

Weather and Seasons

Lesson 0b: How Can We Describe Our Weather?

Grade: Kindergarten	Length of lesson: 33 minutes	Placement of lesson in unit: 0b of 4 prelessons on weather (taught at the beginning of the year before the lesson series begins)
Unit central questions: Is weather the same everywhere all of the time? How do you know?		Lesson focus question: How can we describe our weather?
Main learning goal: Weather can be described by looking at it and feeling it.		
Science content storyline: Weather is what it looks like and feels like outside. Weather includes temperature, clouds, sunlight, rain or snow, and wind. We can describe weather by looking at it and feeling it. We can use our eyes to observe the weather outside, and we can use our skin to feel temperatures, breezes, and rain or snow.		
Ideal student response to the focus question: <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
- Class chart from lesson 0a (“What Is Weather?”)
- **Optional:** “Check Out the Weather” song (YouTube video, <https://www.youtube.com/watch?v=RmSKsyJ15yg>)
- YouTube video clip of a weather report (<https://www.youtube.com/watch?v=E1--PAFPtHw>)

Ahead of Time

- Review the Weather and Seasons Content Background Document.
- Decide whether to show the “Check Out the Weather” YouTube video and consider how to engage students in the song. (**Note:** You can use this song whenever you feel it fits into a lesson.)
- Decide whether to have students bring their notebooks and a pencil with them outside for the weather activity so they can draw or write down their observations.
- 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 *weather*, *temperature*, and *thermometer*.

Lesson 0b General Outline

Time	Phase of Lesson	How the Science Content Storyline Develops
4 min	Link to previous lesson: The teacher engages students in reviewing what they learned about weather in the previous lesson. Students use key words from their class chart to describe different kinds of weather.	<ul style="list-style-type: none"> Weather is what it looks like and feels like outside. We can describe weather as sunny or cloudy, windy or calm, hot or cold, or rainy, snowy, or dry.
1 min	Lesson focus question: The teacher introduces the focus question, <i>How can we describe our weather?</i>	
5 min	Setup for activity: The teacher prepares students for observing the weather outside, and students talk about what they'll look for.	<ul style="list-style-type: none"> Weather is what it looks like and feels like outside. Weather includes temperature, sunlight, clouds, rain or snow, and wind.
10 min	Activity: Students go outside to observe the weather, including what they see (sun, clouds, rain, wind blowing trees) and what they feel (how hot or cold it is, the warmth of the Sun, breezes).	
6 min	Follow-up to activity: After students return to the classroom, they use words from the class chart to describe their weather observations.	
6 min	Synthesize/summarize today's lesson: The teacher reviews the focus question and engages students in summarizing key ideas about weather. Then students give a weather report based on their outdoor weather observations and watch a short video clip of a weather report.	<ul style="list-style-type: none"> Weather is what it looks like and feels like outside Weather includes temperature, sunlight, clouds, rain or snow, and wind. We can observe weather with our eyes and feel it with our skin.
1 min	Link to next lesson: The teacher foreshadows the next lesson in which students learn to use a thermometer to measure how hot or cold it is.	

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4 min	<p>Link to Previous Lesson</p> <p>Synopsis: The teacher engages students in reviewing what they learned about weather in the previous lesson. Students use key words from their class chart to describe different kinds of weather.</p> <p>Main science idea(s):</p> <ul style="list-style-type: none"> Weather is what it looks like and feels like outside. We can describe weather as sunny or cloudy, windy or calm, hot or cold, or rainy, snowy, or dry. 	<p>Ask questions to elicit student ideas and predictions.</p> <p>Select content representations and models matched to the learning goal and engage students in their use.</p>	<p>Show slides 1 and 2.</p> <p>In our last lesson, we learned about all kinds of weather from a book called <i>Weather and Seasons</i>. We also made a chart of weather words to help us describe weather. And we learned a song about weather too!</p> <p>Who can tell me something we learned from our reading about weather?</p> <p>What did we learn about weather from the song?</p> <p>NOTE TO TEACHER: <i>You may want to ask other open-ended questions as well to give students an opportunity to share what they've learned so far about weather.</i></p> <p>Now let's look at our class chart from last time.</p> <p>NOTE TO TEACHER: <i>Display the class chart from the previous lesson ("What Is Weather?") where everyone can see it.</i></p> <p>Who can use one of the words from our chart to describe something about the weather?</p>	<p>It can be sunny out.</p>	<p>Yes! The word <i>sunny</i> is here on our chart. How can we tell if it's sunny outside?</p>

