Science – States of Matter

St Mary's C of E Primary School and Nursery

'Be the BEST you can be'

Key Vocabulary:	
States	On Earth, all matter exists in one of three different states: solid, liquid or gas.
Solids	A substance that stays the same shape whether it is in a container or not
Liquids	A substance that can flow and take on the shape of a container
Gases	A substance that has no fixed shape, like oxygen.
Particle	Particles are tiny bits of matter that make up everything in the universe.
Condensation	The process of a gas cooling and changing into a liquid.
Water cycle	Water on Earth is constantly moving. It is recycled over and over again. This is called the Water Cycle.
Melting	The process of a solid heating and changing into a liquid.
Evaporation	The process of a liquid heating and changing into a gas.
Precipitation	Precipitation is any liquid or frozen water that forms in the atmosphere and falls to Earth. It is one of the three main steps of the global water cycle.
Freezing	The process of a liquid cooling and changing into a solid.
Changes of state	When a material changes from one material type to another, we say 'it has changed state.'
Water Vapour	This is water that takes the form of a gas. When water is boiled, it evaporates into a water vapour.

Key facts

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

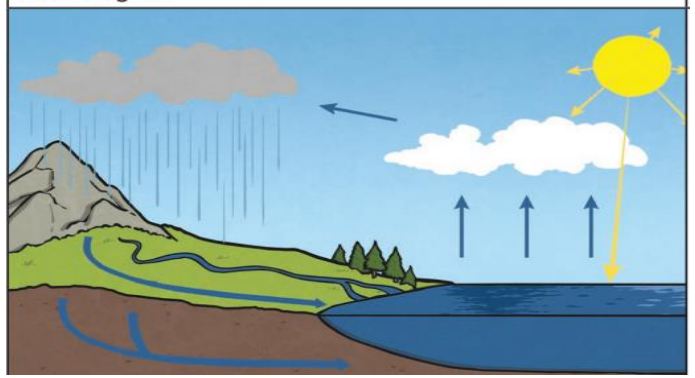
Solids — Particles in a solid are close together and cannot move. They can only vibrate.

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.

Condensation and evaporation occur within the water cycle.



Did you know that liquids have a definite volume but don't have a definite shape? Liquid forms to the shape of a container.

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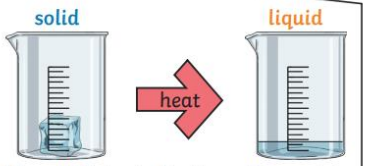
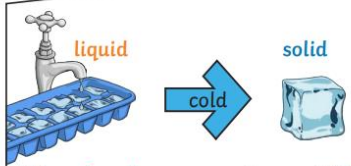


If a solid is heated to its melting point, it melts and changes to a liquid. This is because the particles start to move faster and faster until they are able to move over and around each other.



When freezing occurs, the particles in the liquid begin to slow down as they get colder and colder. They can then only move gently on the spot, giving them a solid structure.