

# **Student Achievement Committee Meeting**

Wednesday, July 19, 2023 6:30 PM

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

1. **Call to Order/ Pledge of Allegiance**
2. **Decision: Approval of Minutes from May 17, 2023**
3. **Decision: Approval of Minutes from June 21, 2023**
4.
  1. **Public Comment**
    1. Send your comments to:  
KatlyneLaprise@bristolk12.org
    2. Be sure to put PUBLIC COMMENT in the subject line.
    3. Include your name and address.
    4. Direct your comments to the Board Chair.
    5. Your comments will be read at the meeting by the Board Chair.
    6. All comments should be written in an appropriate manner, particularly if concerning a personnel matter.
    7. Any comments not adhering to the guidelines will not be read at the meeting.
5. **First Reading: New Curriculum, Introduction to Business II, presented by Dr. Jaime Rechenberg**
6. **First Reading: New Curriculum, Astronomy, presented by Dr. Jaime Rechenberg**
7. **First Reading: Curriculum revision, Meteorology, presented by Dr. Jaime Rechenberg**
8. **First Reading: New Curriculum, Acting for Camera and Voice (BAIMS), presented by Ken Bagley**
9. **First Reading: New Curriculum, Playwriting (BAIMS), presented by Ken Bagley**
10. **Information: School Calendars for 23-24, 24-25 and Observances of holidays**
11. **Adjournment**



Student Achievement Committee  
May 17, 2023  
MINUTES - DRAFT

Present: Russell Anderson, Catherine Carbone, Michael Dietter, Jennifer Dube, Jill Fitzsimons-Bula, Carly Fortin, Kristen Giantonio, Sara Hale, Amy Martino, Lea McCabe, Maria Pirro-Simmons, Jaime Rechenberg, Azra Redzic, Jillian Romann, Todd Sturgeon, Dante Tagariello, Melanie Vetrano, Leszek Ward

Call to Order

Commissioner Sturgeon called the meeting to order at 6:35 p.m.

Decision: Approval of Minutes from April 19, 2023 meeting:

*On a motion made by Commissioner Jill Fitzsimons-Bula and seconded by Commissioner Todd Sturgeon, it was unanimously;*

**VOTED: to approve the minutes of April 19, 2023.**

Information: School Calendar- Religious Observances

Mrs. Carly Fortin, Chief Academic Officer, reviewed the information about the number of students and Bristol faculty absent in the last few years on Eid al Fitr, Rosh Hashanah, Yom Kippur, and Three Kings' Day as compared to a typical date in the school year. According to the data, Eid AL Fitr and Three Kings' Day have more absences than an average school day, however, Rosh Hashanah and Yom Kuppur did not have a significant difference. There was also an increase in staff absences throughout the district on these holidays.

*Questions and discussion followed.*

Information: BAIMS Lottery

Mrs. Fortin reviewed information on the lottery process for BAIMS, answering several questions that were brought to our attention since the last SAC meeting. Mrs. Fortin presented information on the number of students/families that refused the lottery pull, whether they declined or were exited from the lottery (families that did not respond after multiple attempts).

Mrs. Fortin also presented that there have not been significant demographic changes from the beginning of the school year to now since we have a 97% and a 98% retention rate for students. In each round of lottery pulls, the currently enrolled and accepted demographics are analyzed and compared to the October 1st percentages of that feeder school. Students are randomized each round to make a selection (only student ID and demographic info are known). Students chosen need to meet both the number of student seats available and the demographic feeder percentage goals. The Educational Specifications state that the school should represent the demographic characteristics of the entire district. Specific course needs were also considered when filling seats.

*Questions and discussion followed.*

Information: Summer School

Mrs. Carly Fortin presented information on our summer school programs that will be running this summer.

Students in Kindergarten through Grade 5 will have the opportunity to strengthen their literacy and mathematics skills by focusing on pre-teaching concepts that will help students prepare for the grade they are entering. Families who responded to an interest survey were entered into a lottery and students were chosen at random to attend. Elementary summer school will take place at West

Bristol School.

Students in grades 6 through 8th are recommended by their teachers for summer school and will participate in literacy and/or math instruction to strengthen their skills. Students who are not yet ready for Algebra in grade 8 will be able to take AVID Algebra. This summer, middle school students will also be able to choose an encore class as well. This will take place at Bristol Eastern High School.

To provide K-8 students and families with greater choice and more extensive programs, Bristol Public Schools will be granting multiple scholarship opportunities for students to attend summer programming in and around Bristol. Scholarships will be determined based on camp enrollment and total cost of attendance.

High school students who have no earned credit in a required course will have the opportunity to recover credit this summer. Most courses will be hybrid, meeting at Bristol Eastern High School 2 days a week with virtual assignments as well. This summer, Bristol will be partnering with Tunxis Community College so students can enroll in and earn a certification as a CNA.

All Bristol Public Schools' students with IEPs who meet the criteria will be eligible to attend extended school year instruction and related services at our ESY program this summer. Grades Pre-K through 8 will attend ESY at West Bristol School while grades 9 through 12 will attend ESY at Bristol Central High School.

#### Information: Preview of the Introduction to Business course

Dr. Jaime Rechenberg, Secondary STEM Supervisor, presented the new Introduction to Business course. This is a basic business course designed to familiarize students with a variety of topics in the field of business. Students will gather a basic understanding of general business, economics, management, marketing, business law, accounting and finance. Overall, the course gives students a broad exposure to business operations and a solid background for additional business courses, This course is best for grades 9 and 10 and would be .5 credits.

There being no further discussion, Commissioner Sturgeon adjourned the meeting at 7:33pm.

Respectfully submitted,

***Katlyne Laprise***

Katlyne Laprise



Student Achievement Committee  
June 21, 2023  
MINUTES - DRAFT

*The minutes presented within this document are a summary of the discussion that took place at the Board of Education meeting. To view the meeting in its entirety and hear full reports please go to: [June 21, 2023 Meeting Recording](#) **Passcode:** \$att4\$n3*

Present: Ken Bagley, Catherine Carbone, Jill Fitzsimons-Bula, Carly Fortin, Sara Hale, Maria Pirro-Simmons, Jillian Romann, Leszek Ward

Call to Order

Commissioner Fitzsimons-Bula called the meeting to order at 6:30 p.m.

Decision: Approval of Minutes from May 17, 2023 meeting:

*On a motion made by Commissioner Fitzsimons-Bula, the minutes will be brought to the next Student Achievement Committee Meeting.*

PreK Math (Curriculum Revision):

Mrs. Jillian Romann, Elementary STEM Supervisor, presented that the PreK curriculum was last revised in 2015 and the new curriculum follows the CT Early Learning and Development Standards. This curriculum is designed around four strands: counting and cardinality, operations and algebraic thinking, measurement and data, and geometry and spatial sense. This curriculum also focuses on mathematizing the classroom by learning math concepts through science, art, and literacy connections.

*On a motion made by Commissioner Pirro-Simmons and seconded by Commissioner Fitzsimons-Bula, it was unanimously;*

**VOTED: to approve the PreK Math curriculum revision.**

6th Grade Exploratory Drumming- BAIMS (Curriculum Revision):

Mr. Kenneth Bagley, Supervisor of Fine Arts, presented the revised exploratory drumming course that will be available at BAIMS. Each exploratory course is 22 classes at 40 minutes each. These classes are meant to give students that are not in the concentration course an overview of the pathway so that all students get to explore all of the Encore pathways. The percussion exploratory course will consist of 4 units: Introduction to Percussion Technique, Introduction to Bucket Drumming, Introduction to African Drumming, and Introduction to Drum Set.

*Questions and discussion followed.*

*On a motion made by Commissioner Pirro-Simmons and seconded by Commissioner Fitzsimons-Bula, it was unanimously;*

**VOTED: to approve the 6th Grade Exploratory Drumming curriculum revision.**

7th Grade Exploratory Piano- BAIMS (Curriculum Revision):

Mr. Bagley presented the curriculum revision for the exploratory piano course at BAIMS. The course will consist of 5 units: Introduction to Playing Piano, Orientation to the Staff, Bass Clef notes, 3rds (skips) on the Staff, and Eighth Notes.

*Questions and discussion followed.*

*On a motion made by Commissioner Pirro-Simmons and seconded by Commissioner Fitzsimons-Bula, it was unanimously;*

**VOTED: to approve the 7th Grade Exploratory Piano curriculum revision.**

Information: Acting for Camera and Voice:

Mr. Bagley presented the new high school course at BAIMS, Acting for Camera and Voice. This course will introduce students to the fundamental skills and theories of acting for the camera. Further emphasis will be given to developing the voice skills to be able to do voice-over work, including dialect and accents. Students will eventually perform in front of their peers and share their created projects. This new course will consist of 5 units: Introduction to Vocal Acting, The Voice Actor, Intro to Film Analysis, Acting for the Camera, and The Final Project.

*Questions and discussion followed.*

Information: Playwriting:

Mr. Bagley presented the new high school course at BAIMS, Playwriting. This course will introduce students to dramatic writing for the stage. This course will include scene and dialogue craft exercises, developing strong characters and narrative structures, critical reading of plays, and responding constructively to other students' work. Students may be required to create and perform original scenes at the end of the course. Students will also be able to submit their play for consideration in the Eugene O'Neill Theater Center's Young Playwrights Festival. The course will consist of 3 units: What is a play?, One Acts, and Young Playwrights Festival.

Grades 6-8 Physical Education (Curriculum Revision):

Mrs. Sara Hale, Supervisor of Physical Education and Wellness, presented a revision to the middle school physical education curriculum. This curriculum revision focuses on physical fitness, lifetime activities, individual activities, team games, and cooperative games. Looking at the curl-ups, pushups, 20 meter pacer, and the sit and reach testing data from the last few years, it was noted that the number of passing students has seen a downward trend. This revised curriculum not only has an entire unit that is dedicated to physical fitness, but the team decided to ensure that all units will have an encompassing theme of physical fitness, connected to the physical fitness assessment, embedded in each lesson. Something new that was added to the curriculum is a family overview link. This overview will be sent out to families before each unit begins and allows families access to a snapshot of what their child will be participating in PE class in the next few class sessions.

*On a motion made by Commissioner Pirro-Simmons and seconded by Commissioner Fitzsimons-Bula, it was unanimously;*

**VOTED: to approve the Physical Education curriculum revision for grades 6-8.**

There being no further discussion, Commissioner Fitzsimons-Bula adjourned the meeting at 7:25pm.

Respectfully submitted,

***Katlyne Laprise***

Katlyne Laprise



## PROCEDURES FOR REMOTE PUBLIC COMMENT

Members of the public are invited to comment to the Board on any topic related to school business.

Items requiring consideration by the Board must be approved as an agenda item by a 2/3ds vote of the Board members present. Such items may be referred for further study and not necessarily acted upon at this meeting.

Anyone wishing to address the Board should adhere to the following procedures:

### **PUBLIC COMMENT**

#### **Before a Remote Meeting**

1. Send your comments to: [KatlyneLaprise@bristol12.org](mailto:KatlyneLaprise@bristol12.org)
2. Be sure to put PUBLIC COMMENT in the subject line.
3. Include your name and address.
4. Direct your comments to the Board Chair.
5. Your comments will be read at the meeting by the Board Chair.
6. All comments should be written in an appropriate manner, particularly if concerning a personnel matter.
7. Any comments not adhering to the guidelines will not be read at the meeting.

#### **During a Remote Meeting**

1. Everyone is requested to address the Chair for recognition.
2. Each speaker must state his/her name and address.
3. All speakers must observe rules of common etiquette. Personalities are not to be injected. Anyone violating this rule will be denied the floor. Unless waived by the Chairperson or a majority of the Board,
4. Each speaker shall limit his/her remarks to three (3) minutes.
5. A speaker will not be recognized for a second time on the same topic.
6. Each speaker must concern himself/herself with the topic under discussion. Anyone digressing from the topic will be ruled out of order.
7. Written statements and materials may be made available, in advance of comments, for distribution to Board members.
8. Speakers shall state their positions on the subject being discussed.
9. Board members will not respond directly to comments during the Board meeting. The Superintendent will direct the question to the appropriate staff member for follow-up.



Course Title:	Content Area:	Grade Level:	Credit (if applicable)
Introduction to Business II	CTE-Business	10-12	0.5 Optional Tunxis Credit

### Course Description:

This accelerated course is ideal for students striving to get a head start on a career in business. Students will take a deeper dive into topics from Introduction to Business I or Entrepreneurship. This course introduces the principles and practices of business management. Topics include: Informational and legal foundations for business management; economic, regulatory, and societal environment of business, finance, and marketing; planning, organizing, leading and controlling a business organization.

### Aligned Core Resources:

BUSN12 Introduction to Business by Kelly and Williams  
Textbook

### Connection to the [BPS Vision of the Graduate](#)

Collaboration  
Global Awareness  
Communication  
Critical Thinking and Problem Solving

### Additional Course Information:

**Knowledge/Skill Dependent courses/prerequisites**

### Link to [Completed Equity Audit](#)

Introduction to Business 1 OR Entrepreneurship

[Equity Audit - Introduction to Business II](#)

### Standard Matrix

District Learning Expectations and Standards	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
<u>MBA Research Standards, Business Management - <b>Business Law</b></u> Understands business's responsibility to know, abide by, and enforce laws and regulations that affect business operations and transactions				X		
<u>MBA Research Standards, Business Management - <b>Communication Skills</b></u> Understands the concepts, strategies, and systems used to obtain and convey ideas and information.	X					
<u>MBA Research Standards, Business Management - <b>Financial Analysis</b></u> Understands tools, strategies, and systems used to maintain, monitor, control, and					X	

plan the use of financial resources						
<u>MBA Research Standards, Business Management - Operations</u> Understands the processes and systems implemented to monitor, plan, and control the day-to-day activities required for continued business functioning			X			
<u>MBA Research Standards, Business Management - Professional Development</u> Understands concepts, tools, and strategies used to explore, obtain, and develop in a business career			X			
<u>MBA Research Standards, Business Management - Strategic Management</u> Understands tools, techniques, and systems that affect a business's ability to plan, control, and organize an organization/department		X	X			
<u>MBA Research Standards, Business Management - Knowledge Management</u> Understands the systems, strategies, and techniques used to collect, organize, analyze, and share information known in an organization			X		X	
<u>MBA Research Standards, Business Management - Project Management</u> Understands tools, techniques, and systems that are used to plan, implement, monitor, and evaluate business projects					X	X
<u>MBA Research Standards, Business Management - Quality Management</u> Understands the need for standards and the strategies and techniques used to implement, monitor, and evaluate them			X			
<u>MBA Research Standards, Business Management - Risk Management</u>		X		X		

Understands risk-management strategies and techniques used to minimize business loss						
<u>MBA Research Standards, General Management - <b>Customer Relations</b></u> Understands the techniques and strategies used to foster positive, ongoing relationships with customers						X
<u>MBA Research Standards, General Management - <b>Human Resources Management</b></u> Understands the tools, techniques, and systems that businesses use to plan, staff, lead, and organize its human resources			X			
<u>MBA Research Standards, Business Management - <b>Information Technology</b></u> Understands tools, strategies, and systems needed to access, process, maintain, evaluate, and disseminate information to assist business decision-making	X					

### Unit Links

[The Business Environment](#)  
[Economics and International Business](#)  
[Managing a Business](#)  
[Business Law & Ethics](#)  
[Financing a Business](#)  
[Marketing](#)

<b>Unit Title:</b>	
The Business Environment	
<b>Relevant Standards: Bold indicates priority</b>	
<p>MBA Research Standards, Business Management - <b>Communication Skills. Understands the concepts, strategies, and systems used to obtain and convey ideas and information.</b></p> <p>MBA Research Standards, Business Management - <b>Information Technology. Understands tools, strategies, and systems needed to access, process, maintain, evaluate, and disseminate information to assist business decision-making</b></p>	
<b>Essential Question(s):</b>	<b>Enduring Understanding(s):</b>
<ul style="list-style-type: none"> <li>• What is the role of business in the economy?</li> <li>• How did modern business evolve?</li> <li>• What role do nonprofit organizations have in the economy?</li> <li>• What are the core factors of production and how are they used in the economy?</li> <li>• How will current business trends affect your future career choices?</li> <li>• How does having excellent communication contribute to having a successful business?</li> <li>• What are the key factors of nonverbal communication?</li> <li>• What are communication channels and how do you choose which channel is most effective?</li> </ul>	<ul style="list-style-type: none"> <li>• Business improves people’s standard of living and increases the quality of life</li> <li>• Modern business has evolved through different eras from the Industrial Revolution to the relationship era today</li> <li>• Nonprofit organizations work along with businesses to improve the quality of life in society</li> <li>• Business improves people’s standard of living and increases the quality of life</li> <li>• Modern business has evolved through different eras from the Industrial Revolution to the relationship era today</li> <li>• Nonprofit organizations work along with businesses to improve the quality of life in society</li> <li>• Nonverbal communication should reinforce the meaning of one’s message</li> <li>• A communication channel is effective when it is selected by understanding its impact toward the decision made</li> <li>• Effective business writing involves considering the needs of one’s audience</li> <li>• Successful verbal presentations are created and delivered by understanding their structure and impact on the audience</li> </ul>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
<ul style="list-style-type: none"> <li>• Students should demonstrate a clear understanding of the factors that separated the five business eras.</li> <li>• Students should be able to discuss that nonprofit organizations differ from businesses in that their goals do not include financial gain. However, nonprofits are clearly businesslike establishments that contribute to the economy in a number of significant ways—most employ people, many produce goods and services and take in revenue, and many act as economic magnets for additional investment. Many nonprofits interact with businesses by developing partnerships that benefit</li> </ul>	5 class sessions of 42 class sessions

<p>both parties.</p> <ul style="list-style-type: none"> <li>• Students should be able to explain the barriers of communication, identify which barrier is easiest to surmount, and defend their reasoning.</li> <li>• Students will be able summarize key points of an advertisement, ask clarifying questions, and listen for key points.</li> <li>• Students will be able to identify the proper communication channel based on a variety of scenarios.</li> <li>• Students will be able to draft a professional email.</li> </ul>	
<p><b>Family Overview (link below)</b></p>	<p><b>Integration of Technology:</b></p>
<p><a href="#">Introduction to Business 2. Unit 1 Family Friendly Link</a></p>	<ul style="list-style-type: none"> <li>• Internet Research/Resources</li> <li>• GMAIL</li> <li>• Desktop Publishing Software</li> <li>• Presentation Software</li> </ul>
<p><b>Unit-specific Vocabulary:</b></p>	<p><b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b></p>
<p><b>Business Now:</b> Value, Business, Profit, Loss, Entrepreneurs, Nonprofits, Factors of production, Business environment, Speed to market, Business technology, Internet, E-commerce Demographics, free trade, General agreement on tariffs and trade,</p> <p><b>Communication:</b> Communication, noise, communication barriers, intercultural communication, nonverbal communication, active listening, communication channels, bias, active voice, passive voice, dynamic delivery,</p>	<p>Various Internet Resource</p>
<p><b>Opportunities for Interdisciplinary Connections:</b></p>	<p><b>Anticipated misconceptions:</b></p>
<ul style="list-style-type: none"> <li>• Economics</li> <li>• Math</li> <li>• Civics</li> <li>• Language Arts</li> </ul>	<ul style="list-style-type: none"> <li>• Large businesses are immune from failure.</li> <li>• The intention of the message is the same as the perception of the message.</li> <li>• Communication is the same in all areas of life.</li> </ul>
<p><b>Connections to Prior Units:</b></p>	<p><b>Connections to Future Units:</b></p>
<p>N/A</p>	<p>This is the introductory unit that will be the foundation for all subsequent learning throughout this course.</p>
<p><b>Differentiation through <a href="#">Universal Design for Learning</a></b></p>	
<p><b>UDL Indicator</b></p>	<p><b>Teacher Actions:</b></p>
<p>5.1 Use multiple media for communication 1.1 Compose in multiple media such as text, speech</p>	<p>5.1 Compose in multiple media such as text, speech, video 1.1 Display information in a flexible format so that perceptual features can be varied</p>
<p><b>Supporting Multilingual/English Learners</b></p>	

Related <b>CELP standards:</b>		Learning Targets:	
<ul style="list-style-type: none"> <li>● 9-12.1 An EL can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.</li> <li>● 9-12.2 An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions</li> <li>● 9-12.4 An EL can construct grade appropriate oral and written claims and support them with reasoning and evidence.</li> <li>● 9-12.5 An EL can conduct research and evaluate and communicate findings to answer questions or solve problems.</li> <li>● 9-12.7 An EL can adapt language choices to purpose, task, and audience when speaking and writing.</li> <li>● 9-12.8 An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>● 9-12.10 An EL can make accurate use of standard English to communicate in grade appropriate speech and writing.</li> </ul>		<ul style="list-style-type: none"> <li>● I can discuss the role of business in the economy.</li> <li>● I can explain the evolution of modern business.</li> <li>● I can discuss the role of nonprofit organizations in the economy.</li> <li>● I can outline the core factors of production and how they affect the economy.</li> <li>● I can explain how current business trends might affect your career choices.</li> <li>● I can explain the importance of excellent business communication.</li> <li>● I can describe the key elements of nonverbal communication.</li> <li>● I can compare, contrast, and choose effective communication channels.</li> </ul>	
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
1	I can discuss the role of business in the economy.	Students can identify the factors of production and how they create businesses.  Students can explain the eras of American business..	
	I can explain the evolution of modern business.		
	I can discuss the role of nonprofit organizations in the economy.	Students can compare the role of nonprofit organizations to for profit organizations in the economy	
2	I can outline the core factors of production and how they affect the economy.	Students can classify the factors of production and explain their impact on the economy.	
3	I can explain how current business trends might affect your career choices.	Students can research current business trends to identify careers evolving from the trends..	
4	I can explain the importance of excellent business communication.	Students can list the six main barriers to effective	

	<p>I can describe the key elements of nonverbal communication.</p>	<p>communication and identify which barriers are easiest to surmount.</p> <p>Students can determine how the elements of nonverbal communication help to convey or misrepresent a message.</p>	
	<p>I can compare, contrast, and choose effective communication channels.</p>	<p>Students can choose the appropriate communication channel based on the message they intend to convey in order to avoid misconceptions.</p>	

<b>Unit Title:</b>	
Economics and International Business	
<b>Relevant Standards: Bold indicates priority</b>	
<p><u>MBA Research Standards, Business Management - <b>Strategic Management</b></u>. Understands tools, techniques, and systems that affect a business's ability to plan, control, and organize an organization/department</p> <p><u>MBA Research Standards, Business Management - <b>Risk Management</b></u>. Understands risk-management strategies and techniques used to minimize business loss</p>	
<b>Essential Question(s):</b>	<b>Enduring Understanding(s):</b>
<ul style="list-style-type: none"> <li>• What is economics and what has caused the current global economic crisis?</li> <li>• What events brought upon the great recession and how has it impacted the economy?</li> </ul>	<ul style="list-style-type: none"> <li>• Economics is the study of choices made to allocate society's resources</li> <li>• Fiscal and monetary policies are used to improve economic performance</li> <li>• Socialism and communism are two categories of planned economies</li> <li>• Economies of the world are adopting mixed market systems to meet the needs of its citizens</li> <li>• Business opportunities have increased because of technological growth and reduction of barriers to trade</li> <li>• Reasons for increased international trade include access to factors of production, reduced risks, and inflow of innovation</li> <li>• Measuring international trade requires an understanding of balance of trade, balance of payments, and exchange rates</li> <li>• Firms use a number of different approaches depending on their goals and the structure of the foreign market</li> <li>• Barriers to international trade include sociocultural differences, economic differences, and legal/political differences</li> <li>• Emergence of regional trading blocs, common markets, and international trade promotes free trade</li> </ul>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
<ul style="list-style-type: none"> <li>• Students should be able to analyze a major financial crisis including the causes and responses.</li> <li>• Students should be able to compare and contrast command, market, and mixed economies.</li> <li>• Students can interpret the laws of supply and demand.</li> <li>• Students should be able to demonstrate an understanding of different cultural business customs.</li> </ul>	10 class sessions of 42 class sessions
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>

<a href="#">Introduction to Business 2. Unit 2 Family Friendly Link</a>	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
<p>Economy, economics, macroeconomics, microeconomics, fiscal policy, budget surplus budget deficit federal debt, monetary policy, commercial banks, money, money supply, M1 money supply, M2 money supply, open market operations, Federal Deposit Insurance Corporation (FDIC), discount rate, reserve requirement, economic system, capitalism, pure competition, monopolistic competition, oligopoly, monopoly, natural monopoly, supply, supply curve, demand, demand curve, equilibrium price, socialism, communism, mixed economies, privatization, gross domestic product (GDP), unemployment rate business cycle, contraction, recession, depression, recovery, expansion, inflation, hyperinflation, disinflation, deflation, consumer price index (CPI) producer price index (PPI), productivity</p> <p>Opportunity cost absolute advantage, comparative advantage, balance of trade trade surplus, trade deficit, balance of payments, balance of payments surplus, balance of payments deficit, exchange rate, countertrade, foreign outsourcing, importing, exporting, foreign licensing, foreign franchising, direct investment, joint ventures, partnership, strategic alliance sociocultural differences, infrastructure, protectionism, tariffs, quotas, voluntary export restraints (VERs), embargo, free trade, General Agreement on Tariffs and Trade (GATT), World Trade Organization (WTO), World Bank, International Monetary Fund (IMF), trading bloc common market, North American Free Trade Agreement (NAFTA) European Union (EU)</p>	<p>The Federal Reserve Bank of Atlanta Educational Resources</p>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
<p>Civics, US History, Economics</p>	<ul style="list-style-type: none"> <li>● Supply and demand always leads to fair prices</li> <li>● Monetary value is the same world wide</li> <li>● The economy is solely controlled by the government</li> <li>● Economic growth mean everyone is better off</li> <li>● Government intervention always hinders the economy</li> <li>● All countries benefit from international trade</li> <li>● Countries are not impacted by the actions of other countries.</li> </ul>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<p>The Business Environment Verbal and Nonverbal International Communication</p>	<ul style="list-style-type: none"> <li>● Business Management</li> <li>● Ethics</li> <li>● Marketing</li> </ul>

- Financing

**Differentiation through [Universal Design for Learning](#)**

**UDL Indicator**

**Teacher Actions:**

3.2 Highlight patterns, critical features, big ideas, and relationships

3.2 Highlight or emphasize key elements in text, graphics, diagrams, formulas

**Supporting Multilingual/English Learners**

**Related [CELP standards:](#)**

**Learning Targets:**

- 9-12.1 An EL can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.
- 9-12.2 An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions
- 9-12.4 An EL can construct grade appropriate oral and written claims and support them with reasoning and evidence.
- 9-12.5 An EL can conduct research and evaluate and communicate findings to answer questions or solve problems.
- 9-12.7 An EL can adapt language choices to purpose, task, and audience when speaking and writing.
- 9-12.8 An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.
- 9-12.10 An EL can make accurate use of standard English to communicate in grade appropriate speech and writing.

