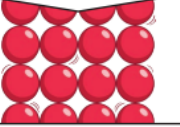
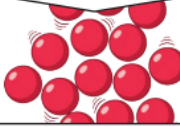
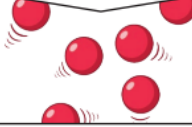
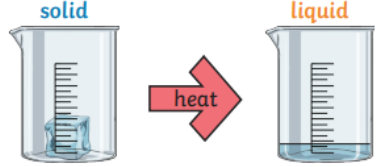


Key knowledge

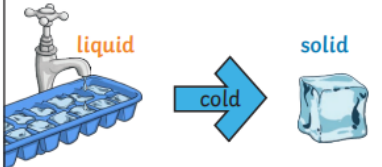
There are three states of matter.

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.

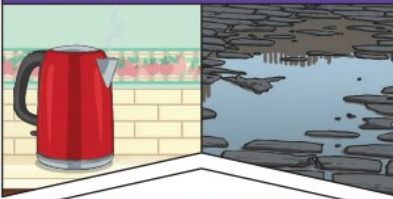


If a **solid** is heated to its **melting** point, it **melts** and changes to a **liquid**. This is because the particles start to move faster and faster until they are able to move over and around each other.



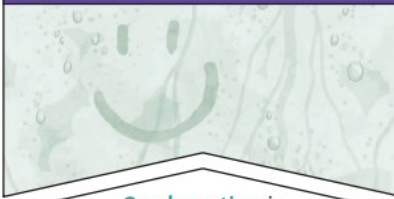
When **freezing** occurs, the particles in the **liquid** begin to slow down as they get colder and colder. They can then only move gently on the spot, giving them a **solid** structure.

Evaporation



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.

I will be able to

- Compare and group materials together according to whether they are liquids, solids or gases
- Notice that some things change state when they are heated up or cooled down and measure or re-search the temperature at which this happens in degrees Celsius
- Identify the part played by evaporation and condensation in the water cycle and link the rate of evaporation with temperature

Famous Scientists



Robert Boyle



Marie Curie

Investigation

Dunking biscuits

- How will you know which biscuit is better?
- What properties of the biscuit do you think are most important?
- What are you measuring?
- Which biscuit appeared to work best? How do you know?

Key Vocabulary

states of matter	Materials can be one of three states: solids, liquids or gases. Some materials can change from one state to another and back again.
solids	These are materials that 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.
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 takes evaporates into a water vapour.
melt	This is when a solid changes into a liquid.
freeze	Liquid turns into a solid during the freezing process..
evaporate	Turns a liquid into a gas.
condense	Turns a gas into a liquid
precipitation	Liquid or solid particles that fall from a cloud as rain, sleet hail or snow.