

## Activity Sheet 4

### DOUBLE STANDARDS

We can use a double number line to understand the relationship between the Fahrenheit and Celsius scales.

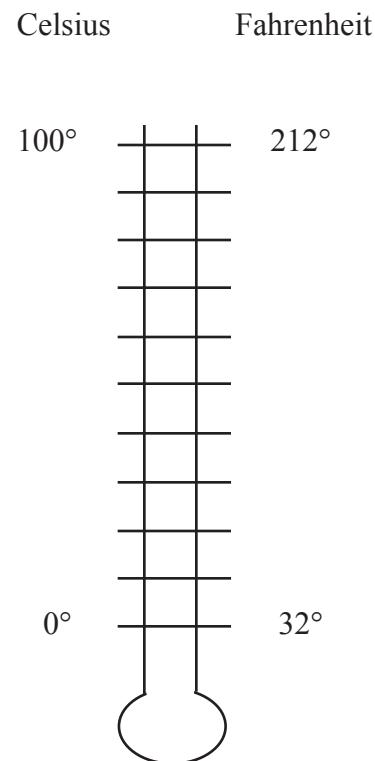
Water freezes at  $0^{\circ}$  C and boils at  $100^{\circ}$  C.

Water freezes at  $32^{\circ}$  F and boils at  $212^{\circ}$  F.

The difference between the boiling and freezing points on the Celsius scale is 100 degrees; the difference on the Fahrenheit scale is 180 degrees. The ratio of  $^{\circ}$ C to  $^{\circ}$ F is 100:180 or 5:9.

When we change from  $^{\circ}$ F to  $^{\circ}$ C, we subtract  $32^{\circ}$  from the Fahrenheit temperature and then take  $\frac{5}{9}$  of it.

To change from  $^{\circ}$ C to  $^{\circ}$ F, we take  $\frac{9}{5}$  of the Celsius temperature and add  $32^{\circ}$ .



1. Label the intervals on the thermometer above in degrees for both Fahrenheit and Celsius temperatures.
2. Find the Fahrenheit temperature when the Celsius temperature is  $20^{\circ}$ .
3. Normal body temperature in  $^{\circ}$ F is 98.6. What would normal body temperature be in  $^{\circ}$ C?
4. When the Celsius scale indicates a temperature of  $10^{\circ}$ , what does the Fahrenheit scale read? Describe the procedure you used to arrive at your solution.