

A Fine Day For ...

Strand: Measurement and Geometry

Topic: Measuring in Fahrenheit

Primary SOL: 2.11 The student will read the temperature to the nearest 10 degrees.

Related SOL: 2.2 a, b

Materials

- Story about weather and/or temperature
- Large thermometer for display
- Thermometers with Fahrenheit scales for student use
- Temperatures Today activity sheet (attached)
- A Fine Day for _____ activity sheet (attached)
- Different nondigital thermometers (i.e., a body temperature thermometer and an outdoor thermometer [rectangular and circular]).

Vocabulary

thermometer, Fahrenheit, temperature, degree

Student/Teacher Actions: What should students be doing? What should teachers be doing?

1. Begin by reading aloud a story about weather and/or temperature.
2. Ask, “What tools might we use to measure the weather?” Responses may include a rain gauge, barometer, thermometer, and ruler. Explain that today we are going to be measuring temperatures, using thermometers.
3. Display a large rectangular thermometer. Have each student write some observations about the thermometer and share with another student. Have students share their observations with the class. Observations should include Fahrenheit—the scale markings that indicate counting by twos, and the recording of the 10s on the scale.
4. Display a round outside thermometer. Have students write some observations about the thermometer and share with another student. Ask students to compare both types of thermometers. Listen for comparison of scales.
5. Demonstrate how to read the current temperature in Fahrenheit on the thermometer, using counting by tens and twos. Call on student volunteers to read other Fahrenheit temperatures. Explain that not all countries use Fahrenheit, just like not all countries use inches. Model reading the current temperature in Celsius on the thermometer. Call on student volunteers to read other Celsius temperatures.
6. Distribute the Temperatures Today activity sheet and a thermometer. Have students bring their sheets, thermometers, and pencils outside, find different locations on the playground that might have different temperatures (e.g., in the shade, under the slide, out on the blacktop, beside the wall of the school), sit down, and place the thermometer on the ground. After the thermometers have been on the ground for a few minutes, have student read and record the temperatures on the Temperatures Today sheets. Have

them also complete the other items on the sheet (e.g., 90° F means it might be a fine day to go swimming).

7. Once the class is inside, take five minutes to ask whether students had any concerns or problems during the temperature activity. Select a few students to share their temperature readings, and record the temperatures they recorded on the board. Ask students to generalize about the weather outside today, based on the temperatures (e.g., “It is really hot,” or, “It seems like temperatures in the shade are cooler.”).
8. Distribute the A Fine Day for _____ activity sheet, and explain that students will now read and record four different temperatures and then think of an activity they might like to do outside on a day with each temperature.
9. As students work on the activity, circulate around the room. Ask students to model skip counting by tens and twos to read the temperature.

Assessment

- **Questions**
 - Why do you think thermometers have numbers that count by tens? Would it be easier or harder to read the temperature if the numbers counted by twos? Why?
- **Journal/Writing Prompts**
 - My friend in Germany called to tell me that it was 10 degrees Fahrenheit this morning when she woke up. I went to the thermometer and measured that it was 50 degrees here. Do you think that the weather in Germany is about the same as it is here or that it is very different? Why?
 - If 90 degrees Fahrenheit is hot and 40 degrees Fahrenheit is cold, what do you think would be a good Fahrenheit temperature to have inside a house for it to feel “just right”?
- **Other**
 - Use the A Fine Day for _____ sheet as written assessment.

Extensions and Connections (for all students)

- Have students’ record temperatures over a one-week or one-month period (during a specified time of day) and then graph the trends.
- Have students measure and record temperatures in other classrooms in the school. Guide them in making generalizations, using these data.
- Ask students to think about when else you could use a thermometer to measure temperature? (Some ideas to look for is when we are sick and when we are cooking.) Do the thermometers we use when we are sick look like the thermometer we will use to measure the temperature outside? Show students the thermometer that reads body temperature. How are they alike, and how are they different? Ask students, does the thermometer we use for cooking/baking look the same as the other two thermometers? Show students the thermometer. How are they alike, and how are they different?

Strategies for Differentiation

- Have students draw a line from the top of each thermometer reading to the temperature number.
- Have students use moveable thermometer manipulatives to show various temperatures.
- Have students make their own paper thermometer and fill in the scale marks, using skip counting by twos and tens.
- Redirection and corrective feedback should be given throughout lesson.
- If a student is unable to go outside, they may measure the temperature inside.

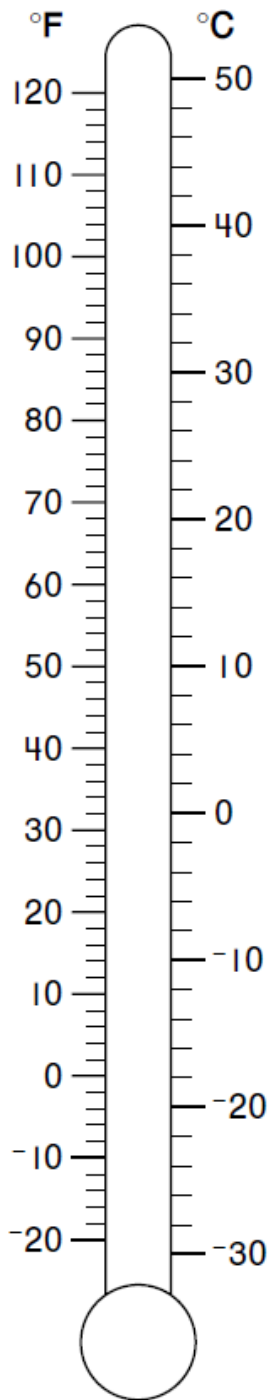
Note: The following pages are intended for classroom use for students as a visual aid to learning.

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Temperatures Today

Name _____

After your thermometer has been on the ground for a few minutes, read the temperature and record it on the thermometer below by drawing exactly what it looks like.



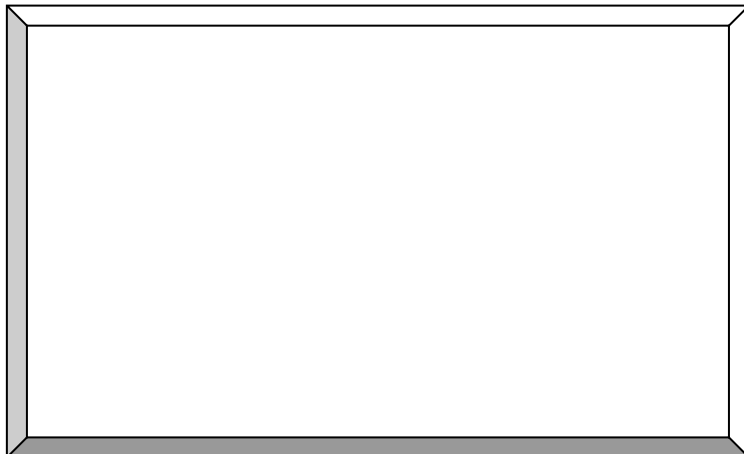
Where are you sitting in order to measure the temperature?

What is the temperature on the ground where you are?

_____ Fahrenheit

Because of this temperature, it is a fine day for

This is a picture of what the temperature feels like today:



A Fine Day for _____

Name _____

° F ° C Temperature _____ ° F It is a fine day for _____ _____ _____	° F ° C Temperature _____ ° F It is a fine day for _____ _____ _____
° F ° C Temperature _____ ° F It is a fine day for _____ _____ _____	Temperature _____ ° F It is a fine day for _____ _____ _____