2026-2027 Middle School - 6th Grade Science - Unit 6 - Weather Patterns Unit Framework

Unit 1 Unit 2 Unit 3 Unit 4 Unit 5 **Unit 6** Unit 7 Unit 8 Unit 9

Kentucky Academic Standards for Science

Unit Title	**Estimated Time Frame**
Weather Patterns: Severe Storms in Galetown	**22 Days**

Unit Anchor Phenomenon (Big Idea):

Rainstorms in Galetown have been getting more severe.

Problem Students are Trying to Solve (Essential Question):

What caused Galetown to have more severe rainstorms?

Unit Three Dimensional Statement

Students use digital and physical models, hands-on activities, data, and science texts to investigate how changes in weather conditions result from interactions between sunlight, surface water, and air (stability and change, energy and matter).

Essential Standards (Focal Performance Expectations) (KAS for Science):

06-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

Clarification Statement: Emphasis is on the ways water changes its state as it moves through the multiple pathways of the hydrologic cycle. Examples of models can be conceptual or physical.

Assessment Boundary: A quantitative understanding of the latent heats of vaporization and fusion is not assessed.

KILP: 1 - Recognize that text is anything that communicates a message.
6 - Collaborate with others to create new meaning.
7 - Utilize digital resources to learn and share with others.

06-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.
Clarification Statement: Emphasis is on how air masses flow from regions of high pressure to low pressure, causing weather (defined by temperature, pressure, humidity, precipitation, and wind) at a fixed location to change over time, and how sudden changes in weather can result when different air masses collide. Emphasis is on how weather can be predicted within probabilistic ranges. Examples of data can be provided to students (such as weather maps, diagrams, and visualizations) or obtained through laboratory experiments (such as with condensation).
Assessment Boundary: Assessment does not include recalling the names of cloud types or weather symbols used on weather maps or the reported diagrams from weather stations.
KILP: 2 - Employ, develop, and refine schema to understand and create text.
6 - Collaborate with others to create new meaning.
8 - Engage in specialized, discipline specific literacy practices.

06-ESS2-6. Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.
Clarification Statement: Emphasis is on how patterns vary by latitude, altitude, and geographic land distribution. Emphasis of atmospheric circulation is on the sunlight-driven latitudinal banding, the Coriolis Effect, and resulting prevailing winds; emphasis of ocean circulation is on the transfer of heat by the global ocean convection cycle, which is constrained by the Coriolis Effect and the outlines of continents. Examples of models can be diagrams, maps and globes, or digital representations.
Assessment Boundary: Assessment does not include the dynamics of the Coriolis Effect.
KILP: 1 - Recognize that text is anything that communicates a message.
6 - Collaborate with others to create new meaning.
7 - Utilize digital resources to learn and share with others.

Supporting Standards (Connections to Other Performance Expectations)**:**

06-ESS2-3. Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.
Clarification Statement: Examples of data include similarities of rock and fossil types on different continents, the shapes of the continents (including continental shelves), and the locations of ocean structures (such as ridges, fracture zones, and trenches).
Assessment Boundary: Paleomagnetic anomalies in oceanic and continental crust are not assessed.

06-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
Clarification Statement: Emphasis is on the processes of melting, crystallization, weathering, deformation, and sedimentation, which act together to form minerals and rocks through the cycling of Earth’s materials.
Assessment Boundary: Assessment does not include the identification and naming of minerals.

08-ESS3-2. Analyze and interpret data to forecast future catastrophic events to inform the development of technologies to mitigate the effects of natural hazards.
Clarification Statement: Emphasis is on how some natural hazards, such as volcanic eruptions and severe weather, are preceded by phenomena that allow for reliable predictions, but others, such as earthquakes, occur suddenly and with no notice, and thus are not yet predictable. Examples of natural hazards can be taken from interior processes (such as earthquakes and volcanic eruptions), surface processes (such as mass wasting and tsunamis), or severe weather events (such as hurricanes, tornadoes, and floods). Examples of data can include the locations, magnitudes, and frequencies of the natural hazards. Examples of technologies can be global (such as satellite systems to monitor hurricanes or forest fires) or local (such as building basements in tornado prone regions or reservoirs to mitigate droughts).
Assessment Boundary: None provided.