- I can define economics and understand the concept of scarcity
- I can analyze past economic crisis and identify their impact on the economy
- I can discuss the impact of fiscal and monetary policy on the economy
- I can evaluate the free market system and supply and demand
- I can evaluate planned market systems
- I can describe the trend toward mixed market systems
- I can discuss key terms and tools to evaluate economic performance
- I can discuss dramatic changes in U.S. trade policy over the last decade
- I can describe business opportunities in the world economy
- I can explain the key reasons for international trade
- I can describe the tools for measuring international trade
- I can analyze strategies for reaching global markets
- I can discuss barriers to international trade and strategies to surmount them
- I can describe the free-trade movement, and discuss key benefits and criticisms

Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
1	I can define economics and discuss the concept of scarcity.	Students will apply the concept of scarcity and how the factors of production influence how society makes economic decisions.	
2	I can analyze past economic crisis and identify their impact on the economy	Students will research past economic crises and the government response to analyze both causes and solutions.	

3	I can discuss the impact of fiscal and monetary policy on the economy	Students can determine the role of fiscal and monetary policy in the economy. Which governing organizations are responsible for each. Students will analyze how much influences these policies have on interest rates, money supply and inflation.	The
4	I can evaluate the free market system and supply and demand	Students can graph and analyze the laws of supply and demand as well as events that would affect supply and quantity demanded.	
5	I can evaluate planned market systems	Students can identify current planned market economic systems and how they affect business operations	
6	I can describe the trend toward mixed market systems	Students can describe the elements of a mixed market economic system and the pros and cons for businesses	
7	I can discuss key terms and tools to evaluate economic performance	Students can discuss the concepts of GDP, inflation rates, PPI, and CPI	
8	I can discuss dramatic changes in U.S. trade policy over the last decade	Students can research United States trade policy and discuss its effects on businesses	
	I can describe business opportunities in the world economy	Students can describe global business opportunities available to them.	
9	I can explain the key reasons for international trade	Students can explain the importance of international trade and how it contributes to the global economy	
	I can describe the tools for measuring international trade		
	I can analyze strategies for reaching global markets		
10	I can discuss barriers to international trade and strategies to surmount	Students can explain the benefits of free trade and	

	them	<p>discuss how it can lead to increased economic growth, job creation and access to a wider variety of goods for consumers. Students can also explore potential negatives of free trade including potential job losses in certain industries, income inequality and environmental impacts.</p>	
	<p>I can describe the free-trade movement, and discuss key benefits and criticisms</p>		

Unit Title	
Managing a Business	
Relevant Standards: <b>Bold indicates priority</b>	
<p><u>MBA Research Standards, Business Management - <b>Operations</b></u>. Understands the processes and systems implemented to monitor, plan, and control the day-to-day activities required for continued business functioning</p> <p><u>MBA Research Standards, Business Management - <b>Professional Development</b></u>. Understands concepts, tools, and strategies used to explore, obtain, and develop in a business career</p> <p><u>MBA Research Standards, Business Management - <b>Strategic Management</b></u>. Understands tools, techniques, and systems that affect a business's ability to plan, control, and organize an organization/department</p> <p><u>MBA Research Standards, Business Management - <b>Knowledge Management</b></u>. Understands the systems, strategies, and techniques used to collect, organize, analyze, and share information known in an organization</p> <p><u>MBA Research Standards, Business Management - <b>Quality Management</b></u>. Understands the need for standards and the strategies and techniques used to implement, monitor, and evaluate them</p> <p><u>MBA Research Standards, General Management - <b>Human Resources Management</b></u>. Understands the tools, techniques, and systems that businesses use to plan, staff, lead, and organize its human resources</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> <li>• How does management contribute to organizational success?</li> <li>• What are the key theories and current practices of motivation within business?</li> <li>• How does strategic planning impact overall business planning?</li> <li>• What is the organizing function of management?</li> <li>• What is the role of managerial leadership and how does each leadership style impact a business?</li> <li>• What is the managerial control process?</li> <li>• What is Human Resources and how does it impact the success of a business?</li> <li>• What are key HR issues facing today's economy?</li> <li>• What opportunities and challenges are present within Human Resource functions?</li> <li>• What is involved in HR planning and how do core HR responsibilities present themselves in business?</li> <li>• What is the key federal legislation affecting Human Resources?</li> <li>• How is diversity helping to shape modern business?</li> </ul>	<ul style="list-style-type: none"> <li>• Management functions include planning, organizing, leading, and controlling</li> <li>• People's thoughts and feelings play a vital role in motivation</li> <li>• Planning is the core of effective management, and organizing involves creating a logical structure</li> <li>• Leadership categories fall along a continuum of power, and controlling involves monitoring performance</li> <li>• HR management focuses on a company's human investment</li> <li>• HR issues include layoffs and outsourcing and wage gap</li> <li>• HR managers face many challenges in building a top-quality workforce</li> <li>• HR responsibilities include recruitment and selection</li> <li>• Firms rely on HR to avoid employment lawsuits</li> </ul>
Demonstration of Learning:	Pacing for Unit
<ul style="list-style-type: none"> <li>• Students should be able to explain the difference between a manager and a leader</li> <li>• Students should be able to differentiate management theories</li> <li>• Students should be able to describe various leadership styles</li> <li>• Students should be able to explain the role and importance of HR in business</li> </ul>	9 class sessions of 42 class sessions

<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
<a href="#">Introduction to Business 2, Unit 3 Family Friendly Link</a>	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Management, planning, organizing, leading, controlling, top management, middle management, first-line (or supervisory management), Maslow's Hierarchy of Needs Theory Theory X and Theory Y, job enrichment, expectancy theory, equity, strategic planning, tactical planning, operational planning, contingency planning, mission, SWOT analysis, strategic goals, strategies, organization chart, degree of centralization, span of control, departmentalization, line organization, line-and-staff organization, line managers, staff managers, matrix organizations, free-rein leaders, human resource (HR) management, job analysis, job description, job specifications, (or "specs"), internal recruitment, external recruitment, structured interview, probationary period, contingent workers, orientation, on-the-job training, apprenticeship, management development, performance appraisals, compensation, wages, salaries, benefits, cafeteria-style benefits, flextime, compressed workweek, remote work, Civil Rights Act of 1964 Title VII, Equal Employment Opportunity Commission (EEOC), affirmative action, sexual harassment	<ul style="list-style-type: none"> <li>• Various industry leadership/management/motivational books will be used for enrichment.</li> <li>• Ted-Talks</li> </ul>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
Psychology, Sociology	<ul style="list-style-type: none"> <li>• Managers control everything and make all decisions.</li> <li>• Management is only telling people what to do</li> <li>• Leaders are born, not made</li> <li>• Human resources is only about hiring and firing employees</li> </ul>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
Communication	Financing, Marketing, Business Law
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
9.1 Promote expectations and beliefs that optimize motivation	9.1 Provide coaches, mentors, or agents that model the process of setting personally appropriate goals that take into account both strengths and weaknesses
<b>Supporting Multilingual/English Learners</b>	
<b>Related <a href="#">CELP standards:</a></b>	<b>Learning Targets:</b>
<ul style="list-style-type: none"> <li>• 9-12.1 An EL can construct meaning from oral</li> </ul>	<ul style="list-style-type: none"> <li>• I can discuss the importance of management to</li> </ul>

	<p>presentations and literary and informational text through grade appropriate listening, reading, and viewing.</p> <ul style="list-style-type: none"> <li>9-12.2 An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions</li> <li>9-12.4 An EL can construct grade appropriate oral and written claims and support them with reasoning and evidence.</li> <li>9-12.5 An EL can conduct research and evaluate and communicate findings to answer questions or solve problems.</li> <li>9-12.7 An EL can adapt language choices to purpose, task, and audience when speaking and writing.</li> <li>9-12.8 An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>9-12.10 An EL can make accurate use of standard English to communicate in grade appropriate speech and writing.</li> </ul>	<p>organizational success</p> <ul style="list-style-type: none"> <li>I can explain key theories and current practices of motivation</li> <li>I can explain business planning, especially strategic planning</li> <li>I can discuss the organizing function of management</li> <li>I can explain the role of managerial leadership and the key leadership styles</li> <li>I can describe the management control process</li> <li>I can explain the importance of human resources to business success</li> <li>I can discuss key human resource issues in today's economy</li> <li>I can outline challenges and opportunities that the human resources function faces</li> <li>I can discuss human resource planning and core human resources responsibilities</li> <li>I can explain the key federal legislation that affects human resources</li> <li>I can explain the role of diversity in contemporary business</li> </ul>	
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
1	I can discuss the importance of management to organizational success	Students can demonstrate an understanding of the key functions of management including planning, organizing, leading and controlling and explain how each function contributes to achieving organizational goals and ensuring success.	
2	I can explain key theories and current practices of motivation	Students should grasp the significance of employee motivation and engagement in organizational success. Students can recognize that effective management involves fostering a positive work culture, providing opportunities for growth and development .	
3	I can explain business planning, especially strategic planning	Students can discuss the importance of strategic thinking and long-term planning in management. Students can analyze how	
	I can discuss the organizing function of management		

		effective management involves setting clear objectives, formulating strategies, and adapting to changes in the business environment.	
4	I can explain the role of managerial leadership and the key leadership styles	Students can provide a clear explanation of different managerial leadership styles such as autocratic, democratic, laissez-faire, transformational and situational leadership. They should describe the characteristics of each style.	
	I can describe the management control process	Students can explain the elements of the control process and describe how this process helps managers monitor progress, identify and address potential issues to ensure that organizational goals are achieved.	
5	I can explain the importance of human resources to business success	Students can evaluate the strategic role of HR in organizations. They understand that HR functions are not just administrative but contribute to the overall success of the organization by aligning human capital with business goals and fostering a positive work environment.	
	I can discuss key human resource issues in today's economy	Students can identify key issues and challenges faced by HR professionals today. They should understand topics such as workforce diversity, remote work, employee well-being, talent retention and adapting technological advancements.	
6	I can outline challenges and opportunities that the human resources function faces		
7	I can discuss human resource	Students can demonstrate	

	<p>planning and core human resources responsibilities</p> <p>I can explain the key federal legislation that affects human resources</p>	<p>a comprehensive understanding of key federal legislation related to HR. Students can explain the purpose, scope, and main provisions of the legislation accurately. Students can identify applicable laws and explain key provisions of each legislation including the rights it offers to employees and the responsibilities it imposes on employers.</p>	
8	<p>I can explain the role of diversity in contemporary business</p>	<p>Students can recognize the benefits of diversity in contemporary business. Students can understand how a diverse workforce can bring different perspectives, ideas and experiences that enhance creativity, innovation, problem solving. Students will apply the concept of inclusion and its relationship with diversity to create an inclusive work environment.</p>	

Unit Title:	
Business Law & Ethics	
Relevant Standards: <b>Bold indicates priority</b>	
<p>MBA Research Standards, Business Management - <b>Business Law</b>. Understands business's responsibility to know, abide by, and enforce laws and regulations that affect business operations and transactions</p> <p>MBA Research Standards, Business Management - <b>Risk Management</b>. Understands risk-management strategies and techniques used to minimize business loss</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> <li>● What are ethics and universal ethical standards?</li> <li>● What is business ethics and how do ethical dilemmas affect business?</li> <li>● How does ethics relate to both individuals and organizations?</li> <li>● How does social responsibility impact stakeholder groups?</li> <li>● What is the role of social responsibility in the global arena?</li> <li>● How do companies measure social responsibility?</li> <li>● How have unions impacted its members and economy?</li> <li>● What are the challenges unions face today?</li> <li>● What is the purpose of laws?</li> <li>● What are the major sources of laws in the United States?</li> <li>● What are the characteristics of a contract and how are the terms of contracts enforced?</li> <li>● How do title and risk pass from the seller to the buyer when a sale occurs?</li> <li>● How would you summarize legal principles, governing agency, intellectual property, and bankruptcy?</li> </ul>	<ul style="list-style-type: none"> <li>● Universal ethical standards are ethical norms that apply to all people across a broad spectrum of situations</li> <li>● Business ethics is the application of right and wrong in a business setting</li> <li>● Organizational culture has an influence on the ethical conduct of individual employees</li> <li>● Social responsibility is the obligation of a business to contribute to society</li> <li>● Unions are organized into craft unions and industrial unions</li> <li>● Many labor laws dealing with labor unions were passed after 1932</li> <li>● Federal law requires that both sides in collective bargaining bargain in good faith</li> <li>● Unions impact employee compensation, job security, and employee productivity</li> <li>● Laws are the rules governing the conduct and actions of people within a society that are enforceable by the government and arise from many sources</li> <li>● Two branches of law are civil law and criminal law</li> <li>● All valid contracts must satisfy four conditions</li> <li>● In a principal-agent relationship, the principal gives the agent the authority to act in place of, and bind, the principal when dealing with third parties</li> <li>● Bankruptcy provides the means for debtors who are unable to meet their obligations to discharge their debts and get a fresh start</li> <li>● Patents, trademarks, and copyrights protect intellectual property rights</li> </ul>
Demonstration of Learning:	Pacing for Unit
<ul style="list-style-type: none"> <li>● Students should be able to explain universal ethical standards</li> <li>● Students should be able to apply their knowledge to solve ethical dilemmas</li> <li>● Students should be able to explain how to protect their intellectual property</li> </ul>	9 class sessions of 42 sessions

<ul style="list-style-type: none"> <li>• Students should be able to identify laws that protect businesses and employees</li> <li>• Students should be able to describe the role of a union</li> <li>• Students should be able to provide an overview of the legal principles governing agency, and bankruptcy in businesses</li> </ul>	
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
<a href="#">Introduction to Business 2 Unit 4 Family Friendly Llnk</a>	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Laws, constitution, statutory law, Uniform Commercial Code (UCC), administrative law, case law, tort, negligence, crime, business law, contract, consideration, statute of frauds, breach of contract, statute of limitations, compensatory damages, specific performance, sales, title, principal-agent relationship, principal, agent, scope of authority, chapter 7 bankruptcy, chapter 11 bankruptcy, chapter 13 bankruptcy, property, intellectual property, patent, trademark, copyright, ethics, universal ethical standards, business ethics, ethical dilemma, code of ethics, whistle-blowers, social responsibility, stakeholders, consumerism, planned obsolescence. Sarbanes-Oxley Act, corporate philanthropy, cause-related marketing, corporate responsibility, sustainable development, carbon footprint, green marketing, social audit	Legal documents used for reference, ethical case studies
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
Civics, Law and Justice, Psychology	<ul style="list-style-type: none"> <li>• Business laws are unnecessary and hinder business operations.</li> <li>• Ethical behavior is subjective and varies from person to person</li> <li>• Business ethics are solely about avoiding legal consequences</li> <li>• Business ethics and profits do not mix</li> </ul>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
Economics, Management, Communication	Financing and Marketing
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
5.3 Build fluencies with graduated levels of support for practice and performance	5.3 Provide multiple examples of novel solutions to authentic problems
<b>Supporting Multilingual/English Learners</b>	

Related <b>CELP standards:</b>		Learning Targets:	
<ul style="list-style-type: none"> <li>9-12.1 An EL can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.</li> <li>9-12.2 An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions</li> <li>9-12.4 An EL can construct grade appropriate oral and written claims and support them with reasoning and evidence.</li> <li>9-12.5 An EL can conduct research and evaluate and communicate findings to answer questions or solve problems.</li> <li>9-12.7 An EL can adapt language choices to purpose, task, and audience when speaking and writing.</li> <li>9-12.8 An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>9-12.10 An EL can make accurate use of standard English to communicate in grade appropriate speech and writing.</li> </ul>		<ul style="list-style-type: none"> <li>I can explain ethics and universal ethical standards</li> <li>I can describe business ethics and ethical dilemmas</li> <li>I can discuss how ethics relates to both the individual and the organization</li> <li>I can examine the impact of social responsibility on stakeholder groups</li> <li>I can explain the role of social responsibility in the global arena</li> <li>I can describe how companies evaluate their efforts to be socially responsible</li> <li>I can evaluate the impact that unions have had on their members' welfare and the economy, and explain the challenges that today's unions face.</li> <li>I can explain the purpose of laws and identify the major sources of law in the United States.</li> <li>I can describe the characteristics of a contract and explain how the terms of contracts are enforced.</li> <li>I can describe how both title and risk pass from the seller to the buyer when a sale occurs.</li> <li>I can provide an overview of the legal principles governing agency, intellectual property, and bankruptcy.</li> </ul>	
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
1	I can explain ethics and universal ethical standards	Students can explain ethics and by using the universal ethical standards navigate ethical dilemmas that affect both individuals and organizations.	
	I can describe business ethics and ethical dilemmas		
	I can discuss how ethics relates to both the individual and the organization		
2	I can examine the impact of social responsibility on stakeholder groups	Students can examine social responsibility in a global arena and identify ways companies measure social responsibility.	
	I can explain the role of social responsibility in the global arena		
	I can describe how companies evaluate their efforts to be socially responsible		
3	I can evaluate the impact that unions have had on their members' welfare and the economy, and explain the challenges that today's unions face.	Students can identify reasons for the creation of unions as well as challenges faced by labor unions past and present.	
4	I can explain the purpose of laws and identify the major sources of law in the United States.	Students can understand the purpose of laws and identify sources of laws in	

		the United States.	
5	I can describe the characteristics of a contract and explain how the terms of contracts are enforced.	Students can define a contract and identify its key characteristics, including the parties involved, the mutual agreement, and the consideration exchanged.	
	I can describe how both title and risk pass from the seller to the buyer when a sale occurs.		
6	I can provide an overview of the legal principles, governing agency, intellectual property, and bankruptcy.	Students can effectively communicate their understanding of legal principles, governing agencies, intellectual property, and bankruptcy through verbal or written explanations	

Unit Title	
Financing a Business	
Relevant Standards: <b>Bold indicates priority</b>	
<p><u>MBA Research Standards, Business Management - <b>Financial Analysis</b></u>. Understands tools, strategies, and systems used to maintain, monitor, control, and plan the use of financial resources</p> <p><u>MBA Research Standards, Business Management - <b>Knowledge Management</b></u>. Understands the systems, strategies, and techniques used to collect, organize, analyze, and share information known in an organization</p> <p><u>MBA Research Standards, Business Management - <b>Project Management</b></u>. Understands tools, techniques, and systems that are used to plan, implement, monitor, and evaluate business projects</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> <li>• What is the goal of financial management and what issues do managers face to achieve financial goals?</li> <li>• What tools do financial managers use to evaluate a company's financial well being and develop financial plans?</li> <li>• What are sources of funds in business?</li> <li>• What are the key issues to determine a firm's capital structure?</li> <li>• How do financial managers acquire and manage assets?</li> <li>• How do financial managers evaluate capital budget proposals?</li> </ul>	<ul style="list-style-type: none"> <li>• Goal of financial management is to maximize the market price of stock</li> <li>• The current financial condition of a company is evaluated using ratio analysis</li> <li>• Some sources of funds to meet a firm's short-term and long-term financial needs include trade credit, bank loans, debts, commercial paper, and owner investments</li> <li>• Capital structure comprises a mix of equity and debt-financing</li> <li>• Financial managers acquire and manage current assets by using cash holdings, offering credits, and managing inventories</li> <li>• Financial managers evaluate capital budgeting proposals by taking into account time value of money and net present value</li> </ul>
Demonstration of Learning:	Pacing for Unit
<ul style="list-style-type: none"> <li>• Students should be able to demonstrate their understanding of business dynamics and how it impacts financing decisions</li> <li>• Students will be able to demonstrate their understanding of risk management and its role in financing decisions.</li> <li>• Students should be able to outline their funding needs and propose a strategy for obtaining financing.</li> </ul>	4 class sessions of 42 classes
Family Overview (link below)	Integration of Technology:
<a href="#">Introduction to Business 2, Unit 5 Family Friendly Link</a>	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):

Financial capital, finance, risk, risk-return trade-off, financial ratio analysis, liquid asset, liquidity ratios, asset management ratios, financial leverage, leverage ratios, profitability ratios, budgeted income statement, budgeted balance sheet, cash budget, trade credit, spontaneous financing, factor, line of credit, revolving credit agreement, commercial paper, retained earnings, covenant, equity, debt financing, capital structure, cash equivalents, U.S. Treasury bills (T-bills), money market mutual funds, capital budgeting, time value of money, certificate of deposit (CD), present value, net present value (NPV)	Banking websites Spreadsheet software
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
Personal Finance, Economics, Math	<ul style="list-style-type: none"> <li>• Businesses can easily get loans or financing whenever they need it</li> <li>• All financing options are the same</li> <li>• Financing is only for big businesses</li> <li>• Financing means taking on debt</li> <li>• Once financing is secured the business is guaranteed success</li> </ul>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
Business Environment, Economics, Ethics	Marketing
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
6.1 Guide appropriate goal-setting	6.1 Provide prompts and scaffolds to estimate effort, resources, and difficulty
<b>Supporting Multilingual/English Learners</b>	
<b>Related <a href="#">CELP standards:</a></b>	<b>Learning Targets:</b>
<ul style="list-style-type: none"> <li>• 9-12.1 An EL can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.</li> <li>• 9-12.2 An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions</li> <li>• 9-12.4 An EL can construct grade appropriate oral and written claims and support them with reasoning and evidence.</li> <li>• 9-12.5 An EL can conduct research and evaluate and communicate findings to answer questions or solve problems.</li> <li>• 9-12.7 An EL can adapt language choices to purpose, task, and audience when speaking and writing.</li> <li>• 9-12.8 An EL can determine the meaning of words</li> </ul>	<ul style="list-style-type: none"> <li>• I can identify the goal of financial management and the issues financial managers confront as they seek to achieve this goal</li> <li>• I can describe the tools financial managers use to evaluate their company's current financial condition and develop financial plans</li> <li>• I can evaluate the major sources of funds available to meet a firm's short-term and long-term financial needs</li> <li>• I can identify the key issues involved in determining a firm's capital structure</li> <li>• I can describe how financial managers acquire and manage current assets</li> <li>• I can explain how financial managers evaluate capital budgeting proposals to identify the best long-term investment options for their company</li> </ul>

