

States of Matter

Year 4 Knowledge Organiser

Key Vocabulary

Condensation	When water vapour changes from a gas back to liquid.
Evaporation	When liquid changes into gas, usually when heated.
Freezing	When a liquid turns to a solid as it has reached its freezing point. These can differ depending on the substance
Gases	Gaseous matter does not have any fixed shape but does have a mass. The matter within a gas is free moving.
Liquids	Liquids take the shape of their container. They can change shape but do not change the amount of space they take up. They can flow or be poured
Melting	When a solid changes to a liquid, usually when heated.
Solids	Solids keep their shape unless a force is applied to them. They can be hard, soft or even squashy. Solids take up the same amount of space no matter what has happened to them.
Water vapour	Water that is in the form of a gas

Key Skills

- Name a range of solids, liquids and gases .
- Identify and group materials based upon their state.
- Explain the particle structure of solids, liquids and gases
- Describe how some materials can change state - solid to liquid, liquid to solid and liquid to gas.
- Describe how materials change through heating and cooling.
- Explain and measure the temperature at which materials change state .

Key facts

There are three different states of matter: solids, liquids and gases. These states change when heated or cooled

Solids



Particles in a solid are close together and cannot move. They can only vibrate.

Liquids



Particles in a liquid are close together but can move around each other easily.

Gases



Particles in a gas are spread out and can move around very quickly in all directions.

When water and other liquids reach a certain temperature, they change state into a solid or a gas. The temperatures that these changes happen at are called the boiling, melting or freezing point.

