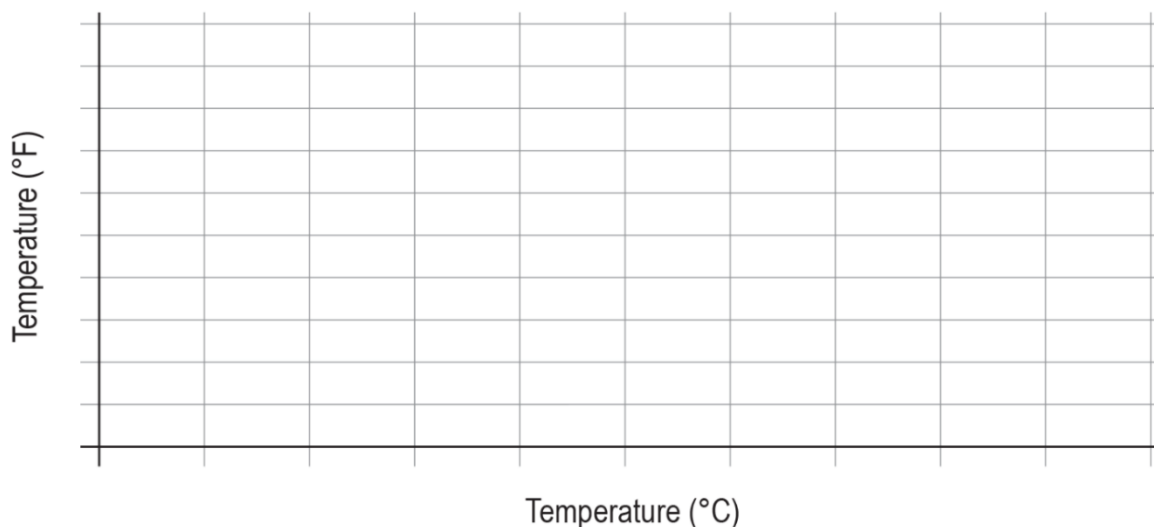# 1B - INVESTIGATING THE TEMPERATURE SCALE

Analysis

Graph 1: Temperature scales

1. Use SPARKvue Graph tools to find the linear fit of the graph. What is the line equation?

Questions

1. Replace the y and x in the line equation with the temperature units they represent on the graph axes. Explain how the line equation describes the relationship between the Fahrenheit and Celsius scales.

2. A pool has a temperature of 28 °C. Use your line equation to convert this temperature to Fahrenheit.

❷ 3. The boiling point of ethanol is 173 °F. According to your equation, what is this temperature in Celsius?

❷ 4. Describe how energy was conserved as it was transferred from the heater-stirrer to the water.

❷ 5. Most substances increase volume when heated, including liquid water. How will this affect density? Does mass also change when a substance is heated? Why or why not?