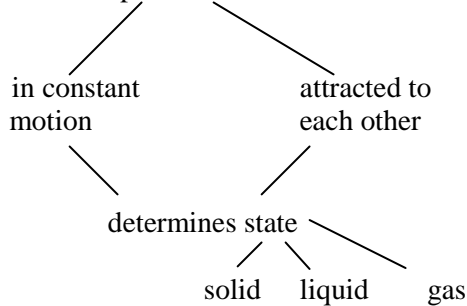


Matter is made of atoms and molecules = particles



Oct. 12

Solids

- particles are strongly attracted to each other and vibrate in place
- have a definite shape and a definite volume
- 2 types:

2 types not on exam

- o crystalline – orderly arrangement of particles
 - examples: ice, diamonds, salt
- o amorphous – particles are randomly arranged
 - examples: wax, rubber

Liquids

- particles move fast enough to overcome SOME of the attraction between them
- takes the shape of its container (indefinite shape), but has a definite volume
- because of particle attraction special properties
 - o hydraulic - difficult to push particles together
 - o surface tension – on surface particle attraction causes a drop of liquid to be spherical in shape
 - o viscosity = resistance to flow
 - thin liquids = low viscosity = pours easily
 - thicker liquids = high viscosity = harder to pour

special properties not on exam

Gases

- particles have the least attraction to each other; move freely of each other
- indefinite shape (takes the shape of its container) and indefinite volume (takes the same volume as the container it is in)
- empty space between the particles varies depending on container size
 - o pressure = amount of force exerted on a given area = caused by collision of particles
 - less empty space between particles = particles closer together = collide more = high pressure
 - more empty space between particles = particles farther apart = few collisions = low pressure

pressure not on exam