

## Weather and Seasons

### Lesson 0a: What Is Weather?

|  |                                     |   |
|--|-------------------------------------|---|
| <b>Grade:</b> Kindergarten   | <b>Length of lesson:</b> 30 minutes | <b>Placement of lesson in unit:</b> 0a of 4 prelessons on weather (taught at the beginning of the year before the lesson series begins) |
| <b>Unit central questions:</b> Is weather the same everywhere all of the time? How do you know?  |                                     | <b>Lesson focus question:</b> What is weather?  |
| <b>Main learning goal:</b> Weather is what it looks like and feels like outside. Weather includes temperature, sunlight, clouds, rain or snow, and wind.   |                                     |   |
| <b>Science content storyline:</b> Weather is the combination of many conditions outside, such as temperature, sunlight, rain or snow, and wind. Sometimes it can be sunny, but other times, it might be cloudy, or rainy. Sometimes it's warm outside, but other times it's cold. All of these things make up our daily weather. |                                     |   |
| <b>Ideal student response to the focus question:</b> <i>[Students should describe weather qualitatively.]</i> Weather is what it looks like and feels like outside. It can be sunny or cloudy, rainy or dry, hot or cold, windy or calm.   |                                     |   |

#### Preparation

##### Materials Needed

- Science notebooks
- Chart paper and markers
- *Weather and Seasons* by Cory Phillips (National Geographic Learning book, Windows on Literacy (Science): Language, Literacy, and Vocabulary!)
- **Optional:** “Check Out the Weather” song (YouTube video, <https://www.youtube.com/watch?v=RmSKsyJ15yg>)

##### Ahead of Time

- Review the Weather and Seasons Content Background Document.
- Decide whether to show the “Check Out the Weather” YouTube video at the end of the lesson and consider how to engage students in the song. (**Note:** You can use this song whenever you feel it fits into a lesson.)
- Prepare the National Geographic book for display on a document reader or Elmo projector.
- Throughout the fall and winter, students will collect weather data each weekday and use temperature and weather stickers to record the data on a class weather calendar. You won't collect weekend weather data for this lesson series. Save the calendars to use for the lesson series in the spring. *The month before the lesson series begins in the spring, collect morning and afternoon temperature data for use in lesson 3.* Collect temperatures at the same time of day, such as when school begins and releases each day.
- **ELL support:** Meet with ELL students in advance and introduce them to the lesson content, structure, materials, and activities so they know what's expected and can participate more fully. Identify vocabulary terms in the lesson plan to review with students in advance, including *sunny, cloudy, rainy, dry, hot, warm, cold, windy, calm, and sunlight*. It might be beneficial to have students act out the different kinds of weather in charades. Give each student a weather card and ask him or her to act out the weather scenario on the card. Then have other students guess what kind of weather the student is pantomiming. Give the class a point for every correct guess.

## Lesson 0a General Outline

| Time   | Phase of Lesson  | How the Science Content Storyline Develops  |
|--------|--|---|
| 5 min  | <b>Introduction:</b> To introduce the idea of weather, the teacher engages students in describing what it's like outside.  | <ul style="list-style-type: none"> <li>We decide whether to wear a jacket based on what the weather is like outside.</li> </ul>   |
| 1 min  | <b>Lesson focus question:</b> The teacher introduces the focus question, <i>What is weather?</i>   |   |
| 4 min  | <b>Setup for activity:</b> Students share their ideas about what weather is.   | <ul style="list-style-type: none"> <li>Weather is what it looks like and feels like outside. We can describe weather by talking about what we see and feel.</li> </ul>  |
| 10 min | <b>Activity:</b> The teacher reads a short book to introduce students to the concept that weather is a combination of temperature, sunlight, clouds, wind, and rain or snow.             | <ul style="list-style-type: none"> <li>Weather is what it looks like and feels like outside. Weather includes temperature, sunlight, clouds, rain or snow, and wind. Sometimes it can be sunny, but other times, it might be cloudy. Sometimes it can be dry, but other times, it might be rainy or snowy. Sometimes it's warm outside, but other times, it's cold. Sometimes it might be windy, but other times, it might be calm. All of these things make up our daily weather.</li> </ul> |
| 5 min  | <b>Follow-up to activity:</b> Students think of new words to describe weather and consider the different kinds of weather they can see and feel.   |   |
| 4 min  | <b>Synthesize/summarize today's lesson:</b> The teacher reviews the focus question and engages students in summarizing what weather is and the kinds of conditions that make up weather. | <ul style="list-style-type: none"> <li>Weather is what it looks like and feels like outside. Weather includes temperature, sunlight, clouds, rain or snow, and wind. Sometimes it can be sunny, but other times, it might be cloudy. Sometimes it can be dry, and other times, it might be rainy or snowy. Sometimes it's warm outside, but other times, it's cold. All of these things make up our daily weather. We can observe weather with our eyes and feel it with our skin.</li> </ul> |
| 1 min  | <b>Link to next lesson:</b> The teacher announces that in the next lesson, students will go outside to observe the weather.  |   |