06-PS1-4. Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.
Clarification Statement: Emphasis is on qualitative molecular-level models of solids, liquids, and gases to show that adding or removing thermal energy increases or decreases kinetic energy of the particles until a change of state occurs. Examples of models could include drawings and diagrams. Examples of particles could include molecules or inert atoms. Examples of pure substances could include water, carbon dioxide, and helium.
Assessment Boundary: None provided.

08-PS3-3. Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.
Clarification Statement: Examples of devices could include an insulated box, a solar cooker, and a Styrofoam cup.
Assessment Boundary: Assessment does not include calculating the total amount of thermal energy transferred.

Connections to Kentucky Interdisciplinary Literacy Practices (KILP):

1. Recognize that text is anything that communicates a message.
2. Employ, develop, and refine schema to understand and create text.
6. Collaborate with others to create new meaning.
7. Utilize digital resources to learn and share with others.
8. Engage in specialized, discipline specific literacy practices.

Connections to Standards for Mathematical Practice:

2. Reason abstractly and quantitatively.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.

Science & Engineering Practices Identified in Standards (While only a subset of science and engineering practices are explicitly identified as the mechanism for how students demonstrate mastery at the end of instruction, students should still utilize all of the science and engineering practices as they develop their understanding.) NGSS Appendix F	**Priority Content Disciplinary Core Ideas** NGSS Appendix E	**Crosscutting Concepts Identified in Standards** (While only a subset of crosscutting concepts are explicitly identified as the mechanism for how students demonstrate mastery at the end of instruction, students should still utilize all of the crosscutting concepts as they develop their understanding.) NGSS Appendix G
Developing and Using Models ● Develop a model to describe unobservable mechanisms. ● Develop and use a model to describe phenomena. **Planning and Carrying Out Investigations** Collect data to produce data to serve as the basis for evidence to answer scientific questions or test design solutions under a range of conditions.	**ESS2.C: The Roles of Water in Earth's Surface Processes** ● Water continually cycles among land, ocean, and atmosphere via transpiration, evaporation, condensation and crystallization, and precipitation, as well as downhill flows on land. ● Global movements of water and its changes in form are propelled by sunlight and gravity. ● The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns. ● Variations in density due to variations in temperature and salinity drive a global pattern of interconnected ocean currents. **ESS2.D: Weather and Climate** ● Because these patterns are so complex, weather can only be predicted probabilistically. ● Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns. The ocean exerts a major influence on weather and climate by absorbing energy from the sun, releasing it over time, and globally redistributing it through ocean currents.	**Energy and Matter** Within a natural or designed system, the transfer of energy drives the motion and/or cycling of matter. **Cause and Effect** Cause-and-effect relationships may be used to predict phenomena in natural or designed systems. **Systems and System Models** Models can be used to represent systems and their interactions—such as inputs, processes and outputs— and energy, matter, and information flows within systems.

Prerequisite Skills for Focal Performance Expectations Science & Engineering Practices (from NGSS Appendix F and/or FCPS Enduring Science Skills Document)	**Prerequisite Disciplinary Core Ideas** (from NGSS Appendix E) (Prerequisite Content Knowledge)	**Prerequisite Crosscutting Concepts (**from NGSS Appendix G **)**
1. Identifies limitations of a model for a proposed tool or object. 2. Develops and uses models to describe and/or predict phenomena. 3. Develops a model using an analogy, example, or abstract representation to describe a scientific principle or design solution. 4. Uses a model to test cause and effect relationships or interactions concerning the functioning of a natural or designed world. 5. Identify and use evidence (e.g., measurements, observations, relationships, patterns) to construct or support particular points in a complex explanation that specifies variables. 6. Uses evidence (e.g., measurements, observations, patterns) AND applies scientific ideas to generate multiple solutions to a problem. 7. Compares multiple student-generated solutions based on how well they meet the criteria and constraints of the design solution. 8. Applies scientific ideas to solve design problems.	**ESS2.C: The Roles of Water in Earth's Surface Processes** ● Water is found in many types of places and in different forms on Earth. (K-2) ● Most of Earth's water is in the ocean and much of the Earth's freshwater is in glaciers or underground. (3-5) **ESS2.D: Weather and Climate** ● Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region and time. People record weather patterns over time. (K-2) ● Climate describes patterns of typical weather conditions over different scales and variations. Historical weather patterns can be analyzed. (3-5)	1. Events have causes that generate observable patterns. Design simple tests to gather evidence to support or refute their own ideas about causes. 2. Identify and test causal relationships and use these relationships to explain change. Understand events that occur together with regularity might or might not signify a cause and effect relationship. 3. Objects may break into smaller pieces, be put together into larger pieces, or change shapes. 4. Matter is made of particles and energy can be transferred in various ways and between objects. Observe the conservation of matter by tracking matter flows and cycles before and after processes and recognizing the total weight of substances does not change.

