

LESSON

• Lesson on Celsius Temperature

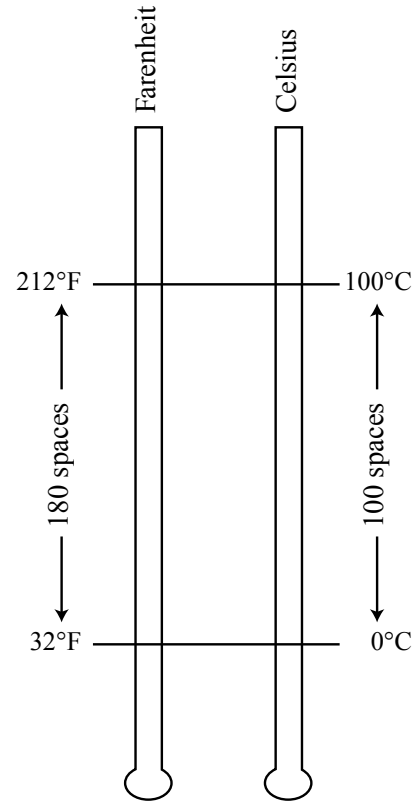
A. Show a transparency (page C–37) of Fahrenheit and Celsius thermometers side-by-side.

Remind students that water boils at 212°F , and water freezes (or ice melts) at 32°F .

Note that the Celsius scale, like the rest of the metric system, was invented to be compatible with our base ten (decimal) numbers. The freezing and boiling points for water were chosen to be “nice” numbers— 0°C and 100°C , respectively.

B. Next, notice that on a Fahrenheit thermometer there are 180 spaces between the freezing and boiling points of water; whereas, on a Celsius thermometer, there are 100 spaces between these two fixed (or unchanging) temperatures.

Through simple proportional reasoning, we see that 9 Fahrenheit degrees are equivalent to 5 Celsius degrees.



F degrees	C degrees
180	100
18	10
9	5

C. Now show an enlarged transparency of the chart on the next page. (See page C–38)
Emphasize:

Each “chunk” of 9 Fahrenheit degrees is equivalent to a “chunk” of 5 Celsius degrees.

D. Demonstrate how to find the Celsius temperatures which correspond to familiar Fahrenheit benchmarks.

E. Ask students to use the chart to find the Fahrenheit temperature which is equivalent to each of these Celsius temperatures: 45°C ; 70°C ; -5°C .

F. Ask students to find the Celsius temperature which is equivalent to each of these Fahrenheit temperatures: 77°F ; 50°F ; -4°F .

G. Now pose this question:

Without using a chart or pictures of thermometers, how can we find the Fahrenheit temperature which is equivalent to 55°C?

Explain: 55°C is 55 spaces above the freezing point (0°C). This is 11 chunks of 5 spaces each, which is equivalent to 11 chunks of 9 spaces each on the Fahrenheit scale. So the corresponding Fahrenheit temperature is 99 spaces above freezing (32°F).

Therefore, the answer to the question is 131°F.

H. What Celsius temperature is equivalent to 59°F?

Explain: 59°F is 27 spaces above freezing (32°F). This is 3 chunks of 9 spaces each, which corresponds to 3 chunks of 5 spaces each on the Celsius scale. So the matching Celsius temperature is 15 spaces above freezing (0°C).

Hence the answer to this question is 15°C.

