MIND MAP

Matter: Anything that occupies space and possesses mass. Matter is made up of particles which are

- very small in size.
- have spaces between them
- are continuously moving
- attract each other

States of matter are interconvertable

Solid State $\underset{\text{Cool}}{\overset{\text{Heat}}{\rightleftharpoons}}$ Liquid State $\underset{\text{Cool}}{\overset{\text{Heat}}{\rightleftharpoons}}$ Gaseous State

Solid $\underset{\text{Sublimation}}{\overset{\text{Sublimation}}{\rightleftharpoons}}$ Gas

MATTER

Solid State | Liquid State | Gaseous State

- **Intermolecular force of attraction**
  Solid > liquid > Gas
- **Intermolecular space**
  Gas > liquid > Solid
- **Compressibility**
  Gas > liquid > Solid

- **Evaporation**
  The phenomenon of change of a liquid into vapours at any temperature below its boiling point is called '**evaporation**'

Factors affecting evaporation

Rate of evaporation increases with

- Increase in surface area.
- Increase in temperature
- Increase in wind velocity
- Decrease in humidity

- **Melting point**
  The temperature at which a solid melts to become a liquid at atmospheric pressure is called '**melting point**'.
- **Boiling point**
  The temperature at which the vapour pressure becomes equals to the atmospheric pressure is known as the **boiling point**.
- **Latent heat**
  The amount of heat required to change the state of matter from one state to another without rise in temperature is known as latent heat of that substance.
- **Latent heat of vaporization**
  The amount of heat energy that is required to change 1kg of solid into liquid at atmospheric pressure at its boiling point is called, **latent heat of vaporization**.
- **Latent heat of fusion**
  The amount of heat energy that is required to change 1kg of a solid into liquid at atmospheric pressure at its melting point is called **latent heat of fusion**.
- **Specific heat**
  The amount of heat energy required to raise the temperature of a unit mass of a substance by 1°C. It is different for different substances.
- **Sublimation**
  Sublimation is the process of conversion of a solid directly into a gas or vice-versa without changing into liquid state.