Preconceptions/Misconceptions:

1. Some students may have alternate conceptions about the troposphere, the layer of the atmosphere where weather happens. They may think that the temperature of the troposphere is the same everywhere; in reality, the troposphere has a temperature gradient with the highest temperature at the surface of Earth and the temperature decreasing with altitude. Understanding the temperature gradient of the troposphere is essential for this unit as it explains the energy loss and cooling of air parcels as they rise. Activities with the Weather Patterns Simulation provide multiple opportunities for students to observe the temperature gradient of the troposphere and gain experience with the consequences of the gradient for air parcels.

2. One persistent alternate conception addressed in the *Weather Patterns* unit is the notion that clouds are like sponges filled with liquid that falls as rain. Many students suggest that clouds hold water when, in reality, clouds are made of small liquid water droplets that aggregate and fall to the ground as rain. Students may also have the following alternate conceptions: rain falls when clouds evaporate, rain comes from holes in clouds, and rain is generated when clouds melt. Although students may view these ideas as plausible, these explanations do not include notions of energy transfers and are likely generated from alternate or missing conceptions about states of matter (e.g., water as solid, liquid, and gas). The *Weather Patterns* unit provides hands-on activities and a computer simulation that address students' conceptions of evaporation and condensation to support their thinking about cloud and rain formation.

3. You may also encounter other alternate conceptions not addressed in this unit such as the notion that clouds are refilled by ocean water, water changes from liquid to gas only when it boils, or water condensing on a surface comes from other liquid water nearby and not from water vapor in the air. In these instances, it is important to provide students with reliable evidence that addresses the issues they raise.

4. An alternate conception students may have is that water vapor is visible. Many students may conflate water vapor with steam (e.g., from a shower or a tea kettle) or fog. They likely think of steam and fog as vapor rather than liquid water because many people associate liquid water with larger droplets of sufficient mass to fall to the ground, and therefore think that the suspended water droplets in steam or fog are a gas. Scientifically, however, water vapor is always invisible gaseous water, whereas; steam and fog are tiny suspended droplets of liquid water that are visible.

Pedagogical Considerations:

1. The *Weather Patterns* unit focuses on convection rainfall. Understanding the general concepts of convection rainfall can help prepare students to understand frontal and orographic rainfall, which are more complex processes but depend on the same causal factors. Students have the opportunity to learn about frontal and orographic rainfall in an article they read for homework.

2. Although the term *relative humidity* may be more familiar to students because it is commonly used in weather forecasts, *how* humidity is measured may be difficult for students to understand at the middle school level. Rather than using humidity, the *Weather Patterns* unit focuses on the amount of water vapor.

Essential Vocabulary:

weather	evaporation	energy	water vapor	cloud	change	pattern	source
condensation	air parcel	temperature	transfer	stability	troposphere	wind	

Assessment Profile:

