

Thermal Energy and Heat ▪ *Enrich***Converting Temperatures**

In this section, you learned that most of the world uses the Celsius temperature scale, but that in the United States, the most common temperature scale is Fahrenheit. You are probably more familiar with one of these scales than the other. One way to become more comfortable with the unfamiliar temperature scale is to compare the numerical values of everyday temperatures in $^{\circ}\text{C}$ and $^{\circ}\text{F}$. A method for converting between Celsius and Fahrenheit temperatures is given below.

To convert $^{\circ}\text{F}$ to $^{\circ}\text{C}$	To convert $^{\circ}\text{C}$ to $^{\circ}\text{F}$
<ol style="list-style-type: none"> 1. Subtract 32. 2. Multiply by 5. 3. Divide by 9. 	<ol style="list-style-type: none"> 1. Multiply by 9. 2. Divide by 5. 3. Add 32.

Convert the following temperatures using the methods described above.

1. Normal body temperature is 98.6°F . _____ $^{\circ}\text{C}$
2. Room temperature is about 72°F . _____ $^{\circ}\text{C}$
3. The lowest temperature ever recorded on Earth was -89.4°C at Vostok, Antarctica. _____ $^{\circ}\text{F}$
4. The highest temperature ever recorded on Earth was 57.8°C at El Azizia, Libya. _____ $^{\circ}\text{F}$
5. $-40^{\circ}\text{C} =$ _____ $^{\circ}\text{F}$
6. The common temperature for baking a cake is 350°F . _____ $^{\circ}\text{C}$
7. Iron melts at 1535°C . _____ $^{\circ}\text{F}$.

Answer the following questions in the spaces provided.

8. Which is warmer, -30°C or -30°F ? Show your work.

9. You are riding to school on the bus in a snowstorm. Through the window, you see a lighted sign that gives the temperature as 26° , but you can't make out whether the temperature scale is Celsius or Fahrenheit. Which is it, and how do you know?
