

Investigating Temperature Scales

Activity Mission 4

Objectives:

- To understand how temperature scales relate to each other.

Initial Questions:

What is temperature?

Temperature is a degree of hotness or coldness.

What is a thermometer?

A thermometer is an instrument used to measure temperature. If the temperature rises, the liquid in the thermometer moves upward.

In this activity, we are going to see how three different temperature scales (Celsius, Fahrenheit, and Kelvin) relate to each other.

Temperature is measured in degrees.

Another way to write 25 degrees Celsius is 25° C.

Materials

A ruler or straight edge

Procedure:

Lay your ruler straight across the thermometer page so that it lines up with 0 degrees Celsius. Draw a line that goes across all three thermometers. Notice that when you do this, your line crosses 32 degrees Fahrenheit and 273 Kelvin. This is because:

$$0^{\circ} \text{C} = 32^{\circ} \text{F} = 273 \text{K}$$

This is the temperature when water freezes.

Now lay your ruler straight across the page so that it lines up with 212 degrees Fahrenheit. Again draw a line that crosses all three thermometers. Your line should show you that:

$$100^{\circ} \text{C} = 212^{\circ} \text{F} = 373 \text{K}$$

This is the temperature when water boils.

Fill in the chart by using your ruler and the thermometers.

	°Celsius	°Fahrenheit	Kelvin
Body Temperature	36		
		180	
Freezing Point			273
		200	
Room Temperature	25		
	65		
Boiling Point		100	
		115	
			373
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