrates this incredible diversity while also preparing each and every student to meaningfully participate in civic life and take their place in the global community.
Course	African American/Black and Puerto Rican/Latino Studies
Course Description	The course is an opportunity for students to explore accomplishments, struggles, intersections, perspectives, and collaborations of African American/Black and Puerto Rican/Latino people in the U.S. Students will examine how historical movements, legislation, and wars affected the citizenship rights of these groups and how they, both separately and together, worked to build U.S. cultural and economic wealth and create more just societies in local, national, and international contexts. Coursework will provide students with tools to identify historic and contemporary tensions around race and difference; map

	economic and racial disparities over time; strengthen their own identity development; and address bias in their communities.
Grade Level	11, 12
Pre-requisites	Successfully completed World History/AP Human Geography and Modern American History
Credit (if applicable)	Social Studies

SERC and BOE African American/Black and Puerto Rican/Latino Studies Curriculum

Bristol Public Schools

Office of Teaching & Learning

Department	Fine Arts
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow's leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	6th Grade Modern Band
Course Description for Program of Studies	N/A
Grade Level	6
Pre-requisites	none
Credit (if applicable)	N/A

P indicates standard will be a priority for the unit; **S** indicates a supporting standard

District Learning Expectations and Standards	Guitar	Keyboard	Body Percussion
Creating			
MU:Cr1.1 Generate and conceptualize artistic ideas and work.			
MU:Cr2.1 Organize and develop artistic ideas and work.			
MU:Cr3.1 Refine and complete artistic work.			
Performing			
MU:Pr4.1 Select, analyze and interpret artistic work for presentation.	S	S	S
MU:Pr5.1 Develop and refine artistic techniques and work for presentation.	P	P	P
MU:Pr6.1 Convey meaning through the presentation of artistic work.	S	S	S

Respond			
MU:Re7.1 Perceive and analyze artistic work.			
MU:Re8.1 Interpret intent and meaning in artistic work.			
MU:Re9.1 Apply criteria to evaluate artistic work.	S	S	S
Connecting S			
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.			
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.			

UNIT ESSENTIAL QUESTIONS
● How do musicians improve the quality of their performance? ● When is a performance judged ready to present? How do context and the manner in which the musical work is presented influence audience response? ● How do we judge the quality of musical work(s) and performance(s)? ● How do performers interpret musical works? ● When is a performance judged ready to present? How do context and the manner in which musical work is presented influence audience response?
UNIT ENDURING UNDERSTANDING
● To express their musical ideas, musicians analyze, evaluate, and refine their performance over time through openness to new ideas, persistence, and the application of appropriate criteria. ● Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response. ● The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria. ● Performers make interpretive decisions based on their understanding of context and expressive intent. ● Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response.

UNIT 1: Guitar

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.3	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.	x	Content Knowledge	Guitar, body, neck, sound hole, fret, bridge, tuning pegs, chord, strum, major, minor
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr5.1	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1	Identify and describe the effect of interest, experience, analysis,	x	Content Knowledge	

	and context on the evaluation of music.	x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	

Learning Targets

I can:

- Hold my guitar in proper play position with my thumb placed on the right spot of the neck
- Place my finger with the proper amount of pressure to make a sound
- Demonstrate how to make sound with my left hand by strumming all of the strings at once
- Read a chord chart and know where to place my fingers on the guitar in relation to the chord chart
- Perform chord patterns with one chord songs
- Read and perform a strum pattern
- Identify the difference between a C and a G chord
- Perform chord patterns with two chord songs
- Identify the difference between D Major, e minor and previously used chords.
- Perform using Full C Major and G Major chords
- Perform a song using three or more chords.

RESOURCES

- Little Kid Rock Materials

UNIT 2: Keyboard

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.3	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.	x	Content Knowledge	Key, sharp, flat, natural, chord, major, minor, pressure, hand position, inversion, comping
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr5.1	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1	Identify and describe the effect of interest, experience, analysis,	x	Content Knowledge	

	and context on the evaluation of music.	x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	

Learning Targets

I can:

- Demonstrate proper hand position when forming a chord.
- Explain how to build a chord
- Read and perform a basic comping pattern
- Define comping and apply the term properly
- Identify the C Major chord
- Perform the C Major chord in isolation and with a track
- Identify the G Major chord
- Perform using both the C Major and G Major chords
- Identify the a-minor chord
- Perform the a-minor chord
- Perform songs involving the a-minor, C and G major chords making proper position adjustments
- Identify the D-Major chord
- Perform the D-Major chord
- Collaborate with 1 or more students to perform a song using the 4 chords and comp/strum patterns

RESOURCES

- Little Kid Rock Materials

UNIT 3: Body Percussion

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.3	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.	x	Content Knowledge	Drum set notation, pattern, body percussion, tone, timbre, pitch
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr5.1	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1	Identify and describe the effect of interest, experience, analysis,	x	Content Knowledge	

	and context on the evaluation of music.	x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	

Learning Targets

I can:

- Read basic drum set notation
- Perform kinesthetic body movements that mimic the drum set
- Perform basic drum patterns using body percussion

RESOURCES

- Little Kid Rock Materials

Bristol Public Schools

Office of Teaching & Learning

Department	Fine Arts
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow’s leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	7th Grade Modern Band
Course Description for Program of Studies	N/A
Grade Level	7
Pre-requisites	none
Credit (if applicable)	N/A

P indicates standard will be a priority for the unit; **S** indicates a supporting standard

District Learning Expectations and Standards	Guitar and Bass	Keyboard	Percussion	Hip-Hop
Creating				
MU:Cr1.1 Generate and conceptualize artistic ideas and work.				P
MU:Cr2.1 Organize and develop artistic ideas and work.				
MU:Cr3.1 Refine and complete artistic work.				S
Performing				
MU:Pr4.1 Select, analyze and interpret artistic work for presentation.	S	S	S	S
MU:Pr5.1 Develop and refine artistic techniques and work for presentation.	P	P	P	S
MU:Pr6.1 Convey meaning through the presentation of artistic work.	S	S	S	P

Respond				
MU:Re7.1 Perceive and analyze artistic work.				
MU:Re8.1 Interpret intent and meaning in artistic work.				
MU:Re9.1 Apply criteria to evaluate artistic work.	S	S	S	S
Connecting S				
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.				
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.				

UNIT ESSENTIAL QUESTIONS
● How do musicians improve the quality of their performance? ● When is a performance judged ready to present? How do context and the manner in which the musical work is presented influence audience response? ● How do we judge the quality of musical work(s) and performance(s)? ● How do performers interpret musical works? ● When is a performance judged ready to present? How do context and the manner in which musical work is presented influence audience response? ● When is creative work ready to share? ● How do musicians make creative decisions? ● How do musicians generate creative ideas? ● How do musicians generate creative ideas?
UNIT ENDURING UNDERSTANDING
● To express their musical ideas, musicians analyze, evaluate, and refine their performance over time through openness to new ideas, persistence, and the application of appropriate criteria. ● Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response. ● The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria. ● Performers make interpretive decisions based on their understanding of context and expressive intent. ● Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response. ● The creative ideas, concepts, and feelings that influence musicians' work emerge from a variety of sources. ● Musicians evaluate and refine their work through openness to new ideas, persistence, and the application of appropriate criteria ● Musicians' presentation of creative work is the culmination of a process of creation and communication. ● The creative ideas, concepts, and feelings that influence musicians' work emerge from a variety of sources.

UNIT 1: Guitar and Bass

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Guitar, Bass, body, neck, sound hole, fret, bridge, tuning pegs, chord, strum, major, minor
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
MU:Pr4.3.H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.H .Hs novice	a. Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I can:

- Properly hold and play the guitar
- Perform the e-minor, C, G, and D major chords using intro strumming patterns.
- Read tablature music
- Perform a song using tablature on my guitar or bass
- Independently learn how to play a new chord

RESOURCES

- Little Kid Rock Materials

UNIT 2: Keyboard

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Key, sharp, flat, natural, chord, major, minor, pressure, hand position, inversion, comping
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
MU:Pr4.3.H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.H .Hs novice	a. Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I can:

- Properly play the keyboard
- Perform the C, G, D major and a-minor chords
- Use both hands to play the piano
- Perform a song of my choice

RESOURCES

- Little Kid Rock Materials

UNIT 3: Percussion

UNWRAPPED STANDARDS

Standard			Type of Standard	Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Drum set notation, pattern, body percussion, tone, timbre, pitch
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
MU:Pr4.3.H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.H.Hs novice	a. Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I can:

- Read basic drum set notation
- Perform kinesthetic body movements that mimic the drum set
- Perform basic drum patterns using body percussion

RESOURCES

- Little Kid Rock Materials

UNIT 4: Hip Hop

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Rhyme, verse, beat, harmony, melody, line, composition
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
MU:Pr4.3.H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.H.Hs novice	a. Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Cr1.1.E.Hs novice	Compose and improvise melodic and rhythmic ideas or motives that reflect characteristic(s) of music or text(s) studied in rehearsal.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Cr3.1.E.Hs novice	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and teacher-provided criteria.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Cr3.2.E.Hs novice	a. Share personally-developed melodic and rhythmic ideas or motives – individually or as an ensemble – that demonstrate		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	understanding of characteristics of music or texts studied in rehearsal.	x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Cr1.1.H.Hs intermediate	Generate melodic, rhythmic, and harmonic ideas for melodies (created over specified chord progressions or AB/ABA forms) and two-to-three-chord accompaniments for given melodies.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	

Learning Targets

I can:

- Understand how to rhyme words together in a comprehensive line
- Create a 4 verse composition
- Perform my 4 verse composition
- Collaborate with my peers to add beats, harmonies, melodies etc. to my piece
- Rehearse and refine my group project
- Perform my group piece to a larger audience
- Provide constructive feedback to my peers
- Use constructive feedback to improve our group piece.

RESOURCES

- Little Kid Rock Materials

Bristol Public Schools

Office of Teaching & Learning

Department	Fine Arts
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow's leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	8th Grade Modern Band
Course Description for Program of Studies	N/A
Grade Level	7
Pre-requisites	none
Credit (if applicable)	N/A

P indicates standard will be a priority for the unit; **S** indicates a supporting standard

District Learning Expectations and Standards	Guitar and Bass	Keyboard	Percussion	Song Structure	Final Project
Creating					
MU:Cr1.1 Generate and conceptualize artistic ideas and work.					P
MU:Cr2.1 Organize and develop artistic ideas and work.					
MU:Cr3.1 Refine and complete artistic work.					S
Performing					
MU:Pr4.1 Select, analyze and interpret artistic work for presentation.	S	S	S		S
MU:Pr5.1 Develop and refine artistic techniques and work for presentation.	P	P	P		P
MU:Pr6.1 Convey meaning through the presentation of artistic work.	S	S	S		S

Respond					
MU:Re7.1 Perceive and analyze artistic work.				P	
MU:Re8.1 Interpret intent and meaning in artistic work.					
MU:Re9.1 Apply criteria to evaluate artistic work.	S	S	S		S
Connecting S					
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.					
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.					

UNIT ESSENTIAL QUESTIONS

- How do musicians improve the quality of their performance?
- When is a performance judged ready to present? How do context and the manner in which the musical work is presented influence audience response?
- How do we judge the quality of musical work(s) and performance(s)?
- How do performers interpret musical works?
- When is a performance judged ready to present? How do context and the manner in which musical work is presented influence audience response?
- When is creative work ready to share?
- How do musicians make creative decisions?
- How do musicians generate creative ideas?
- How do musicians generate creative ideas?
- How does understanding the structure and context of music inform a response?

UNIT ENDURING UNDERSTANDING

- To express their musical ideas, musicians analyze, evaluate, and refine their performance over time through openness to new ideas, persistence, and the application of appropriate criteria.
- Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response.
- The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria.
- Performers make interpretive decisions based on their understanding of context and expressive intent.
- Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response.
- The creative ideas, concepts, and feelings that influence musicians' work emerge from a variety of sources.
- Musicians evaluate and refine their work through openness to new ideas, persistence, and the application of appropriate criteria
- Musicians' presentation of creative work is the culmination of a process of creation and communication.
- The creative ideas, concepts, and feelings that influence musicians' work emerge from a variety of sources.
- Response to music is informed by analyzing context (social, cultural, and historical) and how creators and performers manipulate the elements of music.

