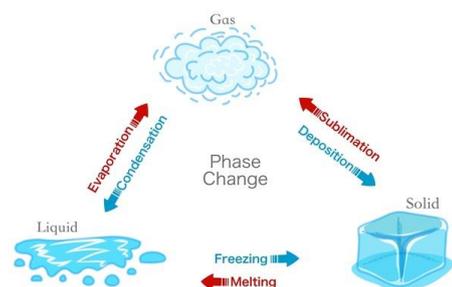


Solid	Liquid	Gas
Fixed Volume	Fixed Volume	No fixed volume
Fixed Shape	No fixed shape	No fixed shape
Cannot be Compressed	Cannot be compressed	Can be compressed
Does not flow	Flows easily	Flows in all direction

Kinetic Particle Theory

- All matter consists of particles that are too small to be directly visible
- The particles are always in a constant state of random motion at varying speeds

Physical Properties	Solid	Liquid	Gas
Arrangement	Closely packed in an orderly arrangement	Loosely packed in a disorderly arrangement	Far apart & random arrangement
Forces of attraction	Very strong attractive force	Strong attractive force	Weak attractive force
Density	Very high density	High density	Low density
Movement	Vibrate about its fixed position	Particles sliding over one another freely	Move about at high speeds randomly
Energy	Increasing energy →		



SUBLIMATION & DEPOSITION

Common Substances

Iodine is a dark purple solid at room temperature. When low heat is applied, it undergoes sublimation and becomes a violet gas.

Dry ice is frequently used as a cooling agent to keep temperatures low. It is used instead of normal ice as it sublimates to form gaseous carbon dioxide, rather than water.

DIFFUSION

Diffusion is **the movement of molecules from a region of higher concentration to a region of lower concentration** until it is mixed evenly -> equilibrium is reached.

During diffusion, gas or liquid particles would move to available spaces in a container through random motion, mixing thoroughly in the process.

Applications of Diffusion

- Spread of Perfume
- Cooking Aromas

Factors that affect Rate of Diffusion

1. Molecular Mass – The higher the Molecular Mass, the slower the rate of diffusion
 - a. Can be found using the Periodic Table (Refer to Mole Concept Chapter)
2. Temperature – The higher the temperature, the higher the kinetic energy of the particles, thus the speed of the the particles is higher, and the rate of diffusion is higher

