

Weather Patterns/Seasons
Aligned Lesson 3
Science Lesson 1 for Unit: Weather and Seasons

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Related Unit: Weather and Seasons	Lesson Length: Approx. 4 Days (30 - 40 min. each day) Items can be presented in large or small groups and can be printed from this document.
Enduring Understandings	Essential Questions
<ul style="list-style-type: none"> ▪ Patterns are used to make predictions about weather. ▪ Sunlight warms Earth’s surfaces. ▪ Weather is a combination of sunlight and various precipitation e.g., snow, rain (location dependent). ▪ Asking questions about observations helps us find answers to design investigations. ▪ Data may be used for weather predictions. ▪ Differences in sunlight are noticed in seasonal changes. ▪ Weather affects our daily lives... 	<ul style="list-style-type: none"> ▪ How are changes in weather patterns observed over the course of the year? ▪ How does weather affect our daily lives? ▪ What tools can you use to collect data about the weather? ▪ What is weather? ▪ What happens when it snows, rains, or is windy?
Transfer Goals	
<p><u>Patterns:</u></p> <ul style="list-style-type: none"> ▪ Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1) Cause and Effect Events have causes that generate observable patterns. (K-PS3-1),(K-PS3- 2),(K-ESS3-2) ▪ Connections to Engineering, Technology, and Applications of Science Interdependence of Science, Engineering, and Technology People encounter questions about the natural world every day. (K-ESS3-2) Influence of Engineering, Technology, and Science on Society and the Natural World People depend on various technologies in their lives; human life would be very different without technology. (K-ESS3- 2)Patterns of the natural world can be observed. ▪ Asking questions (for science) and defining problems (for engineering) ▪ Analyzing and interpreting data 	
Learning Objective	
<ul style="list-style-type: none"> ▪ Obtain information from text about sunlight, weather, and storms. ▪ Explain verbally or in writing the purpose of weather forecasting. ▪ Record observations about sunlight and weather. ▪ Ask questions about weather and the different types of storms. ▪ Use data to describe the seasons and weather conditions. 	

Library of Congress Primary Sources	Materials/Supplies/Resources
<ul style="list-style-type: none"> ▪ Children's Book with Seasonal Illustrations ▪ Anemometer ▪ U.S. WEATHER BUREAU. INSTRUMENTS ▪ Early Barometer ▪ Spring Cherry Blossoms ▪ Winter Scene ▪ Summer at the Beach ▪ Fall Tree ▪ Summer Garden ▪ Summer ▪ Fall Trees ▪ Weather Mysteries: Hot in Summer / Cold in Winter? 	<ul style="list-style-type: none"> ▪ Check the Weather by Nancy Roser ▪ Weather Words by Gail Gibbons ▪ What is Severe Weather by Jenniger Boothroyd ▪ Weather Words by Gail Gibbons ▪ Tornados by Seymour Simon ▪ Weather by Seymour Simon ▪ Storms by Seymour Simon ▪ Hurricanes by Seymour Simon ▪ <i>DK Eyewitness Weather</i> by Brian Cosgrove ▪ Tornado Alert by Franklyn Branley illustrated by Giulio Maestro ▪ Thunder-Boomer by Shutta Crum illustrated by Carol Thompson ▪ Navigate http://weather.weatherbug.com/ Website to collect data ▪ https://www.loc.gov/teachers/classroommaterials/primarysourcesets/weather-forecasting/pdf/teacher_guide.pdf ▪ https://www.loc.gov/teachers/classroommaterials/primarysourcesets/weather-forecasting/pdf/teacher_guide.pdf ▪ Weather data sheets (attached) ▪ Chart paper ▪ Thermometer ▪ Rain gauge ▪ Ruler ▪ Weather Vane ▪ Markers ▪ US map ▪ Weather images ▪ Internet access
<p>Day #1 Engage: How can I get students interested in this? 30-min.</p>	
<ul style="list-style-type: none"> ▪ Review data from weather journals from the last two weeks. Have students continue to record the weather in their weather journals. MP.4 CCSS MA K.CC.1 ▪ Navigate http://weather.weatherbug.com/ Website to collect data ▪ What other weather patterns have you noticed? (snow during winter, hot during summer) 	
<p>Day #2 Explore: How can I help students make sense of their observations? 30-min.</p>	
<ul style="list-style-type: none"> ▪ What weather does this picture show? Sunny Day ▪ How do you know? ▪ What weather does this picture show? Rainy Day ▪ How do you know? ▪ Read one of the suggested weather books that describes weather patterns and discuss with students. 	
<p>Day #3 Explain: How can I help students make sense of their observations? 30-min.</p>	
<ul style="list-style-type: none"> ▪ Identify weather patterns over time.(CCC Patterns) ▪ Discuss key details about weather patterns introduced in the story. ▪ Identify a time when you noticed the weather changed from one day to the next. ▪ Was the weather this morning different from the afternoon? Pictures show cold, snowy weather in inter and sunny weather in summer. Some of the pictures show spring blossoms and changing leaves in fall. 	

Day # 4 Elaborate: How can my students apply their new knowledge to other situations? 30-min.

- Work with students to identify the weather patterns over the past few days/weeks?
- What can they determine from reviewing these patterns? (season, temperature, etc.)
- What weather patterns do you think you will notice during the summer?
- What weather patterns do you think you will notice during the winter?

Day #4 Evaluate: How can I help my students self-evaluate and reflect on the learning? 30-min.

- Give students a piece of paper folded in half. Ask students to draw and label a picture of a sunny day on one side and a rainy day on the other side. Ask students to compare and contrast the two pictures.
- Teacher will review weather journals and provide feedback

Rubric:

4 - Student demonstrates full understanding without prompting and support

3 - Student demonstrates some understanding but needs some prompting

2 - Student demonstrates basic understanding but requires prompting and support.

1 - Student demonstrates a limited understanding

Rubric:	Scale
Student follow directions and drew a picture of a sunny and rainy day.	
Student labeled and/or described the weather in each picture correctly.	
Student is able to make comparisons and contrasts between the two pictures.	
Student demonstrates an understanding of different weather patterns based on observations, journals and discussions.	

Total: ____/16