

Measuring Temperature

Cross-Curricular Focus: Physical Science

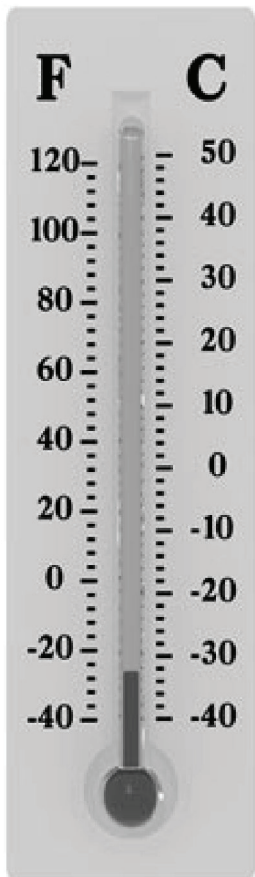
The thermometer is the most common tool for measuring **temperature**. Many thermometers use two different temperature scales: Fahrenheit and Celsius. You may have wondered how they relate to each other. Both scales were invented in the 1700's and are named after their inventors.

The Fahrenheit scale was invented by Gabriel Fahrenheit. He set the boiling point for water at 212°, and the freezing point at 32°. Temperatures are measured all along the scale, much like a number line

or ruler. The unit of measurement for temperature is a degree, instead of an inch on a ruler.

Anders Celsius invented the Celsius scale after the Fahrenheit scale. He kept Fahrenheit's anchor points. The anchor points are the temperatures at which water would freeze or boil. Celsius however, changed the numbers of his temperature scale. Under the Celsius scale, water freezes at 0° and boils at 100°. This numbering scale has been adopted for most scientific purposes. It works well with the metric system.

Many thermometers work because liquid changes its volume, or the amount of space it takes up, based on its temperature. When a liquid is cold, it takes up less space than it does when it is warm. Many of the changes in temperature are very small. Thermometers use a large bulb filled with liquid and a very narrow tube to show the changes. The markings on the thermometer are based on the freezing point and boiling point of water. Why? Because Gabriel Fahrenheit chose them as conditions that are easy to recreate. Anders Celsius agreed. Sometimes, inventors set the standard for everyone.



Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) Which scale came first: Fahrenheit or Celsius?

2) Why do scientists use the Celsius scale?

3) Why do many thermometers use liquid?

4) What is the unit of measurement for temperature?

5) Which temperature would be more comfortable for most people: 80° Fahrenheit or 80° Celsius?

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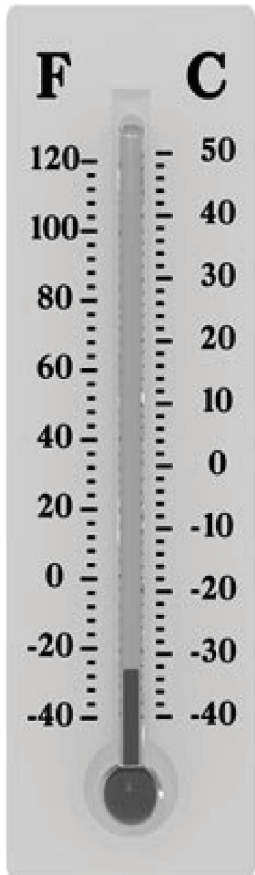
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Name: **Key**

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

Actual wording of answers may vary.

1) Which scale came first: Fahrenheit or Celsius?

Fahrenheit

2) Why do scientists use the Celsius scale?

because it works well with the metric system

3) Why do many thermometers use liquid?

because liquid changes its volume based on temperature

4) What is the unit of measurement for temperature?

degrees or °

5) Which temperature would be more comfortable for most people: 80° Fahrenheit or 80° Celsius?

80° Fahrenheit