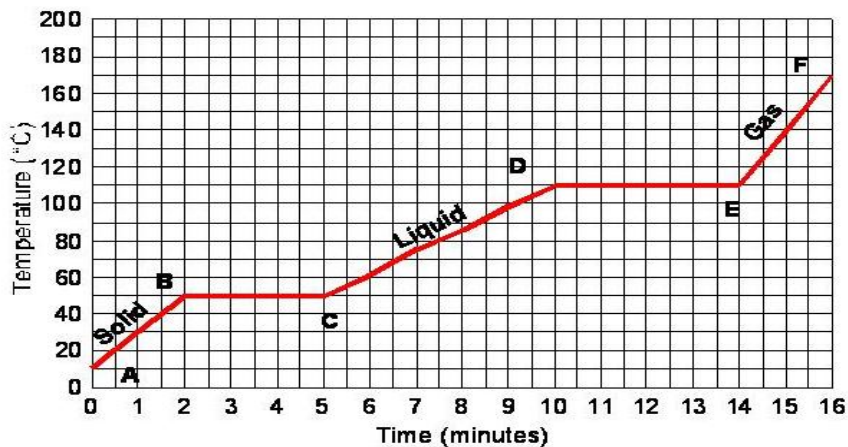


# Changes in State

Name \_\_\_\_\_ Per. \_\_\_\_\_

Look carefully at the graph. It was drawn from the data collected when a substance was heated at a constant rate. To heat at a constant rate means to add heat evenly as time passes. Use the graph to complete the questions that follow. See text, pages 70 – 78.



- At the start of observations, Point A, the substance exists in which state? \_\_\_\_\_
- The temperature at point A is: \_\_\_\_\_
- As energy is \_\_\_\_\_, the temperature of the substance rises at a constant rate for two minutes.
- The temperature remains constant until the change from a solid state to a \_\_\_\_\_ is complete.
- How many minutes does it take to add enough energy to melt the solid completely? \_\_\_\_\_
- From Point C to Point D, the substance is in the \_\_\_\_\_ state.
- What is the temperature of the substance at Point D? \_\_\_\_\_
- The temperature remains constant while the liquid changes to a \_\_\_\_\_.
- At Point E, the substance exists as a \_\_\_\_\_.
- How many degrees does the substance's temperature rise as energy is added between Points E and F? \_\_\_\_\_
- When the gaseous substance is allowed to cool, it \_\_\_\_\_ energy.
- The cooling curve will be the reverse of the warming curve. Energy is released as the substance changes from a \_\_\_\_\_ to a \_\_\_\_\_ to a \_\_\_\_\_.
- The amount of energy released during condensation will be the same as the amount \_\_\_\_\_ during vaporization.
- What two things are the particles of the substance doing as energy is added between Points C and D?  
\_\_\_\_\_
- As the substance is cooling down what are the particles doing? \_\_\_\_\_
- As the substance is cooling down is it contracting or expanding? \_\_\_\_\_