FCPS 6th Grade Science EOU Assessment Folder

Pre-Unit Assessment (formative) → Lesson 1.1

Critical Junctures (formative) → Level 2 Progress Build - end of Lesson 2.5

End of Unit Assessment (Summative) → Lesson 4.4

Formative Assessments:
On-the-Fly Assessment 1: Making Deeper Connections (Lesson 1.4, Activity 2)
On-the-Fly Assessment 2: Insight from Student Annotations (Lesson 1.4, Activity 3)
On-the-Fly Assessment 3: Exploring Stability and Change in Weather Patterns (Lesson 1.5, Activity 3)
On-the-Fly Assessment 4: Explaining What Causes Rainfall (Lesson 1.6, Activity 2)
On-the-Fly Assessment 5: Making Deeper Connections (Lesson 2.2, Activity 2)
On-the-Fly Assessment 6: Insight from Student Annotations (Lesson 2.2, Activity 3)
On-the-Fly Assessment 7: Investigating How Temperature Affects Amount of Rain (Lesson 2.3, Activity 3)
On-the-Fly Assessment 8: Integrating the Concept of Stability and Change into Rainfall Explanations (Lesson 2.4, Activity 2)
On-the-Fly Assessment 9: How Wind Can Affect Amount of Rain (Lesson 3.2, Activity 3)
On-the-Fly Assessment 10: Analyzing, Interpreting, and Selecting Evidence in Support of a Claim (Lesson 4.2, Activity 3)
On-the-Fly Assessment 11: Using Evidence in Arguments (Lesson 4.3, Activity 3)

Other High Quality Resources

Next Generation Science Standards - Quality Examples of Science Lessons and Units
Open SciEd Classroom Resources

FCPS Resources

FCPS Achievement & Trauma-Informed Strategies in the Classroom

Individual lesson information to be completed at the school level based on pre-unit assessment data and formative assessment data.

Chapter 1 Problem Students are Trying to Solve: (Supporting Question)				
What causes the rainfall in Galetown?				
Chapter 1 Three Dimensional Statement:				
Students investigate evaporation, condensation, and energy transfer (energy and matter) by using the simulation, a hands-on investigation, and an article. They construct explanations and visual models showing how an increased amount of surface water can cause the amount of rainfall to increase (cause and effect).				
		Anchor Resource Connections		
Lesson Learning Intention (describes clearly what the students will know and/or be able to do as a result of learning and teaching.)	**Lesson Success Criteria** (based on lesson sequence and connections to Learning Intention)	**Learning Progression** (from "Evidence sources and reflection opportunities" AND "Application of key concepts to problem" on the Coherence Flowchart)	**Key Concepts** (from Key Concepts section on the Coherence Flowchart)	**Amplify Progress Build Level** (these are found in Planning for the Unit on the Unit Landing Page in Progress Build)
The Pre-Unit Assessment is diagnostic and designed to reveal students' understanding of the unit's core content, both unit-specific science concepts and crosscutting concepts, prior to instruction by indicating, for formative purposes, where students initially fall along the levels of the Progress Build (PB). The Pre-Unit Assessment also measures students' understanding of important supporting content not explicitly included in the PB. As such, it offers a baseline from which to measure growth of understanding over the course of the unit.				
I am learning to obtain information from different sources so that I can discuss my initial ideas for the causes of increased storm severity and how surface water affects the amount of water vapor in the air.	I know I am successful when I can: • explain water cycling on Earth. • explain how water is an essential part of weather. • obtain information to answer weather related questions. • describe what a forensic meteorologist does. • describe how a simulation models the water cycle.	Use the Sim to investigate how liquid water becomes water vapor (1.2)		**Level 1: Rain can happen when an air parcel cools and loses energy. The loss of energy causes water vapor in the air parcel to condense and fall as rain.** All air contains water vapor. When the temperature of an air parcel and the temperature of the surrounding air are different, energy transfer happens. Energy always transfers from warmer air to cooler air until the temperatures of the two become equal. So, when an

	• Describe surface water and its relation to water vapor in the air.			air parcel is warmer than the air that surrounds it, energy flows from the warm air parcel to its cooler surrounding air until the temperature of the air parcel becomes equal to the temperature of the surrounding air. When an air parcel cools down and loses energy, the water vapor in the air parcel condenses into liquid water and can fall as rain. The more an air parcel loses energy and cools, the more rainfall can happen.
I am learning to: • collect evidence using models so that I can explain how energy transfer from air can result in condensation that may result in rain. • obtain information from an article so that I can explain the role of gravity in the movement of water on Earth.	I know I am successful when I can: • observe and describe what happens when a puddle evaporates. • define *air parcel*. • set up an experiment to observe the process of condensation. • define *energy*, *temperature*, and *transfer*. • use a digital model to collect evidence about factors that affect condensation and the amount of energy transfer. • explain how energy transfer from air can affect condensation. • explain what makes water move.	• Use the Sim to observe what happens when water vapor cools. (1.3) • Use plastic bags to create models of air parcels to observe the process of condensation. (1.3)	• When liquid water becomes warmer it can evaporate and become water vapor in the air. All air contains water. (1.3) • When water vapor in an air parcel cools, it can condense into liquid water which can form a cloud and fall as rain. (1.3)	**Level 1: Rain can happen when an air parcel cools and loses energy. The loss of energy causes water vapor in the air parcel to condense and fall as rain.**