| Time  | Phase of Lesson and How the Science Content Storyline Develops  | STeLLA Strategy  | Teacher Talk and Questions  | Anticipated Student Responses  | Possible Probe/Challenge Questions   |
|-------|---|--|---|--|--|
| 5 min | <p><b>Introduction</b></p> <p><b>Synopsis:</b> To introduce the idea of weather, the teacher engages students in describing what it's like outside.</p> <p><b>Main science idea(s):</b></p> <ul style="list-style-type: none"> <li>We decide whether to wear a jacket based on what the weather is like outside.</li> </ul> | Ask questions to elicit student ideas and predictions. | <p><b>Show slides 1 and 2.</b></p> <p>When you were getting ready for school this morning, how did you decide what to wear to school?</p> <p>Why isn't anyone wearing a jacket? Did you decide not to wear a jacket because of how it feels outside?</p> <p>Sometimes we decide what to wear based on what it's like outside. So how would you describe what it's like outside today?</p> | <p>It's hot outside, so I wore shorts.</p> <p>My mom told me what to wear.</p> <p>Yeah, I wore a T-shirt and shorts because it's warm today. I didn't need a jacket.</p> <p>It's sunny, so I wanted to wear a short-sleeve T-shirt.</p> <p>It's sunny!</p> <p>There aren't any clouds!</p> <p>It's warm.</p> | <p>What do you see in the sky to make you think that?</p> <p>Is it warm enough for a sweater, a T-shirt, or a tank</p> |

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|-------|--|---|---|---|---|
|       |  |   | <p>Was it raining this morning?</p> <p>Everything you've been telling me is about the weather and what it's like.</p> <p>In this unit, we'll learn about what weather is and how to describe it like the weather forecasters on TV do.</p>  | <p>It's warm enough for a T-shirt, but not a tank top! And it's too warm for a sweater.</p> <p>No. It was sunny!</p> <p>No!</p> | <p>top?</p> <p>So you didn't need a raincoat or umbrella?</p> |
| 1 min | <p><b>Lesson Focus Question</b></p> <p><b>Synopsis:</b> The teacher introduces the focus question, <i>What is weather?</i></p> | Set the purpose with a <u>focus question</u> or goal statement. | <p><b>Show slide 3.</b></p> <p>Today we're going to think about our weather here in Pomona.</p> <p>We'll also think about an important question: <i>What is weather?</i></p> <p>This question is our focus question for today's lesson. Each of our lessons in this unit will have a focus question for us to think about.</p> <p><b>NOTE TO TEACHER:</b> <i>Write the focus question on the board and draw a box around it. Then have students repeat the question aloud</i></p> |   |   |

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|-----------------------------|---|--|--|-------------------------------|------------------------------------|--|-----------------------------|----------|--|-------|--|--|--------|--|--|---|--|
|                             |   |  | <i>with you as you point to each word.</i>   |                               |                                    |  |                             |          |  |       |  |  |        |  |  |   |  |
| 4 min                       | <p><b>Setup for Activity</b></p> <p><b>Synopsis:</b> Students share their ideas about what weather is.</p> <p><b>Main science idea(s):</b></p> <ul style="list-style-type: none"> <li>Weather is what it looks like and feels like outside. We can describe weather by talking about what we see and feel.</li> </ul> | Ask questions to elicit student ideas and predictions. | <p><b>Show slide 4.</b></p> <p>What do you think weather is? Let’s hear your ideas.</p> <p><b>NOTE TO TEACHER:</b> <i>Create a three-column chart titled “What Is Weather?” and label the first two columns “Words That Describe Weather” and “Pictures.” (See the sample below.) Leave the third column blank until lesson 0d.</i></p> <table border="1" data-bbox="783 784 1341 1055"> <thead> <tr> <th colspan="3">What Is Weather?</th> </tr> <tr> <th>Words That Describe Weather</th> <th>Pictures</th> <th></th> </tr> </thead> <tbody> <tr> <td>Sunny</td> <td></td> <td></td> </tr> <tr> <td>Cloudy</td> <td></td> <td></td> </tr> </tbody> </table> <p><i>As students share their ideas, list words in the first column that describe different aspects of weather (e.g., sunny/cloudy, rain/rainy, hot/cold, windy). In the second column, draw simple diagrams to illustrate the words that students come up with. You’ll add to this list after the reading activity, so keep it displayed at the front of the room.</i></p> <p><i>During this discussion, probe students’ thinking for other aspects of weather if they aren’t</i></p> | What Is Weather?              |                                    |  | Words That Describe Weather | Pictures |  | Sunny |  |  | Cloudy |  |  | <p>Weather is like what’s on the news when they show if it’s sunny or not.</p> <p>Weather is when it’s sunny outside.</p> <p>Weather is when it rains.</p> <p>If it’s hot.</p> <p>If it’s windy.</p> <p>I’m not sure.</p> |  |
| What Is Weather?            |   |  |  |                               |                                    |  |                             |          |  |       |  |  |        |  |  |   |  |
| Words That Describe Weather | Pictures  |  |  |                               |                                    |  |                             |          |  |       |  |  |        |  |  |   |  |
| Sunny                       |   |  |  |                               |                                    |  |                             |          |  |       |  |  |        |  |  |   |  |
| Cloudy                      |   |  |  |                               |                                    |  |                             |          |  |       |  |  |        |  |  |   |  |

