





Topic Vocabulary	
States of matter	Materials can be one of three states - solids, liquids and gases. Some materials can change from one to the other and back again.
Solids	These are materials that keep their shape unless a force is applied. They can be hard, soft or even squashy. Solids take up the same amount of space, whatever happens 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 they are in. They do not have a fixed shape but they do have mass.
Water Vapour	This is water that takes the form of a gas. When water is boiled, it evaporates into water vapour.

Key Knowledge		
There are three states of matter.		
Solid 	Liquid 	Gas 
Particles in a solid are close together and cannot move. They can only vibrate.	Particles in a liquid are close together but can move around each other easily.	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.


solid



➔


heat

liquid



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.


liquid



➔

cold


solid



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.

Links to Prior Learning

- Some shapes can be changed by squashing and bending.
- Objects can be sorted into groups like metal and wood, and these can be used for different purposes according to their properties.
- Materials move differently on different surfaces.

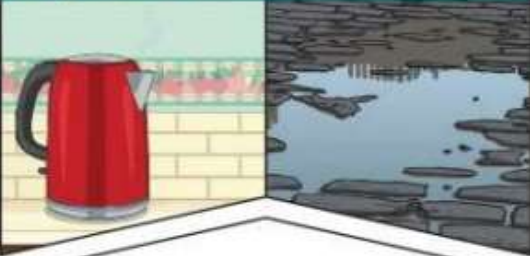


Topic Vocabulary	
Melt	This is when a solid changes to a liquid.
Freeze	Liquid turns to a solid, during the freezing process.
Evaporate	Turn a liquid to a gas.
Condense	Turn a gas into a liquid.
Precipitation	Liquid or solid particles that fall to the ground as rain, snow or sleet.




Key Knowledge

Evaporation



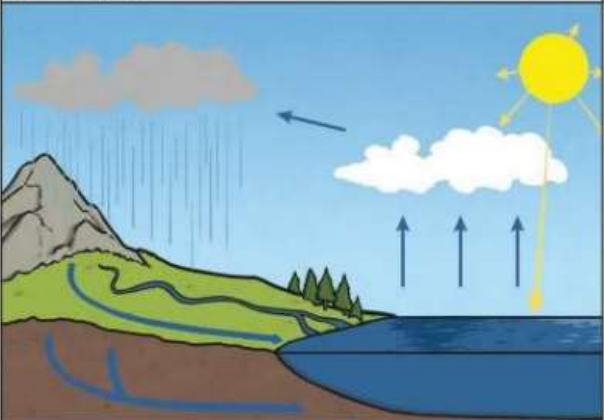
Evaporation occurs when water turns into **water vapour**. This happens very quickly when the water is hot, like in a kettle, but it can also happen slowly, like a puddle evaporating in the warm air.

Condensation



Condensation is when **water vapour** is cooled down and turns into water. You can see this when droplets of water form on a window. The **water vapour** in the air cools when it touches the cold surface.

Condensation and **evaporation** occur within the water cycle.



1. 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**).
3. When the droplets get too heavy, they fall back to the earth as rain, sleet, hail or snow (**precipitation**).