

Key knowledge and Diagrams

Know that things are made of particles (tiny building blocks) and that these are organised differently in different states

Know that materials can change state when temperature changes

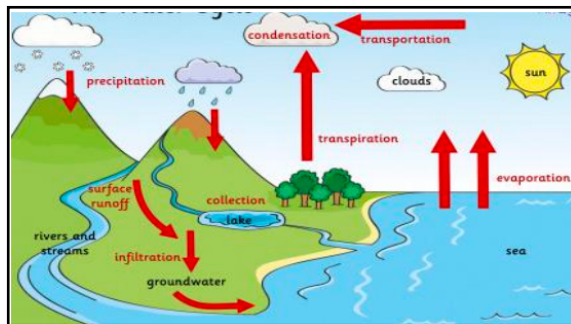
Know that when solids turn into liquids, this is called melting and the reverse process is called freezing

Know that when liquids turn into gases, this is called evaporation and the reverse process is called condensation

Know that when a solid turns into a gas without passing through the liquid state, this is called sublimation

Know that the melting point of water is 0°C and the boiling point 100°C

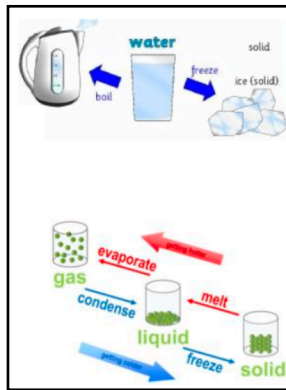
Know that water flows around our world in a continuous process called the water cycle



WATER CYCLE

The water cycle is the journey water takes as it moves from the land to the sky and back again.

It follows a cycle of evaporation, condensation, precipitation and collection/run off.



CHANGING STATE




Some materials change state when they are heated or cooled and some of these changes can be reversed.

Everyday examples of evaporation: washing, drying, water boiling, puddles evaporating on a hot day.

Everyday examples of condensation: water droplets forming inside windows or on a cold glass.

Key Vocabulary

matter	any solid, liquid or gas that exists in the universe
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
temperature	how hot or cold something is, normally measured in degrees Celsius (°C)
evaporation	the process of liquid heating and changing into a gas
condensation	the process of a gas cooling and changing into a liquid
water cycle	the process of water being recycled over and over again
particle	an extremely small unit of matter
changes of state	a material changes from one material type to another, we say 'it has changed state'
freezing	process of a liquid cooling and changing into a solid
melting	the process of a solid heating and changing into a liquid
state	on Earth, all matter exists in one of three different states: solid, liquid or gas

States of matter		
solid	liquid	gas
		
● rigid	● not rigid	● not rigid
● fixed shape	● no fixed shape	● no fixed shape
● fixed volume	● fixed volume	● no fixed volume
cannot be squashed	cannot be squashed	can be squashed
Solid (at room temperature)	Liquid (at room temperature)	Gas (at room temperature)
Wood Iron Copper Plastic	water milk blood oil	oxygen carbon dioxide nitrogen steam

States of matter