UNIT 1: Guitar and Bass

UNWRAPPED STANDARDS

Standard			Type of Standard	Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Guitar, Bass, body, neck, sound hole, fret, bridge, tuning pegs, chord, strum, major, minor
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
MU:Pr4.3.H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.H.Hs novice	a. Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I can:

- Properly hold and play the guitar
- Perform the e-minor, C, G, and D major chords using intro strumming patterns.
- Read tablature music
- Perform a song using tablature on my guitar or bass
- Independently learn how to play a new chord

RESOURCES

- Little Kid Rock Materials

UNIT 2: Keyboard

UNWRAPPED STANDARDS

Standard			Type of Standard	Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Key, sharp, flat, natural, chord, major, minor, pressure, hand position, inversion, comping
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
MU:Pr4.3.H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.H.Hs novice	a. Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I can:

- Properly play the keyboard
- Perform the C, G, D major and a-minor chords
- Use both hands to play the piano
- Perform a song of my choice

RESOURCES

- Little Kid Rock Materials

UNIT 3: Percussion

UNWRAPPED STANDARDS

Standard			Type of Standard	Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Drum set notation, pattern, body percussion, tone, timbre, pitch
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
MU:Pr4.3.H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.H.Hs novice	a. Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I can:

- Read basic drum set notation
- Perform kinesthetic body movements that mimic the drum set
- Perform basic drum patterns using body percussion

RESOURCES

- Little Kid Rock Materials

UNIT 4: Song Structure

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Re7.2.C.6	a.Describe how the elements of music and expressive qualities relate to the structure of the pieces	x	Content Knowledge	Intro, verse, chorus, hook, bridge, melody, harmony
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re7.2.C.8	a. Compare how the elements of music and expressive qualities relate to the structure within programs of music. b.Identify and compare the context of programs of music from a variety of genres, cultures, and historical periods.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I can:

- Understand components that make up song structure (intro, verse, chorus, hook)
- Identify through listening song structure in basic pop music

RESOURCES
• Little Kid Rock Materials

UNIT 5: Final Project

UNWRAPPED STANDARDS

Standard			Type of Standard	Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Verse, chorus, bridge, hook, melody, harmony, chord
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
MU:Pr4.3.H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr6.1.H.Hs novice	a. Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Cr1.1.E.Hs novice	Compose and improvise melodic and rhythmic ideas or motives that reflect characteristic(s) of music or text(s) studied in rehearsal.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Cr3.1.E.Hs novice	a. Evaluate and refine draft compositions and improvisations based on knowledge, skill, and teacher-provided criteria.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Cr3.2.E.Hs novice	a. Share personally-developed melodic and rhythmic ideas or motives – individually or as an ensemble – that demonstrate		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	understanding of characteristics of music or texts studied in rehearsal.	x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Cr1.1.H.Hs intermediate	Generate melodic, rhythmic, and harmonic ideas for melodies (created over specified chord progressions or AB/ABA forms) and two-to-three-chord accompaniments for given melodies.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	

Learning Targets

I can:

- Create a basic song using the prescribed criteria
- Rehearse that song in my group
- Perform, using instruments, my group's composition
- Analyze feedback received and apply it to my performance
- Compare my performance to others for improved performance

RESOURCES

- Little Kid Rock Materials

Bristol Public Schools

Office of Teaching & Learning

Department	Music
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow's leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	Modern Band
Course Description for Program of Studies	Modern Band teaches students to perform music they know and love and to compose and improvise. Styles that are studied include rock, pop, reggae, hip-hop, rhythm & blues, electronic dance music, and other contemporary styles as they emerge. Modern Band also utilizes (but is not limited to) the musical instruments that are common to these genres: guitar, bass, drums, piano, voice and technology. Prior instrument experience is not necessary to take this course.
Grade Level	9-12
Pre-requisites	none
Credit (if applicable)	.5

P indicates standard will be a priority for the unit; S indicates a supporting standard

District Learning Expectations and Standards	Learn	Master	Final
Creating			
MU:Cr1.1 Generate and conceptualize artistic ideas and work.			S
MU:Cr2.1 Organize and develop artistic ideas and work.			
MU:Cr3.1 Refine and complete artistic work.			P
Performing			
MU:Pr4.1 Select, analyze and interpret artistic work for presentation.	S	S	S
MU:Pr5.1 Develop and refine artistic techniques and work for presentation.	S	S	S

MU:Pr6.1 Convey meaning through the presentation of artistic work.	P	P	
Responding			
MU:Re7.1 Perceive and analyze artistic work.			
MU:Re8.1 Interpret intent and meaning in artistic work.			
MU:Re9.1 Apply criteria to evaluate artistic work.	S	S	S
Connecting			
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.			
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.			S

UNIT ESSENTIAL QUESTIONS
• How do musicians improve the quality of their performance? • When is a performance judged ready to present? How do context and the manner in which the musical work is presented influence audience response? • How do we judge the quality of musical work(s) and performance(s)? • How do performers interpret musical works? • When is a performance judged ready to present? How do context and the manner in which musical work is presented influence audience response? • How do musicians improve the quality of their creative work? • How do performers select repertoire? • How do musicians generate creative ideas? • When is creative work ready to share? • How do the other arts, other disciplines, contexts and daily life inform creating, performing, and responding to music?
UNIT ENDURING UNDERSTANDING
• To express their musical ideas, musicians analyze, evaluate, and refine their performance over time through openness to new ideas, persistence, and the application of appropriate criteria. • Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response. • The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria. • Performers make interpretive decisions based on their understanding of context and expressive intent. • Musicians evaluate and refine their work through openness to new ideas, persistence, and the application of appropriate criteria. • Performers' interest in and knowledge of musical works, understanding of their own technical skill, and the context for a performance influence the selection of repertoire. • The creative ideas, concepts, and feelings that influence musicians' work emerge from a variety of sources. • Musicians' presentation of creative work is the culmination of a process of creation and communication. • Understanding connections to varied contexts and daily life enhances musicians' creating, performing, and responding.

UNIT 1: 'Learn'

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1.E.Hs intermediate	Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Chord progression, rhythmic beat, song structure
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		X	Product Development	
			Learning Behavior	
MU:Pr6.1.E.Hs novice	Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	Hand position, chord structure, strumming
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		X	Physical Skill	
			Product Development	
			Learning Behavior	
MU:Re9.1.E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	X	Content Knowledge	Chord structure, vocal style
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

MU:Pr4.3. H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Content Knowledge	Major, minor, chord, chord progression, chord symbols, drum notation
		X	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

MU:Pr6.1. H.Hs novice	Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	Chord progression, balance, blend, accompaniment
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		X	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I CAN:

- Properly hold and play the guitar, bass, keyboard, and drum set (as needed)
- Perform chord progressions on guitar, bass and keyboard (could include the following chords C, G, D, E, F7, A Major chords and e, and a minor)
- Independently learn how to play a new chord
- Explain basic song structure

UNIT 2: “Master”

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr5.1. E.Hs intermediate	Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Chord progression, rhythmic beat, song structure, comping patterns
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		X	Product Development	
			Learning Behavior	

MU:Pr6.1. E.Hs novice	Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music.		Content Knowledge	Hand position, chord structure, strumming
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		X	Physical Skill	
			Product Development	
			Learning Behavior	

MU:Re9.1. E.Hs novice	Identify and describe the effect of interest, experience, analysis, and context on the evaluation of music.	X	Content Knowledge	Chord structure, vocal style,
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

MU:Pr4.3. H.Hs novice	Identify prominent melodic and harmonic characteristics in a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments selected for performance, including at least some based on reading standard notation.		Content Knowledge	Major, minor, chord, chord progression, chord symbols, drum notation
		X	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

MU:Pr6.1. H.Hs novice	Perform with expression and technical accuracy in individual performances of a varied repertoire of music that includes melodies, repertoire pieces, and chordal accompaniments, demonstrating understanding of the audience and the context.		Content Knowledge	Chord progression, balance, blend, accompaniment, styles of music, genres of music
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		X	Physical Skill	
			Product Development	
			Learning Behavior	

MU:Cr3.1. E.Hs intermediate	Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Composition, balance, blend,
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		X	Product Development	
			Learning Behavior	

LEARNING TARGETS
I CAN: ● Collaborate with my group members to perform basic songs ● Perform a song cover and original song on my chosen instrument (could include C, G, D, E, F7, A Major chords and e, and a minor)

UNIT 3: Final Project

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.1.E.Hs intermediate	Select a varied repertoire to study based on music reading skills (where appropriate), an understanding of formal design in the music, context, and the technical skill of the individual and ensemble.		Content Knowledge	Genre, chord progression
		X	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	
MU:Pr5.1.E.Hs intermediate	Evaluate and refine draft compositions and improvisations based on knowledge, skill, and collaboratively-developed criteria.		Content Knowledge	Comping Patterns, balance, blend, texture, form
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		X	Product Development	
			Learning Behavior	
MU:Cr1.1.E.Hs intermediate	Compose and improvise ideas for melodies and rhythmic passages based on characteristic(s) of music or text(s) studied in rehearsal.		Content Knowledge	Performance preparation
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		X	Product Development	
		X	Learning Behavior	

MU:Cr3.2.E.Hs intermediate	Share personally-developed melodies and rhythmic passages – individually or as an ensemble – that demonstrate understanding of characteristics of music or texts studied in rehearsal.		Content Knowledge	Performance preparation
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		X	Physical Skill	
			Product Development	
			Learning Behavior	

MU:Re9.1.E.Hs intermediate	Explain the influence of experiences, analysis, and context on interest in and evaluation of music.	X	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

MU:Cn11.0.E.Hs intermediate	Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.		Content Knowledge	Audio production, audio recording
		X	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN:

- Create a budget for my group
- Record and perform music with a group
- Explain the process of basic music production
- Demonstrate knowledge of networking to promote my group

Bristol Public Schools

Office of Teaching & Learning

Department	Fine Arts
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow's leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	6th Grade General Music
Course Description for Program of Studies	N/A
Grade Level	6
Pre-requisites	none
Credit (if applicable)	N/A

P indicates standard will be a priority for the unit; **S** indicates a supporting standard

District Learning Expectations and Standards	Intro to Ukulele	Playing the Ukulele	Chords on the Ukulele	Performing on the Ukulele
Creating				
MU:Cr1.1 Generate and conceptualize artistic ideas and work.				
MU:Cr2.1 Organize and develop artistic ideas and work.	P	S	S	
MU:Cr3.1 Refine and complete artistic work.				
Performing				
MU:Pr4.1 Select, analyze and interpret artistic work for presentation.	S	P	P	S

MU:Pr5.1 Develop and refine artistic techniques and work for presentation.				P
MU:Pr6.1 Convey meaning through the presentation of artistic work.		S	S	S
Respond				
MU:Re7.1 Perceive and analyze artistic work.	S	S		
MU:Re8.1 Interpret intent and meaning in artistic work.				
MU:Re9.1 Apply criteria to evaluate artistic work.				S
Connecting				
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.				
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.				

UNIT ESSENTIAL QUESTIONS
Cr2.1 How do musicians make creative decisions? Pr4.2 How does understanding the structure and context of musical works inform performance? Pr5.1 How do musicians improve the quality of their performance? Pr6.1 When is a performance judged ready to present? How do context and the manner in which musical work is presented influence audience response? Re7.1 How do individuals choose music to experience? Re7.2 How does understanding the structure and context of music inform a response? Re9.1 How do we judge the quality of musical work(s) and performance(s)?
UNIT ENDURING UNDERSTANDING
Cr2.1 Musicians' creative choices are influenced by their expertise, context, and expressive intent. Pr4.2 Analyzing creators' context and how they manipulate elements of music provides insight into their intent and informs performance. Pr5.1 To express their musical ideas, musicians analyze, evaluate, and refine their performance over time through openness to new ideas, persistence, and the application of appropriate criteria. Pr6.1 Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response. Re7.1 Individuals' selection of musical works is influenced by their interests, experiences, understandings, and purposes. Re7.2 Response to music is informed by analyzing context (social, cultural, and historical) and how creators and performers manipulate the elements of music. Re9.1 The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria.

UNIT 1: Intro to Ukulele

UNWRAPPED STANDARDS

Standard			Type of Standard	Concepts and Disciplinary-Specific Vocabulary
Cr2.1	Organize and develop artistic ideas and work.		Content Knowledge	Ukulele, body, frets, fingerboard, neck, soundhole, strings, bridge, saddle, chord, strum, pluck, rhythm, step, skip
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr4.2	Select, analyze and interpret artistic work for presentation.	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Re7.1	Perceive and analyze artistic work.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	
Re7.2	Perceive and analyze artistic work.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

			Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I CAN:

- Demonstrate how to properly hold a ukulele
- Demonstrate proper tuning of a ukulele
- Demonstrate how to play open strings

RESOURCES

- Quaver Ukulele Unit
- "Uke Can Do It" workbook

UNIT 2: Playing the Ukulele

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
Cr2.1	Organize and develop artistic ideas and work.		Content Knowledge	Ukulele, body, frets, fingerboard, neck, soundhole, strings, bridge, saddle, chord, strum, pluck, rhythm, step, skip
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr4.2	Select, analyze and interpret artistic work for presentation.	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr6.1	Convey meaning through the presentation of artistic work.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets
I CAN: ● Perform the C scale ● Perform the intervals and skips in C Major

RESOURCES
● Quaver Ukulele Unit ● "Uke Can Do It" workbook

UNIT 3: Chords on the Ukulele

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
Cr2.1	Organize and develop artistic ideas and work.		Content Knowledge	Ukulele, body, frets, fingerboard, neck, soundhole, strings, bridge, saddle, chord, strum, pluck, rhythm, step, skip
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	

Pr4.2	Select, analyze and interpret artistic work for presentation.	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr6.1	Convey meaning through the presentation of artistic work.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	

Learning Targets

I CAN:

- Perform the C, F and G7 chords
- Perform 2 chords in a row

RESOURCES

- Quaver Ukulele Unit
- "Uke Can Do It" workbook

UNIT 4: Performing on the Ukulele

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
Pr4.2	Select, analyze and interpret artistic work for presentation.	x	Content Knowledge	Ukulele, body, frets, fingerboard, neck, soundhole, strings, bridge, saddle, chord, strum, pluck, rhythm, step, skip
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr5.1	Develop and refine artistic techniques and work for presentation.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr6.1	Convey meaning through the presentation of artistic work.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
Re9.1	Apply criteria to evaluate artistic work.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	

			Product Development	
		x	Learning Behavior	

Learning Targets

I can:

