



What are the States of Matter?

Matter is everything around us – everything you can see or touch. All matter exists in one of three states: solid, liquid, or gas. Each state has its own characteristics.

Solids

Solids have a definite shape and volume. This means that solid objects keep their shape and don't change shape unless something is done to them.

Examples of Solids:

- A rock
- A chair
- Ice

Characteristics of Solids:

- They don't change their shape easily.
- The particles are packed together tightly and don't move around much. Instead, they vibrate in place.

Liquids

Liquids, on the other hand, do not have a fixed shape. They take the shape of the container they are in, but they do have a definite volume.

Examples of Liquids:

- Water
- Milk
- Olive Oil

Characteristics of Liquids:

- They can flow and spread to fill their container.
- The particles in liquids are close together, but they can move around each other.

Gases

Gases are different again; they do not have a definite shape or volume. They will fill up any space available to them.

Examples of Gases:

- Air
- Steam
- Carbon dioxide

Characteristics of Gases:

- They spread out to fill the whole container, no matter how big it is.
- The particles in gases are far apart and move around very quickly.

Transitioning Between States

Matter can change from one state to another when heat is added or removed. Here are the main changes:

- **Melting:** When a solid (like ice) is heated, it can become a liquid (like water).
- **Freezing:** When a liquid (like water) is cooled, it can become a solid (like ice).
- **Evaporation:** When a liquid (like water) is heated, it can turn into a gas (like steam).
- **Condensation:** When a gas (like steam) cools down, it can turn back into a liquid (like water).