Chapter 4 Notes: Section 1, Matter

The state of matter is determined by two things:

1. How \_\_\_\_\_\_\_\_\_\_\_ the particles are moving

2. How \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ particles are attracted to each other

There are \_\_\_\_\_\_\_\_\_\_\_ states of matter.

I. Solids

A. Solids have a definite \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

B. Particles in solids have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attraction to each other.

C. They do not move \_\_\_\_\_\_\_\_\_\_\_\_ enough to overcome their attraction to each other.

D. There are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ types of solids.

1. Crystalline solids have an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ arrangement of atoms or molecules.

a. Example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Amorphous solids are made of atoms and molecules in no particular order.

II. Liquids

1. Liquids take the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the container they are placed in, but have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Particles in liquids move fast enough to overcome some of the attraction between them.
3. Liquid particles \_\_\_\_\_\_\_\_\_\_\_\_ past each other until the liquid takes the shape of the container.
4. Particles in liquids cannot be pushed easily \_\_\_\_\_\_\_\_\_\_\_\_\_\_ together.
5. Liquids have surface \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Causes drops to form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shaped drops
7. Viscosity is a liquid’s resistance to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. Think: thickness
9. The thicker the liquid, the closer the particles

III. Gases

1. Gases can change in both \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Particles in gases move fast enough to completely \_\_\_\_\_\_\_\_\_\_\_\_

away from each other.

1. Particles of gas have less \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than particles of liquids or solids.
2. There is empty space between particles.
3. The amount of space between particles can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_