- Perform chords with simple melodies
- Provide feedback to my peers on their performances

RESOURCES

- Quaver Ukulele Unit
- "Uke Can Do It" workbook
- Websites with Ukulele Chord Charts for misc songs

Bristol Public Schools

Office of Teaching & Learning

Department	Fine Arts
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow's leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	7th Grade Digital Music
Course Description for Program of Studies	N/A
Grade Level	7
Pre-requisites	none
Credit (if applicable)	N/A

P indicates standard will be a priority for the unit; **S** indicates a supporting standard

District Learning Expectations and Standards	Mood Based Loop Work	Commercial Project
Creating		
MU:Cr1.1 Generate and conceptualize artistic ideas and work.		
MU:Cr2.1 Organize and develop artistic ideas and work.	P	P
MU:Cr3.1 Refine and complete artistic work.	S	S
Performing		
MU:Pr4.1 Select, analyze and interpret artistic work for presentation.	S	S
MU:Pr5.1 Develop and refine artistic techniques and work for presentation.	S	P

MU:Pr6.1 Convey meaning through the presentation of artistic work.		
Respond		
MU:Re7.1 Perceive and analyze artistic work.		
MU:Re8.1 Interpret intent and meaning in artistic work.		S
MU:Re9.1 Apply criteria to evaluate artistic work.		S
Connecting		
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.		S
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.		S

UNIT ESSENTIAL QUESTIONS

- Cr 2.1 How do musicians make creative decisions?
- Cr3.1 How do musicians improve the quality of their creative work?
- Cr3.2 When is creative work ready to share?
- Pr4.3.7 How do performers interpret musical works?
- Pr5.1.7 How do musicians improve the quality of their performance?
- Re8.1.7 How do we discern the musical creators' and performers' expressive intent?
- Re9.1.7 How do we judge the quality of musical work(s) and performance(s)?
- Cn10.0.7 How do musicians make meaningful connections to creating, performing, and responding?
- Cn11.0.7 How do the other arts, other disciplines, contexts, and daily life inform creating, performing, and responding to music?

UNIT ENDURING UNDERSTANDING

- Cr2.1 Musicians' creative choices are influenced by their expertise, context, and expressive intent.
- Cr3.1 Musicians evaluate, and refine their work through openness to new ideas, persistence, and the application of appropriate criteria.
- Cr3.2 Musicians' presentation of creative work is the culmination of a process of creation and communication.
- Pr4.3.7 Performers make interpretive decisions based on their understanding of context and expressive intent.
- Pr5.1.7 To express their musical ideas, musicians analyze, evaluate, and refine their performance over time through openness to new ideas, persistence, and the application of appropriate criteria.
- Re8.1.7 Through their use of elements and structures of music, creators and performers provide clues to their expressive intent.
- Re9.1.7 The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria.
- Cn10.0.7 Musicians connect their personal interests, experiences, ideas, and knowledge to creating, performing, and responding.
- Cn11.0.7 Understanding connections to varied contexts and daily life enhances musicians' creating, performing, and responding.

UNIT 1: Mood Based Loop Work

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Cr2.1.7	a. Select, organize, develop and document personal musical ideas for arrangements, songs, and compositions within AB, ABA, or theme and variation forms that demonstrate unity and variety and convey expressive intent.		Content Knowledge	Loop, form, mood, layers, beat, rhythm
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Cr3.1.7	a. Evaluate their own work, applying selected criteria such as appropriate application of elements of music including style, form, and use of sound sources.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Cr3.2.7	Present the final version of their personal documented personal composition, song, or arrangement, using craftsmanship and originality to demonstrate unity and variety, and convey expressive intent.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr4.3.7	Perform contrasting pieces of music demonstrating their interpretations of the elements	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening,	

	of music and expressive qualities (such as dynamics, tempo, timbre, articulation/style, and phrasing) convey intent.		Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
MU:Pr5.1.7	a.Identify and apply collaboratively-developed criteria (such as demonstrating correct interpretation of notation, technical skill of performer, originality, emotional impact, and interest) to rehearse, refine, and determine when the music is ready to perform.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	

Learning Targets

I can:

- Select loops from a bank to demonstrate musical styles
- Explain musical loops and how they can be extended in time
- Demonstrate how layering loops can affect the rhythm and harmony.
- Refine and present my project to the class

RESOURCES

- Music audio software (Garage Band, Studio One, Mix Craft, etc)
- Incredibox

UNIT 2: Commercial Project

<table>
<tr><th colspan="5">UNWRAPPED STANDARDS</th></tr>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">Cr2.1.7</td><td rowspan="5">a. Select, organize, develop and document personal musical ideas for arrangements, songs, and compositions within AB, ABA, or theme and variation forms that demonstrate unity and variety and convey expressive intent.</td><td></td><td>Content Knowledge</td><td rowspan="5">Loop, form, mood, layers, beat, rhythm</td></tr>
<tr><td>x</td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td></td><td>Physical Skill</td></tr>
<tr><td>x</td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">Cr3.1.7</td><td rowspan="5">a. Evaluate their own work, applying selected criteria such as appropriate application of elements of music including style, form, and use of sound sources.</td><td></td><td>Content Knowledge</td><th>PRIOR KNOWLEDGE NEEDED</th></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td rowspan="11">Basic use of music production software</td></tr>
<tr><td>x</td><td>Physical Skill</td></tr>
<tr><td>x</td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">Cr3.2.7</td><td rowspan="5">Present the final version of their personal documented personal composition, song, or arrangement, using craftsmanship and originality to demonstrate unity and variety, and convey expressive intent.</td><td></td><td>Content Knowledge</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td>x</td><td>Physical Skill</td></tr>
<tr><td>x</td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="2">Pr4.3.7</td><td rowspan="2">Perform contrasting pieces of music demonstrating their</td><td>x</td><td>Content Knowledge</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening,</td></tr>
</table>

	interpretations of the elements of music and expressive qualities (such as dynamics, tempo, timbre, articulation/style, and phrasing) convey intent.		Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr5.1.7	a.Identify and apply collaboratively-developed criteria (such as demonstrating correct interpretation of notation, technical skill of performer, originality, emotional impact, and interest) to rehearse, refine, and determine when the music is ready to perform.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
Re8.1.7	Describe a personal interpretation of contrasting works and explain how creators' and performers' application of the elements of music and expressive qualities, within genres, cultures, and historical periods, convey expressive intent	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	
Re9.1.7	Select from teacher-provided criteria to evaluate musical works or performances.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	
Cn10.0.7	Demonstrate how interests, knowledge, and skills relate to		Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening,	

	personal choices and intent when creating, performing, and responding to music		Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Cn11.0.7	Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.		Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	

Learning Targets

I CAN:

- Create a fictitious product that solves a problem in my life or in someone else's.
- Create a spoken advertisement designed to sell the product that I have created
- Use microphones to record live sound
- Create a musical backtrack to accompany my advertisement that matches the mood of my product.
- Use music software to create the musical backtrack to my advertisement.
- Refine and edit my work using music software.
- Prepare and finalize my project to be presented to an audience

RESOURCES

- Music audio software (Garage Band, Studio One, Mix Craft, etc)
- Recording equipment

Bristol Public Schools

Office of Teaching & Learning

Department	Fine Arts
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow's leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	8th Grade Songwriting
Course Description for Program of Studies	N/A
Grade Level	8
Pre-requisites	none
Credit (if applicable)	N/A

P indicates standard will be a priority for the unit; **S** indicates a supporting standard

District Learning Expectations and Standards	Notation	Songwriting Basics	Writing a 4 Chord Song
Creating			
MU:Cr1.1 Generate and conceptualize artistic ideas and work.	S		S
MU:Cr2.1 Organize and develop artistic ideas and work.	P	S	S
MU:Cr3.1 Refine and complete artistic work.	S		P
Performing			
MU:Pr4.1 Select, analyze and interpret artistic work for presentation.		P	
MU:Pr5.1 Develop and refine artistic techniques and work for presentation.			S

MU:Pr6.1 Convey meaning through the presentation of artistic work.			P
Respond			
MU:Re7.1 Perceive and analyze artistic work.	S	S	
MU:Re8.1 Interpret intent and meaning in artistic work.			
MU:Re9.1 Apply criteria to evaluate artistic work.		P	S
Connecting			
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.	S		
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.		S	

UNIT ESSENTIAL QUESTIONS
- Cr1.1.8 How do musicians generate creative ideas?   - Cr2.1.8 How do musicians make creative decisions?   - Cr3.1.8 How do musicians improve the quality of their creative work?   - Cr3.2.8 When is creative work ready to share?   - Pr4.2.8 How does understanding the structure and context of musical works inform performance?   - Pr5.1.8 How do musicians improve the quality of their performance?   - Pr6.1.8 When is a performance judged ready to present? How do context and the manner in which musical work is presented influence audience response?   - Re7.2.8 How does understanding the structure and context of music inform a response?   - Re9.1.8 How do we judge the quality of musical work(s) and performance(s)?   - Cn10.0.8 How do musicians make meaningful connections to creating, performing, and responding?   - Cn11.0.8 How do the other arts, other disciplines, contexts, and daily life inform creating, performing, and responding to music?
UNIT ENDURING UNDERSTANDING
- Cr1.1.8 The creative ideas, concepts, and feelings that influence musicians' work emerge from a variety of sources.   - Cr2.1.8 Musicians' creative choices are influenced by their expertise, context, and expressive intent.   - Cr3.1.8 Musicians evaluate, and refine their work through openness to new ideas, persistence, and the application of appropriate criteria.   - Cr3.2.8 Musicians' presentation of creative work is the culmination of a process of creation and communication.   - Pr4.1.8 Performers' interest in and knowledge of musical works, understanding of their own technical skill, and the context for a performance influence the selection of repertoire.   - Pr4.2.8 Analyzing creators' context and how they manipulate elements of music provides insight into their intent and informs performance.   - Pr5.1.8 To express their musical ideas, musicians analyze, evaluate, and refine their performance over time through openness to new ideas, persistence, and the application of appropriate criteria.   - Pr6.1.8 Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response.   - Re7.2.8 Response to music is informed by analyzing context (social, cultural, and historical) and how creators and performers manipulate the elements of music.   - Re9.1.8 The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria.   - Cn10.0.8 Musicians connect their personal interests, experiences, ideas, and knowledge to creating, performing, and responding.   - Cn11.0.8 Understanding connections to varied contexts and daily life enhances musicians' creating, performing, and responding.

UNIT 1: Notation

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
Cr1.1.8	Generate rhythmic, melodic and harmonic phrases and harmonic accompaniments within expanded forms (including introductions, transitions, and codas) that convey expressive intent		Content Knowledge	Notes, pitch, duration, bass clef, treble clef, tones, semitones, whole step, half stef, scale, major, minor, triad, chord
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Cr2.1.8	B. Use standard and/or iconic notation and/or audio/ video recording to document personal rhythmic phrases, melodic phrases, and harmonic sequences.		Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Cr3.1.8	a. Evaluate their own work by selecting and applying criteria including appropriate application of compositional techniques, style, form, and use of sound sources.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
Re7.2.8	a. Compare how the elements of music and expressive qualities	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	

	relate to the structure within programs of music.		Physical Skill	
			Product Development	
			Learning Behavior	
Cn10.0.8	Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music.		Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	

Learning Targets
I can: ● Identify notes (pitches and durations) ● Identify bass and treble clefs ● Understand intervals of tones and semitones between notes ● Understand the pattern of Tones and Semitones that make up a major scale ● Identify major and minor thirds by counting semitones ● Understand the difference between major and minor triads ● Understand where major and minor chords occur by scale degree

UNIT 2: Songwriting Basics

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
Cr2.1.8	a. Select, organize, and document musical ideas for arrangements, songs, and compositions within expanded forms that demonstrate tension and release, unity and variety, balance, and convey expressive intent.		Content Knowledge	Instrumentation, lyrics, form, structure, purpose
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr4.1.8	Apply personally-developed criteria for selecting music of contrasting styles for a program with a specific purpose and/or context, and explain expressive qualities, technical challenges, and reasons for choices.	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr4.2.8	c. Identify how cultural and historical context inform performances and result in different musical effects.	x	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Re7.2.8	b.Identify and compare the context of programs of music from a variety of genres, cultures, and historical periods.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

Re9.1.8	Apply appropriate personally-developed criteria to evaluate musical works or performances.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	
Cn11.0.8	Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.		Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	

Learning Targets

I can:

- Identify the instrumentation used in music
- Identify the purpose and function of the utilized instrumentation
- Analyze the form of the example music
- Analyze the lyrics and lyrical structure of the example music
- Create my own lyrics about a subject I am passionate about

RESOURCES

- Recordings of example music

UNIT 3: Writing a 4 Chord Song

UNWRAPPED STANDARDS

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
Cr1.1.8	Generate rhythmic, melodic and harmonic phrases and harmonic accompaniments within expanded forms (including introductions, transitions, and codas) that convey expressive intent		Content Knowledge	Notes, pitch, duration, bass clef, treble clef, tones, semitones, whole step, half stef, scale, major, minor, triad, chord, instrumentation, lyrics, form, structure, purpose, chord progression, melody, harmony, verse, chorus, bridge, refrain, intro, outro
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Cr2.1.8	a. Select, organize, and document musical ideas for arrangements, songs, and compositions within expanded forms that demonstrate tension and release, unity and variety, balance, and convey expressive intent. b.Use standard and/or iconic notation and/or audio/ video recording to document personal rhythmic phrases, melodic		Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
		x	Product Development	
			Learning Behavior	
Cr3.1.8	a. Evaluate their own work by selecting and applying criteria including appropriate application of compositional techniques, style, form, and use of sound sources.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
Cr3.2.8	Present the final version of their documented composition, song, or arrangement, using craftsmanship and originality to demonstrate the application of		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	

	compositional techniques for creating unity and variety, tension and release, and balance to convey expressive intent.	x	Product Development	
			Learning Behavior	
Pr5.1.8	a.Identify and apply personally-developed criteria (such as demonstrating correct interpretation of notation, technical skill of performer, originality, emotional impact, variety, and interest) to rehearse, refine, and determine when the music is ready to perform.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
		x	Product Development	
			Learning Behavior	
Pr6.1.8	b.Demonstrate performance decorum (such as stage presence, attire, and behavior) and audience etiquette appropriate for venue, purpose, context, and style.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		x	Physical Skill	
			Product Development	
			Learning Behavior	
Re9.1.8	Apply appropriate personally-developed criteria to evaluate musical works or performances.	x	Content Knowledge	
		x	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
		x	Learning Behavior	

Learning Targets

I can:

- Input notes and chords into note writing software
- Create a four-chord progression that repeats to create the refrain music
- Create a bass that reinforces the roots of the chord progression
- Create a melody that is supported by the harmonies chosen
- Write lyrics about a topic that is important to me.
- Create a song with a Verse, Chorus, Bridge form.

