

Matter

Sept. 8

Matter - is anything that has mass and takes up space (everything around you, including you). It has 3 forms Solid, Liquid or Gas.

Particle Theory of Matter

- All matter is made up of very tiny particles.
- All particles in a pure substance are the same but different from another substance.
- There are spaces between the particles.
- The particles are always moving. They move faster if they gain energy(Heat).
- There are attractions between particles. Some are weak and some are strong.

Matter has 3 states

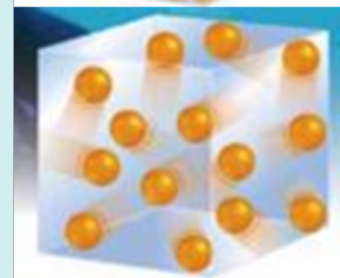
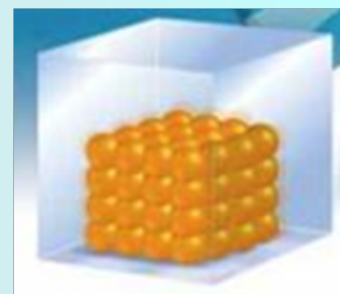


Look at this picture of 7Up in a glass with ice.

What are the 3 states of matter in this picture?

Properties of Matter

- Matter is made of small particles. There are empty spaces between all of these particles that allow the particles to move.
- > Solid particles are packed together and cannot move freely. They only vibrate.
- > Liquid particles are farther apart and can slide past each other.
- > Gas particles are far apart and move around quickly.

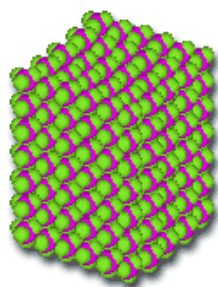




3 States of Matter

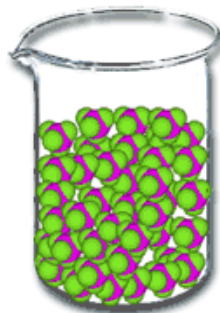
Copy the chart

State	Shape	Volume	Particle arrangement	Particle movement
1. Solid	Definite	Definite	Close	Vibrate
2. Liquid	Indefinite	Definite	Close	Free flowing
3. Gas	Indefinite	indefinite	Far Apart	Random



Solid

particles tightly packed, like bees in a hive. Greatly effected by gravity, that is why solids fall to the ground. Vibrate since cannot move around freely.



Liquid

Particles in liquid have enough energy to pull away from each other, while at the same time vibrating close together in small clusters. Relate this to a group of people talking at a party. They can move around as a group, or flow in between other groups.

Still effected by gravity. falls downward

Diffusion of food coloring in water



Gas

Particles are so far apart and they have lots of energy.

Sometimes goes against gravity.

Takes shape of any container or room it is in.

Remember diffusion of perfume