



Science focus	States of matter	Year 4	Spring Term
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What? (Key knowledge)
<h3>Changing states</h3> <p>Some materials change state when they are heated or cooled and some of these changes can be reversed.</p> <h3>Evaporation</h3> <p>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. Everyday examples of evaporation: washing drying, water boiling, puddles evaporating on a hot day.</p> <h3>Condensation</h3> <p>Condensation is when water vapour is cooled down and turns into water. The water vapour in the air cools when it touches the cold surface. Everyday examples of condensation: water droplets forming inside windows or on a cold glass.</p>

What? (Key Vocabulary)	
Solid	Substance that stays the same shape whether in a container or not
Liquid	Substance that can flow and take on the shape of a container
Gas	Substance that has no fixed shape, like oxygen
Matter	Any solid, liquid or gas that exists in the universe
Particle	An extremely small unit of matter
Water Vapour	This is water that takes the form of a gas. When water is boiled, it evaporates into a water vapour

The Water Cycle
Condensation and evaporation both happen within the water cycle
A) The water evaporates into the air. The sun heats up water on land and in rivers, lakes and seas and turns into water vapour. The water vapour rises into the air.
B) Water vapour condenses into clouds. Water in the air cools down and changes back into tiny droplets of liquid water, forming clouds.
C) Water falls as rain. The clouds get heavy and water falls back to the earth in the form of rain or snow.
D) Water returns to the sea. Rain water runs over the land and collects in lakes or rivers, which take it back to the sea. The cycle starts all over again.

Temperature	
Boiling	Water boils at exactly 100 degrees Celsius (100
Melting	Different solids melt at different temperatures. Ice melts at 0 C Chocolate melts at about 35 C
Freezing	Water freezes at 0 C
Evaporation and Condensation	Water can evaporate and condense at any temperature. But the warmer it is the faster the evaporation takes place.