RESOURCES

- Note writing software - finale, note flight
- Digital music software - garage band, studio one

Bristol Public Schools

Office of Teaching & Learning

Department	Music
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow's leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	Chorus
Course Description for Program of Studies	Students have received a general music experience for approximately six years and a choral music experience for one year upon entering 6th grade. These classes have prepared our students with the necessary foundation to perform in an ensemble. This course exposes students to the unique and essential skills needed to perform in an ensemble. This course meets one time per every four days of rotation.
Grade Level	6-8
Pre-requisites	None
Credit (if applicable)	None

P indicates standard will be a priority for the unit; **S** indicates a supporting standard

District Learning Expectations and Standards	Posture / Breath	Articulation	Phrasing	Pitch / Rhythm	Key Signature	Time Signature	Road Map Symbols	Solfege	Conducting Gestures	Dynamics	Diction	Vowel Color / Intonation	Meaning / Interpretation	Balance	Blending
Creating															
MU:Cr1.1 Generate and conceptualize artistic ideas and work.															
MU:Cr2.1 Organize and develop artistic ideas and work.													S		
MU:Cr3.1 Refine and complete artistic work.															
Performing															
MU:Pr4.1 Select, analyze and interpret artistic work for presentation.				P	P	P	P	P						P	P
MU:Pr5.1 Develop and refine artistic techniques and work for presentation.															

MU:Pr6.1 Convey meaning through the presentation of artistic work.	P	P	P						P	P		P	S		
Responding															
MU:Re7.1 Perceive and analyze artistic work.										S					
MU:Re8.1 Interpret intent and meaning in artistic work.			S						S		P				
MU:Re9.1 Apply criteria to evaluate artistic work.													P		
Connecting															
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.													S		
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.											S				

ESSENTIAL QUESTIONS

- When is a performance judged ready to present? How do context and the manner in which the musical work is presented influence the audience response?

- How do we discern the musical creators' and performers' expressive intent?
- How does understanding the structure and context of musical works inform performance?
- How do the other arts, other disciplines, contexts and daily life inform creating, performing, and responding to music?
- How do we judge the quality of musical work(s) and performance(s)?
- How do performers select repertoire?

ENDURING UNDERSTANDING
• Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response • Through their use of elements and structures of music, creators and performers provide clues to their expressive intent. • Analyzing creators' context and how they manipulate elements of music provides insight into their intent and informs performance. • Understanding connections to varied contexts and daily life enhances musicians' creating, performing, and responding. • The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria. • Performers' interest in and knowledge of musical works, understanding of their own technical skill, and the context for a performance influence the selection of repertoire.

UNIT 1:Posture and Breath Support

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr6.1.E.HSI (Proficient)	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres. b. Demonstrate an understanding of expressive intent by connecting with an audience through prepared and improvised performances.		Content Knowledge	Thorax (intercostal muscles), diaphragm
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	All breathing is from the diaphragm
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Stand or sit using proper posture.
- Identify muscle groups used in singing.
- Prepare my body for the physical act of singing.

RESOURCES

- ENT diagram, thorax diagram

UNIT 2: Articulation

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr6.1. E.HSI (Proficient)</td><td rowspan="5">a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres.

b. Demonstrate an understanding of expressive intent by connecting with an audience through prepared and improvised performances.</td><td></td><td>Content Knowledge</td><td>Legato, staccato, accent</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>Previous exposure in elementary school and refined in middle school</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="2"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS

I CAN

- Identify staccato, accent, legato within my music.
- Perform staccato, accent, legato.
- Explain and understand why staccato, accent, and legato are used within selected repertoire

RESOURCES

- musical examples using repertoire

UNIT 3: Phrasing

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr6.1.E.HSII (Accomplished)</td><td rowspan="5">a. Demonstrate mastery of the technical demands and an understanding of expressive qualities of the music in prepared and improvised performances of a varied repertoire representing diverse cultures, styles, genres, and historical periods.

b. Demonstrate an understanding of intent as a means for connecting with an audience through prepared and improvised performances.</td><td></td><td>Content Knowledge</td><td>Phrasing</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>All notes are monodynamic</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="7"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">MU:Re8.1.E.HSI (Proficient)</td><td rowspan="5">Explain and support interpretations of the expressive intent and meaning of musical works, citing as evidence the treatment of the elements of music, contexts, (when appropriate) the setting of the text, and personal research.</td><td>X</td><td>Content Knowledge</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td></td><td>Physical Skill</td></tr>
<tr><td></td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS
I CAN: ● Recognize the natural rise and fall of a vocal line. ● Find the word that represents the apex (peak) of the phrase. ● Sing a vocal line with direction and meaning.

RESOURCES
Use examples from repertoire and/or lyrics

UNIT 4: Pitch & Rhythm

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="6">MU:Pr4.2.E.HSI (Proficient)</td><td rowspan="6">a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.</td><td>X</td><td>Content Knowledge</td><td>● treble and bass clef
● 16th notes, whole notes, dotted notes</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>What standard notation is</td></tr>
<tr><td></td><td>Product Development</td><td>PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT</td></tr>
<tr><td></td><td>Learning Behavior</td><td>Quarter and eighth notes</td></tr>
</table>

LEARNING TARGETS

I CAN

- Read standards notes and perform them. (notes on the treble and bass clef)
- Identify written notes; their pitch and duration. (16th notes to whole notes, and dotted notes)
- Sing correct pitch and duration as indicated by the music.

RESOURCES

- sight reading textbook, website

UNIT 5: Key Signatures

<table>
<tr><th colspan="6">Vocal Awareness/Technique</th></tr>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th colspan="2">Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr4.2.
E.HSI
(Proficient)</td><td rowspan="5">a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.</td><td>X</td><td>Content Knowledge</td><td colspan="2">solfège, key signature, and how sharps and flats affect the “do”</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td colspan="2">COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td colspan="2">That “do” is fixed</td></tr>
<tr><td></td><td>Product Development</td><td colspan="2">PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT</td></tr>
<tr><td></td><td>Learning Behavior</td><td colspan="2">Basic solfège scale</td></tr>
</table>

LEARNING TARGETS

I CAN

- Find and sing the ‘do’ note of C in written music.
- Find and sing the ‘do’ note of G in written music.
- Find and sing the ‘do’ note of F in written music.

RESOURCES

- sight reading textbook, website/software

UNIT 6:Time Signatures

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.2. E.HSI (Proficient)	a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.	X	Content Knowledge	Time Signature, Meter, Down beat, Strong/weak beats
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	Quarter note always gets one beat
			Product Development	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
			Learning Behavior	Ability to keep a steady beat

LEARNING TARGETS

I CAN

- Identify the time signature on a score. (2/4, 3/4, 4/4, 6/8)
- Identify the meter aurally. (2/4, 3/4, 4/4, 6/8)
- Perform music in grade-appropriate meters.
- Associate beats with conductor's gesture.

RESOURCES

- sight reading textbook, website/software

UNIT 7: Road Map Symbols

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.2. E.HSI (Proficient)	a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.	X	Content Knowledge	• repeat/return signs, CODA, DS, DC and first/second endings, refrain
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	That you do not need to go back to the beginning when there is a repeat, could be return sign Read/sing through first and second ending (forgetting to repeat and jump to 2nd ending)
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Identify repeat/return signs, CODA, DS, DC and first/second endings
- Follow the score returning to the correct measure with the road map symbols.

RESOURCES

- sight reading textbook, website/software

UNIT 8: Solfège

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.2. E.HSI (Proficient)	a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.	X	Content Knowledge	solfège syllable
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
		X	Physical Skill	Exposure to solfège
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Sing a scale using solfège syllables.
- Jump to a scale degree (interval) from do. (re, mi, so)
- Identify ‘do’ in the key signature of the musical passage.
- Sing musical passages with solfège syllables.

RESOURCES

- sight reading textbook, website/software

UNIT 9: Conducting Gestures

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr6.1. E.HSI (Proficient)</td><td rowspan="5">a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres.</td><td></td><td>Content Knowledge</td><td>Conducting, upbeat and downbeat, cut off, entrance</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>Forgetting to look at the conductor to know when and how to sing/articulate</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="7"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">MU:Re8.1. E.HSI (Proficient)</td><td rowspan="5">Explain and support interpretations of the expressive intent and meaning of musical works, citing as evidence the treatment of the elements of music, contexts, (when appropriate) the setting of the text, and personal research.</td><td>X</td><td>Content Knowledge</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td></td><td>Physical Skill</td></tr>
<tr><td></td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS

I CAN

- Start and end music phrases together with others.
- Follow directions/gestures for appropriate synchronization.
- Associate beats with conductor’s gesture.
- Prepare and perform for upbeats and downbeats.

RESOURCES
• teacher modeling, peer

UNIT 10: Dynamics

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Re7.2. E.HSI (Proficient)	Explain how the analysis of passages and understanding the way the elements of music are manipulated inform the response to music.		Content Knowledge	Dynamics ranging from pp-ff, crescendo, decrescendo
		X	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
			Physical Skill	Not vary the dynamics enough
			Product Development	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
			Learning Behavior	Ability to sing at different volumes
MU:Pr6.1. E.HSI (Proficient)	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres. b. Demonstrate an understanding of expressive intent by connecting with an audience through prepared and improvised performances.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		X	Physical Skill	
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Identify and perform ff in written music.
- Identify and perform f in written music.
- Identify and perform mf in written music.
- Identify and perform mp in written music.
- Identify and perform p in written music.
- Identify and perform pp in written music.
- Identify and perform cresc. in written music.
- Identify and perform decresc. in written music.

RESOURCES

1. warm-up activities which may or may not include excerpts from the repertoire

UNIT 11: Diction

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Re8.1.E.HSI (Proficient)</td><td rowspan="5">Explain and support interpretations of the expressive intent and meaning of musical works, citing as evidence the treatment of the elements of music, contexts, (when appropriate) the setting of the text, and personal research.</td><td>X</td><td>Content Knowledge</td><td></td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td></td><td>Physical Skill</td><td>Singing everything in an American accent</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="7"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">MU:Cn11.0.E.HSII (Accomplished)</td><td rowspan="5">Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.</td><td></td><td>Content Knowledge</td></tr>
<tr><td>X</td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td></td><td>Physical Skill</td></tr>
<tr><td></td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS

I CAN

- Perform the correct vowels and consonants.
- Make myself understandable to others.

RESOURCES
• selected repertoire/songs, warm-up activities

UNIT 12: Vowel Color & Intonation

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr6.1.
E.HSI
(Proficient)</td><td rowspan="5">a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres.</td><td></td><td>Content Knowledge</td><td>Larynx, pharynx, soft palette placement, mask, resonance</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>That pop stars sing correctly</td></tr>
<tr><td></td><td>Product Development</td><td>PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT</td></tr>
<tr><td></td><td>Learning Behavior</td><td>Breathing technique</td></tr>
</table>

LEARNING TARGETS

I CAN

- Shape my vocal tract appropriately.
- Identify muscles and spaces that affect the vowel color.
- Adjust tongue position for each of the singing vowels (ah, eh, ee, oh, oo)
- Adjust soft palette position for each of the singing vowels (ah, eh, ee, oh, oo)
- Place vowel sounds into the mask

RESOURCES

- selected repertoire/songs, warm-up activities

UNIT 13: Meaning & Interpretation

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr6.1.E.HSII (Accomplished)	a. Demonstrate mastery of the technical demands and an understanding of expressive qualities of the music in prepared and improvised performances of a varied repertoire representing diverse cultures, styles, genres, and historical periods. b. Demonstrate an understanding of intent as a means for connecting with an audience through prepared and improvised performances.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	Bringing in prior knowledge of a song's meaning
			Product Development	
			Learning Behavior	
MU:Re9.1.E.HSI (Proficient)	Evaluate works and performances based on personally- or collaboratively-developed criteria, including analysis of the structure and context.		Content Knowledge	
		X	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
			Physical Skill	
			Product Development	
			Learning Behavior	

LEARNING TARGETS
I CAN ● Understand the meaning of the text. ● Understand the context of the text. ● Sing so others can understand the text. ● Convey the meaning of the song using expression and body language.