<p>and phrases in oral presentations and literary and informational text.</p> <ul style="list-style-type: none"> <li>• 9-12.10 An EL can make accurate use of standard English to communicate in grade appropriate speech and writing.</li> </ul>			
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1	I can identify the goal of financial management and the issues financial managers confront as they seek to achieve this goal	Students can identify the goal of financial management and determine solutions for a company's current financial condition	
	I can describe the tools financial managers use to evaluate their company's current financial condition and develop financial plans		
2	I can evaluate the major sources of funds available to meet a firm's short-term and long-term financial needs	Students can analyze short-term and long-term financing options the best meet the needs of a company	
	I can identify the key issues involved in determining a firm's capital structure		
3	I can describe how financial managers acquire and manage current assets	Students can research and explain real-world examples of companies acquiring and managing business assets	
	I can explain how financial managers evaluate capital budgeting proposals to identify the best long-term investment options for their company		

Unit Title	
Marketing	
Relevant Standards: <b>Bold indicates priority</b>	
<p>MBA Research Standards, Business Management - <b>Project Management</b>. Understands tools, techniques, and systems that are used to plan, implement, monitor, and evaluate business projects</p> <p>MBA Research Standards, General Management - <b>Customer Relations</b>. Understands the techniques and strategies used to foster positive, ongoing relationships with customers</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> <li>• What are the objectives, process, and scope of marketing?</li> <li>• What role does the customer play in marketing?</li> <li>• How would you explain each element of marketing strategy?</li> <li>• How would you describe the consumer and business decision making process?</li> <li>• What are the elements of marketing research?</li> <li>• What role does social responsibility and technology play in marketing?</li> </ul>	<ul style="list-style-type: none"> <li>• Marketing involves creating, communicating, and delivering value to customers</li> <li>• Information is an integral part of CRM</li> <li>• Elements of marketing strategy include product, price, distribution, and promotion</li> <li>• Understanding customer needs includes studying consumer and business buyer behavior</li> <li>• Categories of marketing research data include secondary and primary data</li> <li>• Social responsibility movement and technology have impacted marketing in the last two decades</li> </ul>
Demonstration of Learning:	Pacing for Unit
<ul style="list-style-type: none"> <li>• Students should be able to explain the scope of marketing</li> <li>• Students should be able to explain the role of the customer in marketing</li> <li>• Students should be able to explain the roles of social responsibility and technology in marketing</li> <li>• Students should be able to demonstrate their ability to conduct market research and analyze the results</li> </ul>	4 of 42 classes
Family Overview (link below)	Integration of Technology:
<a href="#">Introduction to Business 2. Unit 6 Family Friendly Language</a>	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):
Marketing, utility, marketing concept, customer relationship management (CRM), value, customer satisfaction, customer loyalty, marketing plan, market segmentation, target market, consumer marketers (B2C), business marketers (B2B), demographic segmentation, geographic segmentation, psychographic segmentation, behavioral segmentation, marketing mix, environmental scanning, market share,	Role play

consumer behavior, cognitive dissonance, business buyer behavior, marketing research, secondary data, primary data, observation research, survey research, green marketing, mass customization			
<b>Opportunities for Interdisciplinary Connections:</b>		<b>Anticipated misconceptions:</b>	
Psychology, Computer Software Applications, Introduction to Digital Media Production, Advanced Digital Media Production		<ul style="list-style-type: none"> <li>Marketing is only about advertising</li> <li>Marketing is only for big businesses</li> <li>Marketing guarantees immediate success</li> <li>Marketing is only about selling products</li> </ul>	
<b>Connections to Prior Units:</b>		<b>Connections to Future Units:</b>	
Business Environment, Communication, Economics, Law and Ethics, Financing		N/A	
<b>Differentiation through <i>Universal Design for Learning</i></b>			
<b>UDL Indicator</b>		<b>Teacher Actions:</b>	
5.1 Use multiple media for communication		5.1 Compose in multiple media such as text, speech, drawing, illustration, comics, storyboards, design, film, music, dance/movement, visual art, sculpture, or video	
<b>Supporting Multilingual/English Learners</b>			
<b>Related <i>CELP standards:</i></b>		<b>Learning Targets:</b>	
<ul style="list-style-type: none"> <li>9-12.1 An EL can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.</li> <li>9-12.2 An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions</li> <li>9-12.4 An EL can construct grade appropriate oral and written claims and support them with reasoning and evidence.</li> <li>9-12.5 An EL can conduct research and evaluate and communicate findings to answer questions or solve problems.</li> <li>9-12.7 An EL can adapt language choices to purpose, task, and audience when speaking and writing.</li> <li>9-12.8 An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>9-12.10 An EL can make accurate use of standard English to communicate in grade appropriate speech and writing.</li> </ul>		<ul style="list-style-type: none"> <li>I can discuss the objectives, the process, and the scope of marketing</li> <li>I can identify the role of the customer in marketing</li> <li>I can explain each element of marketing strategy</li> <li>I can describe the consumer and business decision-making process</li> <li>I can discuss the key elements of marketing research</li> <li>I can explain the roles of social responsibility and technology in marketing</li> </ul>	
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1	I can discuss the objectives, the process,	Students can analyze the	

	and the scope of marketing	impact of customer behavior and explain how businesses address those behaviors through marketing strategies.	
	I can identify the role of the customer in marketing		
2	I can explain each element of marketing strategy	Students can define and identify the key elements of a marketing strategy, including target market, product/service offering, pricing, promotion, and distribution.	
3	I can describe the consumer and business decision-making process	Students can describe the stages in the consumer and business decision-making process and describe the primary components of marketing research	
	I can discuss the key elements of marketing research		
4	I can explain the roles of social responsibility and technology in marketing	Students can define social responsibility in marketing and explain its significance in ethical and sustainable business practices.	

Course Title:	Content Area:	Grade Level:	Credit (if applicable)	
Astronomy	Science	10-12	0.5	
Course Description:				
Students will explore the Universe and gain knowledge of Space from Earth's vantage point and beyond to answer the questions, "What comprises the Universe?" and "How has the Universe evolved?" and "Is there intelligent life elsewhere in the Universe?" An examination of stars, planets, and other structures and events within the Cosmos will help us explore these and many other questions.				
Aligned Core Resources:		Connection to the <a href="#">BPS Vision of the Graduate</a>		
N/A		Critical Thinking and Problem Solving		
Additional Course Information: <i>Knowledge/Skill Dependent courses/prerequisites</i>		Link to <a href="#">Completed Equity Audit</a>		
None				
Standard Matrix				
District Learning Expectations and Standards	Unit 1	Unit 2	Unit 3	Unit 4
<a href="#">HS-PS1-8</a> Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.			X	X
<a href="#">HS-PS2-4</a> Use mathematical representations of Newton's Law of Gravitation to describe and predict the gravitational forces between objects.		X		
<a href="#">HS-PS4-3</a> Evaluate the claims, evidence, and the reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.	X			

<p><a href="#">HS-PS4-5</a> Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.</p>	X			
<p><a href="#">HS-ESS1-1</a>: Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation.</p>		X	X	
<p><a href="#">HS-ESS1-2</a>: Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.</p>	X			X
<p><a href="#">HS-ESS1-3</a>: Communicate scientific ideas about the way stars, over their life cycle, produce elements.</p>			X	X
<p><a href="#">HS-ESS1-4</a> Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.</p>		X		
<p><a href="#">HS-ESS1-6</a>: Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.</p>		X		
<p><a href="#">HS-ETS1-2</a> Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p>	X	X	X	X

<p><a href="#">HS-ETS1-4</a> Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p>	X	X	X	X
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**Unit Links**

[Tools Used in Astronomy Throughout History](#)

[Earth, Moon, Sun, and Solar System](#)

[Understanding Stars](#)

[The Universe](#)

Unit Title:	
Tools Used in Astronomy Throughout History	
Relevant Standards: <b>Bold indicates priority</b>	
<ul style="list-style-type: none"> <li>● HS-PS4-3 Evaluate the claims, evidence, and the reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.</li> <li>● <b>HS-PS4-5 Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.</b></li> <li>● <b>HS-ESS1-2: Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.</b></li> <li>● HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</li> <li>● HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</li> </ul>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> <li>● Why study Astronomy?</li> <li>● What is Astronomy? How is it similar to, or different from Cosmology?</li> <li>● What were the accomplishments of early astronomers?</li> <li>● How does the geocentric model differ from the heliocentric model of the solar system?</li> <li>● What are Kepler's Laws of Planetary Motion?</li> <li>● What are astronomical units and other ways of measuring astronomical distances?</li> <li>● How has our understanding of the cosmos developed over time?</li> <li>● How do ancient tools for observing the cosmos compare to the tools of today?</li> <li>● How does light help us understand the universe?</li> <li>● What is a light year, and why do we use light years to measure vast distances?</li> <li>● What is gravity? What role does it play in our universe?</li> <li>● How is the EMR spectrum used to study the universe?</li> </ul>	<ul style="list-style-type: none"> <li>● Astronomy is one of the oldest natural sciences. The early civilizations in recorded history made methodical observations of the night sky. These include the Egyptians, Babylonians, Greeks, Indians, Chinese, Maya, and many ancient indigenous peoples of the Americas. In the past, astronomy included disciplines as diverse as astrometry, celestial navigation, observational astronomy, and the making of calendars.</li> <li>● Before tools such as the telescope were invented, early study of the stars was conducted using the naked eye. As civilizations developed, most notably in Egypt, Mesopotamia, Greece, Persia, India, China, and Central America, astronomical observatories were assembled and ideas on the nature of the Universe began to develop. Most early astronomy consisted of mapping the positions of the stars and planets, a science now referred to as astrometry. From these observations, early ideas about the motions of the planets were formed, and the nature of the Sun, Moon and the Earth in the Universe were explored philosophically. The Earth was believed to be the center of the Universe with the Sun, the Moon and the stars rotating around it. This is known as the geocentric model of the Universe, or the Ptolemaic system, named after Ptolemy.</li> </ul>
Demonstration of Learning:	Pacing for Unit
	10 classes/blocks

<b>Family Overview (link below)</b>		<b>Integration of Technology:</b>	
		<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>	
<b>Unit-specific Vocabulary:</b>		<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>	
Astronomy, Universe, Cosmology, Geocentric, Heliocentric, Constellation, Universe, Telescope, Hubbel, Webb, Myths, Electromagnetic spectrum, Spectroscope, Light year, Planet, Circumpolar, Orbit, Ellipse, Eccentricity, Focus/Foci, Gravity, Universal Gravity, Rotation, Revolution, Astronomical Unit, Orbital period ('year'), Mass, Astrolabe, Hubble's Law		<ul style="list-style-type: none"> <li>• <a href="#">Astronomy Pictures of the Day</a></li> <li>• <a href="#">Windows to the Universe</a></li> <li>• Cosmos A Spacetime Odyssey (Neil DeGrasse Tyson) clips</li> <li>• <a href="#">Introduction to Astronomy</a></li> </ul>	
<b>Opportunities for Interdisciplinary Connections:</b>		<b>Anticipated misconceptions:</b>	
<b>Connections to Prior Units:</b>		<b>Connections to Future Units:</b>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>			
<b>UDL Indicator</b>		<b>Teacher Actions:</b>	
<b>Comprehension (guideline3)</b> <ul style="list-style-type: none"> <li>• Activate or supply background knowledge</li> <li>• Highlight patterns, critical features, big ideas, and relationships</li> <li>• Guide information processing and visualization</li> <li>• Maximize transfer and generalization</li> </ul>		<ul style="list-style-type: none"> <li>• Anchor instruction by linking to and activating relevant prior knowledge (e.g., using visual imagery, concept anchoring, or concept mastery routines)</li> <li>• Make explicit cross-curricular connections.</li> <li>• Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>• Provide interactive models that guide exploration and new understandings</li> <li>• Provide templates, graphic organizers, concept maps to support note-taking</li> </ul>	
<b>Supporting Multilingual/English Learners</b>			
<b>Related <a href="#">CELP standards:</a></b>		<b>Learning Targets:</b>	
9-12.2 An EL can . . . participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.		See all Learning Targets below	
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1	• I can compare and contrast the tools of ancient astronomy with the tools of modern astronomy.	• I can investigate ancient and modern tools used in astronomy and	<a href="#">Timeline of astronomy</a>

		<p>understand their purpose.</p> <ul style="list-style-type: none"> <li>● I can identify differences in ancient and modern tools.</li> <li>● I can discuss the significance of the telescope over time.</li> </ul>	
2	<ul style="list-style-type: none"> <li>● I can compare and contrast the geocentric model of the solar system to the heliocentric model.</li> <li>● I can examine how changing technology has changed our perspective of the solar system.</li> </ul>	<ul style="list-style-type: none"> <li>● I know the geocentric model has the EARTH at the center of the solar system.</li> <li>● I know the heliocentric model has the SUN at the center of the solar system.</li> <li>● I know the historical background to both models.</li> <li>● I know which tools were used that led to each perspective.</li> </ul>	
3	<ul style="list-style-type: none"> <li>● I can explain how gravity organizes our solar system.</li> <li>● I can predict how gravity plays a major role in the interactions of celestial bodies.</li> <li>● I can examine how changing technology has changed our perspective of the organization of celestial bodies.</li> </ul>	<ul style="list-style-type: none"> <li>● I know that gravity is a relationship between mass and distance.</li> <li>● I understand how the role of mass and distance (gravity) impacts the motion and location of celestial bodies.</li> <li>● I can understand the types of observations and data that have supported human understanding of celestial organization.</li> </ul>	
4	<ul style="list-style-type: none"> <li>● I can examine how Kepler's laws determine the motions of the planets.</li> </ul>	<ul style="list-style-type: none"> <li>● I know Kepler's laws and how they define the movement of celestial objects.</li> <li>● I can use Kepler's laws to define the motion of a specific celestial object.</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="#">Kepler's First Law</a></li> <li>● <a href="#">Kepler's Second Law</a></li> <li>● <a href="#">Kepler's Third Law</a></li> </ul>
5	<ul style="list-style-type: none"> <li>● I can examine why the speed of light is used to determine interstellar distances.</li> <li>● I can differentiate between the different forms of light (electromagnetic spectrum) and their use in observational tools.</li> </ul>	<ul style="list-style-type: none"> <li>● I know the different astronomical units used in astronomy.</li> <li>● I can understand the magnitude of each astronomical unit.</li> <li>● I know that the speed of</li> </ul>	

		<p>light is used to measure distance in the universe because it is a constant and because of the vast size of the universe.</p> <ul style="list-style-type: none"> <li>● I can define the different types of light in the electromagnetic spectrum.</li> <li>● I can develop a model to explain how a telescope is a time machine.</li> <li>● I can explain how a telescope works.</li> </ul>	
6	<ul style="list-style-type: none"> <li>● I can identify several constellations and connect their star organization to the constellation name.</li> <li>● I can identify patterns in naming constellations identified in the ancient world.</li> </ul>	<ul style="list-style-type: none"> <li>● I can name several constellations seen in the night sky.</li> <li>● I know the history of naming constellations and the mythological stories related to each.</li> <li>● I can explain how constellations were used in navigation and agriculture.</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="#">How do we know?</a></li> <li>● <a href="#">Constellation in a Canister</a></li> <li>● Carl Sagan's Cosmos clips (constellations through time, cultures, perspectives)</li> </ul>

<b>Unit Title:</b>	
<b>Earth, Moon, Sun, and Solar System</b>	
<b>Relevant Standards: Bold indicates priority</b>	
<p><b>HS-PS2-4 Use mathematical representations of Newton’s Law of Gravitation to describe and predict the gravitational forces between objects.</b></p> <p>HS-ESS1-1: Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun’s core to release energy that eventually reaches Earth in the form of radiation.</p> <p><b>HS-ESS1-4 Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.</b></p> <p>HS-ESS1-6: Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth’s formation and early history.</p> <p>HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p> <p>HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p>	
<b>Essential Question(s):</b>	<b>Enduring Understanding(s):</b>
<ul style="list-style-type: none"> <li>• How did the solar system form?</li> <li>• What are the components of our solar system?</li> <li>• How do the different bodies within our solar system compare?</li> <li>• What factors combine to keep bodies in orbit?</li> <li>• What are the patterns that exist within/because of the sun, moon and earth system?</li> <li>• How far apart are the different bodies within our solar system/universe?</li> <li>• How can we represent the scale of the solar system in a defined amount of space?</li> <li>• How did the Space Race advance our understanding of the solar system and beyond?</li> </ul>	<ul style="list-style-type: none"> <li>• Our solar system formed about 4.5 billion years ago from a dense cloud of interstellar gas and dust. The cloud collapsed, possibly due to the shockwave of a nearby exploding star, called a supernova. When this dust cloud collapsed, it formed a solar nebula – a spinning, swirling disk of material.</li> <li>• The order and arrangement of the planets and other bodies in our solar system is due to the way the solar system formed. Nearest to the Sun, only rocky material could withstand the heat when the solar system was young. For this reason, the first four planets – Mercury, Venus, Earth, and Mars – are terrestrial planets. They are all small with solid, rocky surfaces.</li> <li>• The Space Race played a significant part in the Cold War as the Americans and Soviets competed to prove their technological and intellectual superiority by becoming the first nation to put a human into space. From beginning to end, the world's attention was captivated by this contest for dominance.</li> </ul>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
	15 class/blocks
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>

<b>Unit-specific Vocabulary:</b>		<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>	
Sun, Planet, Asteroid, Exoplanet, Comets, Gravity, Inertia, Orbit, Ellipse, Seasons, Axis/Axial tilt, Terrestrial, Gas Giants, Satellite, Solar energy, Mass, Moon, Phases, Crescent, Gibbous, Eclipse (Solar and Lunar), Umbra, Penumbra, Tides (Neap, Spring, High, Low), System, Luminosity, Surface features, Density, Atmosphere, Naked-eye viewing, Rings, Solstice, Equinox, Winds/weather, Erosion, Zenith, Asteroid, Meteoroid, Meteor, Meteorite, Crater, Tectonic plate activity, Volcano, Mass, Weight, Year, Atmosphere, Day/Night, Rotation, Revolution, Solar wind, Sun's layers and features, Core, Photosphere, Chromosphere, Radiative zone, Corona, Flares, Prominences, Sunspots, Magnetic field, Solar Storms, Aurora, Near-Earth Objects, Speed of light (light minutes), Kilometers, Astronomical Units, Dwarf planet, Habitable zone,		<ul style="list-style-type: none"> <li>● Label the layers and identify the features of our sun</li> <li>● Station Lab for eclipses and tides: both solar and lunar, neap and spring</li> <li>● <a href="#">WebQuest/Lab</a></li> <li>● History Channel's The Universe: DVD series on planets, the moon, the sun, etc.</li> <li>● YouTube: Crash Course Astronomy</li> <li>● Solar System Scavenger Hunt</li> <li>● Solar System, Eclipses, Phases Task Cards</li> <li>● Solar System Quick Checks</li> <li>● Comparing Celestial Objects</li> </ul>	
<b>Opportunities for Interdisciplinary Connections:</b>		<b>Anticipated misconceptions:</b>	
<b>Connections to Prior Units:</b>		<b>Connections to Future Units:</b>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>			
<b>UDL Indicator</b>		<b>Teacher Actions:</b>	
<b>Expression &amp; Communication</b> <ul style="list-style-type: none"> <li>● Use multiple media for communication</li> <li>● Express learning in flexible ways.</li> </ul>		Compose in multiple media such as text, speech, drawing, illustration, comics, storyboards, design, film, music, dance/movement, visual art, sculpture, or video	
<b>Supporting Multilingual/English Learners</b>			
<b>Related <a href="#">CELP standards:</a></b>		<b>Learning Targets:</b>	
9-12.2 An EL can . . . participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.		<ul style="list-style-type: none"> <li>● I can <u>describe</u> what it means to be a “system”.</li> <li>● I can <u>develop</u> an initial model of the solar system.</li> <li>● I can <u>examine and explain</u> relative patterns of motions for Earth, Moon, and Sun.</li> <li>● I can <u>explain</u> how cycles are the basis for keeping time and a calendar.</li> </ul>	
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1	<ul style="list-style-type: none"> <li>● I can describe what it means to be a “system”.</li> <li>● I can distinguish between the different objects in the solar system.</li> <li>● I can develop an initial model of the solar system.</li> </ul>	<ul style="list-style-type: none"> <li>● Compare and contrast celestial bodies (planet, moon, dwarf planet, asteroid, comet, meteoroid, etc) in the solar system</li> </ul>	<a href="#">Solar System Bead Activity</a>  <a href="#">Kinesthetic Radial Model of the Solar System</a>

		<ul style="list-style-type: none"> <li>● I can examine the features and stats of bodies in the solar system.</li> <li>● I can model the solar system using images and explanations.</li> <li>● I can explain how the solar system is a system, including how the bodies interact with one another.</li> </ul>	
2	<ul style="list-style-type: none"> <li>● I can investigate the relationship between the Sun, Earth, and Moon system.</li> <li>● I can examine and explain relative patterns of motions for Earth, Moon, and Sun.</li> <li>● I can describe/model how Earth, Sun and moon cycles played a role in the development of a calendar.</li> </ul>	<ul style="list-style-type: none"> <li>● Explain how gravity organizes our solar system.</li> <li>● I can use the motions of the sun, earth and moon to explain the types of eclipses.</li> <li>● I can use the motions of the sun, earth and moon to explain the tides</li> <li>● I can use the motions of the sun, earth and moon to explain day and night</li> <li>● I can use the motions of the sun, earth and moon to explain the seasons</li> <li>● I can describe the reason that the appearance of the night sky and positions of the stars change at different times.</li> <li>● I can model/explain how celestial patterns allowed for the development of the calendar.</li> </ul>	<a href="#">EarthMoonSun</a>
3	<ul style="list-style-type: none"> <li>● I can revise my solar system model to include accurate scale and deeper explanation of the system and its inner workings.</li> </ul>	<ul style="list-style-type: none"> <li>● Models should include descriptions of the motions and patterns of the earth, sun, and moon; the impact of gravity on the system, solar system bodies and their characteristics and statistics. Models should use astronomical units as the unit of measurement.</li> </ul>	
4	<ul style="list-style-type: none"> <li>● I can understand how the space race/exploration has changed over the</li> </ul>	<ul style="list-style-type: none"> <li>● I can understand what is meant by the term</li> </ul>	

	<p>past century.</p> <ul style="list-style-type: none"> <li>● I can understand how the space race has impacted the study of the solar system.</li> </ul>	<p>space race.</p> <ul style="list-style-type: none"> <li>● I can describe the historical changes to the space race over time.</li> <li>● I can describe how the space race has impacted our understanding of the solar system and led to the development of new tools and technologies..</li> <li>● I can examine past explorations, such as the space race, as well as present day probes, Hubble space telescope, and space stations etc. and the future of space exploration</li> <li>● I can develop a timeline/model to showcase the major events in space exploration.</li> </ul>	
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<b>Unit Title:</b>	
<b>Understanding Stars</b>	
<b>Relevant Standards: Bold indicates priority</b>	
<ul style="list-style-type: none"> <li>● HS-PS1-8 Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.</li> <li>● <b>HS-ESS1-1: Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation.</b></li> <li>● <b>HS-ESS1-3: Communicate scientific ideas about the way stars, over their life cycle, produce elements.</b></li> </ul>	
<b>Essential Question(s):</b>	<b>Enduring Understanding(s):</b>
<ul style="list-style-type: none"> <li>● Why is the big bang theory the most widely accepted scientific explanation for the formation of the universe?</li> <li>● How do scientists think our universe will end/what do they predict about the future of our universe?</li> <li>● What evidence substantiates the big bang theory?</li> <li>● What evidence contradicts the big bang theory?</li> <li>● How does a star form?</li> <li>● What causes stars to shine?</li> <li>● How do stars change throughout their lifespan?</li> <li>● What drives the changes within a star?</li> <li>● What limits a star's life span?</li> <li>● How can we predict the lifespan of a distant star?</li> <li>● Where did all the known elements of the Universe come from?</li> <li>● How do scientists classify stars?</li> <li>● How do these classifications inform astronomers?</li> <li>● What happens to different stars when they run out of fuel?</li> </ul>	<ul style="list-style-type: none"> <li>● The best-supported theory of our universe's origin centers on an event known as the big bang. This theory was born of the observation that other galaxies are moving away from our own at great speed in all directions, as if they had all been propelled by an ancient explosive force.</li> <li>● Stars are born within the clouds of dust and scattered throughout most galaxies. As the cloud collapses, a dense, hot core forms and begins gathering dust and gas. Not all of this material ends up as part of a star — the remaining dust can become planets, asteroids, or comets or may remain as dust.</li> <li>● Stars are fueled by the nuclear fusion of hydrogen to form helium deep in their interiors. The outflow of energy from the central regions of the star provides the pressure necessary to keep the star from collapsing under its own weight, and the energy by which it shines.</li> <li>● All naturally occurring elements heavier than nickel are formed in the rare but spectacular cataclysmic explosions called supernovas</li> </ul>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
	15 blocks
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Big Bang, Edwin Hubble, Expansion, Contraction/collapse, Temperature, Elements, Singularity, Periodic Table, Supernova, Gases, Metals	<ul style="list-style-type: none"> <li>● History Channel's The Universe: Life Cycle of a Star</li> <li>● Crash Course Astronomy on YouTube</li> <li>● <a href="#">Stellar Activity</a></li> </ul>

