

Weather  
 Aligned Lesson 2  
 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)
Enduring Understandings	Essential Questions
<ul style="list-style-type: none"> <li>▪ Patterns are used to make predictions about weather.</li> <li>▪ Sunlight warms Earth’s surfaces.</li> <li>▪ Weather is a combination of sunlight and various precipitation e.g., snow, rain (location dependent).</li> <li>▪ Asking questions about observations helps us find answers to design investigations.</li> <li>▪ Data may be used for weather predictions.</li> <li>▪ Differences in sunlight are noticed in seasonal changes.</li> <li>▪ Weather affects our daily lives...</li> </ul>	<ul style="list-style-type: none"> <li>▪ How are changes in weather patterns observed over the course of the year?</li> <li>▪ How does weather affect our daily lives?</li> <li>▪ What tools can you use to collect data about the weather?</li> <li>▪ What is weather?</li> <li>▪ What happens when it snows, rains, or is windy?</li> </ul>
Transfer Goals	
<p><u>Patterns:</u></p> <ul style="list-style-type: none"> <li>▪ 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)</li> <li>▪ 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.</li> <li>▪ Asking questions (for science) and defining problems (for engineering)</li> <li>▪ Analyzing and interpreting data</li> </ul>	
Learning Objectives	
<p>Students will:</p> <ul style="list-style-type: none"> <li>▪ Obtain information from text about sunlight, weather, and storms.</li> <li>▪ Explain verbally or in writing the purpose of weather forecasting.</li> <li>▪ Record observations about sunlight and weather.</li> <li>▪ Ask questions about weather and the different types of storms.</li> <li>▪ Use data to describe the seasons and weather conditions.</li> </ul>	
Library of Congress Primary Sources	Materials/Supplies/Resources

<ul style="list-style-type: none"> <li>▪ <b>Children's Book with Seasonal Illustrations</b></li> <li>▪ <b>Anemometer</b></li> <li>▪ <b>U.S. WEATHER BUREAU. INSTRUMENTS</b></li> <li>▪ <b>Early Barometer</b></li> <li>▪ <b>Spring Cherry Blossoms</b></li> <li>▪ <b>Winter Scene</b></li> <li>▪ <b>Summer at the Beach</b></li> <li>▪ <b>Fall Tree</b></li> <li>▪ <b>Summer Garden</b></li> <li>▪ <b>Summer</b></li> <li>▪ <b>Fall Trees</b></li> <li>▪ <b>Weather Mysteries: Hot in Summer / Cold in Winter?</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ Library of Congress</li> <li>▪ <a href="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</a></li> <li>▪ <a href="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</a></li> <li>▪ <i>Check the Weather</i> by Nancy Roser</li> <li>▪ <i>Weather Words</i> by Gail Gibbons</li> <li>▪ <i>What is Severe Weather</i> by Jenniger Boothroyd</li> <li>▪ <i>Tornadoes</i> by Seymour Simon</li> <li>▪ <i>Weather</i> by Seymour Simon</li> <li>▪ <i>Storms</i> by Seymour Simon</li> <li>▪ <i>Hurricanes</i> by Seymour Simon</li> <li>▪ <i>DK Eyewitness Weather</i> by Brian Cosgrove</li> <li>▪ <i>Tornado Alert</i> by Franklyn Branley illustrated by Giulio Maestro</li> <li>▪ <i>Thunder-Boomer</i> by Shutta Crum illustrated by Carol Thompson</li> <li>▪ Navigate <a href="http://weather.weatherbug.com/">http://weather.weatherbug.com/</a></li> <li>▪ Weather data sheets (attached)</li> <li>▪ Chart paper</li> <li>▪ Thermometer</li> <li>▪ Rain gauge</li> <li>▪ Ruler</li> <li>▪ Weather Vane</li> <li>▪ Markers</li> <li>▪ US map</li> <li>▪ Weather images</li> </ul>
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**Day #1 Engage:** How can I get students interested in this? 30 min.