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			<p>Who can describe weather using another word on our chart?</p> <p>What other words can you use to describe something about the weather?</p> <p>What words on our chart can you use to describe how the weather <i>feels</i>?</p> <p>ELL support: Ask ELL students what weather words they use in their home languages (e.g., sunny, cloudy, windy, rainy, hot/cold).</p>	<p>We can use our eyes to see the Sun.</p> <p>It can be cloudy.</p> <p>We can see clouds in the sky.</p> <p>It could be rainy out.</p> <p>We can see it raining.</p> <p>If we're outside, we can feel the rain on our faces.</p> <p>We can feel if it's hot or cold.</p> <p>If it's hot outside, we feel hot, and we get all sweaty.</p> <p>If it's cold outside, we shiver and put on extra clothes!</p>	<p>How do we know that it's cloudy outside?</p> <p>Yes. And how do we know it's rainy out?</p> <p>And how do we know if the weather is hot or cold?</p> <p>So our bodies tell</p>

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			<p>Are there any other words on our chart that tell us something about how the weather feels?</p> <p>Show slide 3.</p> <p>So we can <i>see</i> and <i>feel</i> what the weather is like outside. We can see if it's sunny or cloudy outside. We can see the wind and rain and feel it on our faces and arms. Our bodies also tell us whether it's hot or cold outside.</p> <p>The words on our class chart helped us describe what the weather can look and feel like.</p> <p>Today we'll go outside and observe the weather. Then we'll use our observations to give our own weather reports just like the weather reporters on TV do.</p> <p>ELL support: Be explicit about how the words <i>observe</i> and <i>observations</i> relate to</p>	<p>Yes! It can be windy.</p> <p>We can see the trees blowing, and if we're outside, we can feel the wind on our faces.</p>	<p>us whether it's hot or cold outside!</p> <p>How do we know it's windy outside?</p>

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			observing the weather.		
1 min	<p>Lesson Focus Question</p> <p>Synopsis: The teacher introduces the focus question, <i>How can we describe our weather?</i></p>	Set the purpose with a <u>focus question</u> or goal statement.	<p>Show slide 4.</p> <p>Our focus question for this lesson is <i>How can we describe our weather?</i></p> <p>NOTE TO TEACHER: Write the focus question on the board and draw a box around it. Then have students repeat the question aloud with you as you point to each word.</p> <p>What we learn today about observing and describing weather will help us answer this question.</p>		
5 min	<p>Setup for Activity</p> <p>Synopsis: The teacher prepares students for observing the weather outside, and students talk about what they'll look for.</p> <p>Main science idea(s):</p> <ul style="list-style-type: none"> Weather is what it looks like and feels like outside. Weather includes temperature, sunlight, clouds, rain or snow, and wind. 	<p>Make explicit links between science ideas and activities before the activity.</p> <p>Ask questions to elicit student ideas and predictions.</p> <p>Ask questions to probe student ideas</p>	<p>Show slide 5.</p> <p>The only way we can really observe and describe the weather is to go outside and make our own observations.</p> <p>What kinds of things about the weather do you think we might observe outside?</p> <p>What else might we observe about our weather?</p> <p>How can we tell whether it's sunny, cloudy, rainy, or windy outside?</p>	<p>Whether the Sun is out.</p> <p>If there are clouds.</p> <p>If it's windy or not.</p> <p>If it's raining.</p> <p>We can see what it's like outside.</p>	

