



## Marietta City Schools 2023-2024 District Unit Planner

*4th Grade*

<b>Topic Title:</b>	<i>#1 Patterns and Effects of Weather and Climate</i>	<b>Unit Duration</b>	<i>3-4 weeks</i>
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**Mastering content and skills through KNOWLEDGE-BUILDING (establishing the purpose of the unit):**

***What enduring understandings will students gain from this unit?*** Any location on Earth is affected by its current weather and the long-term climate patterns found there.

### GSE Standards

#### ELA

ELAGSE4RI1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

ELAGSE4RI3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

ELAGSE4RI5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

ELAGSE4RI7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

ELAGSE4RL4 Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph).

ELAGSE4RL5 Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.

ELAGSE4L6 Acquire and use accurately grade-appropriate general academic and domain-specific vocabulary, including words and phrases that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and words and phrases basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).

ELAGSE4RL7 Make connections between the text of a story or drama and a visual or oral presentation of the text identifying similarities and differences.

ELAGSE4L5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Explain the meaning of simple similes and metaphors (e.g., as pretty as a picture) in context.

ELAGSE4W3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

ELAGSE4W4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

### **Science**

S4E3a Plan and carry out investigations to observe the flow of energy in water as it changes states from solid (ice) to liquid (water) to gas (water vapor) and changes from gas to liquid to solid.

S4E3b Develop models to illustrate multiple pathways water may take during the water cycle (evaporation, condensation, and precipitation). (Clarification statement: Students should understand that the water cycle does not follow a single pathway.)

S4E4a Construct an explanation of how weather instruments (thermometer, rain gauge, barometer, wind vane, and anemometer) are used in gathering weather data and making forecasts.

S4E4b Interpret data from weather maps, including fronts (warm, cold, and stationary), temperature, pressure, and precipitation to make an informed prediction about tomorrow's weather.

S4E4c Ask questions and use observations of cloud types (cirrus, stratus, and cumulus) and data of weather conditions to predict weather events. d. Construct an explanation based on research to communicate the difference between weather and climate.

### **Essential Questions**

#### **Factual—**

What are the steps in the water cycle?

What are the different cloud types?

What instruments are used to forecast the weather?

What is the difference between weather and climate?

#### **Inferential—**

How does the water cycle affect different parts of the world?

How does forecasting the weather help different people?

How are the phases of the moon connected with the steps of the water cycle?

How is weather data collected and used?

In what ways do people make decisions based on weather trends in their geographic location?

### **Critical Thinking-**

Beyond scientific knowledge, what other skills does a meteorologist need to possess and develop?

How important is the weather forecast to your daily life and the lives of others around the world?

How can climate zones inform decision making?

Tier II Words- High Frequency Multiple Meaning	Tier III Words- Subject/ Content Related Words
temperature, pressure, gauge, phase, trend, cycle, pattern, pressure	precipitation, cirrus, stratus, cumulus, nimbus, barometer, anemometer, gibbous, crescent, atmosphere, altitude, convection, condensation, precipitation, arid, temperate, tropical

**Assessments-** 3rd-5th Social Studies and Science assessments are available through AMP. Please see your instructional coach for support if needed.

### **Transfer of Integrated Skills:**

**Description:** Creating a Weather Map (formative)

1. Follow the directions for the [National Geographic Create a Weather Map](#) lesson to build understanding around using information from this unit to read a weather map.
2. Adapt the Informal Assessment of creating a weather map by having students choose three locations, one of which must be outside the United States.

Standards:  
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ELAGSE4RI7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

**Description:** ReadWorks “Climate Groups”; Includes Step 1 and Step 2 options for differentiating the text (formative)

Standards:

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ELAGSE4RI3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.  
ELAGSE4RI7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.  
ELAGSE4RI8 Explain how an author uses reasons and evidence to support particular points in a text.

**Description:** Climate Postcards (summative)

1. Follow the instructions for Climate Postcards to have students use inference and climate knowledge to identify geographical locations on postcards.

