FLINN SCIENTIFIC

Name_____

"Bouncing Ball" Distillation Worksheet

1. What do the rubber balls used in this demonstration represent?

2. Using the rubber balls in the tub as a model, describe the arrangement and motion of molecules in the solid state.

3. Based on the motion of the bouncing balls when the tub was shaken, explain what happens to the motion of molecules in the solid state when energy is added. What does this process represent?

4. What happened to the balls when the tub was shaken rapidly and violently? What does this process represent?

5. The kinetic–molecular theory (KMT) describes how close together the molecules are in a solid, liquid, and gas, their relative motion, and the attractive forces between molecules. Use the KMT to explain the following properties of liquids and solids:

   a. A liquid flows and takes the shape of its container.

   b. Solids are generally incompressible.

   c. Liquids have a definite volume.

   d. A solid absorbs heat from its surroundings as it melts.