

Lesson Outline**LESSON 1****Solids, Liquids, and Gases****A. Describing Matter**

1. A form of matter is another name for a(n) _____ of matter.
 - a. The three most common states of matter on Earth are solids, _____, and gases.
 - b. Most of the matter in space is in a fourth state of matter called _____, which is high-energy matter consisting of positively and negatively charged particles.
2. _____ can be described in many ways.
 - a. Some descriptions, such as color and odor, involve using your _____.
 - b. Other descriptions, such as mass or volume, are _____.
3. Particle _____ and particle _____ determine a substance's state of matter.
 - a. No matter how close they are to each other, all particles have _____ motion.
 - b. Particles that are free to move will move in a(n) _____ line until they _____ with something.
4. There is a force of _____ between positively charged _____ and negatively charged _____.
 - a. When particles move _____, they move closer together, and the attractive forces between them are _____.
 - b. When particles move _____, they move farther apart, and the attractive forces between them are _____.

B. Solids

1. A solid has a definite _____ and a definite _____.

Lesson Outline continued

2. The type of solid depends on how the _____ in the solid are arranged.

a. When the particles are arranged in a specific, repeating order, the solid is a(n) _____ solid.

b. If the particles are randomly arranged, the solid is a(n) _____ solid.

C. Liquids

1. A liquid has a definite _____ but no definite _____.

2. Unlike solids, liquids flow and can take the _____ of their container.

3. The particle motion in a liquid state of a substance is _____ than the particle motion in substance's solid state.

4. The attractive forces between the particles in a liquid are _____ than they are in a solid.

5. A measurement of a liquid's resistance to flow is its _____.

6. The attraction between molecules that are alike, such as water molecules, is called _____.

7. Molecules at the surface of a liquid also have _____, which involves the uneven forces acting on the particles on the surface of a liquid.

8. Usually, stronger _____ forces between particles is linked to a greater _____ of a liquid.

D. Gases

1. A gas has no definite _____ and no definite _____.

2. The distances between gas particles are so _____ and the attractive forces so _____ that gas particles spread out to fill their container.

3. The gas state of a substances that is usually a solid or a liquid at room temperature is called a(n) _____.