Standards:  
ELAGSE4RI1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.  
ELAGSE4RI3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.  
ELAGSE4RI7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

**Content-Specific GSE/Skills:**

- S4E3-4 Summative Assessment - Forecasting Weather

**Writing Task and Rubric:**

**Description:** Tell the story of a water drop and the journey it takes through the water cycle beginning in a puddle on the school playground.

**Standards:**  
ELAGSE4W3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.  
ELAGSE4L1 Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.  
ELAGSE4L2 Demonstrate command of the conventions of Standard English capitalization, punctuation, and spelling when writing.

Objective or Content	Learning Experiences	Differentiation Considerations
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<b>Daily Lessons for Text Comprehension</b>	<p><u><a href="#">15-Day Plan: Weather and Climate</a></u></p> <ul style="list-style-type: none"> <li>● <b>Hook Texts:</b> <ul style="list-style-type: none"> <li>○ <i>Sector 7</i> by David Wiesner</li> <li>○ <i>Thundercake</i> by Patricia Polacco</li> <li>○ <u><a href="#">The Wind and the Sun Fable</a></u></li> <li>○ <i>Islandborn</i> by Junot Diaz</li> </ul> </li> <li>● <b>Visual Texts:</b> <ul style="list-style-type: none"> <li>○ <u><a href="#">The Water Cycle - StudyJams</a></u></li> <li>○ <u><a href="#">Solids, Liquids, and Gasses - StudyJams</a></u></li> <li>○ <u><a href="#">Clip from the movie Up</a></u></li> <li>○ <u><a href="#">Weather Tools, Weather &amp; Climate</a></u> - Discovery Ed</li> </ul> </li> <li>● <b>Informational Texts:</b> <ul style="list-style-type: none"> <li>○ <u><a href="#">Six Clouds to Know and What They Can Reveal</a></u> (Newsela)</li> <li>○ <u><a href="#">The Water Cycle</a></u> (Newsela)</li> <li>○ <u><a href="#">Weather Data</a></u> (Discovery Ed)</li> <li>○ <u><a href="#">Thunderstorm Basics</a></u> (Newsela)</li> <li>○ <u><a href="#">How to Read a Weather Map</a></u> (Newsela)</li> <li>○ <u><a href="#">Take your pick: Hurricane or Tornado</a></u> (Newsela)</li> <li>○ <u><a href="#">Weather - An Introduction to Weather</a></u> (Readworks)</li> </ul> </li> <li>● <b>Target Texts:</b> <ul style="list-style-type: none"> <li>○ <i>A Drop Around the World</i> by Barbara Shaw McKinney</li> <li>○ <u><a href="#">Weather and Climate: What is climate?</a></u> (Newsela)</li> </ul> </li> </ul>	
<b>Connected SS/Sci Experiences</b> <i>(omit this row if KBU does not contain SS or Sci connections)</i>	<u><a href="#">Weather Observation Journal</a></u> (use <u><a href="#">NOAA Cloudwise</a></u> as an additional resource)	
<b>Connected Tier 1 Unit</b>	<u><a href="#">CKLA Weather, Climate, and Water Cycling</a></u>	
<b>Connected Writing Activities</b>	<p>Focus skill: Expanding vocabulary</p> <ul style="list-style-type: none"> <li>● <u><a href="#">Semantic Gradient</a></u></li> </ul>	

Additional Planning Resources				
<a href="#">MCS K-5 KBU Overview</a>	<a href="#">KBU as a 15-day Plan (Template)</a>	<a href="#">MCS Structured Literacy Repository</a>	<a href="#">Berger Framework for Comprehension (Template)</a>	<a href="#">The Writing Revolution (Templates)</a>
Additional Instructional Resources				
<p><b>Suggested High Quality Complex Texts</b></p> <ul style="list-style-type: none"> <li>• A Drop Around the World (District provided with previous transdisciplinary unit)</li> <li>• One Well (District provided with previous transdisciplinary unit)</li> <li>• Next Time You See a Cloud (District provided with previous transdisciplinary unit)</li> <li>• Everything Weather (District provided with previous transdisciplinary unit)</li> </ul> <p><b>Suggested Experiential Resources</b></p> <ul style="list-style-type: none"> <li>• Weather forecasting with a <a href="#">green screen</a></li> </ul>				