

# WEATHERING THE STORM

## Meteorology Curriculum

### Teacher Guide: Module 1 Lesson 0

**Module Driving Question: How do we keep people safe in the extreme temperatures of summer and winter?**

### **Lesson 0 – Weather and Meteorology**

**Lesson Navigating Question: What is weather?**

Grade Levels:

6–8

Time Required:

50 Minutes

1 Class period

STEM Content Areas:

Technology

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### **Overview**

Students will gain an understanding of what weather is and it is studied through the field of meteorology. Students will explore various career options in the field of meteorology.

## Oklahoma Academic Standards

### Computer Science Standards

- 6.IC.CU.01 – Explain how computing impacts people's everyday activities and careers.
  - 6.IC.CU.02 – Identify and discuss the technology proficiencies needed in the classroom and the workplace, and how to meet the needs of different users.
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## Learning Objectives

1. Define weather.
  2. List the components used to describe weather.
  3. Define meteorology.
  4. Name some examples of careers in the field of meteorology.
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## Vocabulary

**Weather** – the state of the atmosphere including temperature, pressure, wind, humidity, precipitation, and cloud cover

**Meteorology** – the study of the atmosphere and all its processes, especially phenomena related to weather.

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## Materials

- Computers with internet access
  - Student Handouts: *How's the Weather?*
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## Preparation

On slide 7 (Experience), insert a weather forecast clip from your local TV station. Most news stations have short, up-to-date weather forecast clips available online.

Phase	Time	Slide	Description
<b>Enroll</b>	10 min.	3	<ol style="list-style-type: none"> <li>1. Allow students to ponder the question, “What is weather?” Have students write some thoughts in their notebooks. What does it include? What does it not include?</li> <li>2. Students turn and talk to share their ideas or may share ideas as class discussion.</li> <li>3. Ask the class, “Does everywhere have the same weather?” <ul style="list-style-type: none"> <li>• Allow class discussion. When a student makes a claim that weather is or isn’t the same everywhere, ask for examples or evidence. Why do they think that?</li> </ul> </li> <li>4. Have students turn and talk with a partner to make a list of places that might have different weather than Oklahoma. Ask students, “Why might the weather be different in these places?” <ul style="list-style-type: none"> <li>• Have students share their thoughts with the class. Make a list of student responses on the board.</li> <li>• Ask students if they notice any patterns with places that have different weather than Oklahoma. Accept all responses.</li> </ul> </li> </ol>
<b>Experience</b>	10 min.	4	<ol style="list-style-type: none"> <li>5. Ask students to describe what the weather is like today. Allow students to think silently for a few minutes while they write a response on the What’s the Weather? Handout. <ul style="list-style-type: none"> <li>• Have students share their responses with a partner, then with the class. Accept all responses.</li> </ul> </li> <li>6. Next, ask students to describe what the weather was like yesterday and 3 months ago. <ul style="list-style-type: none"> <li>• Have students share their responses with a partner or group.</li> </ul> </li> <li>7. Ask students to identify what their descriptions have in common. After giving groups some time to talk, ask students to share with the class the patterns that they noticed. What words or characteristics do we use to describe the weather? <ul style="list-style-type: none"> <li>• Make a list of responses on the board. Accept all responses.</li> </ul> </li> </ol>

Phase	Time	Slide	Description
<b>Label</b>	2 min.	5	8. Define weather and the different characteristics or components that can be used to describe weather. Tell students that they will learn about each of the characteristics of weather as they learn about the science of meteorology.
<b>Enroll</b>	5 min.	6	9. Ask students what they think a meteorologist does. <ul style="list-style-type: none"> <li>• Allow students to talk with a partner for a minute before sharing ideas with the class.</li> <li>• Students will likely say that a meteorologist is the person on TV that gives the weather report.</li> </ul> 10. Ask students if they would like to learn how to create a weather forecast.
<b>Experience</b>	10 min.	7	11. Watch a clip of a local weather forecast. This can usually be found on your local weather station’s website. 12. As students watch the clip, ask them to record what they notice and what they wonder. You may need to show the clip more than once. After giving students a chance to think silently, have them share with a partner before sharing with the class. <ul style="list-style-type: none"> <li>• Accept all responses for what students notice, but focus discussion around the types of information that is included in the forecast. Use questioning such as, “Did anyone else notice what kind of weather information was included in the report?”</li> <li>• Ask students to share what they wondered. Accept all responses, but focus discussion around how the weather information was obtained or why it’s important.</li> </ul> <p><b>Teaching Tip:</b> There is no right or wrong way to notice and wonder. If this is students’ first experience with notice and wonder, they may feel pressure to find a “correct” answer. You can help alleviate this pressure by responding positively to all ideas, even if they seem “off topic”. Although there is a direction you hope the conversation will flow, allow students to share their thoughts and build off each other’s ideas. If discussion is not moving in the direction you want, use questioning techniques to draw out certain topics.</p>

Phase	Time	Slide	Description
<b>Label</b>	2 min.	8	13. Define meteorology as the study of the atmosphere and all its processes, especially phenomena related to weather.
<b>Demonstrate</b>	10 min.	9	14. Have students explore some example careers in meteorology. The following are useful web pages: <ul style="list-style-type: none"><li>• American Meteorological Society: <a href="#">All About Careers in Meteorology</a></li><li>• indeed: <a href="#">9 Jobs in Meteorology (Plus Salaries and Responsibilities)</a></li></ul> <p><i>Students should explore what they think they would be most interested in and what they find most surprising.</i></p>
<b>Celebrate</b>	1 min	10	15. Celebrate every effort! High fives, team chants, have a treat, etc.

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