(Iron), Spectral lines, Spectroscope, Doppler effect, Red shift, Blue shift, Brightness (Apparent and Absolute), Magnitude, Cosmic microwave background radiation, Composition, Mass, Fusion, Energy, Core, Evolution, Nucleosynthesis, Black Hole, Neutron Star, Atom, Nucleus, Proton, Neutron, Electron, Nebula (Stellar and Planetary), White dwarf, Black dwarf, Protostar, Red Giant, Blue Giant, Supergiants, Massive star, Average star, Hertzsprung-Russell diagram, Luminosity, Pulsar, Main sequence, Parallax, Gravity, Pressure, Age/Lifespan		<ul style="list-style-type: none"> <li>• <a href="#">Luminosity and Brightness</a></li> <li>• H-R Diagram activities - Plotting, drawings</li> <li>• <a href="#">Phet Build an Atom</a></li> <li>• <a href="#">Star Magnitude worksheet</a></li> <li>• <a href="#">Universe Size Comparison 3D</a></li> <li>• <a href="#">Journey Through the Universe at the speed of light</a> or <a href="#">Journey through the universe beyond the speed of light</a></li> </ul>	
<b>Opportunities for Interdisciplinary Connections:</b>		<b>Anticipated misconceptions:</b>	
		Students may confuse big bang with star formation, concepts will need to be discretely defined and discussed throughout the unit. Encourage students to draw connections between formation of stars and the Big Bang theory.	
<b>Connections to Prior Units:</b>		<b>Connections to Future Units:</b>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>			
<b>UDL Indicator</b>		<b>Teacher Actions:</b>	
<b>Comprehension</b> <ul style="list-style-type: none"> <li>• Activate or supply background knowledge</li> <li>• Highlight patterns, critical features, big ideas, and relationships</li> </ul>		<ul style="list-style-type: none"> <li>• Anchor instruction by linking to and activating relevant prior knowledge (e.g., using visual imagery, concept anchoring, or concept mastery routines)</li> <li>• Use advanced organizers (e.g., KWL methods, concept maps).</li> <li>• Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>• Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</li> <li>• Use multiple examples and non-examples to emphasize critical features</li> <li>• Use cues and prompts to draw attention to critical features</li> <li>• Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>	
<b>Supporting Multilingual/English Learners</b>			
<b>Related <a href="#">CELP standards:</a></b>		<b>Learning Targets:</b>	
9-12.6-An EL can . . .analyze and critique the arguments of others orally and in writing.		<ul style="list-style-type: none"> <li>• I can <u>cite evidence</u> of the Big Bang theory.</li> <li>• I can <u>compare and explain</u> current theories that describe the “death” of the universe.</li> </ul>	
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>

1	<ul style="list-style-type: none"> <li>● I can cite evidence of the Big Bang theory.</li> <li>● I can recall/investigate where known elements of the Universe come from.</li> <li>● I can examine and explain how the laws of physics that govern Earth are the same that govern the rest of the universe.</li> </ul>	<ul style="list-style-type: none"> <li>● I can identify elements on the periodic table and connect them to their stellar evolution.</li> <li>● I can explain the different cosmic events that form the elements.</li> <li>● I can explain the universal law of gravitation and how it applies to all bodies, including stars.</li> <li>● I can use evidence of light spectra, motion of distant galaxies, composition of matter in the universe to explain the Big Bang Theory.</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="#">Phet Build an Atom</a></li> </ul>
2	<ul style="list-style-type: none"> <li>● I can compare the formation of a star to the big bang.</li> <li>● I can examine and explain different stars' life cycles based on their mass</li> <li>● I can hypothesize how/why stars evolve to their deaths.</li> <li>● I can develop a model to illustrate the life span of our sun and the role of nuclear fusion in the sun's core to release energy.</li> <li>● I can compare and explain current theories that describe the "death" of the universe.</li> </ul>	<ul style="list-style-type: none"> <li>● I can define similarities and differences between star formation and the big bang theory.</li> <li>● I can understand the stages of the star's life cycle and the balance of energy and gravity.</li> <li>● I can explain how a star's fuel changes throughout its life cycle and how that impacts the color, shape and size of the star.</li> <li>● I can compare and contrast big crunch, big freeze, and the big rip theories in regard to the death of the universe.</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="#">Universe Size Comparison 3D</a></li> <li>● History Channel's The Universe: Life Cycle of a Star</li> <li>● Crash Course Astronomy: Stars, High Mass Stars, Low Mass Stars, etc.</li> </ul>
3	<ul style="list-style-type: none"> <li>● I can apply learning from star life cycles to understand the Sun.</li> <li>● I can examine solar storms and their impact on earth.</li> </ul>	<ul style="list-style-type: none"> <li>● I can define the Sun's current life cycle phase.</li> <li>● I can define 3 types of solar storms and how they impact Earth.</li> </ul>	

<b>Unit Title:</b>	
<b>The Universe</b>	
<b>Relevant Standards: Bold indicates priority</b>	
<b>HS-ESS1-2: Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.</b> HS-ESS1-3: Communicate scientific ideas about the way stars, over their life cycle, produce elements.	
<b>Essential Question(s):</b>	<b>Enduring Understanding(s):</b>
<ul style="list-style-type: none"> <li>• <i>What are the relative sizes and distances of objects in the universe?*</i></li> <li>• <i>What does it mean to be “looking back in time” when we observe the universe?*</i></li> <li>• <i>What causes/How does our night sky change over time? *</i></li> <li>• What do we see in our night sky from Earth, compared to what we see from the Hubble telescope?</li> <li>• <i>How does light and the speed of light help us understand the universe?*</i></li> <li>• What did the Hubble deep field reveal to us?</li> <li>• <i>What created our universe, and what are some theories about the end of the universe?*</i></li> <li>• <i>What evidence do we have of the big bang, and the ever-expanding universe?*</i></li> <li>• What is the probability that life exists elsewhere in the universe?</li> <li>• What are the different types of galaxies?</li> <li>• What are objects we find in deep space beyond our galaxy?</li> <li>• What do we know about our own galaxy, as well as others?</li> <li>• What happens when galaxies or other objects interact or collide?</li> <li>• What are the key events and individuals in history that have led to our current understanding of space or have allowed for deeper space exploration?</li> <li>• What does future space exploration involve?</li> </ul> <p><i>*continued from previous unit</i></p>	<ul style="list-style-type: none"> <li>• Hubble takes sharp pictures of objects in the sky such as planets, stars and galaxies. Hubble has made more than one million observations. These include detailed pictures of the birth and death of stars, galaxies billions of light years away</li> <li>• As Hubble orbits Earth, the Fine Guidance Sensors lock onto stars. The Fine Guidance Sensors are part of the Pointing Control System and aim Hubble in the right direction. The telescope can lock onto a target that is one mile away without moving more than the width of a human hair.</li> <li>• The Drake equation is a probabilistic argument used to estimate the number of active, communicative extraterrestrial civilizations in the Milky Way Galaxy.</li> <li>• Scientists sometimes categorize galaxies based on their shapes and physical features. Other classifications organize galaxies by the activity in their central regions – powered by a supersized black hole – and the angle at which we view them.</li> <li>• Many large galaxies can attract a smaller galaxy. The gravity of the large galaxy will pull the smaller one towards it, creating a collision. If one galaxy has enough momentum, the galaxy with enough movement or momentum could keep moving away after the collision. However, most galaxies are pulled towards one another and do not continue moving past each other because they do not have enough momentum and the gravitational pulls are too strong to escape.</li> <li>• Future space exploration will potentially involve expeditions and the other planets and settlements on the moon as well as establishing mining and fueling outposts, particularly in the asteroid belt. Physical exploration outside the solar System will be robotic for the foreseeable future.</li> </ul>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
	10 blocks

<b>Family Overview (link below)</b>		<b>Integration of Technology:</b>	
		<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>	
<b>Unit-specific Vocabulary:</b>		<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>	
Galaxy, Stars, Quasar, Interstellar, Expansion, Big Bang, Dark matter, SETI, Drake Equation, Hubble Deep Field, Big Crunch, Big Freeze, Big Rip, Black Holes		<ul style="list-style-type: none"> <li>• <a href="#">Big Bang Activities</a></li> <li>• <a href="#">Big Bang and Structure of Universe</a></li> <li>• <a href="#">TedEd: 3 Ways the Universe Could End</a></li> <li>• Big Bang Evidence Workbook</li> <li>• Quick Checks - Big Bang</li> <li>• Crash Course Astronomy: Galaxies parts 1&amp;2</li> <li>• History Channel's The Universe</li> </ul>	
<b>Opportunities for Interdisciplinary Connections:</b>		<b>Anticipated misconceptions:</b>	
<b>Connections to Prior Units:</b>		<b>Connections to Future Units:</b>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>			
<b>UDL Indicator</b>		<b>Teacher Actions:</b>	
<b>Comprehension</b> <ul style="list-style-type: none"> <li>• Activate or supply background knowledge</li> </ul>		Bridge concepts with relevant analogies and metaphors Use advanced organizers (e.g., KWL methods, concept maps)	
<b>Supporting Multilingual/English Learners</b>			
<ul style="list-style-type: none"> <li>• <b>Related <a href="#">CELP</a> standards:</b></li> </ul>		<b>Learning Targets:</b>	
An EL can . . . participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.		All targets in this unit.	
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1	<ul style="list-style-type: none"> <li>• I can examine the evidence for answering the question "Are we alone?"</li> <li>• I can explain the Drake Equation's significance.</li> </ul>	<ul style="list-style-type: none"> <li>• I can access and use SETI information to examine the question, "Are we alone?".</li> <li>• I can analyze evidence and determine its legitimacy.</li> <li>• I understand all of the parts of the Drake equation.</li> </ul>	<a href="#">Student Reading: History of SETI</a>  <a href="#">SETI Institute</a>  Cosmos: Traveller's Tales (Voyager's golden record) <a href="#">The Golden Record</a> and <a href="#">Voyager-The Golden Record</a>

		<ul style="list-style-type: none"> <li>● I can explain the importance of the Drake equation and the SETI program.</li> </ul>	
2	<ul style="list-style-type: none"> <li>● I can explain the ways in which the use of the Hubble telescope has revealed the age and scope of the universe.</li> <li>● I can describe the types of celestial bodies found throughout deep space.</li> <li>● I can explain the statement that “using a telescope is like looking back in time”.</li> </ul>	<ul style="list-style-type: none"> <li>● I can describe how data from the Hubble explains the expansion of the universe.</li> <li>● I can describe how data from the Hubble helps scientists define the age of the universe.</li> </ul>	<a href="#">The 1995 Hubble photo that changed astronomy</a>
3	<ul style="list-style-type: none"> <li>● I can define how scientists use light spectra to gain a deeper understanding of the universe.</li> <li>● I can distinguish between redshift and blueshift and explain how the light shifts provide information about the</li> </ul>	<ul style="list-style-type: none"> <li>● I can identify stars that are receding or approaching Earth.</li> <li>● I can explain redshift/blueshift as evidence of the expansion of the universe.</li> </ul>	<p>Red shift Blue shift webquest</p> <p>Bozeman Science: Doppler Effect on YouTube</p>

Course Title:	Content Area:	Grade Level:	Credit (if applicable)
Meteorology	Science	10-12	0.5

**Course Description:**

Students in this course learn meteorology by developing an understanding of the multiple factors that lead to weather patterns, weather formation and climate. The major topics of study include: Solar radiation, atmospheric moisture and stability, precipitation, air pressure and circulation, air masses and fronts, and changing climates. This course embeds multiple hands-on and virtual lab experiences to enhance students' knowledge and class experience. Students will be expected to maintain a detailed and scientific weather journal, as well as research weather and climate events and share their findings through projects, models, written and/or oral reports and presentations.

**Aligned Core Resources:**

**Connection to the [BPS Vision of the Graduate](#)**

Grade 6 Science-Destructive Weather  
Physical Science-The Year without Summer

Critical Thinking and Problem Solving

**Additional Course Information:  
Knowledge/Skill Dependent courses/prerequisites**

Link to [Completed Equity Audit](#)

**Standard Matrix**

District Learning Expectations and Standards	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
<a href="#">HS-ESS2-1.</a> Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales <del>to form continental and ocean floor features.</del>						X		
<a href="#">HS-ESS2-2.</a> Analyze geoscience data to make the claim that one change to Earth's surface can create feedback that causes changes to other Earth systems.	X							X
<a href="#">HS-ESS2-4.</a> Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.	X	X		X	X		X	X
<a href="#">HS-ESS2-5.</a> Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.		X		X	X		X	
<a href="#">HS-ESS2-6.</a> Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere								X

<a href="#">HS-ESS2-7</a> . Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.	X							
<a href="#">HS-ESS3-5</a> . Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems.								X
<a href="#">HS-ESS3-6</a> . Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	X						X	X
<a href="#">HS-LS4-6</a> . Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.								X
<a href="#">HS-ESS1-2</a> . Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.		X						
<a href="#">HS-ESS1-3</a> . Communicate scientific ideas about the way stars, over their life cycle, produce elements.		X						
<a href="#">HS-PS3-2</a> . Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative positions of particles (objects).			X	X				
<a href="#">HS-PS3-3</a> . Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.*			X	X				
<a href="#">HS-LS1-3</a> . Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.			X					
<a href="#">HS-PS1-3</a> . Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.						X		

## Unit Links

[Unit 1: Introduction to Meteorology and Atmospheric Science](#)

[Unit 2: Solar Radiation](#)

[Unit 3: Temperature](#)

[Unit 4: Atmospheric Moisture and Stability](#)

[Unit 5: Condensation and Precipitation](#)

[Unit 6: Air Pressure and Atmospheric Circulation](#)

[Unit 7: Air Masses and Fronts](#)

[Unit 8: Changing Climate and the World](#)

**Unit Title:**

## Unit 1: Introduction to Meteorology and Atmospheric Science

**Relevant Standards: Bold indicates priority**

- 
- HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedback that causes changes to other Earth systems.
- HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- HS-ESS2-7. Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.
- HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

**Essential Question(s):**

- What is the study of meteorology?
- How has the study of meteorology progressed over time?
- What makes meteorology a branch of atmospheric science?
- How does the modern atmosphere compare to the primeval atmosphere?
- What is the structure of the modern atmosphere?

**Enduring Understanding(s):**

- Learning Sequence 1: Meteorology is the study of the atmosphere, atmospheric phenomena, and atmospheric effects on our weather. The atmosphere is the gaseous layer of the physical environment that surrounds a planet. Forecasters use atmospheric data to scientifically assess the current state of the atmosphere and make predictions of its future state.
- Learning Sequence 2: The art of weather forecasting began with early civilizations using recurring astronomical and meteorological events to help them monitor seasonal changes in the weather. Early meteorological instruments were refined during the seventeenth through nineteenth centuries, other related observational, theoretical, and technological developments also contributed to our knowledge of the atmosphere; and individuals at scattered locations began to make and record atmospheric measurements.
- Learning Sequence 3: Earth's original atmosphere was probably just hydrogen and helium, because these were the main gasses in the dusty, gassy disk around the Sun from which the planets formed. The Earth and its atmosphere were very hot. Molecules of hydrogen and helium move really fast, especially when warm. Actually, they moved so fast they eventually all escaped Earth's gravity and drifted off into space. Earth's "second atmosphere" came from Earth itself. There were lots of volcanoes, many more than today, because Earth's crust was still forming. The volcanoes released: (1) steam, (2) carbon dioxide, and (3) ammonia.
- Learning Sequence 4: Earth's Modern (3rd Atmosphere): Much of the CO<sub>2</sub> dissolved into the oceans. Eventually, a simple form of bacteria developed that could live on energy from the Sun and

	<p>carbon dioxide in the water, producing oxygen as a waste product. Thus, oxygen began to build up in the atmosphere, while the carbon dioxide levels continued to drop. Meanwhile, the ammonia molecules in the atmosphere were broken apart by sunlight, leaving nitrogen and hydrogen. The hydrogen, being the lightest element, rose to the top of the atmosphere and much of it eventually drifted off into space.</p>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
End of Unit Assessment Laboratories Scientific Models	5 blocks
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
<p>Meteorology, Feedback, Climate, Weather, Patterns, Absorption, Redistribution, Positive feedback, Feedback, Mechanism, Dynamic, System interactions, EMR, Photosynthesis, Respiration, Carbon dioxide, Oxygen, Regional climate, Global climate, Temperature, Green-house gas, Carbon cycle, Carbon reserve, Biosphere, Reflection, Atmosphere (layers), Exosphere, Ionosphere, Aurora, Thermosphere, Molecules, Density, High/Low Pressure, Temperature, Mesosphere, Stratosphere, Ozone Layer, Troposphere, Composition (elements, compounds), Major ocean currents, Seasons, Axis/Axial tilt, Radiation, Conduction, Convection, Circulation, Meteorologist, Station model, Radar, Barometer, Anemometer, Air Mass, Front, Storm, Latitude, Longitude, Maritime, Continental, Cycles, Climate change, Satellite</p>	<ul style="list-style-type: none"> <li>• Meteorology <a href="#">Labs</a></li> <li>• <a href="#">Better Lesson Resources</a></li> <li>• <a href="#">Weather Analysis Lab</a></li> <li>• Station <a href="#">Model Lab</a></li> <li>• <a href="#">Meteorology Resources</a></li> <li>• <a href="#">Weather Resources</a></li> <li>• <a href="#">NASA Weather Teacher resource</a></li> <li>• <a href="#">Satellite Meteorology 7-12 Teacher Resources</a></li> <li>• <a href="#">NSTA Standards Page</a> with Classroom resources (at the bottom right of page)</li> </ul>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
	AAAS Misconceptions: <a href="#">Atmosphere</a>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
Highlight patterns, critical features, big ideas, and relationships	<ul style="list-style-type: none"> <li>• Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>• Use outlines, graphic organizers, unit organizer</li> </ul>

		<p>routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</p> <ul style="list-style-type: none"> <li>• Use multiple examples and non-examples to emphasize critical features</li> <li>• Use cues and prompts to draw attention to critical features</li> <li>• Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>	
<b>Supporting Multilingual/English Learners</b>			
<b>Related <a href="#">CELP standards:</a></b>		<b>Learning Targets:</b>	
An EL can make accurate use of standard English to communicate in grade appropriate speech and writing.		All learning targets listed in this unit.	
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1 What is the study of meteorology?	<ul style="list-style-type: none"> <li>• I can describe the tenets of the study of meteorology (CR).</li> <li>• I can describe some of the modern tools used to make meteorological predictions (CR).</li> </ul>	<ul style="list-style-type: none"> <li>• I can define the various factors/tenets (ocean currents, geology, seasons, amount of solar radiation) that affect the weather in a region.</li> <li>• I can define the data provided by modern meteorological tools (radiosonde, weather stations, satellite data, supercomputer for forecasting)</li> </ul>	<a href="#">NASA Meteorology Guide</a>
2 How has the study of meteorology progressed over time?	<ul style="list-style-type: none"> <li>• I can describe the historic meteorological instruments and explain their function (CR).</li> <li>• I can compare ancient tools to modern tools for studying meteorology (CR), (P).</li> <li>• I can compare and contrast types of meteorology data in the 19th century to today (CR), (P).</li> </ul>	<ul style="list-style-type: none"> <li>• I can explain how early man used knowledge of the weather to make agricultural decisions.</li> <li>• I can explain the use and data collected from early meteorological instruments (barometer, anemometer, rain gauge, vanes)</li> <li>• I can compare and contrast the type and quality of data collected from ancient tools to modern tools.</li> </ul>	<a href="#">NASA Meteorology Guide</a>
3 What makes meteorology a branch of atmospheric	<ul style="list-style-type: none"> <li>• I can describe how the study of meteorology is an atmospheric science (CR).</li> <li>• I can model the primeval atmosphere</li> </ul>	<ul style="list-style-type: none"> <li>• I can compare and contrast the 3 atmospheric stages of earth.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Absorb/Emit Lab</a></li> <li>• Atmosphere structure and composition</li> <li>• <a href="#">Temperature and</a></li> </ul>

<p>science? How does the modern atmosphere compare to the primeval atmosphere?</p>	<p>and make (general) comparisons to the modern atmosphere (P).</p>	<ul style="list-style-type: none"> <li>● I can model the changes in atmosphere over time with both pictures and written explanations.</li> </ul>	<p><a href="#">pressure lab</a></p>
<p>4 What is the structure of the modern atmosphere?</p>	<ul style="list-style-type: none"> <li>● I can describe the current model or vertical structure of the atmosphere .</li> <li>● I can analyze data to define the components of the differing layers of the modern atmosphere .</li> </ul>	<ul style="list-style-type: none"> <li>● I can graph the vertical structure of the atmosphere.</li> <li>● I can analyze my graph to make sense of the unique layers within the modern atmosphere.</li> <li>● I can explain why the vertical structure of the atmosphere graph changes due to location (latitude).</li> </ul>	<ul style="list-style-type: none"> <li>● Atmosphere structure and composition activities</li> <li>● <a href="#">Layers of the atmosphere lab</a></li> </ul>

**Unit Title:**

Unit 2: Solar Radiation

**Relevant Standards: Bold indicates priority**

- HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
- HS-ESS1-2. Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.
- HS-ESS1-3. Communicate scientific ideas about the way stars, over their life cycle, produce elements.

**Essential Question(s):**

- What are the Earth-Sun Relationships?
- What is the nature of radiation?
- How does solar radiation heat the Earth?
- How does solar radiation interact with the atmosphere and Earth?
- What optical phenomena are associated with solar radiations and its interactions with the atmosphere and Earth?
- How do meteorologists measure and record solar radiation?
- How do meteorologists use solar radiation information?

