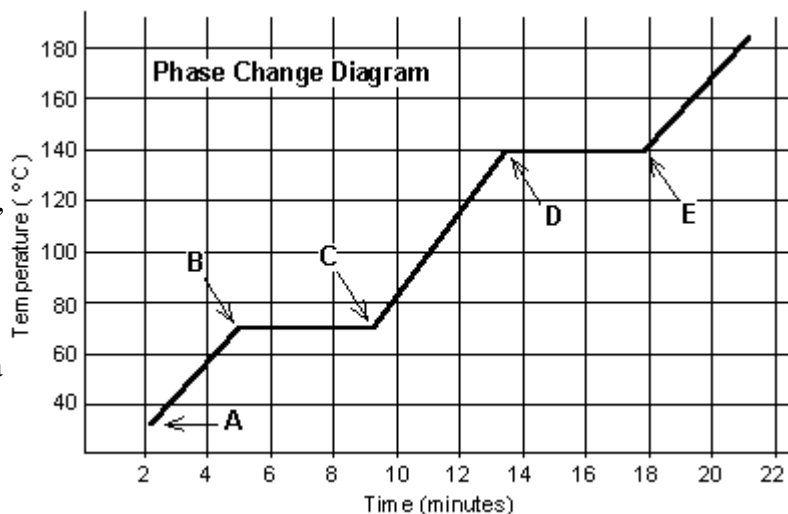


# Phase Change Worksheet

The graph was drawn from data collected as a substance was heated at a constant rate. Use the graph to answer the following questions.

At **point A**, the beginning of observations, the substance exists in a solid state. Material in this phase has \_\_\_\_\_ volume and \_\_\_\_\_ shape. With each passing minute, \_\_\_\_\_ is added to the substance. This causes the molecules of the substance to \_\_\_\_\_ more rapidly which we detect by a \_\_\_\_\_ rise in the substance. At



**point B**, the temperature of the substance is \_\_\_\_\_ °C. The solid begins to \_\_\_\_\_.

At **point C**, the substance is completely \_\_\_\_\_ or in a \_\_\_\_\_ state. Material in this phase has \_\_\_\_\_ volume and \_\_\_\_\_ shape. The energy put to the substance between minutes 5 and 9 was used to convert the substance from a \_\_\_\_\_ to a \_\_\_\_\_. This heat energy is called the **latent heat of fusion**.

Between 9 and 13 minutes, the added energy increases the \_\_\_\_\_ of the substance. During the time from **point D to point E**, the liquid is \_\_\_\_\_. By **point E**, the substance is completely in the \_\_\_\_\_ phase. Material in this phase has \_\_\_\_\_ volume and \_\_\_\_\_ shape. The energy put to the substance between minutes 13 and 18 converted the substance from a \_\_\_\_\_ to a \_\_\_\_\_ state. This heat energy is called the **latent heat of vaporization**. Beyond **point E**, the substance is still in the \_\_\_\_\_ phase, but the molecules are moving \_\_\_\_\_ as indicated by the increasing temperature.

Which of these three substances was likely used in this phase change experiment? Support your claim with evidence?

Substance	Melting point	Boiling point
Bolognium	20 °C	100 °C
Unobtainium	40 °C	140 °C
Foosium	70 °C	140 °C