RESOURCES
● selected repertoire/songs, peer input, poetry analysis

UNIT 14: Balance

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.1. E.HSII (Accomplished)	a. Develop and apply criteria to select a varied repertoire to study and perform based on an understanding of theoretical and structural characteristics and expressive challenges in the music, the technical skill of the individual or ensemble, and the purpose and context of the performance.	X	Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	I can sing the right notes and it's right - but it needs to blend within the group
			Product Development	
			Learning Behavior	

LEARNING TARGETS

Lesson Targets: I CAN

- Listen to the overall volume levels of each part.
- Adjust my personal volume level to match others.

RESOURCES

- modeling (video of other groups, recording of our group)

UNIT 15: Blend

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.1.E.HSII (Accomplished)	a. Develop and apply criteria to select a varied repertoire to study and perform based on an understanding of theoretical and structural characteristics and expressive challenges in the music, the technical skill of the individual or ensemble, and the purpose and context of the performance.	X	Content Knowledge	Vowel color and intonation
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	"Ah" sound is the same
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Listen to vowel colors of others.
- Match vowel colors to others.

RESOURCES

- modeling (video of other groups, recording of our group)

Bristol Public Schools

Office of Teaching & Learning

Department	Music
Department Philosophy	The visual and performing arts are critical in the development of every child. In a diverse and ever changing society, the visual and performing arts are integral in the consistency, appreciation, and creativity of tomorrow's leaders. The fine arts are a universal language, allowing students to learn unique skills and means of expression that contributes back to our society. We believe visual and performing arts create lifelong learners harnessed with empathy and skills necessary to understand our past, present and future world.
Course	Chorus (BC & BE), Vocal Ensemble Fall (BAIMS), Vocal Ensemble Spring (BAIMS)
Course Description for Program of Studies	In this course, students will learn how to sing in an ensemble where they blend their voices with others. Students will learn through varied repertoire (song selection) techniques that will lead to successful group performances.
Grade Level	9-12
Pre-requisites	None
Credit (if applicable)	1.0 (BC & BE), .5/.5 (BAIMS)

P indicates standard will be a priority for the unit; **S** indicates a supporting standard

District Learning Expectations and Standards	Posture / Breath	Articulation	Phrasing	Pitch / Rhythm	Key Signature	Time Signature	Road Map Symbols	Solfege	Conducting Gestures	Dynamics	Diction	Vowel Color / Intonation	Meaning / Interpretation	Balance	Blending
Creating															
MU:Cr1.1 Generate and conceptualize artistic ideas and work.															
MU:Cr2.1 Organize and develop artistic ideas and work.													S		
MU:Cr3.1 Refine and complete artistic work.															
Performing															

MU:Pr4.1 Select, analyze and interpret artistic work for presentation.				P	P	P	P	P						P	P
MU:Pr5.1 Develop and refine artistic techniques and work for presentation.															
MU:Pr6.1 Convey meaning through the presentation of artistic work.	P	P	P						P	P		P	S		
Responding															
MU:Re7.1 Perceive and analyze artistic work.										S					
MU:Re8.1 Interpret intent and meaning in artistic work.			S						S		P				
MU:Re9.1 Apply criteria to evaluate artistic work.													P		
Connecting															
MU:Cn10.0 Synthesize and relate knowledge and personal experiences to make art.													S		
MU:Cn11.1 Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.											S				

UNIT ESSENTIAL QUESTIONS
● When is a performance judged ready to present? How do context and the manner in which the musical work is presented influence the audience response? ● How do we discern the musical creators' and performers' expressive intent? ● How does understanding the structure and context of musical works inform performance? ● How do the other arts, other disciplines, contexts and daily life inform creating, performing, and responding to music? ● How do we judge the quality of musical work(s) and performance(s)? ● How do performers select repertoire?
UNIT ENDURING UNDERSTANDING
● Musicians judge performance based on criteria that vary across time, place, and cultures. The context and how a work is presented influence the audience response ● Through their use of elements and structures of music, creators and performers provide clues to their expressive intent. ● Analyzing creators' context and how they manipulate elements of music provides insight into their intent and informs performance. ● Understanding connections to varied contexts and daily life enhances musicians' creating, performing, and responding. ● The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria. ● Performers' interest in and knowledge of musical works, understanding of their own technical skill, and the context for a performance influence the selection of repertoire.

UNIT 1:Posture and Breath Support

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr6.1. E.HSI (Proficient)	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres. b. Demonstrate an understanding of expressive intent by connecting with an audience through prepared and improvised performances.		Content Knowledge	Thorax (intercostal muscles), diaphragm
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	All breathing is from the diaphragm
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Stand or sit using proper posture.
- Identify muscle groups used in singing.
- Prepare my body for the physical act of singing.

RESOURCES

- ENT diagram, thorax diagram

UNIT 2: Articulation

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr6.1. E.HSI (Proficient)	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres. b. Demonstrate an understanding of expressive intent by connecting with an audience through prepared and improvised performances.		Content Knowledge	Legato, staccato, accent
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
		X	Physical Skill	Should have previous exposure in middle school and refined in high school
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Identify staccato, accent, legato within my music.
- Perform staccato, accent, legato.
- Explain and understand why staccato, accent, and legato are used within selected repertoire

RESOURCES

- musical examples using repertoire

UNIT 3: Phrasing

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr6.1.E.HSII (Accomplished)</td><td rowspan="5">a. Demonstrate mastery of the technical demands and an understanding of expressive qualities of the music in prepared and improvised performances of a varied repertoire representing diverse cultures, styles, genres, and historical periods.

b. Demonstrate an understanding of intent as a means for connecting with an audience through prepared and improvised performances.</td><td></td><td>Content Knowledge</td><td>Phrasing</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>All notes are monodynamic</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="7"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">MU:Re8.1.E.HSI (Proficient)</td><td rowspan="5">Explain and support interpretations of the expressive intent and meaning of musical works, citing as evidence the treatment of the elements of music, contexts, (when appropriate) the setting of the text, and personal research.</td><td>X</td><td>Content Knowledge</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td></td><td>Physical Skill</td></tr>
<tr><td></td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS
I CAN: ● Recognize the natural rise and fall of a vocal line. ● Find the word that represents the apex (peak) of the phrase. ● Sing a vocal line with direction and meaning.

RESOURCES
Use examples from repertoire and/or lyrics

<table>
<tr><th colspan="5">UNIT 4: Pitch & Rhythm</th></tr>
<tr><th colspan="5">Vocal Awareness/Technique</th></tr>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr4.2. E.HSI (Proficient)</td><td rowspan="5">a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.</td><td>X</td><td>Content Knowledge</td><td>• treble and bass clef
• 16th notes, whole notes, dotted notes</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>What standard notation is</td></tr>
<tr><td></td><td>Product Development</td><td>PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT</td></tr>
<tr><td></td><td>Learning Behavior</td><td>Quarter and eighth notes</td></tr>
</table>

LEARNING TARGETS

I CAN

- Read standards notes and perform them. (notes on the treble and bass clef)
- Identify written notes; their pitch and duration. (16th notes to whole notes, and dotted notes)
- Sing correct pitch and duration as indicated by the music.

RESOURCES

- sight reading textbook, website

UNIT 5: Key Signatures

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.2. E.HSI (Proficient)	a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.	X	Content Knowledge	solfège, key signature, and how sharps and flats affect the "do"
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	That "do" is fixed
			Product Development	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
			Learning Behavior	Basic solfège scale

LEARNING TARGETS

I CAN

- Find and sing the 'do' note of C in written music.
- Find and sing the 'do' note of G in written music.
- Find and sing the 'do' note of F in written music.
- Find and sing the 'do' note of D in written music.
- Find and sing the 'do' note of Bb in written music.
- Find and sing the 'do' note of A in written music.
- Find and sing the 'do' note of Eb in written music.

RESOURCES

- sight reading textbook, website/software

UNIT 6:Time Signatures

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.2. E.HSI (Proficient)	a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.	X	Content Knowledge	Compound and simple meter
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	That 6/8 and 3/4 are the same meter
			Product Development	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
			Learning Behavior	Ability to keep a steady beat

LEARNING TARGETS

I CAN

- Identify the difference between compound and simple meters. (2/4, 2/2, 3/4, 3/8, 4/4, 6/8, 6/4, 9/8, 12/8)
- Perform simple and compound meters and know where each of the beats are.
- Associate beats with conductor’s gesture.

RESOURCES

- sight reading textbook, website/software

UNIT 7: Road Map Symbols

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.2. E.HSI (Proficient)	a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.	X	Content Knowledge	• repeat signs, CODA, DS, and first/second endings
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	That you do not need to go back to the beginning when there is a repeat Read/sing through first and second ending (forgetting to repeat and jump to 2nd ending)
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Identify repeat signs, CODA, DS, and first/second endings
- Follow the score returning to the correct measure with the road map symbols.

RESOURCES

- sight reading textbook, website/software

UNIT 8: Solfège

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr4.2. E.HSI (Proficient)	a. Demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances.	X	Content Knowledge	solfège
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
		X	Physical Skill	Exposure to solfège
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Sing a scale using solfège syllables.
- Jump to any scale degree (interval) from do.
- Identify ‘do’ in the key signature of the musical passage.
- Sing musical passages with solfège syllables.

RESOURCES

- sight reading textbook, website/software

UNIT 9: Conducting Gestures

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr6.1. E.HSI (Proficient)</td><td rowspan="5">a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres.</td><td></td><td>Content Knowledge</td><td>Conducting, upbeat and downbeat</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>Forgetting to look at the conductor to know when and how to sing/articulate</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="7"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">MU:Re8.1. E.HSI (Proficient)</td><td rowspan="5">Explain and support interpretations of the expressive intent and meaning of musical works, citing as evidence the treatment of the elements of music, contexts, (when appropriate) the setting of the text, and personal research.</td><td>X</td><td>Content Knowledge</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td></td><td>Physical Skill</td></tr>
<tr><td></td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS

I CAN

- Start and end music phrases together with others.
- Follow directions/gestures for appropriate synchronization.
- Associate beats with conductor’s gesture.
- Prepare and perform for upbeats and downbeats

RESOURCES
• teacher modeling, peer

UNIT 10: Dynamics

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Re7.2. E.HSI (Proficient)	Explain how the analysis of passages and understanding the way the elements of music are manipulated inform the response to music.		Content Knowledge	Dynamics ranging from pp-ff and sfz
		X	Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
			Physical Skill	Not vary the dynamics enough
			Product Development	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
			Learning Behavior	Ability to sing at different volumes
MU:Pr6.1. E.HSI (Proficient)	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres. b. Demonstrate an understanding of expressive intent by connecting with an audience through prepared and improvised performances.		Content Knowledge	
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	
		X	Physical Skill	
			Product Development	
			Learning Behavior	

LEARNING TARGETS

I CAN

- Identify and perform ff in written music.
- Identify and perform f in written music.
- Identify and perform mf in written music.
- Identify and perform mp in written music.
- Identify and perform p in written music.
- Identify and perform pp in written music.
- Identify and perform sfz in written music.

RESOURCES

1. warm-up activities which may or may not include excerpts from the repertoire

<table>
<tr><th colspan="5">UNIT 11: Diction</th></tr>
<tr><th colspan="5">Vocal Awareness/Technique</th></tr>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Re8.1.E.HSI (Proficient)</td><td rowspan="5">Explain and support interpretations of the expressive intent and meaning of musical works, citing as evidence the treatment of the elements of music, contexts, (when appropriate) the setting of the text, and personal research.</td><td>X</td><td>Content Knowledge</td><td></td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><th>COMMON MISCONCEPTIONS</th></tr>
<tr><td></td><td>Physical Skill</td><td>Singing everything in an American accent</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="7"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">MU:Cn11.0.E.HSII (Accomplished)</td><td rowspan="5">Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.</td><td></td><td>Content Knowledge</td></tr>
<tr><td>X</td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td></td><td>Physical Skill</td></tr>
<tr><td></td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS

I CAN

- Perform the correct vowels and consonants.
- Make myself understandable to others.

RESOURCES
• selected repertoire/songs, warm-up activities

UNIT 12: Vowel Color & Intonation

Vocal Awareness/Technique

Standard		Type of Standard		Concepts and Disciplinary-Specific Vocabulary
MU:Pr6.1. E.HSI (Proficient)	a. Demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, and genres.		Content Knowledge	Larynx, pharynx, soft palette placement, mask, resonance
			Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)	**COMMON MISCONCEPTIONS**
		X	Physical Skill	That pop stars sing correctly
			Product Development	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**
			Learning Behavior	Breathing technique

LEARNING TARGETS

I CAN

- Shape my vocal tract appropriately.
- Identify muscles and spaces that affect the vowel color.
- Adjust tongue position for each of the Italian singing vowels (ah, eh, ee, oh, oo)
- Adjust soft palette position for each of the Italian singing vowels (ah, eh, ee, oh, oo)
- Place vowel sounds into the mask

RESOURCES

- selected repertoire/songs, warm-up activities

UNIT 13: Meaning & Interpretation

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr6.1.E.HSII (Accomplished)</td><td rowspan="5">a. Demonstrate mastery of the technical demands and an understanding of expressive qualities of the music in prepared and improvised performances of a varied repertoire representing diverse cultures, styles, genres, and historical periods.

b. Demonstrate an understanding of intent as a means for connecting with an audience through prepared and improvised performances.</td><td></td><td>Content Knowledge</td><td></td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>Bringing in prior knowledge of a song’s meaning</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="7"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
<tr><td rowspan="5">MU:Re9.1.E.HSI (Proficient)</td><td rowspan="5">Evaluate works and performances based on personally- or collaboratively-developed criteria, including analysis of the structure and context.</td><td></td><td>Content Knowledge</td></tr>
<tr><td>X</td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td></tr>
<tr><td></td><td>Physical Skill</td></tr>
<tr><td></td><td>Product Development</td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS

I CAN

- Understand the meaning of the text.
- Understand the context of the text.
- Sing so others can understand the text.
- Convey the meaning of the song using expression and body language.