**Enduring Understanding(s):**

- Learning Sequence 1: It is the earth's relationship to the sun, and the amount of light it receives, that is responsible for the seasons and biodiversity. The amount of sun a region receives depends on the tilt of the earth's axis and not its distance from the sun. Every location on Earth receives sunlight at least part of the year.
- Learning Sequence 2: Solar radiation, often called the solar resource, is a general term for the electromagnetic radiation emitted by the sun.
- Learning Sequence 3: Energy from the sun is transferred through space and through the earth's atmosphere to the earth's surface. Since this energy warms the earth's surface and atmosphere, some of it is or becomes heat energy. There are three ways heat is transferred into and through the atmosphere: radiation, conduction, convection.
- Learning Sequence 4: About 29 percent of the solar energy that arrives at the top of the atmosphere is reflected back to space by clouds, atmospheric particles, or bright ground surfaces like sea ice and snow. This energy plays no role in Earth's climate system. About 23 percent of incoming solar energy is absorbed in the atmosphere by water vapor, dust, and ozone, and 48 percent passes through the atmosphere and is absorbed by the surface. Thus, about 71 percent of the total incoming solar energy is absorbed by the Earth system.
- Learning Sequence 5: Solar radiation is often defined as the energy reaching the earth from the sun. A large part of this is visible sunlight, but the solar spectrum extends into the UV as well as the near infra-red. It reaches us in different ways: directly from the sun (direct solar radiation), through scattering through the atmosphere (diffuse solar radiation) or via reflections. These quantities can be measured separately as (1) total radiation on the surface or (2)

	the global horizontal irradiance.
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
End of Unit Assessment Laboratories Scientific Models	6 Blocks
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Temperature, Solar radiation, Solar energy, Thermometer, Fahrenheit, Celsius, Tilt-Seasons, Albedo, Unequal heating, Storage, Ultraviolet light, Troposphere, Stratosphere, Mesosphere, Thermosphere, Exosphere, Water Cycle, Evaporation, Condensation, Precipitation, Surface runoff, Water cycle, Dew point, Saturation, Cloud cover, Wind direction, Visibility, Humidity (relative, etc), EMR, Spectra, Radiation, Solar energy, Hydrogen, Helium, 1st atmosphere, 2nd atmosphere, 3rd atmosphere, Energy, Energy transfer, Radiation, Conduction, Convection, Solar radiation, Solar energy	<ul style="list-style-type: none"> <li>• Meteorology <a href="#">Labs</a></li> <li>• <a href="#">Better Lesson Resources</a></li> <li>• <a href="#">Weather Analysis Lab</a></li> <li>• Station <a href="#">Model Lab</a></li> <li>• <a href="#">Meteorology Resources</a></li> <li>• <a href="#">NASA Meteorology Guide</a></li> </ul>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
	AAAS Misconceptions: <a href="#">Solar Radiations/Seasons</a>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
Highlight patterns, critical features, big ideas, and relationships	<ul style="list-style-type: none"> <li>• Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>• Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</li> <li>• Use multiple examples and non-examples to emphasize critical features</li> <li>• Use cues and prompts to draw attention to critical features</li> <li>• Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>
<b>Supporting Multilingual/English Learners</b>	
<b>Related <a href="#">CELP standards:</a></b>	<b>Learning Targets:</b>

An EL can construct grade appropriate oral and written claims and support them with reasoning and evidence.		<ul style="list-style-type: none"> <li>● I can create an explanatory model to describe the reasons for the seasons and the impact on meteorological science (P).</li> <li>● I can describe the patterns in energy related to the different waves found on the electromagnetic spectrum (CR).</li> <li>● I can create a wave model to describe solar radiation (P).</li> <li>● I can analyze and interpret the laws of radiation (P).</li> <li>● I can describe the role of solar radiation on meteorology (CR).</li> <li>● I can explain optical events and their relationship to solar ray interactions with the atmosphere and earth (CR).</li> </ul>	
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1 What are the Earth-Sun Relationships?	<ul style="list-style-type: none"> <li>● I can model and describe Earth's motions.</li> <li>● I can create an explanatory model to describe the reasons for the seasons and the impact on meteorological science (P).</li> <li>● I can explain the importance of Earth's orientation to the study of meteorology (CR).</li> </ul>	<ul style="list-style-type: none"> <li>● I can explain the differences between the patterns of Earth's rotation and Earth's Revolution.</li> <li>● I can model the impact of revolution on the seasons and meteorological science.</li> <li>● I can explain how tilt and latitude impact the amount of solar energy reaching earth.</li> </ul>	
2 What is the nature of radiation?	<ul style="list-style-type: none"> <li>● I can describe the patterns in energy related to the different waves found on the electromagnetic spectrum (CR).</li> <li>● I can create a wave model to describe solar radiation (P).</li> </ul>	<ul style="list-style-type: none"> <li>● I can identify the different parts of the electromagnetic spectrum</li> <li>● I can identify which electromagnetic waves become heat energy</li> </ul>	
3 How does solar radiation heat the Earth?	<ul style="list-style-type: none"> <li>● I can compare and contrast the three forms of heat transfer (CR), (P).</li> <li>● I can analyze and interpret the laws of radiation (P).</li> </ul>	<ul style="list-style-type: none"> <li>● I can model how Solar energy reaching Earth's surface becomes heat energy</li> </ul>	Lab activities: <ul style="list-style-type: none"> <li>● Radiation</li> <li>● Conduction</li> <li>● Convection</li> </ul> <a href="#">Heat Transfer Lab</a>
4 How does solar radiation interact with the atmosphere and Earth?  What optical phenomena are associated with	<ul style="list-style-type: none"> <li>● I can describe the ways in which solar radiation interacts with the atmosphere (CR).</li> <li>● I can describe the ways in which solar radiation interacts with the Earth (CR).</li> <li>● I can describe the role of solar radiation on meteorology (CR).</li> <li>● I can explain optical events and their relationship to solar ray interactions</li> </ul>	<ul style="list-style-type: none"> <li>● I can interpret a diagram of where solar radiation goes once it enters Earth's atmosphere.</li> <li>● I can model how different aspects of Earth interact with sunlight.</li> <li>● I can describe solar</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="#">Absorb/Emit Lab</a></li> <li>● <a href="#">Temperature and pressure lab</a></li> </ul>

solar radiations and its interactions with the atmosphere and Earth?	with the atmosphere and earth (CR).	events and their appearance on Earth.	
<p>5</p> <p>How do meteorologists measure and record solar radiation?</p> <p>How do meteorologists use solar radiation information?</p>	<ul style="list-style-type: none"> <li>● I can describe the tools and collection processes related to solar radiation and meteorology.</li> <li>● I can analyze and explain solar information (heat data, lumens, etc).</li> </ul>	<ul style="list-style-type: none"> <li>● I can define the <b>solar constant</b></li> <li>● I can describe the difference between the two tools used to measure solar energy</li> <li>● I can analyze solar information to understand the differences in temperature between the layers.</li> </ul>	<p>Big Data, Small Devices: <a href="#">Solar Terminator</a> (p209)</p>

Unit Title:	
Unit 3: Temperature	
Relevant Standards: <b>Bold indicates priority</b>	
<ul style="list-style-type: none"> <li>● HS-PS3-2. Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative positions of particles (objects).</li> <li>● HS-PS3-3. Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.*</li> <li>● HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</li> </ul>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> <li>● How do meteorologists measure temperature? How do meteorologists use air temperature data?</li> <li>● How does the temperature vary in a day? How do you calculate the mean daily temperature?</li> <li>● What factors impact the recorded temperature of a region?</li> <li>● How do extreme temperatures impact human comfort?</li> </ul>	<ul style="list-style-type: none"> <li>● Learning Sequence 1: Temperature is affected by many processes at several different time and space scales. Some of these factors are well understood and very predictable (like the seasons), while others present bigger challenges.</li> <li>● Learning Sequence 2/3: Daily air temperatures at Earth's surface are controlled by the incoming and outgoing energy. During the day, the air temperature increases as energy gains exceed the energy lost from Earth's surface. Throughout the night, the air temperature decreases as Earth's surface loses more energy than it receives.</li> <li>● Learning Sequence 4: The human body always works to remain in homeostasis. One form of homeostasis is thermoregulation. Body temperature varies in every individual, but the average internal temperature is 37.0 °C (98.6 °F). Stress from extreme external temperature can cause the human body to shut down. Hypothermia can set in when the core temperature drops to 35 °C (95 °F). Hyperthermia can set in when the core body temperature rises above 37.5-38.3 °C (99.5-100.9 °F). These temperatures commonly result in mortality. Humans have adapted to living in climates where hypothermia and hyperthermia are common primarily through culture and technology, such as the use of clothing and shelter.</li> </ul>
Demonstration of Learning:	Pacing for Unit
End of Unit Assessment Laboratories Scientific Models	6 Blocks
Family Overview (link below)	Integration of Technology:

	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Electromagnetic radiation, Conduction, Convection, Radiation, Re-radiation, Rotation, Revolution, Ocean currents, Infrared, Water vapor, Chlorofluorocarbons, Greenhouse gasses, Absorption, Reflection, Positive & negative feedback loops, Types of clouds, Conservation of energy, Thermal energy, Heat, Radiant energy, Matter cycles, Energy flow, Thermal energy, Energy flow, Conduction, Convection, Radiation, Feedback, Positive feedback, Mechanism, Temperature, Homeostasis, Stabilize, Destabilize, Thermometer, Fahrenheit, Celsius, Altitude,	<ul style="list-style-type: none"> <li>• Meteorology <a href="#">Labs</a></li> <li>• <a href="#">Better Lesson Resources</a></li> <li>• <a href="#">Weather Analysis Lab</a></li> <li>• Station <a href="#">Model Lab</a></li> <li>• <a href="#">Meteorology Resources</a></li> <li>• <a href="#">Weather Resources</a></li> <li>• <a href="#">NASA Weather Teacher resource</a></li> <li>• <a href="#">Satellite Meteorology 7-12 Teacher Resources</a></li> </ul>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
	AAAS: Misconceptions- <a href="#">Weather and Climate Basic Elements</a>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<ul style="list-style-type: none"> <li>• Biology NGSS Unit: Yellowstone-Wolves Change Rivers</li> <li>• Physical Science NGSS Unit: The Year Without Summer</li> <li>• Chemistry NGSS Unit: Environmental Chemistry</li> </ul>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
Highlight patterns, critical features, big ideas, and relationships	<ul style="list-style-type: none"> <li>• Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>• Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</li> <li>• Use multiple examples and non-examples to emphasize critical features</li> <li>• Use cues and prompts to draw attention to critical features</li> <li>• Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>
<b>Supporting Multilingual/English Learners</b>	
<b>Related <a href="#">CELP standards:</a></b>	<b>Learning Targets:</b>
<ul style="list-style-type: none"> <li>• An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>• An EL can speak and write about grade-appropriate</li> </ul>	

<p>complex literary and informational texts and topics.</p> <ul style="list-style-type: none"> <li>● An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.</li> </ul>			
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
<p>1</p> <p>How do meteorologists measure temperature?</p> <p>How do meteorologists use air temperature data?</p>	<ul style="list-style-type: none"> <li>● I can describe the tools used to collect temperature data.</li> <li>● I can describe the ways in which meteorologists protect temperature/meteorological instruments.</li> <li>● I can analyze surface temperature to draw isotherms on a weather map.</li> <li>● I can describe the meteorological importance of drawing and communicating isotherms.</li> </ul>	<ul style="list-style-type: none"> <li>● I can read a thermometer in both Fahrenheit and Celsius scales</li> <li>● I can explain how clouds both diffuse and reflect light</li> <li>● I can explain how the atmosphere is heated by Earth's surface</li> <li>● I can explain how air temperature near or over bodies of water is much different from that over land due to differences in the way water and land heat and cool.</li> </ul>	<ul style="list-style-type: none"> <li>● Calculations-<a href="#">isotherms</a></li> <li>● Hypothermia and Hyperthermia google slides</li> <li>● BBC The Weather: Cold</li> <li>● BBC The Weather: Heat</li> </ul>
<p>2</p> <p>How does the temperature vary in a day?</p> <p>How do you calculate the mean daily temperature?</p>	<ul style="list-style-type: none"> <li>● I can collect temperature data.</li> <li>● I can calculate the mean daily temperature.</li> <li>● I can explain the variation in temperature throughout the course of a 24 hour period.</li> <li>● I can model the mean daily temperature on a weather map.</li> </ul>	<ul style="list-style-type: none"> <li>● I can draw a line on a map joining points with the same temperature.</li> <li>● I can explain that during the day, the air temperature increases as energy gains exceed the energy lost from Earth's surface and during the night, the air temperature decreases as Earth's surface loses more energy than it receives.</li> </ul>	
<p>3</p> <p>What factors impact the recorded temperature of a region?</p>	<ul style="list-style-type: none"> <li>● I can develop a model to represent the temperature patterns related to land and water.</li> <li>● I can construct an explanation for the temperatures in coastal communities and its relationship to ocean currents.</li> <li>● I can model or explain how altitude impacts temperature.</li> <li>● I can predict the average seasonal temperature based on a region's geographic position.</li> <li>● I can analyze temperature data to explain the relationship between cloud</li> </ul>	<ul style="list-style-type: none"> <li>● I can explain that ocean currents act like a conveyor belt, transporting warm water and precipitation from the equator toward the poles and cold water from the poles back to the equatorial region.</li> <li>● I can describe that the farther away you get from the earth, the</li> </ul>	<ul style="list-style-type: none"> <li>● Lab activities: <ul style="list-style-type: none"> <li>○ Radiation</li> <li>○ Conduction</li> <li>○ Convection</li> </ul> </li> <li>● Albedo activities/demo</li> <li>● <a href="#">Heat Transfer Lab</a></li> <li>● <a href="#">Absorb/Emit Lab</a></li> </ul>

	<p>cover and temperature.</p> <ul style="list-style-type: none"> <li>● I can analyze temperature data to explain the relationship between angle of solar incidence and temperature.</li> </ul>	<p>thinner the atmosphere gets and the total heat content of a system is directly related to the amount of matter present, so it is cooler at higher elevations.</p> <ul style="list-style-type: none"> <li>● I can identify when the sun has a lower elevation angle, the solar energy reaching Earth is less intense because it is spread out over a larger area.</li> </ul>	
<p>4 How do extreme temperatures impact human comfort?</p>	<ul style="list-style-type: none"> <li>● I can measure temperature and calculate wind chill.</li> <li>● I can measure temperatures and calculate heat index.</li> <li>● I can describe the ways in which meteorologists communicate information related to extreme temperatures.</li> </ul>	<ul style="list-style-type: none"> <li>● I can calculate wind chill using a wind chill chart</li> <li>● I can explain the difference between temperature and heat index and what factors go into its calculation.</li> <li>● I can provide evidence and reasoning to explain the growing need for meteorological information to be communicated to emergency managers (FEMA, Homeland Security) through the integration of weather forecasters into emergency operations and the development of weather watches, warnings, and advisories to coordinate between emergency managers and meteorologists, to benefit public safety and to improve our capability to prepare for and respond to emergencies.</li> </ul>	<ul style="list-style-type: none"> <li>● Heat Index calculations</li> <li>● <a href="#">Wind Chill calculations</a></li> </ul>

**Unit Title:**

## Unit 4: Atmospheric Moisture and Stability

**Relevant Standards: Bold indicates priority**

- HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
- HS-PS3-2. Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative positions of particles (objects).
- HS-PS3-3. Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.\*

**Essential Question(s):**

- How does water in the atmosphere impact meteorological communications and predictions?
- What are the unusual properties of water? How do these properties impact weather?
- How is humidity measured?
- How does humidity play a role in weather forecasting?
- How does adiabatic change impact atmospheric stability?

**Enduring Understanding(s):**

- Learning Sequence 1: Earth's water has a significant role in weather and weather systems. Water has unique properties, such as its specific heat or heat capacity, and has the ability to change state depending on the regional temperature and pressure. Such changes in state are the result in the flow of energy that ultimately drives the water cycle and weather systems.
- Learning Sequence 2: Water is the only substance on earth that naturally exists in all three physical states: solid (ice), liquid (water), gas (vapor or steam). The high specific heat of water means it takes a large amount of energy and a longer time to warm it, as well as a much longer time for that heat to be released. As the seasons change, those who live near large bodies of water--such as lakes and oceans--experience the effects of water's high specific heat on a larger scale.
- Learning Sequence 3: Relative humidity is the ratio of the current absolute humidity to the highest possible absolute humidity (which depends on the current air temperature). A reading of 100 percent relative humidity means that the air is totally saturated with water vapor and cannot hold any more, creating the possibility of rain.
- Learning Sequence 4: In general, as a parcel of air rises, the water vapor in it condenses and heat is released. The rising air will therefore cool more slowly as it rises; the wet adiabatic lapse rate will in general be less negative than the dry adiabatic lapse rate. The wet adiabatic lapse rate has been observed to vary between  $-6.5^{\circ}\text{C}/\text{km}$  and  $-3.5^{\circ}\text{C}/\text{km}$ .

<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
End of Unit Assessment Laboratories Scientific Models	5 Blocks
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Troposphere, Stratosphere, Mesosphere, Thermosphere, Exosphere, Water Cycle, Evaporation, Condensation, Precipitation, Surface runoff, Water cycle, Dew point, Saturation, Cloud cover, Wind direction, Visibility, Humidity (relative, etc), Conservation of energy, Thermal energy, Heat, Radiant energy, Matter cycles, Energy flow, Thermal energy, Energy flow, Conduction, Convection, Radiation	<ul style="list-style-type: none"> <li>• Meteorology <a href="#">Labs</a></li> <li>• <a href="#">Better Lesson Resources</a></li> <li>• <a href="#">Weather Analysis Lab</a></li> <li>• Station <a href="#">Model Lab</a></li> <li>• <a href="#">Meteorology Resources</a></li> <li>• <a href="#">Weather Resources</a></li> <li>• <a href="#">NASA Weather Teacher resource</a></li> <li>• <a href="#">Satellite Meteorology 7-12 Teacher Resources</a></li> <li>• <a href="#">NSTA Standards Page</a> with Classroom resources (at the bottom right of page)</li> </ul>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• AAAS: Misconceptions-<a href="#">Weather and Climate Basic Elements</a></li> <li>• AAAS Misconceptions: <a href="#">Cloud Formation</a></li> </ul>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<ul style="list-style-type: none"> <li>• Physical Science Unit: The Year Without Summer</li> <li>• Chemistry NGSS Unit: Environmental Chemistry</li> </ul>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
Highlight patterns, critical features, big ideas, and relationships	<ul style="list-style-type: none"> <li>• Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>• Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</li> <li>• Use multiple examples and non-examples to emphasize critical features</li> <li>• Use cues and prompts to draw attention to critical features</li> <li>• Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>
<b>Supporting Multilingual/English Learners</b>	
<b>Related <a href="#">CELP standards:</a></b>	<b>Learning Targets:</b>

<ul style="list-style-type: none"> <li>• An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>• An EL can speak and write about grade-appropriate complex literary and informational texts and topics.</li> <li>• An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.</li> </ul>			
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
<p>1</p> <p>How does water in the atmosphere impact meteorological communications and predictions?</p>	<ul style="list-style-type: none"> <li>• I can model the hydrologic cycle.</li> <li>• I can make an initial model/explanation for how water in the atmosphere drives meteorological events.</li> </ul>	<ul style="list-style-type: none"> <li>• I can identify which parts of the water cycle have the greatest impact on weather</li> <li>• I can explain how the heat capacity of water drives Earth's overall climate and daily weather patterns.</li> </ul>	<p><a href="#">Content resource</a></p>
<p>2</p> <p>What are the unusual properties of water?</p> <p>How do these properties impact weather?</p>	<ul style="list-style-type: none"> <li>• I can explain the properties of water.</li> <li>• I can define and model the different states of water.</li> <li>• I can describe the latent heat of vaporization for water.</li> <li>• I can connect the latent heat of water to the energy required for weather events.</li> </ul>	<ul style="list-style-type: none"> <li>• I can diagram how as water changes state it absorbs or releases energy. Example: when water vapor forms clouds energy is released back into the atmosphere</li> <li>• evaporative cooling helps slow down the rate of daytime heating in places where there are sources of water, such as lakes.</li> </ul>	<p><a href="#">New York Science Teacher Files-Water Cycle</a></p> <p>Big Data, Small Devices: <a href="#">Tides of Change</a> (p192)</p> <p><a href="#">How raindrops form</a></p> <p><a href="#">What do raindrops really look like?</a></p> <p>Surface Tension of water on YouTube</p> <p>Surface Tension of Water droplet demo/experiment</p> <p>Water Stations Lab</p>
<p>3</p> <p>How is humidity measured?</p> <p>How does humidity play a role in weather forecasting?</p>	<ul style="list-style-type: none"> <li>• I can define and use the instruments used to determine the relative humidity.</li> <li>• I can calculate relative humidity.</li> <li>• I can use psychrometric tables to improve the communication of a weather forecast.</li> </ul>	<ul style="list-style-type: none"> <li>• I can identify three types of hygrometers and how they measure relative humidity</li> <li>• I can use a sling psychrometer to calculate relative humidity.</li> <li>• I can explain the significance of relative humidity in a temperature forecast.</li> </ul>	<p><a href="#">Investigation:Moisture in the Atmosphere</a></p>
4	<ul style="list-style-type: none"> <li>• I can calculate dry and wet adiabatic</li> </ul>	<ul style="list-style-type: none"> <li>• I can explain how</li> </ul>	<p><a href="#">Adiabatic lapse rate</a></p>

<p>How does adiabatic change impact atmospheric stability?</p>	<p>lapse rates.</p> <ul style="list-style-type: none"><li>● I can describe the components of atmospheric stability and instability.</li><li>● I can identify and model the connections between adiabatic change and atmospheric stability.</li><li>● I can explain and model lifting mechanisms within the atmosphere.</li></ul>	<ul style="list-style-type: none"><li>● The adiabatic lapse rate is the rate at which the temperature of an air parcel changes in response to the compression or expansion associated with a change in elevation.</li></ul>	
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Unit Title:	
Unit 5: Condensation and Precipitation	
Relevant Standards: <b>Bold indicates priority</b>	
<ul style="list-style-type: none"> <li>● HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.</li> <li>● HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.</li> </ul>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> <li>● How do clouds form?</li> <li>● How are clouds classified?</li> <li>● How is fog different from a cloud?</li> <li>● How do the different types of precipitation form? How is precipitation measured?</li> <li>● How do meteorologists predict severe precipitative weather events?</li> <li>● Can weather events be manipulated?</li> </ul>	<ul style="list-style-type: none"> <li>● Learning Sequence 1: A cloud is a visible accumulation of minute droplets of water, ice crystals, or both, suspended in the air. Though they vary in shape and size, all clouds are basically formed in the same way through the vertical air above the condensation level. Clouds may also form in contact with the ground surface, too. The different types of clouds are named based on their shape and how high up they hover in the troposphere.</li> <li>● Learning Sequence 2: Precipitation is water released from clouds in the form of rain, freezing rain, sleet, snow, or hail. It is the primary connection in the water cycle that provides for the delivery of atmospheric water to the Earth.</li> </ul>
Demonstration of Learning:	Pacing for Unit
End of Unit Assessment Laboratories Scientific Models	4 Blocks
Family Overview (link below)	Integration of Technology:
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):
Troposphere, Stratosphere, Mesosphere, Thermosphere, Exosphere, Water Cycle, Evaporation, Condensation, Precipitation, Surface runoff, Water cycle, Dew point, Saturation, Cloud cover, Wind direction, Visibility, Humidity (relative, etc), Cloud types (cirrus, stratus, cumulus, nimbo-, alto-, etc)	<ul style="list-style-type: none"> <li>● Meteorology <a href="#">Labs</a></li> <li>● <a href="#">Better Lesson Resources</a></li> <li>● <a href="#">Weather Analysis Lab</a></li> <li>● Station <a href="#">Model Lab</a></li> <li>● <a href="#">Meteorology Resources</a></li> <li>● <a href="#">Weather Resources</a></li> <li>● <a href="#">NASA Weather Teacher resource</a></li> <li>● <a href="#">Satellite Meteorology 7-12 Teacher Resources</a></li> <li>● <a href="#">NSTA Standards Page</a> with Classroom resources (at the bottom right of page)</li> </ul>

	<ul style="list-style-type: none"> <li>BBC's <i>The Weather</i> (4 DVD Series)</li> </ul>		
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>		
	AAAS Misconceptions: <a href="#">Water Cycle</a>		
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>		
<ul style="list-style-type: none"> <li>Grade 6 NGSS Unit: Destructive Weather</li> <li>Physical Science NGSS UNit: The Year without Summer</li> </ul>			
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>			
<b>UDL Indicator</b>	<b>Teacher Actions:</b>		
Highlight patterns, critical features, big ideas, and relationships	<ul style="list-style-type: none"> <li>Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</li> <li>Use multiple examples and non-examples to emphasize critical features</li> <li>Use cues and prompts to draw attention to critical features</li> <li>Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>		
<b>Supporting Multilingual/English Learners</b>			
<b>Related <a href="#">CELP standards:</a></b>	<b>Learning Targets:</b>		
<ul style="list-style-type: none"> <li>An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>An EL can speak and write about grade-appropriate complex literary and informational texts and topics.</li> <li>An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.</li> </ul>			
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
<p>1</p> <p>How do clouds form?</p> <p>How are clouds classified?</p> <p>How is fog different from a cloud?</p>	<ul style="list-style-type: none"> <li>I can describe the different cloud types and their formation.</li> <li>I can classify clouds based on observation.</li> <li>I can predict the weather based on cloud observations.</li> <li>I can model the differences between fog and a cloud.</li> <li>I can explain the properties and formation of the different fogs.</li> </ul>	<ul style="list-style-type: none"> <li>Use evidence of cloud types to support my prediction.</li> <li>Generate an explanatory model that describes the scientific differences between fog and clouds.</li> <li>I can use key vocabulary to discuss the</li> </ul>	<p><a href="#">New York Science Teacher Files-Types of Clouds</a></p> <p>Teacher-created slides</p> <p>Daily weather log identifying and recording observed clouds</p> <p><a href="#">All the Cloud Types</a></p>

	<ul style="list-style-type: none"> <li>● I can model clouds and fog on a meteorological map.</li> </ul>	environmental factors necessary to fog formation and the different types of fog.	<a href="#">TedEd: How did clouds get their names?</a>
<p>2</p> <p>How do the different types of precipitation form?</p> <p>How is precipitation measured?</p> <p>How do meteorologists predict severe precipitative weather events?</p> <p>Can weather events be manipulated ?</p>	<ul style="list-style-type: none"> <li>● I can explain how precipitation forms.</li> <li>● I can explain the formation of various forms of precipitation.</li> <li>● I can explain and use tools for measuring precipitation.</li> <li>● I can explain how meteorologists predict severe precipitative weather events.</li> <li>● I can describe the ways in which humans can manipulate weather events.</li> <li>● I can model precipitation on a meteorological map.</li> <li>● I can analyze a meteorological map to predict precipitation.</li> </ul>	<ul style="list-style-type: none"> <li>● I can distinguish between the various forms of precipitation.</li> <li>● I can determine key environmental conditions required for the formation of each type of precipitation.</li> <li>● I can understand weather map symbolism for the various types of precipitation and related weather characteristics.</li> <li>● I can make distinct connections between human impact on climate and the impact climate has on weather.</li> </ul>	<p><a href="#">NWS: Types of Precipitation</a></p> <p><a href="#">How Can Rain Create Conflict? Precipitation and Water Use: Crash Course Geography #11</a></p> <p><a href="#">How are weather forecasts made?</a></p> <p>BBC <i>The Weather: Wet</i> DVD</p>