- Have images of the primary sources displayed, weather books displayed, and weather tools laid out on a table.
  - Engage students by giving them time to explore the books and items on display.
  - Discuss what they noticed about the books and items
  - Primary Source(s) that can be used to observe and make connections:
  - **Children's Book with Seasonal Illustrations**
  - **Anemometer**
  - **U.S. WEATHER BUREAU. INSTRUMENTS**
  - **Early Barometer**
  - **Spring Cherry Blossoms**
  - **Winter Scene**
  - **Summer at the Beach**
- Describe and discuss today's weather. Use weather journals to record daily weather conditions.

**Day #2 Explore:** How can I help students make sense of their observations? 30 min.

- Explain that we will be discussing weather: Make a list of words the students know about weather.
- Record students' answers to the following question for these pictures: What words would you use to describe the weather in the picture?
- **Sunny Day**
- **Rainy Day**
- **Snowy Mountain**
- **Sunny Beach**
- Read a weather story from the suggested list. Have students listen to explain weather.

**Day #3 Explain:** How can I help students make sense of their observations? 30 min.

- What is weather?
- What is the weather like today? Is it the same or different from yesterday's weather?
- View the following pictures:
  - [Spring Cherry Blossoms](#)
  - [Winter Scene](#)
  - [Summer at the Beach](#)
  - [Fall Tree](#)
- The pictures show cold, snowy weather in inter and sunny weather in summer. Some of the pictures show spring blossoms and changing leaves in fall.
- What is the weather like in our area during winter, spring, summer and fall? Do you notice any patterns in the weather during different seasons? (ex. snow/cold in winter) (CCC Patterns)
- The weather in different areas can be different from our area? What do you like about the weather today?
- Describe temperature and identify warm and cold weather?K.MD.
- Ask students to describe the temperature outside today?
- Review pictures again and identify what the students think the temperature is in each picture.

**Day # 4 Elaborate:** How can my students apply their new knowledge to other situations? 15-30 min.

Express Inquiry Model

- Make weather books with students: Give students 5 - ¼ sheets of paper, stapled to resemble a book. Title the book: My Weather Book, label each page of the book with a type of weather and draw a picture of that type of weather on each page.
- Display a map of the country and identify where you live. Identify other regions in the country that have different weather patterns/seasons than where you live.
































































Watch: [What Causes the Seasons?](#) How has technology helped us find out about weather and seasons? (CCC: Technology)

**Day #4 Evaluate:** How can I help my students self-evaluate and reflect on the learning? 15-30 min.

- Write/ describe what weather is.
- Complete the Weather Assessment (Attached)
- Select Library of Congress Primary sources to group into seasons. Construct and Investigate in Inquiry process.

# Weather Journal: Circle the picture in each section that represents the weather.

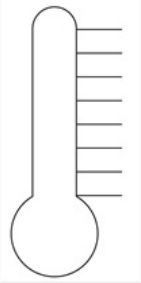
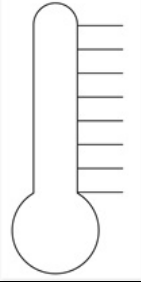
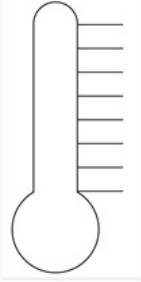
Name: \_\_\_\_\_

	Day #1	Day #2	Day #3	Day #4	Day #5	Day #6	Day #7
Sunny							
Partly Cloudy							
Cloudy							
Hot							
Mild							
Cold							
Rain							
Snow							
Dry							

**Name:** \_\_\_\_\_

Directions: Cut out and sort Library of Congress primary source used in this lesson by season and color thermometers to match the temperature to the season.

Library of Congress Primary sources will be provided for these young students on a work sheet.

<p><b><u>Winter:</u></b></p>	
<p><b><u>Spring:</u></b></p>	
<p><b><u>Summer:</u></b></p>	
<p><b><u>Fall:</u></b></p>	