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|--------|---|---|--|-------------------------------|------------------------------------|
|        |   |   | <p><i>mentioned (e.g., sunny/cloudy, warm/hot, rainy/not rainy, windy/not windy).</i></p> <p>You've come up with some great ideas to describe what weather is!</p> <p><b>Show slide 5.</b></p> <p>Here's a simple definition we could use to help us think about weather: <i>Weather</i> is what it looks like and feels like outside. Can we all agree on this description of weather?</p>  |                               |                                    |
| 10 min | <p><b>Activity</b></p> <p><b>Synopsis:</b> The teacher reads a short book to introduce students to the concept that weather is a combination of temperature, sunlight, clouds, wind, and rain or snow.</p> <p><b>Main science idea(s):</b></p> <ul style="list-style-type: none"> <li>Weather is what it looks like and feels like outside. Weather includes temperature, sunlight, clouds, rain or snow, and wind. Sometimes it can be sunny, but other times, it might be cloudy. Sometimes it</li> </ul> | <p>Select activities that are matched to the learning goal.</p> <p>Make explicit links between science ideas and activities <b>during</b> the activity.</p> | <p>Next, we're going to read a short book about weather, and then we'll think about the weather outside right now.</p> <p><b>ELL support:</b> Read and discuss the <i>Weather and Seasons</i> book with ELL students during the lesson preview so they know what to expect and can participate more fully in the lesson activity.</p> <p><b>NOTE TO TEACHER:</b> <i>Display the National Geographic book Weather and Seasons on a document reader or Elmo projector as you read the text aloud.</i></p> <p><i>During the reading, provide opportunities for students to connect the content to their own experiences with certain kinds of weather. Focus special attention on weather events mentioned in the book that aren't part of students' daily lives.</i></p> |                               |                                    |

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|-----------------------------|---|---|--|---|------------------------------------|--|-----------------------------|----------|--|-------|--|--|--------|--|--|-------|--|--|-------|--|--|----------|--|--|------------|--|--|--|--|
|                             | <p>can be dry, but other times, it might be rainy or snowy. Sometimes it's warm outside, but other times, it's cold. Sometimes it might be windy, but other times, it might be calm. All of these things make up our daily weather.</p>   |   | <p><i>Ask students to give you a thumbs-up every time they hear a word that's already listed on the class chart. When they hear a new word about weather, have them make a blinking signal with their hands. Then pause and add the new word to the chart.</i></p> <table border="1" data-bbox="779 548 1333 1023"> <thead> <tr> <th colspan="3">What Is Weather?</th> </tr> <tr> <th>Words That Describe Weather</th> <th>Pictures</th> <th></th> </tr> </thead> <tbody> <tr> <td>Sunny</td> <td></td> <td></td> </tr> <tr> <td>Cloudy</td> <td></td> <td></td> </tr> <tr> <td>Snowy</td> <td></td> <td></td> </tr> <tr> <td>Rainy</td> <td></td> <td></td> </tr> <tr> <td>Hot/Cold</td> <td></td> <td></td> </tr> <tr> <td>Windy/Calm</td> <td></td> <td></td> </tr> </tbody> </table> | What Is Weather?  |                                    |  | Words That Describe Weather | Pictures |  | Sunny |  |  | Cloudy |  |  | Snowy |  |  | Rainy |  |  | Hot/Cold |  |  | Windy/Calm |  |  |  |  |
| What Is Weather?            |   |   |  |   |                                    |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |
| Words That Describe Weather | Pictures  |   |  |   |                                    |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |
| Sunny                       |   |   |  |   |                                    |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |
| Cloudy                      |   |   |  |   |                                    |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |
| Snowy                       |   |   |  |   |                                    |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |
| Rainy                       |   |   |  |   |                                    |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |
| Hot/Cold                    |   |   |  |   |                                    |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |
| Windy/Calm                  |   |   |  |   |                                    |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |
| 5 min                       | <p><b>Follow-Up to Activity</b></p> <p><b>Synopsis:</b> Students think of new words to describe weather and consider the different kinds of weather they can see and feel.</p> <p><b>Main science idea(s):</b></p> <ul style="list-style-type: none"> <li>Weather is what it</li> </ul> | <p>Make explicit links between science ideas and activities <b>after</b> the activity.</p> <p>Ask questions to elicit student ideas and</p> | <p>Let's look at all of the words we've listed on our class chart.</p> <p>How could we use these words to help us describe weather? Can someone use one of these words in a sentence to describe weather?</p>  | <p>When it's windy outside, we can feel it blowing our hair around.</p> | <p>That's great!</p>               |  |                             |          |  |       |  |  |        |  |  |       |  |  |       |  |  |          |  |  |            |  |  |  |  |