RESOURCES

- selected repertoire/songs, peer input, poetry analysis

UNIT 14: Balance

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr4.1.E.HSII (Accomplished)</td><td rowspan="5">a. Develop and apply criteria to select a varied repertoire to study and perform based on an understanding of theoretical and structural characteristics and expressive challenges in the music, the technical skill of the individual or ensemble, and the purpose and context of the performance.</td><td>X</td><td>Content Knowledge</td><td></td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>I can sing the right notes and it’s right - but it needs to blend within the group</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="2"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS

Lesson Targets: I CAN

- Listen to the overall volume levels of each part.
- Adjust my personal volume level to match others.

RESOURCES

- modeling (video of other groups, recording of our group)

UNIT 15: Blend

Vocal Awareness/Technique

<table>
<tr><th colspan="2">Standard</th><th colspan="2">Type of Standard</th><th>Concepts and Disciplinary-Specific Vocabulary</th></tr>
<tr><td rowspan="5">MU:Pr4.1.E.HSII (Accomplished)</td><td rowspan="5">a. Develop and apply criteria to select a varied repertoire to study and perform based on an understanding of theoretical and structural characteristics and expressive challenges in the music, the technical skill of the individual or ensemble, and the purpose and context of the performance.</td><td>X</td><td>Content Knowledge</td><td>Vowel color and intonation</td></tr>
<tr><td></td><td>Skill (Problem-Solving, Writing, Speaking, Listening, Reasoning)</td><td>COMMON MISCONCEPTIONS</td></tr>
<tr><td>X</td><td>Physical Skill</td><td>“Ah” sound is the same</td></tr>
<tr><td></td><td>Product Development</td><td rowspan="2"></td></tr>
<tr><td></td><td>Learning Behavior</td></tr>
</table>

LEARNING TARGETS

I CAN

- Listen to vowel colors of others.
- Match vowel colors to others.

RESOURCES

- modeling (video of other groups, recording of our group)

Bristol Public Schools

Office of Teaching & Learning

Department	Career and Technical Education (CTE)
Department Philosophy	Bristol schools believe in providing students with rich opportunities to ensure career and college readiness. These opportunities include development of skills, practices, and exploration within several career clusters and pathways. Each CTE curriculum enables students to acquire and strengthen leadership, literacy, numeracy, decision-making, computer skills, and technology skills through 11 career clusters and pathways: (1) architecture and construction, (2) business management, (3) education and training, (4) finance, (5) health science, (6) hospitality and tourism, (7) information technology, (8) manufacturing, (9) marketing, (10) transportation, distribution and logistics, and (11) STEM. Each career cluster provides students with access to hand-on experiences that will allow for students development of skills that will support successful transition to their post secondary experiences.
Course	Digital Media Production (2022)
Course Description for Program of Studies	The first level course which focuses on using professional video and photo cameras, and the software used to edit them. Students make their own videos similar to what content creators post on YouTube and other video services.
Grade Level	9-12
Pre-requisites	None
Credit (if applicable)	0.5

Resource-CSDE

UNIT 1: Introduction to Digital Media Concepts

UNWRAPPED STANDARDS			
Advance CTE Standard	**Performance Elements**	**Key Concepts/Big Ideas**	**Academic Vocabulary**
ITPC01.13 Consider intellectual property issues when creating Web pages.	ITPC01.13.01 Explain the concept of intellectual property. ITPC01.13.02 Differentiate between copyright and trademarks.	Define the legal concerns of copyrights, ethics, releases, and royalties.	Copyright infringement Royalties Communication Feedback Copyright Trademark Scope Storage
ESS01.01 Complete required training, education, and certification to prepare for employment in a particular career field.	ESS01.01.01 Identify training, education and certification requirements for occupational choice.	Identify various career paths in digital/video production. Identify proper methods of transport and storage for appropriate production and personal equipment.	

UNIT 1: Introduction to Digital Media Concepts

- What are the career opportunities available in this field?
- Why is it important to understand proper equipment handling?
- Why is it important to understand media laws?

CTE Standard	**Learning Targets:** I can	Summative Assessment Strategy	Lesson Progression and Connection to ELA/Math CCSS	Common Learning Experiences and Assessments
ITPC 01.13	• I can identify any legal concerns of copyrights, ethics, releases, and royalties. • I can use legal parameters to make decisions about where, when, and what to film.	X Selected Response (SR) X Constructed Response (CR) ☐ Performance (P) ☐ Observation (O)	**Lesson Progression and Standards Connection:** • Apply understanding of legal and ethical issues related to video as demonstrated in classroom activities	**Mandatory Lessons/Activities:** • *Presentation on the legal concerns of media.*
Pacing:	1-2 days		**CCSS Connections:** • 1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. • 4. Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context, relevant to grades 9-10 texts and topics.	**Assessments:** • *Digital Media research projects assessed via presentation rubric* • *Daily teacher observations of student activities and projects*
ESS01.01	• I can identify and research career opportunities available in the Digital Media field. • I can identify multiple professionals in various career paths within the industry. • I can identify and demonstrate proper methods of transporting and storing equipment. • I can describe the essential components of a media storage facility.	☐ Selected Response (SR) x Constructed Response (CR) x Performance (P) ☐ Observation (O)	**Lesson Progression and Standards Connection:** • Create a research document for careers • Demonstrate understanding of use and storage of equipment through classroom equipment as demonstrated through in class exercises	**Mandatory Lessons/Activities:** • *Presentation on careers related to the field* • *Career research project activity* • *Proper equipment storage task*

	• I can describe the adverse effects of improper storage on media equipment.			
Pacing:	1-2 days		**CCSS Connections:** • 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 complexity band independently and proficiently.	**Assessments:** • *Digital Media research projects assessed via presentation rubric* • *Daily teacher observations of student activities and projects.* • *Student observation of equipment storage and care.*

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
• *Anything on the internet is free and legal to use.* • *You need a person's permission to record them*	• *No prior knowledge needed*	•	• *Independent research of career related opportunities* • *Reflection* • *Making connections in students' daily exposure to created digital content.*

UNIT 2: Fundamental Camera Techniques

UNWRAPPED STANDARDS

Advance CTE Standard	Performance Elements	Key Concepts/Big Ideas	Academic Vocabulary
ESS02.02 Demonstrate use of the concepts, strategies, and systems for obtaining and conveying ideas and information to enhance communication in the workplace.	ESS02.02.02 Record information needed to present a report on a given topic or problem.	● Identify and organize the personnel and equipment you will need to record in the field	White Balance Iris Aperture ISO Shutter Tripod Monopod Auto Focus Manual Focus Audio Peaking Pan Zoom Tilt Dolly Pedestal
ITPC01.03 Design and employ the use of motion graphics to create a visual Web/digital designs	ITPC01.03.02 Create product visual design. ● Apply principles and elements of design ● Apply color theory to select appropriate colors ● Create and/or implement the look and feel of the product. ● Create graphical images and videos. ● Enhance digital communication presentation using a photographic process ● Evaluate visual appeal.	● Identify the important elements of composition/framing ● Identify the use of white balance, iris, aperture, auto and manual focus, audio settings, and levels in camera operations. ● Identify camera movement methods ● Identify camera stabilization methods	

UNIT 2: Fundamental Camera Techniques

- What tools are used in video productions?
- Why is it important to control camera operation concepts when recording?

CTE Standard	**Learning Targets:** I can	Summative Assessment Strategy	Lesson Progression and Connection to ELA/Math CCSS	Common Learning Experiences and Assessments
ESS 02.02	• I can analyze a production event and describe the necessary equipment and personnel. • I can describe the roles of each person and piece of equipment in the production.	X Selected Response (SR) X Constructed Response (CR) Performance (P) Observation (O)	**Lesson Progression and Standards Connection:** • *Written camera operation procedures documents.*	**Mandatory Lessons/Activities:** • *Visual presentation of standard equipment and personnel to bring to the field*
Pacing:	5-6 days		**CCSS Connections:** • 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently	**Assessments:** • *Assess students on technical vernacular using tests and or quizzes.* • *Daily teacher observations of student activities and projects*
ITPC 01.03	• I can apply white balance, iris, aperture, auto and manual focus, audio settings, and levels in camera operations. • I can describe and use camera movements, stabilization, and composition. • I can transfer my knowledge of camera settings to new and different environments.	Selected Response (SR) x Constructed Response (CR) x Performance (P) Observation (O)	**Lesson Progression and Standards Connection:** • *Video projects requiring camera stabilization and movement theories.* • *Basic field video to demonstrate understanding of equipment use.*	**Mandatory Lessons/Activities:** • *Presentation of the different camera operations, paired with simulation and camera work.* • *Lesson-Live demonstration of the different camera operations and how they work and can be adjusted.*
Pacing:	5-6 days		**CCSS Connections:** • 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently	**Assessments:** • *Assess students on technical vernacular using tests and or quizzes.* • *Daily teacher observations of student activities and projects*

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
● *You can put the camera in auto mode and it will record great footage no matter the setting.* ● *Operating a video camera is only for professionals.*	● *There is no prior knowledge needed*	●	● *Independent opportunities to record live events* ● *Reflection* ● *Making connections in students' daily exposure to created digital content.*

UNIT 3: Basic Editing

UNWRAPPED STANDARDS

Advance CTE Standard	Performance Elements	Key Concepts/Big Ideas	Academic Vocabulary
ITPC 01.09 Create and implement a digital communication product to meet customer needs.	ITPC01.09.04 Create product visual design ● Apply principles and elements of design. ● Apply color theory to select appropriate colors. ● Create and/or implement the look and feel of the product. ● Create graphical images and videos. ● Apply knowledge of typography. ● Enhance digital communication presentation using a photographic process. ● Alter digitized images using an image manipulation program. ● Alter digitized video using a video manipulation program. ● Evaluate visual appeal. ITPC01.09.05 Produce content for a digital communication product. ● Produce or acquire graphics content. ● Produce or acquire motion graphics content. ● Produce or acquire audio content. ● Produce or acquire video content I	● Create graphics and titles appropriate to the project. ● Describe terminology specific to nonlinear video editing ● Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context, relevant to grades 9-10 texts and topics.	Frame Key Frame Transfer Import Export Chroma Key Clip Codec Cut Composting Compression Digital Video Drop-Frame Drop-Out Final Cut FPS Frame Rate Image Stabilizer JPEG MP4 J-Cut Noise Reduction Raster Rough Cut Ripple-Edit
ITPC01.08 Employ knowledge of Web design, programming, and administration to develop and maintain Web applications.	ITPC01.08.01 Implement functional design criteria. ● Identify, utilize and create reusable components.	● Apply Digital file management and organization ● Describe digital file management and organization	

<table>
<tr><th colspan="5">UNIT 3: Basic Editing</th></tr>
<tr><td colspan="5">● How can video editing impact the effectiveness of a video message?
● Why is digital file management essential in creating videos?</td></tr>
<tr><th>CTE Standard</th><th>Learning Targets: I can</th><th>Summative Assessment Strategy</th><th>Lesson Progression and Connection to ELA/Math CCSS</th><th>Common Learning Experiences and Assessments</th></tr>
<tr><td>ITPC 01.09</td><td>● I can create graphics and titles appropriate to the video project and the intended theme.
● I can describe terminology specific to nonlinear video editing.
● I can describe and utilize digital file management and organization to support project workflow.</td><td rowspan="2"><table><tr><td></td><td>Selected Response (SR)</td></tr><tr><td>X</td><td>Constructed Response (CR)</td></tr><tr><td>X</td><td>Performance (P)</td></tr><tr><td></td><td>Observation (O)</td></tr></table></td><td>Lesson Progression and Standards Connection:
● Editing a basic video demonstrating ability to create graphics and titles.
● Video projects requiring the use of video editing skills</td><td>Mandatory Lessons/Activities:
● Live demonstration of software
● Video project</td></tr>
<tr><td>Pacing:</td><td>10-14 days</td><td>CCSS Connections:
● 1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
● 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 complexity band independently and proficiently.</td><td>Assessments:
● Unit quizzes and/or tests on key concepts and standards
● Daily teacher observations of student activities and projects</td></tr>
<tr><td>ITPC 01.08</td><td>● I can manage and organize the digital files for the project.
● I can identify symbols used in video editing software and purpose/meaning/usefulness.
● I can use the tools in video editing software to create digital content.</td><td rowspan="2"><table><tr><td></td><td>Selected Response (SR)</td></tr><tr><td>x</td><td>Constructed Response (CR)</td></tr><tr><td>x</td><td>Performance (P)</td></tr><tr><td></td><td>Observation (O)</td></tr></table></td><td>Lesson Progression and Standards Connection:
● Managing digital file storage and organization.</td><td>Mandatory Lessons/Activities:
● Live demonstration of software
● Video project</td></tr>
<tr><td>Pacing:</td><td>10-14 days</td><td>CCSS Connections:
● 4. Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context, relevant to grades 9-10 texts and topics.</td><td>Assessments:
● Unit quizzes and/or tests on key concepts and standards
● Daily teacher observations of student activities and projects.</td></tr>
</table>

			• 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 complexity band independently and proficiently.	