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		and predictions.	<p>What can we find out about the weather by <i>feeling</i> what it's like outside?</p> <p>So we can find out many things about the weather by what we see and what we feel.</p> <p>In a moment, we'll go outside and observe the weather. First, I want you to listen carefully as I go over the instructions for our weather-observation activity.</p>	<p>We can tell if it's hot or cold.</p> <p>If it's windy.</p>	<p>What else can we feel on our skin and faces?</p>
10 min	<p>Activity</p> <p>Synopsis: Students go outside to observe the weather, including what they see (sun, clouds, rain, wind blowing trees) and what they feel (how hot or cold it is, the warmth of the Sun, breezes).</p> <p>Main science idea(s):</p> <ul style="list-style-type: none"> Weather is what it looks like and feels like outside. Weather includes temperature, sunlight, clouds, rain or snow, and wind. 	<p>Select activities that are matched to the learning goal.</p> <p>Make explicit links between science ideas and activities during the activity.</p>	<p>NOTE TO TEACHER: <i>Organize the class to go outside. Give clear instructions so that students know (1) whether to bring their notebooks with them to record their observations, (2) where they can stand to observe the weather, (3) how long they'll be outside, (4) what to look for when they observe the weather, and (5) what they should be able to describe about the weather when they give their reports after the activity. Remind students not to look directly at the Sun.</i></p> <p><i>During the activity, ask more general, open-ended questions at first ("What do you observe about the weather today?" "What do you see?" "What do you feel?"). Then follow up with more detailed questions about the weather. Asking more open-ended questions</i></p>		

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		Ask questions to elicit student ideas and predictions.	<p><i>initially will give students an opportunity to practice using the weather words they've been learning.</i></p> <p>ELL support: Give ELL students an opportunity to talk with a partner about what they observe. Then have them share their observations with one other person before students return to the classroom.</p> <p>What do you observe about the weather today?</p> <p>What do you see? What do you feel?</p> <p>Look at the sky. Is the Sun out?</p> <p>Are there a lot of clouds in the sky today or just a few?</p> <p>Do you observe any rain?</p> <p>What do you observe about the trees? Can you tell if it's windy?</p> <p>What do you feel on your skin? Is it hot or warm? Is it cool or cold?</p> <p>Think about what you'll tell your classmates about the weather when we go back inside.</p> <p>NOTE TO TEACHER: <i>Give students time to record their weather observations by drawing pictures of what they see and feel</i></p>		

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			<i>(Sun/rain, clouds, wind).</i>		
6 min	<p>Follow-Up to Activity</p> <p>Synopsis: After students return to the classroom, they use words from the class chart to describe their weather observations.</p> <p>Main science idea(s):</p> <ul style="list-style-type: none"> • Weather is what it looks like and feels like outside. • Weather includes temperature, sunlight, clouds, rain or snow, and wind. 	<p>Make explicit links between science ideas and activities after the activity.</p> <p>Engage students in analyzing and interpreting data and observations.</p> <p>Ask questions to probe student ideas and predictions.</p> <p>Ask questions to challenge student thinking.</p>	<p>NOTE TO TEACHER: <i>Return to the classroom and ask students to use words from the class weather chart to describe their observations.</i></p> <p>Show slide 6.</p> <p>Now let’s hear your weather observations!</p> <p>What did you observe about our weather outside today? Use words from our class chart to describe the weather you saw and felt.</p> <p>What else did you observe about our weather?</p>	<p><i>Sample dialogue:</i> It felt warm.</p> <p>I was starting to sweat!</p> <p>No, there wasn’t any rain at all.</p> <p>There’s a little wind today.</p> <p>The wind was moving the leaves on the trees a little.</p>	<p>Yes, it’s warm outside today, isn’t it?</p> <p>Did you see or feel any rain?</p> <p>How do you know that?</p> <p>Did you feel the</p>

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			<p>Raise your hand if you weren't sure it's sunny outside.</p> <p>NOTE TO TEACHER: <i>It's likely that some students won't raise their hands, so be sure to ask follow-up questions to engage all students in this discussion.</i></p> <p>Let's talk about this. Why weren't you sure it's sunny today?</p>	<p>Yes, just a little.</p> <p>It was sunny outside.</p> <p>I thought it was cloudy, too.</p> <p>Well, it's kind of sunny outside, but it's a little cloudy, too, so I didn't know whether to raise my hand.</p> <p>Well, it's mostly sunny outside, but there are some clouds, too, so I think it can be sunny and cloudy at the</p>	<p>wind on your skin too?</p> <p>What do others think? Can it be sunny and cloudy at the same time?</p>

