

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?

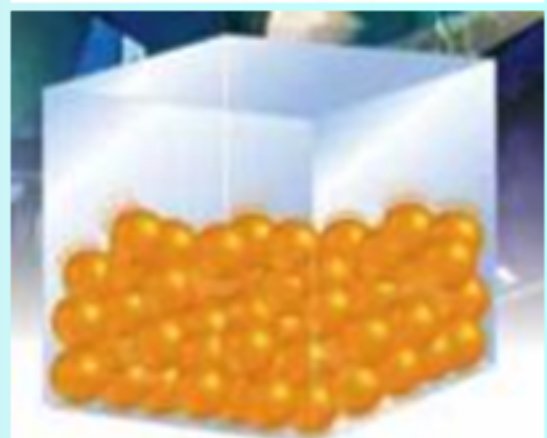
Properties of Matter

- Matter is made of small particles. There are empty spaces between all of these particles that allow the particles to move.

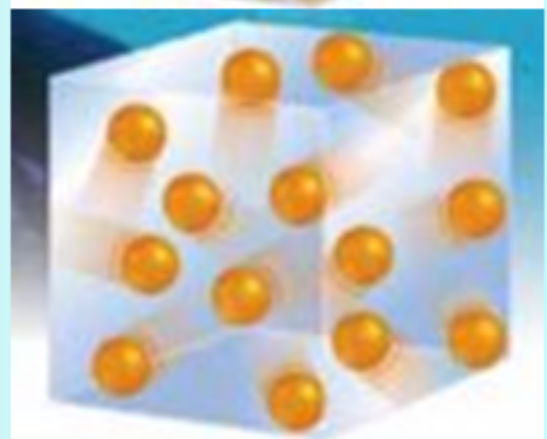
> **Solid particles** are packed together and cannot move freely. They only vibrate.



> **Liquid particles** are farther apart and can slide past each other.



> **Gas particles** are far apart and move around quickly.

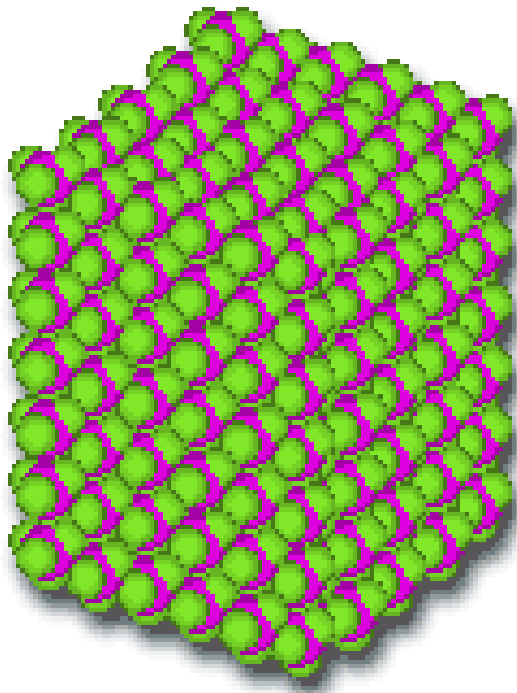




3 States of Matter

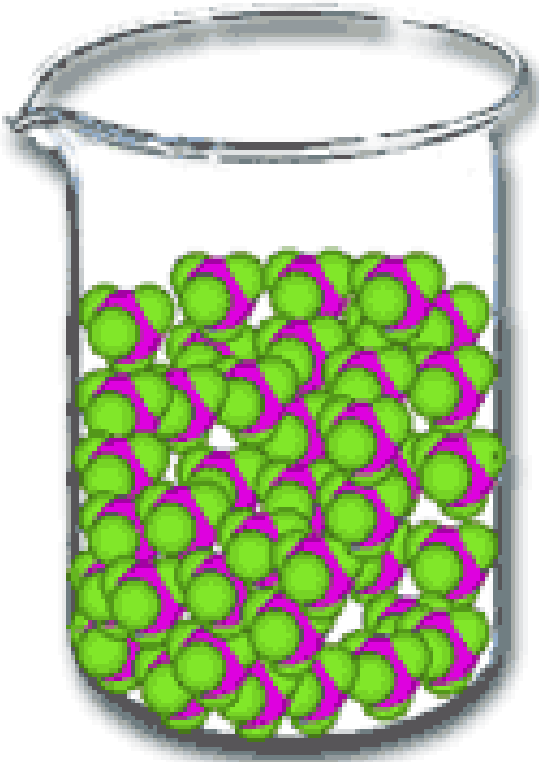
Copy the chart

<u>State</u>	<u>Shape</u>	<u>Volume</u>	<u>Particle arrangement</u>	<u>Particle movement</u>
State	Shape	Volume	Part:ical Distance	Movement
1. Solid	Definite has its own shape	Definite Can calculate its volume	Close	Vibrate
2. Liquid	Indefinite Takes the shape of its container	Definite Can calculate its volume	Close	Free flowing
3. Gas	Indefinite Takes the shape of its container	indefinite Cannot calculate its volume	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