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|-------|--|---|---|---|--|
|       |  |   | <p><b>ELL support:</b> ELL students may have difficulty understanding that observing can mean more than seeing things. You may want to point out that observing can also involve other senses, such as feeling. And in science, observing means recording what they see and feel.</p> <p><b>Show slide 7.</b></p> <p>Now I want you to look out the window and raise your hand if you observe something about the weather.</p> <p>When I call on you, start your sentence with “I observe _____.”</p> <p>Those are good weather observations!</p> | <p>things.</p> <p>I observe that it’s sunny.</p> <p>I observe some clouds.</p> <p>I observe that it’s breezy today.</p> | <p>Is there anything else you observe about the weather today?</p> |
| 4 min | <p><b>Synthesize/Summarize Today’s Lesson</b></p> <p><b>Synopsis:</b> The teacher reviews the focus question and engages students in summarizing</p> | <p>Highlight key science ideas and focus question throughout.</p> | <p><b>Show slide 8.</b></p> <p>Let’s revisit our focus question for today: <i>What is weather?</i></p> <p>First of all, what did we decide about what weather is?</p>   | <p>Weather is what it</p>   |  |

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|------|--|---|---|---|------------------------------------|
|      | <p>what weather is and the kinds of conditions that make up weather.</p> <p><b>Main science idea(s):</b></p> <ul style="list-style-type: none"> <li>Weather is what it looks like and feels like outside. Weather includes temperature, sunlight, clouds, rain or snow, and wind. Sometimes it can be sunny, but other times, it might be cloudy. Sometimes it can be dry, and other times, it might be rainy or snowy. Sometimes it's warm outside, but other times, it's cold. All of these things make up our daily weather. We can observe weather with our eyes and feel it with our skin.</li> </ul> | <p>Engage students in making connections by synthesizing and summarizing key science ideas.</p> <p>Summarize key science ideas.</p> | <p>When people turn on their TVs to watch the weather report, what do they want to know?</p> <p>What do we look for when we observe the weather?</p> <p>If we were weather reporters, what would we tell people about today's weather? Who remembers what we said?</p> <p><b>Show slide 9.</b></p> <p>So today we learned that weather is what it looks like and feels like outside. Weather includes whether it's warm or cold, whether it's sunny or cloudy, whether it's rainy or not, and whether it's windy or not.</p> <p>Sometimes it can be sunny, but at other times, it</p> | <p>looks like and feels like outside.</p> <p>If it's sunny or cloudy.</p> <p>We look to see if it's rainy or not.</p> <p>If it's cold or warm.</p> <p>If it's windy or not.</p> <p>We said it was sunny today.</p> <p>There's no rain!</p> <p>There's a little wind blowing.</p> <p>It's sunny and hot today.</p> |                                    |

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|-------|---|--|--|-------------------------------|------------------------------------|
|       |   |  | <p>might be cloudy or rainy. Sometimes it's warm outside, but other times, it's cold. All of these things that make up our weather.</p> <p><b>NOTE TO TEACHER:</b> <i>Have students draw a picture of a weather scene and choose two or three words on the class chart to illustrate in their pictures. Depending on their literacy skills, they could copy the words or any of the letters they know to label their drawings.</i></p> |                               |                                    |
| 1 min | <p><b>Link to Next Lesson</b></p> <p><b>Synopsis:</b> The teacher announces that in the next lesson, students will go outside to observe the weather.</p> | Link science ideas to other science ideas. | <p><b>Show slide 10.</b></p> <p>In our next lesson, we'll go outside and observe the weather. We'll also learn more about how to describe different kinds of weather we see and feel.</p>  |                               |                                    |