







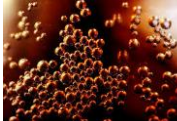


# States of matter – Year 4

Key vocabulary	
change of state	When a material changes to another state (e.g. from a liquid to a solid or gas)
melting	A solid changing into a liquid due to heating.
freezing	When a liquid becomes cold enough to turn solid, it freezes.
freezing point / melting point	The temperature at which a solid becomes a solid / liquid
boiling point	The temperature at which a liquid turns into a gas.
evaporation	When liquid changes into a gas (e.g. water vapour)
condensation	The process when a gas changes into a liquid, caused by cooling.
water cycle	The never-ending process of water moving from the oceans, up into the atmosphere, and back to the Earth and oceans.
temperature	The measure of how hot or cold something is.

Melting, freezing and boiling	
	<b>Melting</b> is a change of state from solid to liquid. The melting point of water is 0°C.
	<b>Freezing</b> is a change of state from liquid to solid. The freezing point of water is 0°C.
	<b>Boiling</b> is a change of state from liquid to gas. Water boils when it is heated to 100°C.

## Solids, liquids and gases

A <b>solid</b> keeps its shape and has a fixed volume.	
Examples of solids:	
ice	sugar
	
A <b>liquid</b> has a fixed volume but changes in shape to fit the container. It can be poured.	
Examples of liquids:	
water	honey
	
A <b>gas</b> fills all the available space; it has no fixed shape or volume.	
Examples of gases:	
water vapour	bubbles in cola
	

Reversible changes (Can be changed back)	Irreversible changes (Cannot be changed back)
Melting chocolate Freezing water	Baking a cake Burning wood

## Evaporation and condensation



### Evaporating puddles

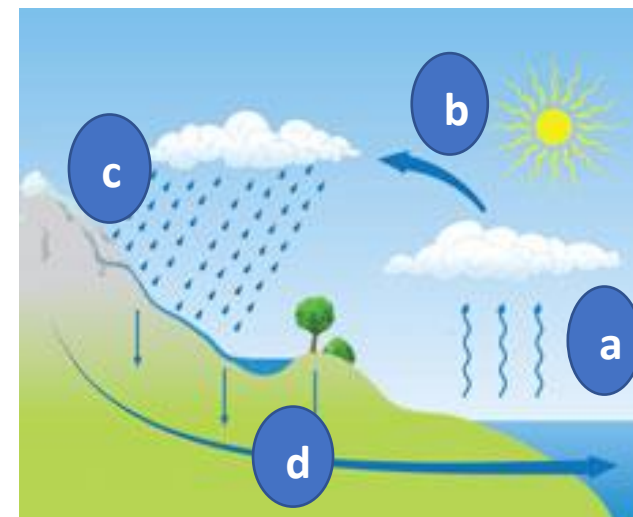
Evaporation is the change from a liquid to a gas at the surface of the liquid.



### Condensation in the bathroom

Condensation is the change from a gas to a liquid, caused by cooling.

## The Water Cycle



a	Water evaporates into the air
b	Water vapour condenses into clouds.
c	Water falls as rain, snow, sleet etc
d	Water returns to the sea and then the cycle starts all over again