Unit Title:	
Unit 6: Air Pressure and Atmospheric Circulation	
Relevant Standards: <b>Bold indicates priority</b>	
<ul style="list-style-type: none"> <li>● HS-ESS2-1. Develop a model to illustrate how Earth’s internal and surface processes operate at different spatial and temporal scales</li> <li>● HS-PS1-3. Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</li> </ul>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> <li>● How do we measure air pressure? How are air pressure and winds connected?</li> <li>● What factors impact winds?</li> <li>● What wind patterns exist on Earth?</li> </ul>	<ul style="list-style-type: none"> <li>● Learning Sequence 1: The air around you has weight, and it presses against everything it touches. That pressure is called atmospheric pressure, or air pressure. It is the force exerted on a surface by the air above it as gravity pulls it to Earth. Atmospheric pressure is commonly measured with a barometer.</li> <li>● Learning Sequence 2: Wind is defined as the movement of air in any direction. The speed of wind varies from calm to the very high speeds of hurricanes. Wind is created when air moves from areas of high pressure toward areas where the air pressure is low. Seasonal temperature changes and the Earth’s rotation also affect wind speed and direction.</li> <li>● Learning Sequence 3: Winds on Earth are either global or local. Global winds blow in the same directions all the time and are related to the unequal heating of Earth by the Sun — that is, more solar radiation strikes the equator than the polar regions – and the rotation of the Earth — that is, the Coriolis effect. Water in the surface currents is pushed in the direction of the major wind belts: <ul style="list-style-type: none"> <li>○ trade winds: east to west between the equator and 30°N and 30°S</li> <li>○ westerlies: west to east in the middle latitudes</li> <li>○ polar easterlies: east to west between 50° and 60° north and south of the equator and the north and south pole</li> </ul> </li> </ul>
Demonstration of Learning:	Pacing for Unit
End of Unit Assessment Laboratories Scientific Models	4 Blocks
Family Overview (link below)	Integration of Technology:
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching,</i>

	<i>organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Feedback, Climate, Weather, Weather patterns, Atmospheric layers, Exosphere, Ionosphere, Aurora, Thermosphere, Mesosphere, Stratosphere, Troposphere, Atmospheric composition (elements), Major ocean currents, Seasons, Latitude, Direct/indirect sunlight, Annual precipitation, Humidity, Air pressure, Wind, Redistribution, Density, Diurnal cycle, Biodiversity, Climate zones, Rain forest, Grassland, Ice caps, Tundra, Boreal forest, Electromagnetic radiation, Conduction, Convection, Radiation, Re-radiation, Rotation, Revolution, Ocean currents, Infrared, Water vapor, Chlorofluorocarbons, Greenhouse gasses, Absorption, Reflection, Positive & negative feedback loops, Types of clouds, Temperature, Thermometer, Fahrenheit, Celsius, Tilt-Seasons, Albedo, Unequal heating, Storage, Ultraviolet light, Cumulus, Stratus, Cirrus, Pollutants (carbon monoxide, SO <sub>x</sub> , NO <sub>x</sub> , Ozone, CO <sub>2</sub> , etc.), Altitude, Ice age, Volcano, Glacier, Particle motion, States of matter, Solid, Liquid gas, Temperature, Pressure, Gas law, Atmosphere, Gravity	<ul style="list-style-type: none"> <li>● Meteorology <a href="#">Labs</a></li> <li>● <a href="#">Better Lesson Resources</a></li> <li>● <a href="#">Weather Analysis Lab</a></li> <li>● Station <a href="#">Model Lab</a></li> <li>● <a href="#">Meteorology Resources</a></li> <li>● <a href="#">Weather Resources</a></li> <li>● <a href="#">NASA Weather Teacher resource</a></li> <li>● <a href="#">Satellite Meteorology 7-12 Teacher Resources</a></li> <li>● <a href="#">NSTA Standards Page</a> with Classroom resources (at the bottom right of page)</li> </ul>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
	AAAS Misconceptions: <a href="#">Air Pressure and Movement</a>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<ul style="list-style-type: none"> <li>● NGSS Chemistry Unit; Air Bags</li> <li>● Physical Science NGSS Unit: The Year Without Summer</li> </ul>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
Highlight patterns, critical features, big ideas, and relationships	<ul style="list-style-type: none"> <li>● Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>● Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</li> <li>● Use multiple examples and non-examples to emphasize critical features</li> <li>● Use cues and prompts to draw attention to critical features</li> <li>● Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>
<b>Supporting Multilingual/English Learners</b>	

Related <b>CELP standards:</b>		Learning Targets:	
<ul style="list-style-type: none"> <li>• An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>• An EL can speak and write about grade-appropriate complex literary and informational texts and topics.</li> <li>• An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.</li> </ul>			
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
<p>1</p> <p>How do we measure air pressure?</p> <p>How are air pressure and winds connected?</p>	<ul style="list-style-type: none"> <li>• I can use meteorological tools to measure air pressure.</li> <li>• I can analyze data collected from a barometer.</li> <li>• I can explain how pressure and altitude affect air pressure.</li> <li>• I can explain how temperature and water vapor impact air pressure.</li> </ul>	<ul style="list-style-type: none"> <li>• I can define the data collected by each of the meteorological tools.</li> <li>• I can measure air pressure.</li> <li>• I can differentiate between air pressure and altitude.</li> <li>• I can describe other weather characteristics that impact air pressure.</li> </ul>	<p><a href="#">Wind Explained</a></p>
<p>2</p> <p>What factors impact winds?</p>	<ul style="list-style-type: none"> <li>• I can model or explain the factors that affect wind.</li> <li>• I can measure wind and apply it to a meteorological weather model.</li> </ul>	<ul style="list-style-type: none"> <li>• I can describe how to determine which direction the wind will blow from looking at a weather map.</li> <li>• I can predict the speed of wind based on evidence of air pressure from a weather map.</li> </ul>	<ul style="list-style-type: none"> <li>• Mapping pressure belts and winds</li> <li>• Demonstration/activity of Coriolis effect</li> <li>• <a href="#">Coriolis Effect Video</a></li> <li>• Coriolis Effect article from Newsela Spring 2019</li> <li>• Big Data, Small Devices: <a href="#">Wind Beneath my Wings</a> p102</li> </ul>
<p>3</p> <p>What wind patterns exist on Earth?</p>	<ul style="list-style-type: none"> <li>• I can describe the scale and structure of various wind patterns found on earth.</li> <li>• I can explain the development and behavior of local winds.</li> <li>• I can analyze ocean currents and use them to explain global wind patterns.</li> <li>• I can analyze global precipitation distribution and use global wind and ocean currents to explain the patterns in distribution.</li> <li>• I can communicate wind patterns on a meteorological forecast/model.</li> </ul>	<ul style="list-style-type: none"> <li>• I can explain the general reasons for the direction of wind.</li> <li>• I can explain why consistent wind patterns exist on Earth, relative to the ocean currents.</li> </ul>	<ul style="list-style-type: none"> <li>• Ocean currents activity and videos <a href="#">Video: How do Ocean Currents Work?</a></li> <li>• Mapping major ocean currents-<a href="#">Rubber Ducks</a></li> <li>• El niño investigation <a href="#">Video: El Nino</a> <a href="#">Video 2: El Nino</a> <a href="#">Video: Ocean driving Force</a></li> <li>• DVD: BBC's <i>The Weather: Wind</i></li> </ul>

**Unit Title:**

## Unit 7: Air Masses and Fronts

**Relevant Standards: Bold indicates priority**

- HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.

**Essential Question(s):**

- What are air masses?
- How do the 5 North American air masses determine weather in the United States?
- What are fronts and how are they formed?
- What is the relationship between fronts and severe weather?
- How do meteorologist's communicate fronts and severe weather on a weather map?

**Enduring Understanding(s):**

- Learning Sequence 1: In meteorology, an air mass is a volume of air defined by its temperature and water vapor content. Air masses cover many hundreds or thousands of miles, and adapt to the characteristics of the surface below them. They are classified according to latitude and their continental or maritime source regions.
- Learning Sequence 2: An air mass is a large body of air with generally uniform temperature and humidity. The area over which an air mass originates is what provides its characteristics. The longer the air mass stays over its source region, the more likely it will acquire the properties of the surface below. As such, air masses are associated with high pressure systems. There are two broad overarching divisions of air masses based upon the moisture content. Continental air masses, designated by the lowercase letter 'c', originate over continents and are therefore dry air masses. Maritime air masses, designated by the letter 'm', originate over the oceans and are therefore moist air masses.
- Learning Sequence 3: When a front passes over an area, it means a change in the weather. Many fronts cause weather events such as rain, thunderstorms, gusty winds, and tornadoes. At a cold front, there may be dramatic thunderstorms. At a warm front, there may be low stratus clouds. Usually, the skies clear once the front has passed.
- Learning Sequence 4: Severe weather can occur with cold fronts, warm fronts, and drylines. The movement of the front will help you determine how long the precipitation will last. Slower moving fronts are more prone to produce heavy persistent rain. The upper level winds determine how fast a supercell will move once it forms.
- Learning Sequence 5: A cold front is represented by a solid blue line with filled-in triangles along it, like in the map on the left. The triangles are like arrowheads pointing in the direction that the front is moving. The surface location of a warm front is represented by a

	solid red line with red, filled-in semicircles along it, like in the map on the right (B). The semicircles indicate the direction that the front is moving. They are on the side of the line where the front is moving. Etc.
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
End of Unit Assessment Laboratories Scientific Models	6 blocks
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Air mass, Cold Front, Continental, Maritime, Warm Front, Occluded Front, Stationary Front, Polar, Tropical, Troposphere, Stratosphere, Mesosphere, Thermosphere, Exosphere, Water Cycle, Evaporation, Condensation, Precipitation, Surface runoff Water cycle, Dew point, Saturation, Cloud cover, Wind direction, Visibility, Humidity (relative, etc) Regional climate, Global climate, Temperature Green-house gas, Carbon cycle, Carbon reserve Biosphere	<ul style="list-style-type: none"> <li>• Meteorology <a href="#">Labs</a></li> <li>• <a href="#">Better Lesson Resources</a></li> <li>• <a href="#">Weather Analysis Lab</a></li> <li>• Station <a href="#">Model Lab</a></li> <li>• <a href="#">Meteorology Resources</a></li> <li>• <a href="#">Weather Resources</a></li> <li>• <a href="#">NASA Weather Teacher resource</a></li> <li>• <a href="#">Satellite Meteorology 7-12 Teacher Resources</a></li> <li>• <a href="#">NSTA Standards Page</a> with Classroom resources (at the bottom right of page)</li> </ul>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
	<ul style="list-style-type: none"> <li>• AAAS Misconceptions: <a href="#">Air Masses</a></li> </ul>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
Highlight patterns, critical features, big ideas, and relationships	<ul style="list-style-type: none"> <li>• Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>• Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</li> <li>• Use multiple examples and non-examples to emphasize critical features</li> <li>• Use cues and prompts to draw attention to critical features</li> <li>• Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>

Supporting Multilingual/English Learners			
Related <a href="#">CELP standards:</a>		Learning Targets:	
<ul style="list-style-type: none"> <li>• An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>• An EL can speak and write about grade-appropriate complex literary and informational texts and topics.</li> <li>• An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.</li> </ul>			
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
1 What are air masses?	<ul style="list-style-type: none"> <li>• I can model and describe air masses according to their source region.</li> <li>• I can classify air masses using a three letter code.</li> <li>• I can explain how air masses are modified.</li> </ul>	<ul style="list-style-type: none"> <li>• I can describe the different characteristics of air masses relative to their source location.</li> <li>• I can recall the two letter abbreviations for each type of air mass.</li> <li>• I can describe how air masses interact with one another. I can predict the outcome of different types of air masses interacting.</li> <li>• I can explain events that may cause an air mass to change.</li> </ul>	NY Science Teacher- <a href="#">Air Masses</a>  <a href="#">What is an air mass?</a>  <a href="#">Scholastic - Study Jams -</a>
2 How do the 5 North American air masses determine weather in the United States?	<ul style="list-style-type: none"> <li>• I can investigate the 5 North American air masses.</li> <li>• I can model how the air masses impact weather conditions in the US.</li> <li>• I can predict the weather in a specific region by analyzing air mass activity.</li> </ul>	<ul style="list-style-type: none"> <li>• I can analyze air mass activity and identify the mass as a specific type.</li> <li>• I can identify fronts.</li> <li>• I can differentiate between occluded, stationary, cold, and warm fronts.</li> <li>• I can predict the weather associated with each type of front.</li> </ul>	Investigation- <a href="#">Air Masses and Fronts</a>
3 What are fronts and how are they formed?	<ul style="list-style-type: none"> <li>• I can distinguish between the different types of fronts.</li> <li>• I can describe the relationship between midlatitude cyclones and polar fronts.</li> <li>• I can describe the lifecycle of a midlatitude cyclone.</li> <li>• I can describe the conveyor belt models of air streams.</li> </ul>	<ul style="list-style-type: none"> <li>• I can explain how Mid-latitude cyclones drive most of the stormy weather in the continental United States.</li> <li>• I can model the development of these cyclones by showcasing a warm front from the south meeting a cold</li> </ul>	Resource: CK-12 Cyclones

		front from the north.	
4 What is the relationship between fronts and severe weather?	<ul style="list-style-type: none"> <li>● I can model fronts and their relationship to the development of thunderstorms.</li> <li>● I can model fronts and their relationship to the development of lightning.</li> <li>● I can model fronts and their relationship to the development of tornadoes.</li> <li>● I can model fronts and their relationship to the development of hurricanes.</li> </ul>	<ul style="list-style-type: none"> <li>● I can generate explanatory models that show the concept of a front visually with scientific explanation.</li> <li>● I can describe the events that lead to the generation of thunder.</li> <li>● I can describe the events that lead to the generation of lightning.</li> <li>● I can identify the similarities and differences in hurricane and tornado formation.</li> </ul>	<p>NY Science Teacher-<a href="#">Latent Heat</a></p> <p>Student Explanatory Models</p> <p>Big Data, Small Devices:<a href="#">Extreme Weather</a> p85, <a href="#">Hurricane Me</a> p235</p>
5 How do meteorologist's communicate fronts and severe weather on a weather map?	<ul style="list-style-type: none"> <li>● I can describe the scale and structure of a frontal system.</li> <li>● I can explain the development and behavior of severe weather events.</li> <li>● I can analyze meteorological maps to describe and/or predict weather events.</li> <li>● I can communicate about fronts on a meteorological forecast/model.</li> <li>● I can communicate about severe weather on a meteorological forecast/model.</li> </ul>	<ul style="list-style-type: none"> <li>● I can describe the different types of severe weather associated with the different regions of the Earth.</li> <li>● I can explain why those forms of severe weather exist and the characteristics of the region that support the development of the weather event.</li> </ul>	<p>NY Science Teacher-<a href="#">Isoline Lab</a></p> <p>Big Data, Small Devices: <a href="#">Weather Mapper</a> p90</p> <p><a href="#">Weather Mapping Fronts and Severe Weather</a></p> <p><a href="#">Assessment items</a></p> <p><a href="#">How To Read Symbols &amp; Colors on a Weather Map</a></p>

**Unit Title:**

Unit 8: Changing Climate and the World

**Relevant Standards: Bold indicates priority**

- HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedback that causes changes to other Earth systems.
- HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- HS-ESS2-6. Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere
- HS-ESS3-5. Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems.
- HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
- HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.

**Essential Question(s):**

- How is climate change detected? What are the causes of climate change?
- What are the 3 factors that affect climate change? What are climate feedback mechanisms?
- What are the consequences of climate change?
- What are the global climates?
- How do weather observations become climate data?
- Why is climate data important? How is it used?

**Enduring Understanding(s):**

- Learning Sequence 1: Current models predict that, although future regional climate changes will be complex and varied, average global temperatures will continue to rise. The outcomes predicted by global climate models strongly depend on the amounts of human-generated greenhouse gases added to the atmosphere each year and by the ways in which these gases are absorbed by the ocean and biosphere.
- Learning Sequence 2: Earth system science is the study of how scientific data stemming from various fields of research, such as the atmosphere, oceans, land ice and others, fit together to form the current picture of our planet as a whole, including its changing climate. Climate scientists separate factors that affect climate change into three categories: forcings, feedbacks, and tipping points.
- Learning Sequence 3: Increased heat, drought and insect outbreaks, all linked to climate change, have increased wildfires. Declining water supplies, reduced agricultural yields, health impacts in cities due to heat, and flooding and erosion in coastal areas are additional concerns.
- Learning Sequence 4: Climate scientists split the Earth into approximately five main types of climates. They are:
  - A. Tropical. In this hot and humid zone, the average temperatures are greater than 64°F (18°C) year-round and there is more than 59 inches of precipitation each year.
  - B. Dry. These climate zones are so dry because moisture is rapidly evaporated from the air and

	<p>there is very little precipitation.</p> <p>C. Temperate: In this zone, there are typically warm and humid summers with thunderstorms and mild winters.</p> <p>D. Continental: These regions have warm to cool summers and very cold winters. In the winter, this zone can experience snowstorms, strong winds, and very cold temperatures—sometimes falling below -22°F (-30°C)!</p> <p>E. Polar: In the polar climate zones, it's extremely cold. Even in summer, the temperatures here never go higher than 50°F (10°C)!</p> <ul style="list-style-type: none"> <li>● Learning Sequence 5: Around the globe, millions of weather observations are recorded each day, by both human observers and automated instruments. In the United States, daily observations at stations that meet specified criteria, methodically collected by volunteer observers and automated weather stations, are used to document our weather and climate.</li> <li>● Learning Sequence 6: Current weather and climate data are used in many ways. People who make decisions for cities and towns rely on accurate and easy-to-understand graphs and maps to assist them in planning for energy needs, water management, and extreme weather events. Local climate data are also used to determine city budgets for maintaining roads, bridges, and other infrastructure.</li> </ul>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
End of Unit Assessment Laboratories Scientific Models	7 blocks
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
Climate, Greenhouse gases, El Nino, La Nina, Absorption, Redistribution, Positive feedback, Feedback Mechanism, Dynamic, System interactions, EMR, Reflection, Climate zones, Feedback, Mechanism Dynamic, System interactions, EMR, Reflection Absorption, Redistribution, Positive feedback Carbon dioxide, Global warming, Global cooling, Ice age, Climate change, Heat, Greenhouse effect, Thermohaline circulation, Feedback loops, Open vs. Closed systems, Climate model, Forecast, Global climate change, Regional climate change, Human impact, Carbon cycle	<ul style="list-style-type: none"> <li>● Meteorology <a href="#">Labs</a></li> <li>● <a href="#">Better Lesson Resources</a></li> <li>● <a href="#">Weather Analysis Lab</a></li> <li>● Station <a href="#">Model Lab</a></li> <li>● <a href="#">Meteorology Resources</a></li> <li>● <a href="#">Weather Resources</a></li> <li>● <a href="#">NASA Weather Teacher resource</a></li> <li>● <a href="#">Satellite Meteorology 7-12 Teacher Resources</a></li> <li>● <a href="#">NSTA Standards Page</a> with Classroom resources (at the bottom right of page)</li> </ul>

Impact prediction, Human-induced, Biodiversity, Environmental impact, Climate change, Empirical evidence			
<b>Opportunities for Interdisciplinary Connections:</b>		<b>Anticipated misconceptions:</b>	
<b>Connections to Prior Units:</b>		<b>Connections to Future Units:</b>	
<b>Differentiation through <i>Universal Design for Learning</i></b>			
<b>UDL Indicator</b>		<b>Teacher Actions:</b>	
Highlight patterns, critical features, big ideas, and relationships		<ul style="list-style-type: none"> <li>● Highlight or emphasize key elements in text, graphics, diagrams, formulas</li> <li>● Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships</li> <li>● Use multiple examples and non-examples to emphasize critical features</li> <li>● Use cues and prompts to draw attention to critical features</li> <li>● Highlight previously learned skills that can be used to solve unfamiliar problems</li> </ul>	
<b>Supporting Multilingual/English Learners</b>			
<b>Related <i>CELP standards:</i></b>		<b>Learning Targets:</b>	
<ul style="list-style-type: none"> <li>● An EL can determine the meaning of words and phrases in oral presentations and literary and informational text.</li> <li>● An EL can speak and write about grade-appropriate complex literary and informational texts and topics.</li> <li>● An EL can participate in grade appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions.</li> </ul>			
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
<p>1</p> <p>How is climate change detected?</p> <p>What are the causes of climate change?</p>	<ul style="list-style-type: none"> <li>● I can analyze climate data to find patterns that signify a change has occurred.</li> <li>● I can explain the natural causes of climate change.</li> <li>● I can explain how humans have impacted climate change</li> </ul>	<ul style="list-style-type: none"> <li>● I can explain why future regional average global temperatures will continue to rise.</li> <li>● I can explain how the outcomes predicted by global climate models strongly depend on the amounts of human-generated greenhouse gasses</li> </ul>	<p>Big Data, Small Devices: <a href="#">Climate from Pole to Pole (p81)</a></p> <p>Big Data, Small Devices: <a href="#">Oceans and Climate</a> (186)</p>

		<p>added to the atmosphere each year.</p> <ul style="list-style-type: none"> <li>● I can explain/model the ways in which these gasses are absorbed by the ocean and biosphere.</li> </ul>	
<p>2</p> <p>What are the 3 factors that affect climate change?</p> <p>What are climate feedback mechanisms?</p>	<ul style="list-style-type: none"> <li>● I can describe climate forcings (initial drivers of climate).</li> <li>● I can describe the climate feedback and their relationship to climate forcings.</li> </ul>	<ul style="list-style-type: none"> <li>● I can explain how scientific data from the atmosphere, oceans, land ice and others, fit together to form the current picture of our planet as a whole.</li> <li>● I can identify the three ways in which climate scientists characterize change: forcings, feedbacks, and tipping points.</li> </ul>	<p><a href="#">NASA Resource</a></p>
<p>3</p> <p>What are the consequences of climate change?</p>	<ul style="list-style-type: none"> <li>● I can describe climate tipping points and their relationship to feedback and forcings.</li> </ul>	<ul style="list-style-type: none"> <li>● Increased heat, drought and insect outbreaks, all linked to climate change, have increased wildfires. Declining water supplies, reduced agricultural yields, health impacts in cities due to heat, and flooding and erosion in coastal areas are additional concerns.</li> </ul>	<p><a href="#">NASA Resource</a></p> <p><a href="#">NASA Climate Time Machine</a></p>
<p>4</p> <p>What are the global climates?</p>	<ul style="list-style-type: none"> <li>● I can identify and categorize a region's climate.</li> <li>● I can differentiate between the world's different climates (wet tropics, tropical wet and dry, dry, humid mid-latitude, humid continental, polar, highland).</li> </ul>	<ul style="list-style-type: none"> <li>● I can identify and differentiate between the different types of climate zones.</li> </ul>	
<p>5</p> <p>How do weather observations become climate data?</p>	<ul style="list-style-type: none"> <li>● I can understand the difference between weather and climate.</li> <li>● I can explain the relationship between weather and climate.</li> <li>● I can explain the role of careful weather data collection in understanding climate.</li> <li>● I can read and interpret climate maps.</li> <li>● I can explain the similarities and differences between a weather map and a climate map.</li> </ul>	<ul style="list-style-type: none"> <li>● I know weather is a daily occurrence and that climate is representative of annual averages for a specific region or zone.</li> <li>● I can use a climate map to explain the climate in a specific region.</li> <li>● I can differentiate between a climate and a weather map.</li> </ul>	<p><a href="#">NOAA Resource</a></p>
<p>6</p>	<ul style="list-style-type: none"> <li>● I can explain how climate data is used</li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>	<p>Big Data, Small Devices:</p>

