

# The Three States of Matter

There are three main states of matter you need to know:

## 1. Solid

- Particles are tightly packed in a fixed arrangement.
- They vibrate but do not move freely.
- Solids have a fixed shape and volume.

## 2. Liquid

- Particles are close but not in a fixed position.
- They can slide past each other.
- Liquids have a fixed volume but take the shape of the container.

## 3. Gas

- Particles are far apart and move quickly in all directions.
- They have no fixed shape or volume.
- Easily compressed.

Summary:

- Solids: Fixed shape and volume
- Liquids: Fixed volume, variable shape
- Gases: Variable shape and volume

These differences are due to how the particles are arranged and how much energy they have.