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			<p>Let's add <i>partly cloudy</i> to our class weather chart so we can remember how to describe weather that's sunny with just a few clouds.</p> <p>Now that we've described our weather observations, let's think about what we would say if we were weather reporters on TV.</p>	<p>same time.</p> <p>I'm not sure. How many clouds do you have to see for it to not be sunny?</p> <p>What if it's sunny with just a few clouds?</p>	<p>Good question! What do you think? Should we only say it's sunny if there aren't any clouds at all?</p> <p>We call that "partly cloudy."</p> <p>When it's partly cloudy, it's sunny with some clouds.</p>
6 min	<p>Synthesize/Summarize Today's Lesson</p> <p>Synopsis: The teacher</p>	Highlight key science ideas	<p>Show slide 7.</p> <p>First, let's revisit our focus question for today: <i>How can we describe our weather?</i></p>		

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	<p>reviews the focus question and engages students in summarizing key ideas about weather. Then students give a weather report based on their outdoor weather observations and watch a short video clip of a weather report.</p> <p>Main science idea(s):</p> <ul style="list-style-type: none"> • Weather is what it looks like and feels like outside • Weather includes temperature, sunlight, clouds, rain or snow, and wind. • We can observe weather with our eyes and feel it with our skin. 	<p>and focus question throughout.</p> <p>Engage students in making connections by synthesizing and summarizing key science ideas.</p>	<p>Who can tell me what the weather is?</p> <p>Show slide 8.</p> <p>That’s right! Weather is what it looks like and feels like outside.</p> <p>So 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>What would you say about today’s weather if you were a weather reporter on TV? Make sure to use weather words from our class chart.</p>	<p>Weather is what it 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><i>Sample dialogue:</i> It was partly cloudy, because the Sun was out, but there were some clouds, too.</p> <p>It was really warm outside!</p> <p>There was no rain!</p>	

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		Summarize key science ideas.	<p>Show slide 9.</p> <p>So today we went outside to <i>observe</i> our weather. Then we used weather words to <i>describe</i> what we saw and felt. Our weather report says that it's <i>[partly cloudy and warm, with a little wind and no rain]</i>.</p> <p>Now let's look at a real weather report to see if we observed and described today's weather accurately.</p> <p>NOTE TO TEACHER: <i>Play 15 seconds to about 2 minutes of a video clip showing a weather report for today (see video link on overview page).</i></p> <p><i>After showing students the video clip, discuss similarities and differences between their outdoor weather observations and the TV weather report. Also discuss why people might need weather reporters to tell them what the weather will be. You might also introduce and define the word meteorologist.</i></p>	A little wind was blowing.	
1 min	<p>Link to Next Lesson</p> <p>Synopsis: The teacher foreshadows the next lesson in which students learn to use a thermometer to measure</p>	Link science ideas to other science ideas.	<p>Show slide 10.</p> <p>One way we tell how hot or cold it is outside is by measuring the temperature with something called a <i>thermometer</i>.</p> <p>So next time, you'll learn how to use a</p>		

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	how hot or cold it is.		<p>thermometer to measure temperatures. You'll also learn how to record the temperatures you measure.</p> <p>ELL support: Show ELL students a thermometer during the lesson preview and orient them to how it works so they understand how to measure temperature.</p> <p>NOTE TO TEACHER: <i>You can use your own procedure to collect the weather data, but the data must be collected at the same time each day using a consistent method. It must also include different conditions, such as sunny or cloudy, rainy or dry, and windy or calm, as well as the temperature reading on the thermometer (see next lesson). This is important so that students will have comparison data to use later in the lesson series. When you've finished collecting weather for each month, store the classroom calendars in a safe place to use again when the lesson series begins. It will be helpful to have a variety of months to choose from during the lesson series, so don't get rid of the calendar data until the lesson series is complete.</i></p>		