Why is climate data important? How is it used?	in Bristol to make decisions.		<a href="#">Challenging the Skeptics</a> p233
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Course Title:	Content Area:	Grade Level:	Credit (if applicable)
<b>Acting for Camera and Voice</b>	Theater	<b>9-12 BAIMS</b>	0.5
<b>Course Description:</b>			
<p>This course introduces students to the fundamental skills and theories of acting for the camera. Further emphasis will be given to developing the voice skills to be able to do voice-over work and tell a story with their voice, including dialect and accents. Students will be required to perform in front of their peers and will create and share recorded projects.</p>			
<b>Aligned Core Resources:</b>		<b>Connection to the <a href="#">BPS Vision of the Graduate</a></b>	
<b>Cameras</b> <b>Green Screen</b> <b>Digital Voice Recorders</b>		<p><b>Meaningfully contribute to a global society</b>  <b>COLLABORATION</b></p> <ul style="list-style-type: none"> <li>● Demonstrates ability to work effectively and respectfully with diverse teams</li> <li>● Exercises flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal</li> <li>● Assume shared responsibility for collaborative work and value the individual contributions made by each team member</li> </ul> <p><b>Successfully Employ Skills for</b>  <b>Self-Sufficiency</b>  <b>GOAL DIRECTED</b></p> <ul style="list-style-type: none"> <li>● Set goals with tangible and intangible success criteria</li> <li>● Use time and financial resources wisely to meet goals, complete tasks, and manage projects</li> <li>● Balance tactical (short-term) goals</li> <li>● Persist to accomplish difficult tasks and to overcome academic and personal barriers to meet goals</li> </ul> <p><b>Effectively Communicate in a Global Society</b>  <b>COMMUNICATION</b></p> <ul style="list-style-type: none"> <li>● Articulates thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts</li> <li>● Listen effectively to decipher meaning, including knowledge, values, attitudes and intentions. Use communication for a range of purposes (e.g. to inform, instruct, motivate and persuade)</li> <li>● Utilize multiple media and technologies, and know how to judge their effectiveness as well as assess their impact</li> </ul>	

	<ul style="list-style-type: none"> <li>Communicate effectively in diverse environments (including becoming multi-lingual)</li> </ul>
<b>Additional Course Information:</b> <i>Knowledge/Skill Dependent courses/prerequisites</i>	<b>Link to Completed Equity Audit</b>
<b>Unit Links</b>	
<i>If unit headings are formatted as a heading, then we can link a Table of Contents to better organize and provide faster access to each unit</i>	
<b>District Learning Expectations and Standards</b>	<b>2</b>
<b>Introduction to Vocal Acting</b>	<b>3</b>
<b>The Voice Actor</b>	<b>5</b>
<b>Introduction to Film Analysis</b>	<b>6</b>
<b>Acting for the Camera</b>	<b>9</b>
<b>Putting it Together - Vocal and/or Camera Final Project</b>	<b>11</b>

<b>Standard Matrix</b>					
<b>District Learning Expectations and Standards</b>	<a href="#"><u>Introduction to Vocal Acting</u></a>	<a href="#"><u>The Voice Actor</u></a>	<a href="#"><u>Introduction to Film Analysis</u></a>	<a href="#"><u>Acting for the Camera</u></a>	<a href="#"><u>Putting it Together - Vocal and/or Camera Final Project</u></a>
<b>Creating</b>					
TH:Cr1.1 Generate and conceptualize artistic ideas and work.		x			x
TH:Cr2.1 Organize and develop artistic ideas and work.		x		x	x
TH:Cr3.1 Refine new work through play, drama processes and theater experiences using critical analysis and experimentation.					x
<b>Performing</b>					
TH:Pr4.1 Select, analyze, and interpret artistic work for presentation.		x		x	x

TH:Pr5.1 Develop and refine artistic techniques and work for presentation.					x
TH:Pr6.1 Convey meaning through the presentation of artistic work.					x
<b>Respond</b>					
TH:Re7.1 Perceive and analyze artistic work.			x		
TH:Re8.1 Interpret intent and meaning in artistic work.	x		x		
TH:Re9.1 Apply criteria to evaluate artistic work.	x				
TH:Cn10.1 Synthesize and relate knowledge and personal experiences to make art.					
TH:Cn11.1 Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.	x				
TH:Cn11.2 Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.					

**Unit Title:**

# Introduction to Vocal Acting

**Relevant Standards: Bold indicates priority**

**TH:Re8.1.HSI a.** Analyze and compare artistic choices developed from personal experiences in multiple drama/theater works.

**TH:Cn11.1.HSI a.** Explore how cultural, global, and historic belief systems affect creative choices in a drama/theater work.

**TH:Re9.1.HSI b.** Consider the aesthetics of the production elements in a drama/theater work.

**Essential Question(s):**

TH:Re8.1 How can the same work of art communicate different messages to different people?  
 TH:Cn11.1 What happens when theater artists allow an

**Enduring Understanding(s):**

TH:Re9.1 Theater artists apply criteria to investigate, explore, and assess drama and theater work.  
 TH:Cn11.1 Theater artists allow awareness of

<p>understanding of themselves and the world to inform perceptions about theater and the purpose of their work?            TH:Re9.1 How are the theater artist's processes and the audience's perspectives impacted by analysis and synthesis?</p>	<p>interrelationships between self and others to influence and inform their work.            TH:Re8.1 Theater artists' interpretations of drama/theater work are influenced by personal experiences and aesthetics.</p>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
Successful marking of the script and completion of an audio recording with clear diction and intentional choices of tone and inflection.	8 80-minute class periods
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Audio Playback</i> <i>Recording device</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
<p><b>Language and Symbols</b>            2.5 Illustrate through multiple media  <b>Physical Action</b>            4.1 Vary the methods for response and navigation  <b>Expression and Communication</b>            5.1 Use multiple media for communication            5.2 Use multiple tools for construction and composition  <b>Sustaining Effort and Persistence</b>            8.3 Foster collaboration and community</p>	<ul style="list-style-type: none"> <li>- Encourage different media for presentation</li>   <li>- Provide opportunity for group collaboration</li> </ul>
<b>Supporting Multilingual/English Learners</b>	
<b>Related <a href="#">CELP standards:</a></b>	<b>Learning Targets:</b>
<p>9-12.2</p> <ul style="list-style-type: none"> <li>● Actively listen to others</li> <li>● Participate in short conversational and written exchanges on familiar topics and texts using academic and domain specific vocabulary</li> </ul> <p>9-12.3</p> <ul style="list-style-type: none"> <li>● Deliver oral presentations</li> </ul> <p>9-12.10</p>	

<ul style="list-style-type: none"> <li>Use frequently occurring nouns, pronouns, verbs, prepositions, adjectives, adverbs, conjunctions, and preposition phrases</li> </ul>			
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
Day 1 - Voice	What makes a voice a “good voice”	Participation Exit slip Lesson: Journal, Warmup, Breathing/Diaphragm lesson, Projection lesson	
Day 2 - Resonation	Understanding resonators and echo	Participation Exit slip Lesson: Journal, Warmup, Resonance activities	
Day 3 - Articulation	Understanding how the tongue, teeth and lips create consonant sounds and how an actor uses articulation to be understood	Participation Exit slip Lesson: Journal, Warmup, Articulation lecture/activities, Tongue Twisters	
Day 4 - Inflection and tone	Understanding how inflection and tone can change the meaning of a text	Participation Exit slip Lesson: Journal, Warmup, Inflection exercises Tone exercises	
Day 5 - Vocal analysis	To compare and understand how different actors’ voices and tone evoke different feelings and meaning to text	Participation Exit slip Lesson: Journal, Warmup, Listen to audio recordings of short stories/audiobooks to compare actors’ vocal qualities	Audio recordings Speaker Audio player
Day 6-8 Short story performance	Analyze a short story/children’s book for characterization and emphatic moments - pauses, increased volume, varied pacing. Record the audio of a short story or children’s book to show mastery and understanding of articulation, inflection and tone	Successful marking of the script and completion of an audio recording with clear diction and intentional choices of tone and inflection.	Midi lab/Recording Studio

**Unit Title:**

# The Voice Actor

## Relevant Standards: **Bold indicates priority**

**TH:Pr4.1.HSII.b** Identify essential text information, research from various sources, and the director's concept that influence character choices in a drama/theater work.

**TH:Cr1.1.HSII.c** - Use personal experiences and knowledge to develop a character that is believable and authentic in a drama/theater work.

**TH:Cr2.HSII.b** Cooperate as a team to make interpretive choices for a drama/theater work.

### Essential Question(s):

TH:Pr4.1 Why are strong choices essential to interpreting a drama or theater piece?  
 TH:Cr1.1 What happens when theater artists use their imaginations and/or learned theater skills while engaging in creative exploration and inquiry?  
 TH:Cr2 How, when, and why do theater artists' choices change?

### Enduring Understanding(s):

TH:Pr4.1 Theater artists make strong choices to effectively convey meaning.  
 TH:Cr1.1 Theater artists rely on intuition, curiosity, and critical inquiry.  
 TH:Cr2 Theater artists work to discover different ways of communicating meaning.

### Demonstration of Learning:

- Performance of a Shel Silverstein poem giving the character a strong voice
- Students will write and perform a radio play including sound effects and strong choices in successful character creation and performance

### Pacing for Unit

5-6 80 minute class periods

### Family Overview (link below)

### Integration of Technology:

*Audio Playback*  
*Recording device*  
*Sound Effect Library*

### Unit-specific Vocabulary:

### Aligned Unit Materials, Resources, and Technology (beyond core resources):

### Opportunities for Interdisciplinary Connections:

### Anticipated misconceptions:

### Connections to Prior Units:

### Connections to Future Units:

## Differentiation through [Universal Design for Learning](#)

### UDL Indicator

### Teacher Actions:

**Language and Symbols**  
 2.5 Illustrate through multiple media  
**Physical Action**

- Encourage different media for presentation

<p>4.1 Vary the methods for response and navigation</p> <p><b>Expression and Communication</b></p> <p>5.1 Use multiple media for communication</p> <p>5.2 Use multiple tools for construction and composition</p> <p><b>Sustaining Effort and Persistence</b></p> <p>8.3 Foster collaboration and community</p>	- Provide opportunity for group collaboration
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**Supporting Multilingual/English Learners**

**Related CELP standards:**

**Learning Targets:**

- 9-12.2
- Actively listen to others
  - Participate in short conversational and written exchanges on familiar topics and texts using academic and domain specific vocabulary
- 9-12.3
- Deliver oral presentations
- 9-12.10
- Use frequently occurring nouns, pronouns, verbs, prepositions, adjectives, adverbs, conjunctions, and preposition phrases

Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
Lesson 1 - Creating a voice for a character	Students will create a specific character voice, considering volume, rate and pitch	Performance of a Shel Silverstein poem giving the character a strong voice	Where the Sidewalk Ends Audio recorder
Lesson 2 - 5 Creating a radio play	Students will perform a scripted radio play based on a children's book or short story	Students will write and perform a radio play including sound effects and strong choices in successful character creation and performance	Sound system Sound effects library or internet options Short story collection Children's book collection

**Unit Title:**

# Introduction to Film Analysis

**Relevant Standards: Bold indicates priority**

- TH:Re7.1.HSI.a** - Respond to what is seen, felt, and heard in a drama/theater work to develop criteria for artistic choices.
- TH:Re8.1.HSI.c** - Justify personal aesthetics, preferences, and beliefs through participation in and observation of a drama/theater work.
- TH:Re8.1.HSII.a** - Develop detailed supporting evidence and criteria to reinforce artistic choices, when participating in or observing a drama/theater work.

<b>Essential Question(s):</b>	<b>Enduring Understanding(s):</b>
<p>TH:Re7.1 How do theater artists comprehend the essence of drama processes and theater experiences?</p> <p>TH:Re8.1 How can the same work of art communicate different messages to different people?</p> <p>TH:Re9.1 How are the theater artist's processes and the audience's perspectives impacted by analysis and synthesis?</p>	<p>Re7.1 theater artists reflect to understand the impact of drama processes and theater</p> <p>Re8.1 theater artists' interpretations of drama/theater work are influenced by personal experiences and aesthetics</p> <p>TH:Re9.1 theater artists apply criteria to investigate, explore, and assess drama and theater work.</p>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
<p>Students will complete a film analysis project analyzing a scene and describing the visual impact and emotional engagement in the scene based on the elements.</p>	<p>8 classes of 80 minutes</p>
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
<p>The Film Analysis unit will give students an understanding of the elements of movie production in order to establish the environment in which they will be performing.</p>	<p><i>Slide Deck</i></p>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
<p>Visual Literacy          Mise-en-scene          Setting          Location          Set Dressing          Props          VFX (Visual effects)          CGI          High-Key Lighting          Low-Key Lighting          Three-Point Lighting          Back Light          Under Light          Top Light          Ambient Light          Body Language          Composition          Lead Room          Rule of Thirds          Symmetry          Negative Space</p>	
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
<p>Creative Construction          Art</p>	<p>Film is the same as stage acting. The amount of thought and consideration put into technical film elements.</p>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<p><b>Differentiation through <a href="#">Universal Design for Learning</a></b></p>	

UDL Indicator	Teacher Actions:
<p><b>Language and Symbols</b> 2.5 Illustrate through multiple media</p> <p><b>Physical Action</b> 4.1 Vary the methods for response and navigation</p> <p><b>Expression and Communication</b> 5.1 Use multiple media for communication 5.2 Use multiple tools for construction and composition</p> <p><b>Sustaining Effort and Persistence</b> 8.3 Foster collaboration and community</p>	<ul style="list-style-type: none"> <li>- Encourage different media for presentation</li>   <li>- Provide opportunity for group collaboration</li> </ul>

**Supporting Multilingual/English Learners**

Related CELP standards:	Learning Targets:
<p>9-12.2</p> <ul style="list-style-type: none"> <li>• Actively listen to others</li> <li>• Participate in short conversational and written exchanges on familiar topics and texts using academic and domain specific vocabulary</li> </ul> <p>9-12.3</p> <ul style="list-style-type: none"> <li>• Deliver oral presentations</li> </ul> <p>9-12.10</p> <ul style="list-style-type: none"> <li>• Use frequently occurring nouns, pronouns, verbs, prepositions, adjectives, adverbs, conjunctions, and preposition phrases</li> </ul>	<p>I can describe and understand production elements that make up a film.</p> <p>I can understand how the production elements of a film create visual impact and emotional engagement in its scenes.</p>

Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
1 What is Mise-en-scène?	In this lesson, students will discuss the difference between film and theater, identify their prior knowledge of film, and identify the definition of mise-en-scène.	Lesson 1 Exit Slip Notetaker	<a href="#">Slide Deck</a>
2 Mise-en-scène: Setting & Location	In this lesson, students will continue their examination of the individual elements that work together to create mise-en-scène. The first elements are setting and location. Students will apply their knowledge of how location helps visualize the story and create impact.	Mise-en-scène Activity Worksheet	<a href="#">Slide Deck</a>
3 Mise-en-scène: Lighting	In this lesson, students will continue their examination of the individual elements that work together to create mise-en-scène. The next element is lighting. Students will apply their knowledge of how lighting helps visualize the story and create impact.	Lighting Analysis activity worksheet	<a href="#">Slide Deck</a>

<p>4 Mise-en-scène: Costumes</p>	<p>In this lesson, students will continue their examination of the individual elements that work together to create mise-en-scène. The next element is costumes. Students will apply their knowledge of how costumes help visualize the story and create impact.</p>	<p>Costume design activity and presentation</p>	<p><a href="#">Slide Deck</a></p>
<p>5 Mise-en-scène: Acting</p>	<p>In this lesson, students will continue their examination of the individual elements that work together to create mise-en-scène. The next element is acting. Students will apply their knowledge of how acting helps visualize the story and create impact.</p>	<p>Acting Activity worksheet</p>	<p><a href="#">Slide Deck</a></p>
<p>6 Mise-en-scène: Composition</p>	<p>In this lesson, students will continue their examination of the individual elements that work together to create mise-en-scène. The next element is composition. Students will apply their knowledge of how composition helps to visualize the story and create impact.</p>	<p>Composition Activity worksheet</p>	<p><a href="#">Slide Deck</a></p>
<p>7 Mise-en-scène: Culminating Activity</p>	<p>In this lesson, students will demonstrate what they have learned about mise-en-scène with a culminating analysis activity. Students will analyze a scene from a film, identify elements of mise-en-scène, and determine the visual impact and emotional engagement in the scene based on the elements.</p>	<p>Culminating analysis activity. Students will analyze a scene from a film, identify elements of mise-en-scène, and determine the visual impact and emotional engagement in the scene based on the elements.</p>	<p><a href="#">PROJECT LINK</a></p>

**Unit Title:**

# Acting for the Camera

## Relevant Standards: **Bold indicates priority**

**TH:Cr2.HSI.b** - Investigate the collaborative nature of the actor, director, playwright, and designers and explore their interdependent roles in a drama/theater work.

**TH:Pr4.1.HSI.b** - Shape character choices using given circumstances in a drama/theater work.

## Essential Question(s):

TH:Cr2 How, when, and why do theater artists' choices change?  
 TH:Pr4.1 Why are strong choices essential to interpreting a drama or theater piece?

## Enduring Understanding(s):

TH:Cr2 theater artists work to discover different ways of communicating meaning  
 TH:Pr4.1 : theater artists make strong choices to effectively convey meaning

## Demonstration of Learning:

Edit  
 Eye Line  
 Frame  
 Green Screen  
 Long Shot  
 Mark  
 "Mark it"  
 Master Shot  
 Medium Shot  
 180 Degree Rule  
 Pan  
 POV Shot  
 Reaction Shot

## Pacing for Unit

7-8 Class Periods

## Family Overview (link below)

In this unit students will analyze, understand and demonstrate the difference between acting for the camera and acting on stage.

## Integration of Technology:

*Video Cameras*  
*Editing Suite*

## Unit-specific Vocabulary:

Action  
 Boom  
 Bounce Card  
 The Call  
 Cheat  
 Clappboard  
 Close-up  
 Continuity  
 Coverage  
 Cut  
 Dailies  
 Dolly Shot  
 Dubbing

Edit  
 Eye Line  
 Frame  
 Green Screen  
 Long Shot  
 Mark  
 "Mark it"  
 Master Shot  
 Medium Shot  
 180 Degree Rule  
 Pan  
 POV Shot  
 Reaction Shot  
 Safety  
 Shot/Take

"Speed"  
 Tilt  
 A Wrap

## Aligned Unit Materials, Resources, and Technology (beyond core resources):

<b>Opportunities for Interdisciplinary Connections:</b>		<b>Anticipated misconceptions:</b>	
<b>Connections to Prior Units:</b>		<b>Connections to Future Units:</b>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>			
<b>UDL Indicator</b>		<b>Teacher Actions:</b>	
<b>Language and Symbols</b> 2.5 Illustrate through multiple media <b>Physical Action</b> 4.1 Vary the methods for response and navigation <b>Expression and Communication</b> 5.1 Use multiple media for communication 5.2 Use multiple tools for construction and composition <b>Sustaining Effort and Persistence</b> 8.3 Foster collaboration and community		<ul style="list-style-type: none"> <li>- Encourage different media for presentation</li>   <li>- Provide opportunity for group collaboration</li> </ul>	
<b>Supporting Multilingual/English Learners</b>			
<b>Related <a href="#">CELP standards:</a></b>		<b>Learning Targets:</b>	
9-12.2 <ul style="list-style-type: none"> <li>• Actively listen to others</li> <li>• Participate in short conversational and written exchanges on familiar topics and texts using academic and domain specific vocabulary</li> </ul> 9-12.3 <ul style="list-style-type: none"> <li>• Deliver oral presentations</li> </ul> 9-12.10 <ul style="list-style-type: none"> <li>• Use frequently occurring nouns, pronouns, verbs, prepositions, adjectives, adverbs, conjunctions, and preposition phrases</li> </ul>		What are the differences between acting for the stage and acting for the camera?	
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1 Difference between Stage and Film Acting	Students will be able to identify some of the major differences between acting for the stage and the camera. They will also be introduced to terms used on film sets and for acting for the camera and be ready to use those terms in upcoming projects.	Quiz: Acting for the Camera Vocabulary and Some Differences Between Film and Stage Acting Journal	Acting for the Camera <a href="#">Vocabulary Slide Deck</a>
2 Exercises in Acting for the Camera	Students will watch some of a workshop in acting for the camera and do some exercises that help them practice some of the differences between stage acting and film acting.	Observation of understanding and exit slip	Michael Caine—Acting in Film Part 1: <a href="https://www.youtube.com/watch?v=ibzR9_N1pQ">https://www.youtube.com/watch?v=ibzR9_N1pQ</a> Michael Caine—Acting in Film Part 2: <a href="https://www.youtube.com/watch?v=6JFYyyHeeT0">https://www.youtube.com/watch?v=6JFYyyHeeT0</a>

3 Finding Your Quality	Students will gain an understanding of their “type” on screen and how they present themselves on film.	Recording and analyzing a conversation in order to establish understanding of character traits.	Video Cameras
4 Film commercials	Students will apply what they’ve learned in filmed commercials	Planning and recording a commercial	Video Cameras

<b>Unit Title:</b>	
<h1>Putting it Together - Vocal and/or Camera Final Project</h1>	
<b>Relevant Standards: Bold indicates priority</b>	
<p><b>TH:Cr1.1.HSII.c</b> - Use personal experiences and knowledge to develop a character that is believable and authentic in a drama/theater work.</p> <p><b>TH:Cr2.HSII.b</b> - Cooperate as a team to make interpretive choices for a drama/theater work.</p> <p><b>TH:Cr3.HSII.c</b> - Re-imagine and revise technical design choices during the course of a rehearsal process to enhance the story and emotional impact of a devised or scripted drama/theater work.</p> <p><b>TH:Pr4.1.HSI.a</b> - Examine how character relationships assist in telling the story of a drama/theater work.</p> <p><b>TH:Pr5.1.HSII.a</b> - Refine a range of acting skills to build a believable and sustainable drama/theater work.</p> <p><b>TH:Pr6.1.HSII.a</b> - Present a drama/theater work using creative processes that shape the production for a specific audience.</p>	
<b>Essential Question(s):</b>	<b>Enduring Understanding(s):</b>
<p>TH:Cr1 What happens when theater artists use their imaginations and/or learned theater skills while engaging in creative exploration and inquiry?</p> <p>TH:Cr2 How, when, and why do theater artists’ choices change?</p> <p>TH:Cr3 How do theater artists transform and edit their initial ideas?</p> <p>TH:Pr4 Why are strong choices essential to interpreting a drama or theater piece?</p> <p>TH:Pr5 What can I do to fully prepare a performance?</p> <p>TH:Pr6 What happens when theater artists and audiences share a creative experience?</p>	<p>TH:Cr1 Theater artists rely on intuition, curiosity, and critical inquiry.</p> <p>TH:Cr2 theater artists work to discover different ways of communicating meaning.</p> <p>TH:Cr3 Theater artists refine their work and practice their craft through rehearsal.</p> <p>TH:Pr4 Theater artists make strong choices to effectively convey meaning.</p> <p>TH:Pr5 Theater artists develop personal processes and skills for a performance.</p> <p>TH:Pr6 Theater artists share and present stories, ideas, and envisioned worlds to explore the human experience.</p>
<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
<p>How do actors create authentic characters?</p> <p>How does the acting influence a movie?</p> <p>How does the pacing and organization of the storyline influence a movie?</p> <p>What makes a good movie or audio performance?</p>	8-10 80-minute class periods



	characters and make strong choices in order to portray their characters with authenticity. Students will use technology to embed sound effects and visual effects in their projects.		
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Course Title:	Content Area:	Grade Level:	Credit (if applicable)
<b>Playwriting</b>	Theater	<b>9-12 BAIMS</b>	0.5
<b>Course Description:</b>			
This course introduces students to dramatic writing for stage. Essential learning processes in the course include scene and dialogue craft exercises, developing strong characters and viable narrative structures, critical reading of plays, and responding constructively to other student work. Students may be required to perform from original scenes.			
<b>Aligned Core Resources:</b>		<b>Connection to the <a href="#">BPS Vision of the Graduate</a></b>	
		<p><b>Meaningfully contribute to a global society</b> COLLABORATION</p> <ul style="list-style-type: none"> <li>• Demonstrates ability to work effectively and respectfully with diverse teams</li> <li>• Exercises flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal</li> <li>• Assume shared responsibility for collaborative work and value the individual contributions made by each team member</li> </ul> <p><b>Successfully Employ Skills for Self-Sufficiency</b> GOAL DIRECTED</p> <ul style="list-style-type: none"> <li>• Set goals with tangible and intangible success criteria</li> <li>• Use time and financial resources wisely to meet goals, complete tasks, and manage projects</li> <li>• Balance tactical (short-term) goals</li> <li>• Persist to accomplish difficult tasks and to overcome academic and personal barriers to meet goals</li> </ul> <p><b>Effectively Communicate in a Global Society</b> COMMUNICATION</p> <ul style="list-style-type: none"> <li>• Articulates thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts</li> <li>• Listen effectively to decipher meaning, including knowledge, values, attitudes and intentions. Use communication for a range of purposes (e.g. to inform, instruct, motivate and persuade)</li> <li>• Utilize multiple media and technologies, and know how to judge their effectiveness as well as assess their impact</li> <li>• Communicate effectively in diverse environments (including becoming multi-lingual)</li> </ul>	
<b>Additional Course Information:</b> <i>Knowledge/Skill Dependent courses/pre-requisites</i>		<b>Link to Completed Equity Audit</b>	
<b>Standard Matrix</b>			

District Learning Expectations and Standards	<a href="#">What is a Play?</a>	<a href="#">One Acts</a>	<a href="#">Young Playwrights Festival</a>
<b>Creating</b>			
TH:Cr1.1 Generate and conceptualize artistic ideas and work.			x
TH:Cr2.1 Organize and develop artistic ideas and work.			x
TH:Cr3.1 Refine new work through play, drama processes and theater experiences using critical analysis and experimentation.			x
<b>Performing</b>			
TH:Pr4.1 Select, analyze, and interpret artistic work for presentation.			x
TH:Pr5.1 Develop and refine artistic techniques and work for presentation.			x
TH:Pr6.1 Convey meaning through the presentation of artistic work.			x
<b>Respond</b>			
TH:Re7.1 Perceive and analyze artistic work.		x	
TH:Re8.1 Interpret intent and meaning in artistic work.	x	x	
TH:Re9.1 Apply criteria to evaluate artistic work.	x		
TH:Cn10.1 Synthesize and relate knowledge and personal experiences to make art.			
TH:Cn11.1 Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.	x		
TH:Cn11.2 Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.			

