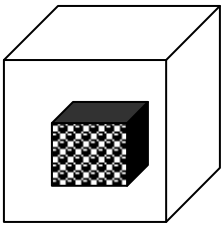
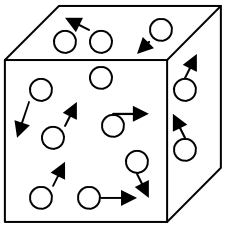
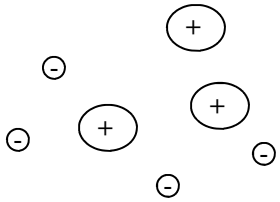
Name_____
Period_____

States (PHASES) of Matter

All matter contains *moving* particles called atoms or molecules.

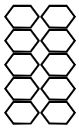
Particles are always moving and the state of the matter is determined by particle speed and the attraction between them.

There are FOUR states of Matter

	Solids	Liquids	Gas	Plasma
				
Shape:	**Definite (doesn't Δ)**	**Container**	**Container**	**Container**
Volume:	**Definite**	**Definite**	**Same as container**	**Same as container**
Attraction:	**Strong**	**Medium**	**Little**	**Conductive particles**
speed of particle:	**Slow vibration**	**Variable sliding**	**Rapid & random**	**Rapid and random**

Solids can be separated into two categories:

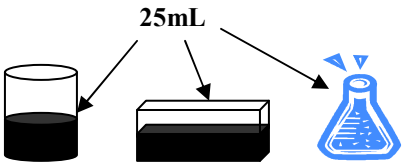
Crystalline **&** ***Amorphous***



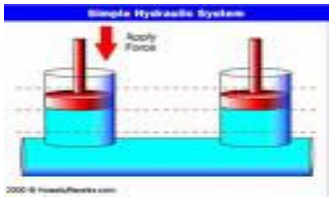
Atoms or **Molecules** are arranged in an orderly regular repeating pattern
Examples: Gold(Au), Ice(H_2O),

Atoms or **Molecules** are not arranged in an orderly manner. Solid was formed rapidly which doesn't allow the molecules to arrange themselves.
Examples: rubber and wax

Liquid's unique properties



Liquids can **change shape** *without* **changing volume**!



Particles in a liquid are close together so they do not compress. They are used in **hydraulic systems**. i.e. Brake lines.

Surface Tension

Force acting on the particles at the surface of a liquid. " ***Cohesion"*** or Attraction of the particles form a "barrier"

Viscosity

A Liquids **Resistance to Flow.**
Honey= High Viscosity
Water= Low Viscosity

Gasses take the **shape** and **volume** of their containers. Particles move fast enough to break away from each other and fill the container they are in. The particles have **less attraction** for each other than a solid or a liquid

***PLASMA* most abundant state of matter in the universe!**

Name_____
Period_____

All matter contains moving particles called_____ or _____.

The state of matter is determined by_____ _____or the _____ between _____.

There are _____ states of matter.

A _____ has a definite volume and a definite shape.

A _____solid has a regular repeating pattern of particles.

The phase of matter known as _____ is a gas that can conduct electricity.

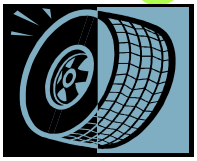
The speed of molecules changes when _____changes.

Matter is most abundant in the _____ state from the universe perspective.

This bug can crawl across water due to the water's _____ _____.
_____causes surface tension on the surface of a liquid.

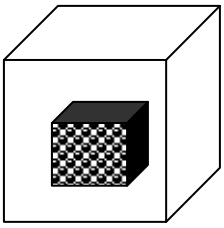
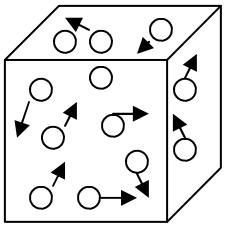
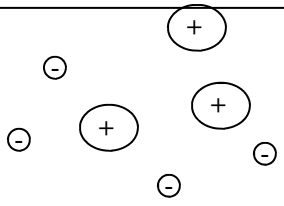
The different rates at which these liquids are flowing is dependent on their _____.
The liquids that flow the fastest have a _____ viscosity.
The liquids that flow the slowest have a _____ viscosity.

Lightning is a state of matter where the particles are in a gaseous and charged state, therefore lightning is matter in the _____state.
Do you know of another strange phenomenon that occurs in the northern and southern latitudes due to charged gasses from the sun interacting with earth's magnetic field?



The Rubber in this tire is a solid whose particles are in an _____ arrangement because the molecules are not in a repeating pattern.
The steel rim however, is a _____ solid. It's atoms form a regular repeating pattern.

Try to complete the table without looking at the front

	 **Solids**	 **Liquids**	 **Gas**	 **Plasma**
Shape:				
Volume:				
Attraction:				
Speed of particles:				