Science Knowledge Organiser	
States of Matter	
Year 4	Spring 2

What? (Key Knowledge)

There are 3 states of matter - solids, liquids or gases.

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. This is because the particles start to move faster and faster until they are able to move over and around each other.

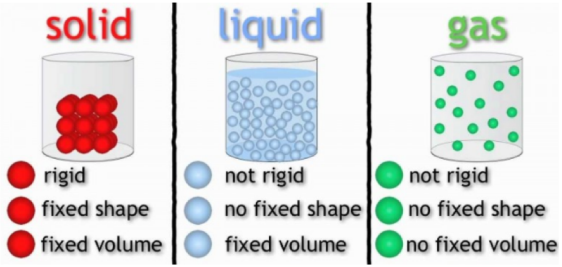
When freezing occurs, the particles in the liquid begin to slow down as they get colder and colder. They can then only move gently on the spot, giving them a solid structure.

Evaporation occurs when water turns into water vapour. This happens very quickly when the water is hot, like in a kettle, but it can also happen slowly, like a puddle evaporating in the warm air.

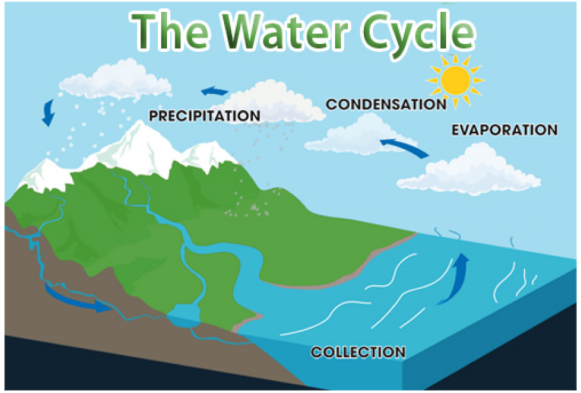
Condensation is when water vapour is cooled down and turns into water.

Diagrams and Symbols

Three States of Matter



The Water Cycle



Key Vocabulary	Definition
solids	These are materials that keep their shape unless a force is applied to them. Solids take up the same amount of space no matter what has happened to them.
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.
gases	Gases can spread out to completely fill the container or room they are in. They do not have any fixed shape but they do have a mass.
water vapour	This is water that takes the form of a gas. When water is boiled, it evaporates into a water vapour.
melt	When a solid changes to a liquid.
freeze	Liquid turns to a solid during the freezing process.
evaporate	Turn a liquid into a gas.
condense	Turn a gas into a liquid.
precipitation	Rain, snow, sleet, or hail that falls to or condenses on the ground.