**Unit Links**

*If unit headings are formatted as a heading, then we can link a Table of Contents to better organize and provide faster access to each unit*

What is a Play?	2
One Acts	4
Young Playwrights Festival	6

**Unit Title:**

# What is a Play?

**Relevant Standards: Bold indicates priority**

**TH:Re8.1.HSI a.** Analyze and compare artistic choices developed from personal experiences in multiple drama/theater works.

**TH:Cn11.1.HSI a.** Explore how cultural, global, and historic belief systems affect creative choices in a drama/theater work.

**TH:Re9.1.HSI b.** Consider the aesthetics of the production elements in a drama/theater work.

**Essential Question(s):**

TH:Re8.1 How can the same work of art communicate different messages to different people?  
 TH:Cn11.1 What happens when theater artists allow an understanding of themselves and the world to inform perceptions about theater and the purpose of their work?  
 TH:Re9.1 How are the theater artist's processes and the audience's perspectives impacted by analysis and synthesis?

**Enduring Understanding(s):**

TH:Re9.1 Theater artists apply criteria to investigate, explore, and assess drama and theater work.  
 TH:Cn11.1 Theater artists allow awareness of interrelationships between self and others to influence and inform their work.  
 TH:Re8.1 Theater artists' interpretations of drama/theater work are influenced by personal experiences and aesthetics.

**Demonstration of Learning:**

**Pacing for Unit**

Students create original monologues, dialogues, and short plays	15 Classes
<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>
<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
<p>CHARACTER: who the actor pretends to be. (Characters want things. They have goals and objectives.)</p> <p>DIALOGUE: a conversation between two or more characters.</p> <p>CONFLICT: obstacles that get in the way of a character achieving what he or she wants. What the characters struggle against.</p> <p>SCENE: a single situation or unit of dialogue in a play.</p> <p>STAGE DIRECTIONS: messages from the playwright to the actors, technicians, and others in the theater telling them what to do and how to do it.</p> <p>SETTING: time and place of a scene.</p> <p>BIOGRAPHY: a character's life story that a playwright creates.</p> <p>MONOLOGUE: a long speech one character gives on stage.</p> <p>DRAMATIC ACTION: an explanation of what the characters are trying to do.</p> <p>BEAT: a smaller section of a scene, divided where a shift in emotion or topic occurs.</p> <p>PLOT: the structure of a play, including exposition, rising action, climax, falling action, and denouement.</p> <p>EXPOSITION: the beginning part of a plot that provides important background information.</p> <p>RISING ACTION: the middle part of a plot, consisting of complications and discoveries that create conflict. CLIMAX: the turning point in a plot.</p> <p>FALLING ACTION: the series of events following the climax of a plot.</p> <p>DENOUEMENT: the final resolution of the conflict in a plot.</p>	
<b>Opportunities for Interdisciplinary Connections:</b>	<b>Anticipated misconceptions:</b>
Students will write plays for acting class/ELA editing and revising etc	
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
<p><b>Comprehension</b> 3.3 Guide information processing and visualization.</p> <p><b>Expression and Communication</b> 5.1 Use multiple media for communication 5.2 Use multiple tools for construction and composition</p>	<ul style="list-style-type: none"> <li>- Provide alternative modalities for presenting written work</li> </ul>

<b>Sustaining Effort and Persistence</b> 8.3 Foster collaboration and community		- Provide opportunity for collaboration	
<b>Supporting Multilingual/English Learners</b>			
<b>Related CELP standards:</b>		<b>Learning Targets:</b>	
9-12.3 <ul style="list-style-type: none"> <li>Compose written narratives or informational texts.</li> </ul> 9-12.4 <ul style="list-style-type: none"> <li>Use academic and domain specific vocabulary</li> </ul> 9-12.7 <ul style="list-style-type: none"> <li>Adapt language choices to task and audience with emerging control</li> </ul> 9-12.9 <ul style="list-style-type: none"> <li>Explain a brief sequence of events, process, description, or compare and contrast.</li> </ul> 9-12.10 <ul style="list-style-type: none"> <li>Use frequently occurring nouns, pronouns, verbs, prepositions, adjectives, adverbs, conjunctions, and preposition phrases</li> </ul>			
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1 - Monologue	I can use script analysis to generate ideas about a character that is believable and authentic in a drama/theatre work.	-Students choose a monologue to memorize/perform. -Students then write their own monologue to memorize/perform.	<a href="http://www.monologueblogger.com">www.monologueblogger.com</a>
2 - Dialogue	I can apply basic research to construct ideas about the visual composition of a drama/theatre work.	Dialogue thoroughly reveals character, traits, personalities, conflict, and mood, and is consistent with style and period. The dialogue feels authentic, and character voice is consistent and cohesive throughout the dramatic action	<a href="https://www.palmbeachdramaworks.org/images/PDFs/2019_young_playwrights_rubric.pdf">https://www.palmbeachdramaworks.org/images/PDFs/2019_young_playwrights_rubric.pdf</a>
3 - Plays	I can cooperate as a creative team to make interpretive choices for a drama/theatre work.	Original presentation of a story, with strong creativity and vision apparent. Research into the story's topics, themes, or period is clear. Setting supports character, theme, and story.	
4 - Table Reads/Read-Thrus	I can practice and revise a devised or scripted drama/theatre work using theatrical staging conventions	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	

5 - Staged Readings	I can use the rehearsal process to analyze the dramatic concept and technical design elements of a devised or scripted drama/theatre work.	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	
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**Unit Title:**

# One Acts

**Relevant Standards: Bold indicates priority**

**TH:Re7.1.HSI.a** - Respond to what is seen, felt, and heard in a drama/theater work to develop criteria for artistic choices.  
**TH:Re8.1.HSI.c** - Justify personal aesthetics, preferences, and beliefs through participation in and observation of a drama/theater work.  
**TH:Re8.1.HSII.a** - Develop detailed supporting evidence and criteria to reinforce artistic choices, when participating in or observing a drama/theater work.

<b>Essential Question(s):</b>	<b>Enduring Understanding(s):</b>
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TH:Re7.1 How do theater artists comprehend the essence of drama processes and theater experiences?  
 TH:Re8.1 How can the same work of art communicate different messages to different people?  
 TH:Re9.1 How are the theater artist's processes and the audience's perspectives impacted by analysis and synthesis?

Re7.1 theater artists reflect to understand the impact of drama processes and theater  
 Re8.1 theater artists' interpretations of drama/theater work are influenced by personal experiences and aesthetics  
 TH:Re9.1 theater artists apply criteria to investigate, explore, and assess drama and theater work.

<b>Demonstration of Learning:</b>	<b>Pacing for Unit</b>
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13 classes

<b>Family Overview (link below)</b>	<b>Integration of Technology:</b>
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*Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning*

<b>Unit-specific Vocabulary:</b>	<b>Aligned Unit Materials, Resources, and Technology (beyond core resources):</b>
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CHARACTER: who the actor pretends to be. (Characters want things. They have goals and objectives.) DIALOGUE: a conversation between two or more characters.  
 CONFLICT: obstacles that get in the way of a character achieving what he or she wants. What the characters struggle against.  
 SCENE: a single situation or unit of dialogue in a play. STAGE DIRECTIONS: messages from the playwright to the actors, technicians, and others in the theater telling them what to do and how to do it.  
 SETTING: time and place of a scene.

<p>BIOGRAPHY: a character’s life story that a playwright creates.  MONOLOGUE: a long speech one character gives on stage.  DRAMATIC ACTION: an explanation of what the characters are trying to do.  BEAT: a smaller section of a scene, divided where a shift in emotion or topic occurs.  PLOT: the structure of a play, including exposition, rising action, climax, falling action, and denouement.  EXPOSITION: the beginning part of a plot that provides important background information.  RISING ACTION: the middle part of a plot, consisting of complications and discoveries that create conflict. CLIMAX: the turning point in a plot.  FALLING ACTION: the series of events following the climax of a plot.  DENOUEMENT: the final resolution of the conflict in a plot.</p>	
	<b>Anticipated misconceptions:</b>
<b>Connections to Prior Units:</b>	<b>Connections to Future Units:</b>
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>	
<b>UDL Indicator</b>	<b>Teacher Actions:</b>
<p><b>Comprehension</b>  3.3 Guide information processing and visualization.  <b>Expression and Communication</b>  5.1 Use multiple media for communication  5.2 Use multiple tools for construction and composition  <b>Sustaining Effort and Persistence</b>  8.3 Foster collaboration and community</p>	<ul style="list-style-type: none"> <li>- Provide alternative modalities for presenting written work</li> <li>- Provide opportunity for collaboration</li> </ul>
<b>Supporting Multilingual/English Learners</b>	
<b>Related <a href="#">CELP standards:</a></b>	<b>Learning Targets:</b>
<p>9-12.3</p> <ul style="list-style-type: none"> <li>● Compose written narratives or informational texts.</li> </ul> <p>9-12.4</p> <ul style="list-style-type: none"> <li>● Use academic and domain specific vocabulary</li> </ul> <p>9-12.7</p> <ul style="list-style-type: none"> <li>● Adapt language choices to task and audience with emerging control</li> </ul> <p>9-12.9</p> <ul style="list-style-type: none"> <li>● Explain a brief sequence of events, process, description, or compare and contrast.</li> </ul> <p>9-12.10</p> <ul style="list-style-type: none"> <li>● Use frequently occurring nouns, pronouns, verbs, prepositions, adjectives, adverbs,</li> </ul>	

conjunctions, and preposition phrases			
Lesson Sequence	Learning Target	Success Criteria/ Assessment	Resources
1 - One Act Writing	I can cooperate as a creative team to make interpretive choices for a drama/theatre work.	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	<a href="https://www.palmbeachdr amaworks.org/images/PDFs/2019_young_playwrights_rubric.pdf">https://www.palmbeachdr amaworks.org/images/PDFs/2019_young_playwrights_rubric.pdf</a>
2 - Table Reads/Read Thrus	I can practice and revise a devised or scripted drama/theatre work using theatrical staging conventions	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	
3-Revising	I can refine, transform, and re-imagine a devised or scripted drama/theatre work using the rehearsal process to invent or re-imagine style, genre, form, and conventions.	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	
4- Staged Reading/ Submissions	I can refine, transform, and re-imagine a devised or scripted drama/theatre work using the rehearsal process to invent or re-imagine style, genre, form, and conventions.	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	

**Unit Title:**

# Young Playwrights Festival

**Relevant Standards: Bold indicates priority**

**TH:Cr1.1.HSII.c** - Use personal experiences and knowledge to develop a character that is believable and authentic in a drama/theater work.

**TH:Cr2.HSII.b** - Cooperate as a team to make interpretive choices for a drama/theater work.

**TH:Cr3.HSII.c** - Re-imagine and revise technical design choices during the course of a rehearsal process to enhance the story and emotional impact of a devised or scripted drama/theater work.

**TH:Pr4.1.HSI.a** - Examine how character relationships assist in telling the story of a drama/theater work.

**TH:Pr5.1.HSII.a** - Refine a range of acting skills to build a believable and sustainable drama/theater work.

**TH:Pr6.1.HSII.a** - Present a drama/theater work using creative processes that shape the production for a specific audience.

Essential Question(s):	Enduring Understanding(s):
<p>TH:Cr1 What happens when theater artists use their imaginations and/or learned theater skills while engaging in creative exploration and inquiry?</p> <p>TH:Cr2 How, when, and why do theater artists' choices change?</p> <p>TH:Cr3 How do theater artists transform and edit their initial ideas?</p> <p>TH:Pr4 Why are strong choices essential to interpreting a drama or theater piece?</p> <p>TH:Pr5 What can I do to fully prepare a performance?</p> <p>TH:Pr6 What happens when theater artists and audiences share a creative experience?</p>	<p>TH:Cr1 Theater artists rely on intuition, curiosity, and critical inquiry.</p> <p>TH:Cr2 theater artists work to discover different ways of communicating meaning.</p> <p>TH:Cr3 Theater artists refine their work and practice their craft through rehearsal.</p> <p>TH:Pr4 Theater artists make strong choices to effectively convey meaning.</p> <p>TH:Pr5 Theater artists develop personal processes and skills for a performance.</p> <p>TH:Pr6 Theater artists share and present stories, ideas, and envisioned worlds to explore the human experience.</p>
Demonstration of Learning:	Pacing for Unit
<p>Students submit a final piece to the Young Playwrights Festival competition</p>	<p>17 classes</p>
Family Overview (link below)	Integration of Technology:
	<p><i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i></p>
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):
<p>CHARACTER: who the actor pretends to be. (Characters want things. They have goals and objectives.) DIALOGUE: a conversation between two or more characters.</p> <p>CONFLICT: obstacles that get in the way of a character achieving what he or she wants. What the characters struggle against.</p> <p>SCENE: a single situation or unit of dialogue in a play. STAGE DIRECTIONS: messages from the playwright to the actors, technicians, and others in the theater telling them what to do and how to do it.</p> <p>SETTING: time and place of a scene.</p> <p>BIOGRAPHY: a character's life story that a playwright creates.</p> <p>MONOLOGUE: a long speech one character gives on stage.</p> <p>DRAMATIC ACTION: an explanation of what the characters are trying to do.</p> <p>BEAT: a smaller section of a scene, divided where a shift in emotion or topic occurs.</p> <p>PLOT: the structure of a play, including exposition, rising action, climax, falling action, and denouement.</p> <p>EXPOSITION: the beginning part of a plot that provides important background information.</p> <p>RISING ACTION: the middle part of a plot, consisting of complications and discoveries that create conflict. CLIMAX: the turning point in a plot.</p> <p>FALLING ACTION: the series of events following the climax of a plot.</p> <p>DENOUEMENT: the final resolution of the conflict in a plot.</p>	

<b>Opportunities for Interdisciplinary Connections:</b>		<b>Anticipated misconceptions:</b>	
Students will write plays for The Young Playwrights Festival @ The Eugene O'Neill Theater Center			
<b>Connections to Prior Units:</b>		<b>Connections to Future Units:</b>	
<b>Differentiation through <a href="#">Universal Design for Learning</a></b>			
<b>UDL Indicator</b>		<b>Teacher Actions:</b>	
<b>Comprehension</b> 3.3 Guide information processing and visualization. <b>Expression and Communication</b> 5.1 Use multiple media for communication 5.2 Use multiple tools for construction and composition <b>Sustaining Effort and Persistence</b> 8.3 Foster collaboration and community		<ul style="list-style-type: none"> <li>- Provide alternative modalities for presenting written work</li> <li>- Provide opportunity for collaboration</li> </ul>	
<b>Supporting Multilingual/English Learners</b>			
<b>Related <a href="#">CELP standards:</a></b>		<b>Learning Targets:</b>	
9-12.3 <ul style="list-style-type: none"> <li>• Compose written narratives or informational texts.</li> </ul> 9-12.4 <ul style="list-style-type: none"> <li>• Use academic and domain specific vocabulary</li> </ul> 9-12.7 <ul style="list-style-type: none"> <li>• Adapt language choices to task and audience with emerging control</li> </ul> 9-12.9 <ul style="list-style-type: none"> <li>• Explain a brief sequence of events, process, description, or compare and contrast.</li> </ul> 9-12.10 <ul style="list-style-type: none"> <li>• Use frequently occurring nouns, pronouns, verbs, prepositions, adjectives, adverbs, conjunctions, and preposition phrases</li> </ul>			
<b>Lesson Sequence</b>	<b>Learning Target</b>	<b>Success Criteria/ Assessment</b>	<b>Resources</b>
1 - Intro to playwrights competition	I can synthesize ideas from research, script analysis, and context to create a performance that is believable, authentic, and relevant in a drama/theatre work.	Original presentation of a story, with strong creativity and vision apparent. Research into the story's topics, themes, or period is clear. Setting supports character, theme, and story.	<a href="https://www.palmbeachdr.amaworks.org/images/PDFs/2019_young_playwrights_rubric.pdf">https://www.palmbeachdr.amaworks.org/images/PDFs/2019_young_playwrights_rubric.pdf</a>
2-Writing	I can use research and script analysis to revise physical, vocal, and physiological	Original presentation of a story, with strong creativity	

	choices impacting the believability and relevance of a drama/ theatre work.	and vision apparent. Research into the story's topics, themes, or period is clear. Setting supports character, theme, and story.	
3-Reading	I can present a drama/theatre work using creative processes that shape the production for a specific audience.	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	
4-Revising	I can use research and script analysis to revise physical, vocal, and physiological choices impacting the believability and relevance of a drama/ theatre work.	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	
5-Final Readings/ Submission	I can use research and script analysis to revise physical, vocal, and physiological choices impacting the believability and relevance of a drama/ theatre work.	Strong original presentation of a story, capturing the audience's attention. Research into the story's topic, themes or period is obvious. Setting supports character, theme, and story	

# 2024 - 2025 District Calendar



Teach and Learn with  
Passion and Purpose

AUGUST						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	TMD	PDD	PDD	OFF	31

SEPTEMBER							20
S	M	T	W	T	F	S	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30						

OCTOBER							21
S	M	T	W	T	F	S	
		1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30	31			

NOVEMBER							16
S	M	T	W	T	F	S	
					1	2	
3	4	5	6	7	8	9	
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29	30	

DECEMBER							16
S	M	T	W	T	F	S	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30	31					

JANUARY							20
S	M	T	W	T	F	S	
			1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31		

EXPLANATION OF DATES:		
Aug.	27	Teacher Meeting Day
Aug.	28 & 29	Teacher Professional Development Days
Sep.	2	Labor Day - No School
Sept.	3	First Day of School
Oct.	3	Rosh Hashanah
Oct.	14	Indigenous People Day/Columbus Day - No School
Nov.	1	Diwali
Nov.	5	Prof Development Day/Election Day - No School
Nov.	11	Veterans Day - No School
Nov.	27	Thanksgiving Recess - Shortened Day All
Nov.	28 & 29	Thanksgiving Recess - No School
Dec.	23	Holiday Recess - Shortened Day
Dec./Jan.	24-1	Holiday Recess - No School
Jan.	1	New Years Day Observance - No School
Jan.	6	Three Kings Day
Jan.	20	Martin Luther King Jr. Day - No School
Feb.	17	Presidents' Day - No School
Feb.	18	Vacation Day - No School
March	31	Eid al-Fitr
April	14-18	Spring Break - No School
April	18	Good Friday - No School
May	26	Memorial Day - No School
June	17	Projected Last Day of School

Parent Conference Days: Shortened Days		
Elem:	October 23, 24, 25	(Snow Date: Nov. 7)
	March 19, 20, 21	(Snow Date: April 3)
K-8:	October 23, 24, 25	(Snow Date: Nov. 7)
	March 19, 20, 21	(Snow Date: April 3)
MS:	October 22, 23, 24, 25	(Snow Date: Nov. 7)
	March 19, 20, 21	(Snow Date: April 3)
HS:	October 15, 16, 17	(Snow Date: Nov. 7)
	March 6	(Snow Date: April 3)

Shortened Days Not Listed Above	
Elementary, K-8 and Middle School - Last 3 days of school	
High School - Midterms on the 88-91st school days; Final Exams - Last five days of school	

Emergency Days:	
Students must attend school 181 days. With no snow days the last day of school will be <b>June 17th</b> . Each snow day will advance the last day of school forward to no later than June 30.	

FEBRUARY							18
S	M	T	W	T	F	S	
						1	
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28		

MARCH							20
S	M	T	W	T	F	S	
						1	
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28	29	
30	31						

APRIL							17
S	M	T	W	T	F	S	
		1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30				

MAY							21
S	M	T	W	T	F	S	
				1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	

JUNE							12
S	M	T	W	T	F	S	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30						

Total Days of School: 181	
Light Blue	No School
Yellow	Shortened Day - All



# 2023 - 2024 District Calendar



Teach and Learn with  
Passion and Purpose

AUGUST							1
S	M	T	W	T	F	S	
		1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	TMD	PDD	PDD	31			

SEPTEMBER							19
S	M	T	W	T	F	S	
					1	2	
3	4	5	6	7	8	9	
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29	30	

OCTOBER							21
S	M	T	W	T	F	S	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30	31					

NOVEMBER							18
S	M	T	W	T	F	S	
			1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30			

DECEMBER							16
S	M	T	W	T	F	S	
					1	2	
3	4	5	6	7	8	9	
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29	30	
31							

JANUARY							20
S	M	T	W	T	F	S	
	1	2	3	4	5	6	
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30	31				

EXPLANATION OF DATES		
Aug.	28	Teacher Meeting Day
Aug.	29 & 30	Teacher Professional Development Days
Aug.	31	First Day of School
Sept.	4	Labor Day - No School
Sept.	25	Yom Kippur
Oct.	9	Indigenous People Day/Columbus Day - No School
Nov.	7	Prof. Development Day/Election Day - No School
Nov.	10	Veterans Day - No School
Nov.	22	Thanksgiving Recess - Shortened Day All
Nov.	23 & 24	Thanksgiving Recess - No School
Dec.	22	Holiday Recess - Shortened Day All
Dec./Jan.	25 - 2	Holiday Recess - No School
Jan.	1	New Years Day Observance - No School
Jan.	15	Martin Luther King Jr. Day - No School
Feb.	19	Presidents' Day - No School
Feb.	20	Vacation Day - No School
Mar	29	Good Friday - No School
April	8-12	Spring Break - No School
April	10	Eid al-Fitr
May	27	Memorial Day - No School
June	12	Projected Last Day of School

Parent Conference Days: Shortened Days		
Elem:	Oct. 25, 26, and 27	PM conferences (Snow Date: Nov. 9)
	March 20, 21, 22	(Snow Date: April 4)
K-8:	Oct. 25, 26, and 27	PM conferences (Snow Date: Nov. 9)
	March 20, 21, 22	(Snow Date: April 4)
MS:	Oct. 24, 25, 26 and 27	PM Conferences (Snow Date: Nov. 9)
	March 20, 21	(Snow Date: April 4)
HS:	Oct. 10, 11, 12	(Snow Date: Nov. 9)
	March 7	(Snow Date: April 4)

Shortened Days Not Listed Above
Elementary, K-8 and Middle School - Last 3 days of school
High School - Midterms on the 88-91st school days;
Final Exams - Last five days of school

Emergency Days
Students must attend school 181 days. With no snow days the last day of school will be <b>June 12th</b> . Each snow day will advance the last day of school forward to no later than June 30.

FEBRUARY							19
S	M	T	W	T	F	S	
				1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29			

MARCH							20
S	M	T	W	T	F	S	
					1	2	
3	4	5	6	7	8	9	
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29	30	
31							

APRIL							17
S	M	T	W	T	F	S	
	1	2	3	4	5	6	
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30					

MAY							22
S	M	T	W	T	F	S	
			1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31		

JUNE							8
S	M	T	W	T	F	S	
						1	
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28	29	
30							

Total Days of School: 181
No School
Shortened Day - All