

CHANGING STATE

Solids, liquids and gases are called the three **states of matter**. Materials can be changed from one state into another by **heating** or **cooling**.

Heating

If ice (solid) is heated, it changes to water (liquid). This change is called **melting**.

Water (liquid) can change to water vapour (gas). This is called **evaporation**.

If water is heated until it **boils**, it changes to water vapour (gas) very quickly. Water boils at 100°C .

Cooling

If water vapour (gas) is cooled, it changes to water (liquid). This process is called **condensing**.

If water (liquid) is cooled, it changes to ice (solid). This change is called **freezing**. Water freezes at 0°C .

VOCABULARY

boiling point, change, evaporation, freezing, gas, liquid, melting, melting point, solid, state, temperature, water cycle

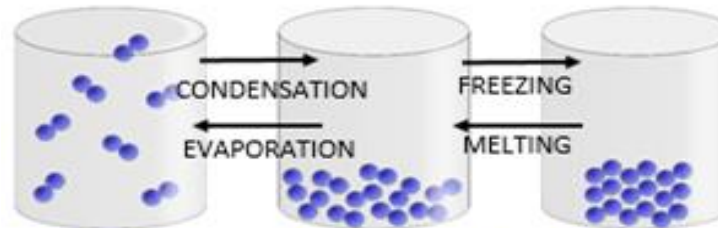
States of Matter

Three states of matter

GAS: particles far apart and randomly arranged / move around

LIQUID: particles close but randomly arranged / move around

SOLID: particles very close together / vibrate around a fixed position



Gas

Liquid

Solid

Examples

Steam (water vapour)
Hydrogen
Carbon Dioxide
Oxygen

Examples

Water
Milk
Washing up liquid

Examples

Ice
Wood
Glass
Diamond

FEATURES

Solids hold their shape. Salt, sand and sugar are tiny solids so they pour like a liquid but they pile up and are not wet.

Liquids form a pool not a pile!

Gases escape from an unsealed container and fill the entire volume of space.

PRIOR KNOWLEDGE

In Year 2, you learnt to decide which material would be most suitable for a particular job (everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard).

The Water Cycle

