

Phases of Matter, Properties, and Changes Quiz-Notes

Be sure to write 2 facts from each slide.

Once you have finished return to Ms.
Bullock's webpage to watch the video.

Matter

- Matter is anything that has mass and takes up space.
- Matter is made of tiny particles called atoms and molecules
- Molecules are always in motion
- The way the particles move and interact with each other helps to determine which state of matter
- 4 States of matter solid, liquid, gas, and plasma

Solids

- Solids have definite shape and volume
- Particles are very close together and strongly attracted to each other

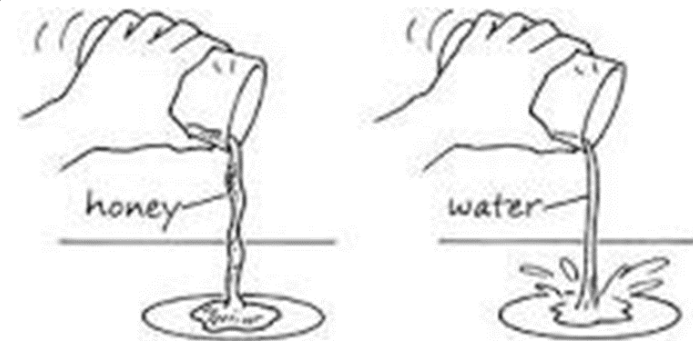


- Crystalline solids arrange in a pattern
- Amorphous solids do not have a pattern



Liquids

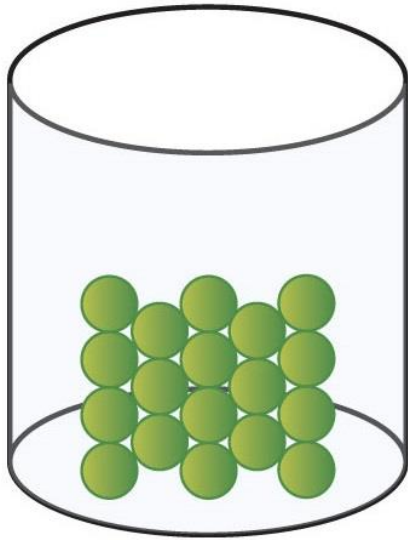
- Liquids change shape but has a definite volume
- Particles can slide past each other
- Surface tension- attracts the surface of the liquid and minimizes the area of the surface
- Viscosity- resistance to flow



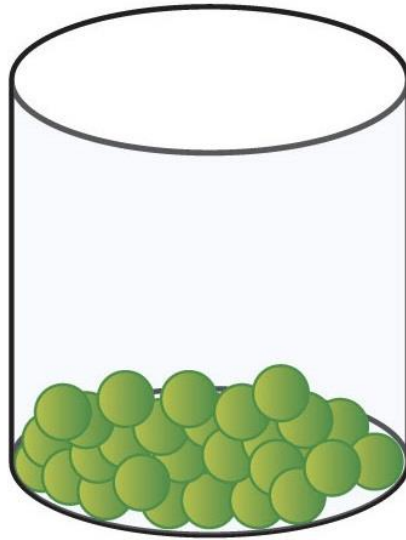
Gas

- Gases change both shape and volume
- Particles move quickly
- Little attraction between particles and can break away easily from one another
- The amount of empty space between particles can change.