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
• *We have no experience editing videos so there's no point starting.* • *Editing will be quick and easy.* • *We can save it in post-production*	• *No prior knowledge necessary.*	•	• *Independent opportunities to edit footage* • *Reflection* • *Making connections in students' daily exposure to created digital content.*

UNIT 4: Phases of Digital Media Production

UNWRAPPED STANDARDS

Advance CTE Standard	Performance Elements	Key Concepts/Big Ideas	Academic Vocabulary
ITPC01.07 Demonstrate the effective use of tools for digital communication production, development and project management to complete web/digital communication projects.	ITPC01.07.01 Select and use appropriate software tools ● Demonstrate proficiency in the use of digital imaging, digital video techniques, and equipment. ● Demonstrate knowledge of available graphics, video, motion graphics, web software programs ● Demonstrate knowledge of available project management and collaborative tools ● Demonstrate knowledge of integrated development environments(such as Visual Studio, Dreamweaver, Flash, Waterproof, etc). ● Manipulate images, video, and motion graphics. ● Demonstrate knowledge of the basic principles of motion graphics.	● Describe the pre-production, production, and post production documentation processes. ● Describe Lighting equipment and theory with regards to video productions ● Apply Lighting equipment and theory with regards to video productions ● Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context, relevant to grades 910 texts and topics.	Pre-Production Production Post-Production StoryBoard B-Roll Edit Import Export MP4 MP3 LED Studio 3-point Lighting Back Light Main Light Light Board
ITPC01.06 Prepare digital communication product specifications to communicate specifications with various audiences.	ITPC01.06.01 Prepare functional specifications. ● Develop flowchart/navigational blueprints. ● Develop storyboards. ● Determine delivery platform(s). ● Design system architecture. ● Design user interface. ● Design navigational schema ITPC01.06.03 Create final project plan. ● Identify and obtain tools and resources to do the job. ● Identify and evaluate risks. ● Develop a detailed task list. ● Identify critical milestones. ● Identify interdependencies.	● Identify who your audience is, and what you want them to do or feel after viewing your video. ● Describe the process used for concept development ● Plan Lighting equipment and theory with regards to video productions ● Identify pre-production, production, and post-production documentation processes. ● Evaluate a shooting location for video production technical needs.	

<table>
<tr><th colspan="5">UNIT 4: Phases of Digital Media Production</th></tr>
<tr><td colspan="5">● Why are the three phases of video production important?
● How do you properly light a shot for video production?</td></tr>
<tr><th>CTE Standard</th><th>Learning Targets: I can</th><th>Summative Assessment Strategy</th><th>Lesson Progression and Connection to ELA/Math CCSS</th><th>Common Learning Experiences and Assessments</th></tr>
<tr><td>ITPC 01.07</td><td>● I can describe the pre-production, production, and post production documentation processes.
● I can describe lighting equipment and theory with regards to video productions.
● I can apply lighting equipment and theory with regards to video productions.
● I can explain the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context (ex: three point lighting, key light, back light, fill light)</td><td rowspan="2"><table><tr><td></td><td>Selected Response (SR)</td></tr><tr><td>X</td><td>Constructed Response (CR)</td></tr><tr><td>X</td><td>Performance (P)</td></tr><tr><td></td><td>Observation (O)</td></tr></table></td><td>Lesson Progression and Standards Connection:
● Video projects utilizing all three phases of video production.
● Manipulating lighting equipment to appropriately light a shot.</td><td>Mandatory Lessons/Activities:
● Presentation on basic lighting setup and the process for all three phases of production
● Live demonstration of lighting equipment
● Full digital media project starting with the Pre-Production stage</td></tr>
<tr><td>Pacing:</td><td>7-14 days</td><td>CCSS Connections:
● 1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
● 4. Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context, relevant to grades 9-10 texts and topics.
● 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 complexity band independently and proficiently.</td><td>Assessments:
● Assess students on technical skills using project rubrics and documents.
● Daily teacher observations of student activities and projects</td></tr>
</table>

ITPC 01.06	• I can identify the intended message and audience for the video production project. • I can describe the process used for concept development. • I can plan lighting equipment and theory with regards to video production. • I can utilize and describe the pre-production, production, and post-production documentation processes. • I can evaluate a shooting location for video production technical needs.	[ ] Selected Response (SR) [x] Constructed Response (CR) [x] Performance (P) [ ] Observation (O)	**Lesson Progression and Standards Connection:** • *Video projects utilizing all three phases of video production.* • *Manipulating lighting equipment to appropriately light a shot.*	**Mandatory Lessons/Activities:** • *Presentation on basic lighting setup and the process for all three phases of production* • *Live demonstration of lighting equipment* • *Full digital media project starting with the Pre-Production stage*
Pacing:	7-14 days		**CCSS Connections:** • 1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. • 4. Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context, relevant to grades 9-10 texts and topics. • 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 complexity band independently and proficiently.	**Assessments:** • *Assess students on technical skills using project rubrics and documents.* • *Daily teacher observations of student activities and projects*

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
• *You can plan the day of the event* • *Everything will go as planned* • *Shoot what you need and that will b enough*	• *Understanding Camera Operation*	•	• *Independent opportunities to edit footage* • *Reflection* • *Making connections in students' daily exposure to created digital content.*

UNIT 5: Digital Media Advanced Editing

UNWRAPPED STANDARDS			
Advance CTE Standard	**Performance Elements**	**Key Concepts/Big Ideas**	**Academic Vocabulary**
ITPC01.07 Demonstrate the effective use of tools for digital communication production, development and project management to complete web/digital communication projects.	ITPC01.07.01 Select and use appropriate software tools. ● Demonstrate proficiency in the use of digital imaging, digital video techniques, and equipment. ● Demonstrate knowledge of available graphics, video, motion graphics, web software programs.	● Edit video using special effects and advanced editing techniques. ● Edit audio elements to support the visual component of video. ● Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context, relevant to grades 910 texts and topics.	Effects Frame Key Frame Transfer Import Export Chroma Key Clip Codec Cut Composting Compression Digital Video Drop-Frame Drop-Out Final Cut FPS Frame Rate Image Stabilizer JPEG MP4 J-Cut Noise Reduction Raster Rough Cut Ripple-Edit Peak Transition Effect Controls Media Exposure Color Correct Essential Graphics
ITPC01.09 Create and implement a digital communication product to meet customer needs.	ITPC01.09.04 Create product visual design ● Apply principles and elements of design. ● Apply color theory to select appropriate colors. ● Create and/or implement the look and feel of the product. ● Create graphical images and videos. ● Apply knowledge of typography. ● Enhance digital communication presentation using a photographic process. ● Alter digitized images using an image manipulation program. ● Alter digitized video using a video manipulation program. ● Evaluate visual appeal. ITPC01.09.05 Produce content for a digital communication product. ● Produce or acquire graphics content. ● Produce or acquire motion graphics content. ● Produce or acquire audio content. ● Produce or acquire video content	● Audio elements of a project contribute significantly to the impact of the video. ● Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. ● Special effects can make a video more effective and impactful	

ITPC01.08 Employ knowledge of Web design, programming, and administration to develop and maintain Web applications.	ITPC01.08.01 Implement functional design criteria. ● Identify, utilize and create reusable components.	● Apply Digital file management and organization ● Describe digital file management and organization	

UNIT 5: ESSENTIAL QUESTIONS

- How do advanced editing techniques support the development of the production theme?
- Why are special effects used in video productions?
- Why is it important to consider audio elements when recording a shot?

CTE Standard	Learning Targets: I can	Summative Assessment Strategy	Lesson Progression and Connection to ELA/Math CCSS	Common Learning Experiences and Assessments
ITPC01.07	● I can edit videos using special effects and advanced editing techniques. ● I can edit audio elements to support the visual component of video. ● I can determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context.	[ ] Selected Response (SR) [x] Constructed Response (CR) [X] Performance (P) [ ] Observation (O)	**Lesson Progression and Standards Connection:** ● *Create short video projects to demonstrate special effects and advanced editing techniques.* ● *Utilize various audio equipment to support the visual component of video.*	**Mandatory Lessons/Activities:** ● *Model various special effect techniques, then have students engage in performance based tasks.* ● *Engage students in special effect projects*
Pacing:	7-14 days		**CCSS Connections:** ● 1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.	**Assessments:** ● *Project rubrics and documents on technical skills and concepts.* ● *Daily teacher observations of student activities and projects*
ITPC01.09	● I can manage and manipulate the audio elements of a project. ● I can use special effects in a video to make a video more effective and impactful.	[ ] Selected Response (SR) [x] Constructed Response	**Lesson Progression and Standards Connection:** ● *Learn antiquated and current special effects; how they are applied*	***Mandatory Lessons/Activities:*** ● *Lead classroom discussion and model audio components for video productions.* ● *Engage students in audio related projects*

		(CR) x Performance (P) Observation (O)		• *Model various audio techniques, then have students engage in performance based tasks*
Pacing:	7-14 days		**CCSS Connections:** • *4. Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context, relevant to grades 9-10 texts and topics.*	**Assessments:** • Project rubrics and documents on technical skills and concepts. • Daily teacher observations of student activities and projects
ITPC01.08	• I can apply, manage, and organize digital files when editing a video	Selected Response x Constructed Response x Performance (P) Observation	**Lesson Progression and Standards Connection:** • *Learn and apply digital file management skills to video project's*	**Mandatory Lessons/Activities:** • *Lead classroom discussion and model file management techniques* • *jEngage students in file management related projects*
Pacing:	7-14 days		**CCSS Connections:** • *10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 complexity band independently and proficiently.*	**Assessments:** • *Project rubrics and documents on technical skills and concepts.* • *Daily teacher observations of student activities and projects*

ADDITIONAL CONSIDERATIONS			
COMMON MISCONCEPTIONS	**PRIOR KNOWLEDGE NEEDED TO MASTER STANDARDS FOR THIS UNIT**	**ADVANCED STANDARDS FOR STUDENTS WHO HAVE DEMONSTRATED PRIOR MASTERY**	**OPPORTUNITIES FOR STUDENT-DIRECTED LEARNING WITHIN THE UNIT**
• *Editing video is quick and easy* • *Video is more important than audio* • *File management isn't important*	• *Understanding basic editing* • *Understanding basic camera operation*	•	• *Independent opportunities to capture and edit footage* • *Reflection* • *Making connections in students' daily exposure to created digital*

Bristol Public Schools

Office of Teaching & Learning

Department	Career and Technical Education (CTE)
Department Philosophy	Bristol schools believe in providing students with rich opportunities to ensure career and college readiness. These opportunities include development of skills, practices, and exploration within several career clusters and pathways. Each CTE curriculum enables students to acquire and strengthen leadership, literacy, numeracy, decision-making, computer skills, and technology skills through 11 career clusters and pathways: (1) architecture and construction, (2) business management, (3) education and training, (4) finance, (5) health science, (6) hospitality and tourism, (7) information technology, (8) manufacturing, (9) marketing, (10) transportation, distribution and logistics, and (11) STEM. Each career cluster provides students with access to hand-on experiences that will allow for students development of skills that will support successful transition to their post secondary experiences.
Course	Advanced Digital Media Production (2022)
Course Description for Program of Studies	The advanced digital production course stresses the importance of teamwork. Through a variety of production projects, students will experience the duties of key positions within a television studio. From pre-production to post-production, students will participate in a variety of production roles including: script writer, storyboard designer, performer, anchor, camera operator, floor manager, audio director, teleprompter, technical director, assistant technical director, graphic designer, editor, director, and producer. This advanced course will focus on both studio and field production techniques. Students will have an opportunity to develop TV production skills and post-production techniques. Students will be expected to assist with the TV production of community and school events. Field assignments may require providing your own transportation. This class incorporates current technology used in Television Production Studios.
Grade Level	9-12
Pre-requisites	Digital Media Production (2022)
Credit (if applicable)	0.5

Table of Contents

Module 1: Introduction to Television Productions

UNWRAPPED STANDARDS

Advance CTE Standard	Performance Elements	Key Concepts/Big Ideas	Academic Vocabulary
ITPC01.04 Gather and analyze digital communication customer requirements to best meet consumer needs.	ITPC01.04.01 Gather data to identify customer requirements. ● Determine client's needs and expected outcomes. ITPC01.04.02 Collect requirements data from customers and competing websites. ● Determine the target audience	● The Television Production industry requires planning. ● There are many career paths in the video industry. ● Every video needs to be carefully crafted to meet the needs of clients.	Audience Contract Purpose Client Scope Salary Corporate Advertisement Public Service Announcement Fiction Non-Fiction Documentary
ESS01.01 Complete required training, education, and certification to prepare for employment in a particular career field.	ESS01.01.01 Identify training, education and certification requirements for occupational choice.	● The Television Production Industry is extremely competitive, and you have to be willing to work your way up the ladder.	

