مدرسة بريستيج الخاصة
PRISTINE PRIVATE SCHOOL

الإمارات
THE EMIRATES

Subject: Science Task Sheet

Name: _____ **Year: 6 Section:** ____ **Date:** _____

TOPIC: STATES OF MATTER

Heating Curves

Heating Curves If the temperature of a pure solid is measured at intervals as it is heated and changes state to a liquid and then a gas, and the temperature is plotted against time, a HEATING curve is obtained. A heating curve is shown for Figure 1 below. The curve below shows that as heating occurs the temperature of the substance increases. The graph shows two horizontal sections where the temperature remains constant over a period of time even though heating continues. This happens when there is a change in state.

Activity #1: Heating Curves

1. Use the graph in figure 1 below to answer the following questions.

a) At point A, the beginning of observations, the substance exists in a _____ state. Material in this phase has a _____ volume and shape. With each passing minute, _____ is added to the substance. This causes the molecules of the substance to gain more _____ energy and hence _____ faster which we detect by a temperature rise in the substance.

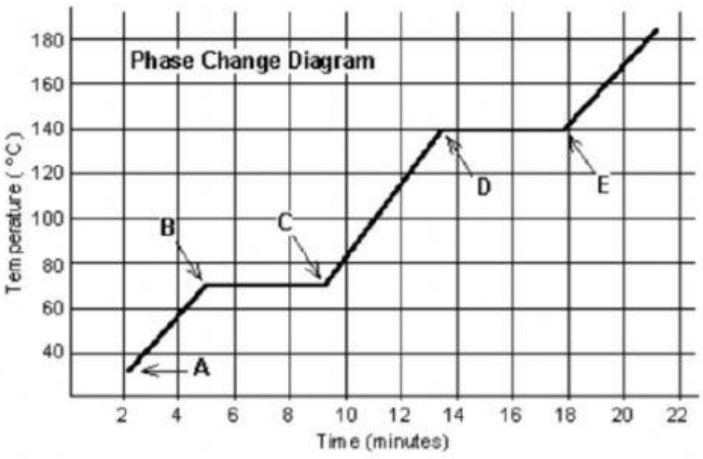

Figure 1 Heating Curve

b) At point B, the temperature of the substance is _____°C and at Point C the temperature is _____°C. This first change in state is where_____ occurs as the temperature remains

constant at the _____ point of the substance. The substance is now in the _____ phase. 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 _____.

c) Between 9 and 13 minutes, the added energy increases the temperature 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 and has reached the _____ point. 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. Beyond point E, the substance is still in the _____ phase, but the molecules are moving faster as indicated by the increasing temperature.

In summary:

From A to B, the material is in the _____ state of matter.

From B to C, the process of _____ is taking pace

From C to D, the material is in the _____ state of matter

From D to E, the process of _____ is taking place

Anything after E is in the _____ state of matter.