I am learning to obtain information from a text and to ask questions so that I can understand and explain the changes that occur in the atmosphere to cause condensation and cloud formation.	I know I am successful when I can: ● make observations of a model diagram to describe what is happening. ● describe the relationship between cooling and condensation. ● read and annotate an article to obtain information about condensation and cloud formation. ● discuss my annotations and ask questions based on my reading. ● use a modeling tool to show how condensation takes place. ● obtain information from an article about clouds that do not produce rain.	● Read "*What Are Clouds?*"		**Level 1: Rain can happen when an air parcel cools and loses energy. The loss of energy causes water vapor in the air parcel to condense and fall as rain.**
I am learning to obtain evidence from an article and reason about proportional relationships in data obtained from a digital model so that I can understand how the temperature changes that occur in an air parcel are related to rainfall amounts.	I know I am successful when I can: ● describe how energy transfer causes the formation of clouds. ● define what a cloud is. ● obtain evidence from a text about how energy is an important part of understanding cloud formation.	● Revisit "*What Are Clouds?*" (1.5) ● Use the Sim to investigate the connections between energy transfer and the size of a rainstorm. (1.5)	● Energy transfers from warm air to cold air until their temperatures become equal. (1.5) ● The more an air parcel loses energy and cools, the more rainfall can happen. (1.5)	**Level 1: Rain can happen when an air parcel cools and loses energy. The loss of energy causes water vapor in the air parcel to condense and fall as rain.**

	• use a digital model to make different weather events. • use a digital model to collect evidence on the role of energy transfer in relation to the size of a weather event. • define *stability* and *change*. • use a digital model to investigate the level of water vapor in the air on the amount of rain that falls.			
I am learning to construct a visual model of the effect of increased surface water on rainfall amounts so that I can write a scientific explanation about the relationship between surface water and rainfall amounts.	I know I am successful when I can: • evaluate claims based on evidence. • use a modeling tool to communicate scientific ideas. • construct a scientific explanation to explain the effect of surface water on rainfall.	• Use unit vocabulary to explain what causes the rainfall in Galetown. (1.6) • Use the paper Modeling Tool to show how the amount of surface water caused different amounts of rain in Galetown (1.6)		**Level 1: Rain can happen when an air parcel cools and loses energy. The loss of energy causes water vapor in the air parcel to condense and fall as rain.**
Other High Quality Resources				
Next Generation Science Standards - Quality Examples of Science Lessons and Units Open SciEd Classroom Resources				
FCPS Resources				
FCPS Achievement & Trauma-Informed Strategies in the Classroom				

Individual lesson information to be completed at the school level based on pre-unit assessment data and formative assessment data.

Chapter 2 Problem Students are Trying to Solve: (Supporting Question)				
Why is the amount of rain in Galetown different from storm to storm?				
Chapter 2 Three Dimensional Statement:				
Students obtain information from the Simulation, an article, and a demonstration to investigate how higher temperatures can affect the amount of rain (cause and effect). They construct visual models showing how warmer air parcels rise higher in the troposphere, losing energy until they reach the same temperature as the surrounding air (stability and change) and that the greater energy loss leads to more rainfall.				
		Anchor Resource Connections		
Lesson Learning Intention (describes clearly what the students will know and/or be able to do as a result of learning and teaching.)	**Lesson Success Criteria** (based on lesson sequence and connections to Learning Intention)	**Learning Progression** (from "Evidence sources and reflection opportunities" AND "Application of key concepts to problem" on the Coherence Flowchart)	**Key Concepts** (from Key Concepts section on the Coherence Flowchart)	**Amplify Progress Build Level** (these are found in Planning for the Unit on the Unit Landing Page in Progress Build)
I am learning to….. so that I can….	I know I am successful when I can: ●			
I am learning to….. so that I can….	I know I am successful when I can: ●			
I am learning to….. so that I can….	I know I am successful when I can: ●			
Other High Quality Resources				
Next Generation Science Standards - Quality Examples of Science Lessons and Units Open SciEd Classroom Resources				
FCPS Resources				
FCPS Achievement & Trauma-Informed Strategies in the Classroom				

Individual lesson information to be completed at the school level based on pre-unit assessment data and formative assessment data.