Module 1: Introduction to Television Productions

- What are career opportunities in the Television Production Industry?
- Why is it important to determine who the target audience will be for a television production?

CTE Standard	**Learning Targets:** I can	Summative Assessment Strategy	Lesson Progression and Connection to ELA/Math CCSS	Common Learning Experiences and Assessments
ITPC 01.04	• I can determine the target audience for a product. • I can analyze television programming schedules to identify/predict targeted audiences.	[ ] Selected Response (SR) [x] Constructed Response (CR) [ ] Performance (P) [ ] Observation (O)	**Lesson Progression and Standards Connection:** • *Determine the target audiences for various Television productions.* • *Review Television programming schedules to evaluate target audiences*	**Mandatory Lessons/Activities:** • *Co-regulated class discussion on the purpose of various media and the target audiences.*
Pacing:	1-2 days		**CCSS Connections:** • By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently	**Assessments:** • *Reflection* • *Measure daily understandings via teacher observation of student activities and projects*
ESS01.01	• I can investigate the various careers in Television and Media Production. • I can research a career of interest related to television/media production.	[ ] Selected Response (SR) [x] Constructed Response (CR) [ ] Performance (P) [ ] Observation (O)	**Lesson Progression and Standards Connection:** • *Create a research document for careers in Television Production*	**Mandatory Lessons/Activities:** • *Research potential job opportunities using online resources*
Pacing:	2 days		**CCSS Connections:** • By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently	**Assessments:** • *Measure student understanding based on presented research projects.* • *Reflection* • *Measure daily understandings via teacher observation of student activities and projects*

<table>
<tr><th colspan="4">Module 2: Live Video Switcher and Streaming Applications</th></tr>
<tr><th colspan="4">UNWRAPPED STANDARDS</th></tr>
<tr><th>Advance CTE Standard</th><th>Performance Elements</th><th>Key Concepts/Big Ideas</th><th>Academic Vocabulary</th></tr>
<tr><td>ITPC01.03 Design and employ the use of motion graphics to create a visual web/digital designs.</td><td>ITPC01.03.02 Create product visual design.
● Create graphical images and videos.
● Apply knowledge of typography.
● Alter digitized images using an image manipulation program.
● Alter digitized video using a video manipulation program.</td><td>● Special effects alter the reality of the viewer.
● Digital images and text can greatly enhance your video.</td><td rowspan="3">Stream
Live
Host
Encoder
Bandwidth
Upload
Download
Bitrate
Scene
Input
Layer
Stream Key
Public / Private / Unlisted
Channel
Preview
Program
Transition
Crop
Strike</td></tr>
<tr><td>ITPC01.07 Demonstrate the effective use of tools for digital communication production, development and project management to complete web/digital communication projects.</td><td>ITPC01.07.01 Select and use appropriate software tools.
● Select and use appropriate software tools.
● Demonstrate knowledge of available graphics, video, motion graphics, web software programs.
● Manipulate images, video, and motion graphics.</td><td>● Split second decisions requiring thorough knowledge of streaming software is required to create a visually appealing production.</td></tr>
<tr><td>ITC 05.03 Employ project management knowledge to oversee IT projects.</td><td>ITC05.03.02 Define scope of work to achieve individual and group goals.
● Identify size and specifics of the task.
● Formulate task sequence.
● Plan multiple tasks simultaneously.
● Identify potential problems.
● Develop contingency plans.</td><td>● Production staff working behind the scenes have to accomplish many small tasks quickly in order to run an event.</td></tr>
</table>

Module 2: Live Video Switcher and Streaming Applications

- What is the sole purpose of the production crew?
- How can you use multiple factors to maximize production value of an event?
- In what ways do special effects contribute to a production?

CTE Standard	**Learning Targets:** I can	Summative Assessment Strategy	Lesson Progression and Connection to ELA/Math CCSS	Common Learning Experiences and Assessments
ITPC01.03	• I can select or create text necessary for production enhancement. • I can select, create, or modify photos, videos and audio for a production. • I can ensure the integrity of the production theme in my creative decisions.	[ ] Selected Response (SR) [ ] Constructed Response (CR) [x] Performance (P) [ ] Observation (O)	**Lesson Progression and Standards Connection:** • *Select and modify multiple types of media to prepare them for production.*	**Mandatory Lessons/Activities:** • *Practice with photo / video editing processes to remove backgrounds, save various types of media, and move files from location to location.*
Pacing:	2 days		**CCSS Connections:** • 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently	**Assessments:** • *In class activities requiring students to prepare various forms of media for production.* • *Measure daily understandings via teacher observation of student activities and projects*
ITPC 01.07	• I can prepare and operate hardware / software combinations for a production recording. • I can prepare and operate hardware / software combinations for a production live stream.	[ ] Selected Response (SR) [ ] Constructed Response (CR) [x] Performance (P) [ ] Observation (O)	**Lesson Progression and Standards Connection:** • *Configure a video switcher to run a recorded production.* • *Configure a computer to run a live streamed production.*	**Mandatory Lessons/Activities:** • *Setup and run multiple productions (live and recorded) where students change roles.*
Pacing:	5-6 days		**CCSS Connections:** • *10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently*	**Assessments:** • *Successful performance of productions*

<table>
<tr><td>ITC 05.03</td><td>

- I can define my roles and responsibilities on the production crew.
- I can explain the connections between the different roles and responsibilities for the members of my production crew.
- I can accomplish my individual tasks in order to help the production crew accomplish the objective.

</td><td rowspan="2">

	Selected Response
x	Constructed Response
	Performance (P)
	Observation

</td><td>

Lesson Progression and Standards Connection:

- *Plan the procedure for the setup and operation of a production.*
- *Prepare multiple live stream productions with rotating roles.*

</td><td>

Mandatory Lessons/Activities:

- *Creation of a list of steps or flowchart to document the actions required by individuals to accomplish collective objectives.*

</td></tr>
<tr><td>Pacing:</td><td>1-2 days</td><td>

CCSS Connections:

- *10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently*

</td><td>

Assessments:

- *List of steps for each role for setup, operation, and strike of an event.*
- *Measure daily understandings via teacher observation of student activities and projects*

</td></tr>
</table>

Module 3: Advanced Audio Operations

UNWRAPPED STANDARDS			
Advance CTE Standard	**Performance Elements**	**Key Concepts/Big Ideas**	**Academic Vocabulary**
ITPC 01.09 Create and implement a digital communication product to meet customer needs.	ITPC01.09.05 Produce content for a digital communication product. ● Produce or acquire audio content.	Audio is an important component of a video production	Acoustics Echo Ambience Amp Gain Pickup Pattern Level XLR Phantom Power Mixer Condenser Microphone Lavalier Lapel Windscreen Pop Filter Equalizer Pan Mono Stereo Mute

<table>
<tr><th colspan="5">Module 3: Advanced Audio Operations</th></tr>
<tr><td colspan="5">How can audio improve or diminish the quality of a production?
Why is audio an important element of a quality production?
How does the integration of audio equipment support the final product?</td></tr>
<tr><th>CTE Standard</th><th>Learning Targets: I can</th><th>Summative Assessment Strategy</th><th>Lesson Progression and Connection to ELA/Math CCSS</th><th>Common Learning Experiences and Assessments</th></tr>
<tr><td>ITPC01.09</td><td>I can identify tools and equipment needed for a specific production.
I can describe the functionality and integration of audio equipment (i.e. microphones, soundboards, speakers…) to achieve the desired effect.
I can operate audio equipment for a live or recorded production.</td><td rowspan="2"><table><tr><td>x</td><td>Selected Response (SR)</td></tr><tr><td>x</td><td>Constructed Response (CR)</td></tr><tr><td>x</td><td>Performance (P)</td></tr><tr><td></td><td>Observation (O)</td></tr></table></td><td>Lesson Progression and Standards Connection:
Students will use multiple components of audio technologies as they integrate into different systems.</td><td>Mandatory Lessons/Activities:
Recording Productions
Live Productions</td></tr>
<tr><td>Pacing:</td><td>3-4 Classes</td><td>CCSS Connections:
10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently</td><td>Assessments:
Performance assessments utilizing audio technologies in multiple applications.
Measure daily understandings via teacher observation of student activities and projects</td></tr>
</table>

Module 4: Advanced Camera Techniques

UNWRAPPED STANDARDS

Advance CTE Standard	Performance Elements	Key Concepts/Big Ideas	Academic Vocabulary
ITPC01.06 Prepare digital communication product specifications to communicate specifications with various audiences.	ITPC01.06.03 Create final project plan. ● Identify and obtain tools and resources to do the job. ● Develop a detailed task list. ● Identify interdependencies.	● Camera settings and camera movement allow for professional video	ISO White Balance Aperture Color profile Exposure Depth of field ND filter Zebra Gimbal Tripod Monopod SLider Boom Crane Bitrate Lens

<table>
<tr><th colspan="5">Module 4: Advanced Camera Techniques</th></tr>
<tr><td colspan="5">● Why is it important for a camera operator to manually control and adjust video camera functions?
● Why is it important for a camera operator to control how the camera moves?</td></tr>
<tr><th>CTE Standard</th><th>Learning Targets: I can</th><th>Summative Assessment Strategy</th><th>Lesson Progression and Connection to ELA/Math CCSS</th><th>Common Learning Experiences and Assessments</th></tr>
<tr><td>ITPC01.06.03</td><td>● I can control the manual camera functions of digital cameras.
● I can make creative decisions for the production by self-selecting camera settings to match the intended production theme.</td><td rowspan="2">x | Selected Response (SR)
x | Constructed Response (CR)
x | Performance (P)
   | Observation (O)</td><td>Lesson Progression and Standards Connection:
● Students will learn how to intentionally configure manual camera settings to create a specific look or feel.</td><td>Mandatory Lessons/Activities:
● In class demonstration of equipment followed by individual or small group practice opportunities.</td></tr>
<tr><td>Pacing:</td><td>2-3 days</td><td>CCSS Connections:
● 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently</td><td>Assessments:
● Performance based assessments may be used in conjunction with written responses.
● Measure daily understandings via teacher observation of student activities and projects</td></tr>
<tr><td>Hyperlink standard code Advance CTE.</td><td>● I can investigate the various lens settings and their impact on the product.
● I can apply lens settings as needed to capture a quality shot.
● I can use lens settings to create the desired effect on the product.</td><td rowspan="2">x | Selected Response (SR)
x | Constructed Response (CR)
x | Performance (P)
   | Observation (O)</td><td>Lesson Progression and Standards Connection:
● Students will learn how different lenses create different effects when recording.</td><td>Mandatory Lessons/Activities:
● Hands on demonstrations paired with online research utilizing various equipment.</td></tr>
<tr><td>Pacing:</td><td>1-2 days</td><td>CCSS Connections:
● 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently</td><td>Assessments:
● Performance based assessments may be used in conjunction with written responses.
● Measure daily understandings via teacher observation of student activities and projects</td></tr>
</table>

Hyperlink standard code Advance CTE.	• I can utilize tripods, monopods, and dollies in a media production. • I can describe how camera movement relates to video experience from the audience perspective.	[ ] Selected Response [ ] Constructed Response [x] Performance (P) [ ] Observation	**Lesson Progression and Standards Connection:** • *Students will learn how different camera movements create a different experience for the audience.*	**Mandatory Lessons/Activities:** • *Hands on demonstrations paired with online research utilizing various equipment.*
Pacing:	1 day		**CCSS Connections:** • *10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently*	**Assessments:** • *Performance based assessments may be used in conjunction with written responses.* • *Measure daily understandings via teacher observation of student activities and projects*

Module 5: Advanced Lighting Operations

UNWRAPPED STANDARDS			
Advance CTE Standard	**Performance Elements**	**Key Concepts/Big Ideas**	**Academic Vocabulary**
ITPC01.06 Prepare digital communication product specifications to communicate specifications with various audiences.	ITPC01.06.03 Create final project plan. ● Identify and obtain tools and resources to do the job. ● Identify and evaluate risks.	● Appropriate amount of light is required when shooting video.	Fresnel LED Incandescent Tungsten Halogen Fluorescent Spotlight Key light Back light Fill light Three point lighting system Back lit Flag Reflector Diffuser Voltage Amperage Ohms CIrcuit DMX Shutter Gel

Module 5: Advanced Lighting Operations

- Why is it important to properly light a stage area for video shoots?
- What are the differences between remote and studio lighting?
- Why is it important to create a lighting plan for a television production?

CTE Standard	**Learning Targets:** I can	**Summative Assessment Strategy**	**Lesson Progression and Connection to ELA/Math CCSS**	**Common Learning Experiences and Assessments**
ITPC 01.06	• I can investigate lighting techniques and their effect on a video production. • I can use lighting technologies and techniques to develop a “feel” of a shot. • I can apply cable safety concepts when setting up a production.	Selected Response (SR) x Constructed Response (CR) x Performance (P) Observation (O)	**Lesson Progression and Standards Connection:** • *Students will explore various lighting technologies as they prepare to light studio sets and recording locations in the field.* • *Students will learn how to lay cables, secure them, and wrap them in ways which will ensure safety and equipment longevity.*	**Mandatory Lessons/Activities:** • *Students will plan and execute lighting designs in studio locations and locations in the field.*
Pacing:	3-4 classes		**CCSS Connections:** • 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently	**Assessments:** • *Performance based assessments may be used in conjunction with written responses.* • *Measure daily understandings via teacher observation of student activities and projects*