

Year 4 – Autumn 2

Science: States of Matter

Key Vocabulary	Definition
Solid	A substance that has a fixed shape and volume.
Liquid	A substance that flows freely and takes the shape of the container.
Gas	A substance that has no fixed shape and is free to fill any space.
Changing state	Moving from one state to another.
Melting point	The temperature when a solid turns into a liquid.
Boiling point	The temperature when a liquid turns to a gas.
Freezing point	The temperature when a liquid turns to a solid.
Water cycle	The way that water moves between being water vapor, to liquid water, and then back to water vapor.

Matter usually exists in one of three states:

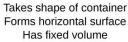


Has fixed shape and volume





Liqui

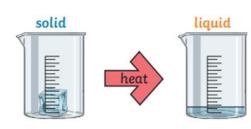




Gas

Expands to fill container

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.



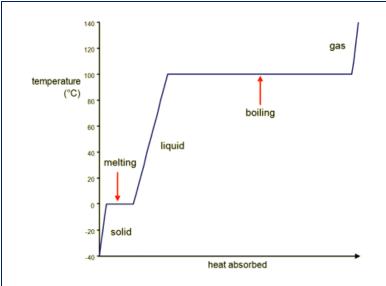
If a solid is heated to its melting point, it melts and changes to a liquid.



solid



When freezing occurs, the particles in the liquid begin to slow down and become a solid structure.







Evaporation occurs when water turns into water vapour.



Condensation is when water vapour cools down and turns into water.

Water Cycle

- **3.** Water from lakes, puddles, rivers and seas is **evaporated** by the sun's heat turning it into water vapour.
- **2.** This water vapour rises, then cools down to form water droplets in clouds (condensation).
- 1. When these water droplets get too heavy, they fall back to the earth as rain, sleet, snow or hail (precipitation).