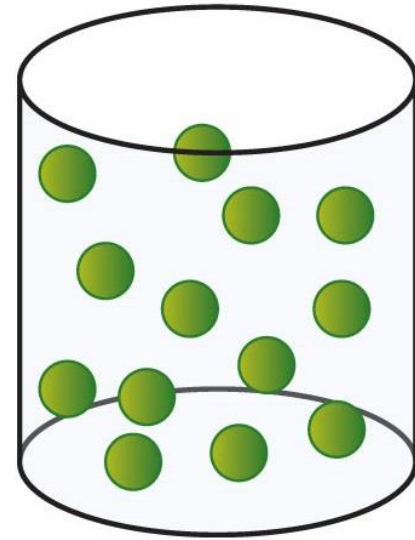




Solid



Liquid

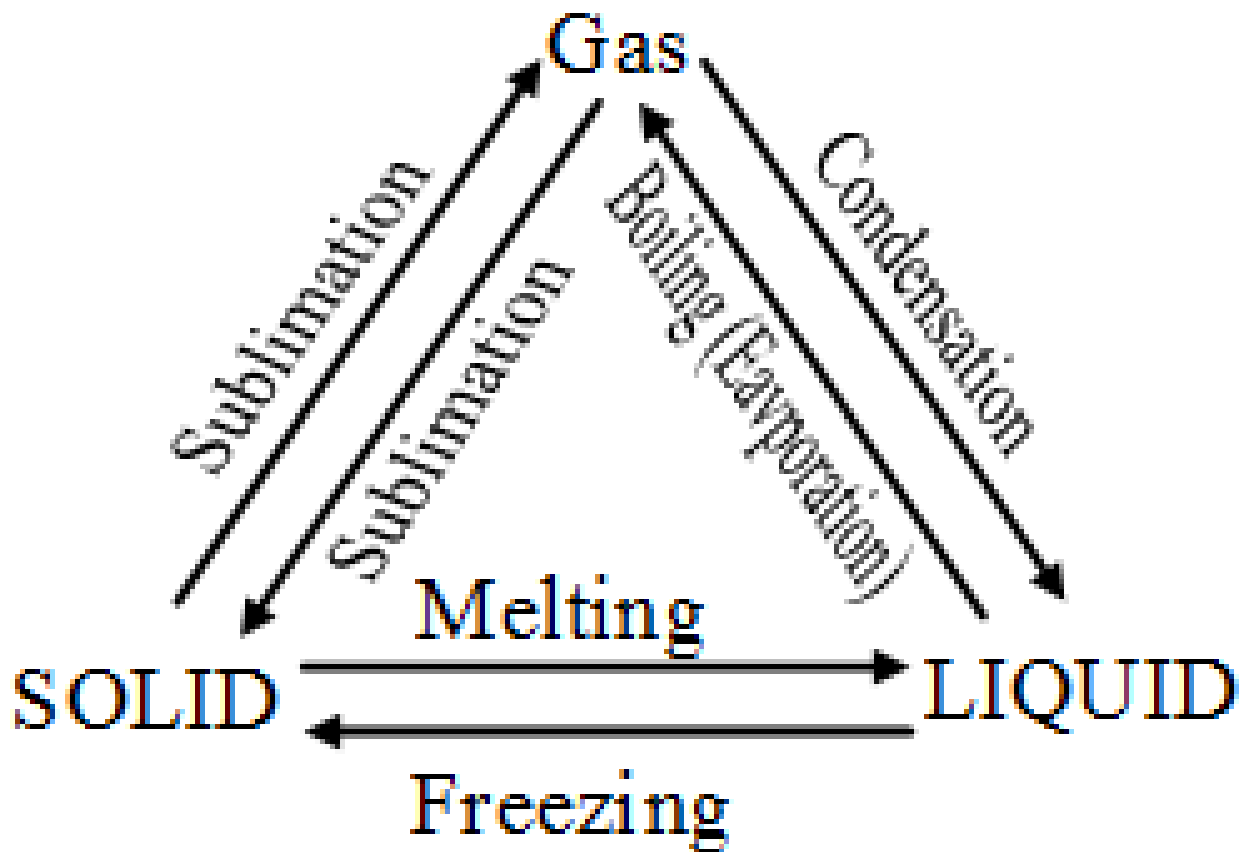


Gas

Solid atoms have the most energy, have a definite volume and shape.

Liquid atoms have more energy than a solid, have a definite volume, and an indefinite shape

Gas atoms have the most energy, have an indefinite volume and an indefinite shape.



Physical Property

- A characteristic of a substance that does not involve a chemical change
- Physical properties are observations or measurements
- Use your 5 senses
- Examples: color, density, volume, strength, flexibility, magnetism, etc.

Chemical Property

- Ability to change
- Chemical properties can only be determined by watching the reaction take place

Examples:

- Reactivity to oxygen
- Flammability
- Reactivity to vinegar

Physical Change

- An action which does not involve a change in substance composition
- The substance retains its properties
- Examples: cutting, breaking, crushing, freezing, mixing, and any change of state

Chemical Change

- An action which does involve a change in substance composition
- The new substance would have different properties.
- Indicators: 1-change in color,
2- change in odor,
3-production of sound,
4-production of light,
5-production of heat/cold,
6-Bubbles, fizzing, foaming, GAS,
7- Formation of precipitate