Chapter 3 Problem Students are Trying to Solve: (Supporting Question)				
Why did the most recent storm in Galetown have the greatest amount of rain?				
Chapter 3 Three Dimensional Statement:				
Students investigate how pressure differences and resulting wind affect rainfall (cause and effect) by obtaining information from videos, hands-on activities, and the Simulation. They analyze and interpret data from real weather events to construct explanations about how strong winds and higher temperatures can lead to more severe storms (cause and effect).				
		Anchor Resource Connections		
Lesson Learning Intention (describes clearly what the students will know and/or be able to do as a result of learning and teaching.)	**Lesson Success Criteria** (based on lesson sequence and connections to Learning Intention)	**Learning Progression** (from "Evidence sources and reflection opportunities" AND "Application of key concepts to problem" on the Coherence Flowchart)	**Key Concepts** (from Key Concepts section on the Coherence Flowchart)	**Amplify Progress Build Level** (these are found in Planning for the Unit on the Unit Landing Page in Progress Build)
I am learning to….. so that I can….	I know I am successful when I can: ●			
I am learning to….. so that I can….	I know I am successful when I can: ●			
I am learning to….. so that I can….	I know I am successful when I can: ●			
Other High Quality Resources				
Next Generation Science Standards - Quality Examples of Science Lessons and Units Open SciEd Classroom Resources				
FCPS Resources				
FCPS Achievement & Trauma-Informed Strategies in the Classroom				

Individual lesson information to be completed at the school level based on pre-unit assessment data and formative assessment data.

Chapter 4 Problem Students are Trying to Solve: (Supporting Question)
How was the Carson Wilderness Education Center damaged?
Chapter 4 Three Dimensional Statement:
Students evaluate and analyze evidence, using what they have learned about the relationship between wind, temperature differences, and rainstorms (cause and effect), in order to make oral and written arguments about whether damage to a wilderness education center was caused by a few moderate storms or by a single large storm.

		Anchor Resource Connections		
Lesson Learning Intention (describes clearly what the students will know and/or be able to do as a result of learning and teaching.)	**Lesson Success Criteria** (based on lesson sequence and connections to Learning Intention)	**Learning Progression** (from "Evidence sources and reflection opportunities" AND "Application of key concepts to problem" on the Coherence Flowchart)	**Key Concepts** (from Key Concepts section on the Coherence Flowchart)	**Amplify Progress Build Level** (these are found in Planning for the Unit on the Unit Landing Page in Progress Build)
I am learning to….. so that I can….	I know I am successful when I can: ●			
I am learning to….. so that I can….	I know I am successful when I can: ●			
I am learning to….. so that I can….	I know I am successful when I can: ●			

Other High Quality Resources
Next Generation Science Standards - Quality Examples of Science Lessons and Units Open SciEd Classroom Resources

Resource Name (Hyperlinked)	SEP Addressed	DCI Addressed	CCC Addressed
The Wonder of Science - phenomena, resources, assessments, anchor charts, videos. NSTA Vetted Resources from NGSS@NSTA NSTA Shared Community Resources STEM Teaching Tools Sample Assessment Task Earth Science Week Resources for MS-ESS2-6 Teaching Science with Lynda R. Williams Sharp School Sample Unit Generation Genius Climate Zone and Ocean Currents	**Developing and Using Models** Develop and use a model to describe phenomena.	**ESS2.C: The Roles of Water in Earth's Surface Processes** Variations in density due to variations in temperature and salinity drive a global pattern of interconnected ocean currents. **ESS2.D: Weather and Climate** Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns. The ocean exerts a major influence on weather and climate by absorbing energy from the sun, releasing it over time, and globally redistributing it through ocean currents.	**Systems and System Models** Models can be used to represent systems and their interactions—such as inputs, processes and outputs— and energy, matter, and information flows within systems.
FCPS Resources			
SEL Standards			