SCIENCE

STATES OF MATTER

YEAR 4

Melting

Evaporation

Condensation

Freezing

The wax melted

as the candle

When water

evaporates, it

becomes water

of steam from

the boiling tea kettle made the

window fog up.

into ice

When water turns

The condensation

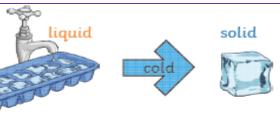
burned.

vapor.

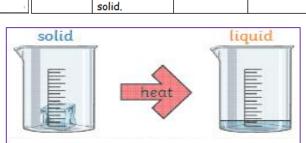
Key Vocabulary					
Word	Definition				
Temperature	How hot or cold something is.				
	Measured in degrees Celsius.				
Celsius	The common scale in the UK for				
	measuring temperature.				
Particle	A tiny amount of something. You				
	can't see them with your eyes!				
Melting	The process of a solid heating				
	and changing into a liquid.				
Evaporation	The process of a liquid heating				
	and changing into a gas.				
Condensation	The process of a gas cooling and				
	changing into a liquid.				
Freezing	The process of a liquid cooling				
	and changing into a solid.				
Precipitation	When water or snow fall from a				
	cloud				
Boiling	To become so hot (100°C) that				
	water bubbles and then turns				
	into a gas.				

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.

	Key Knowledge			Changes of State	
	There are three states of m	atter.		Solid to Liquid	A solid and ch to a lid
	Solid	Liquid	Gas	Liquid to Gas	A liqui evapor into a when h
				Gas to Liquid	When cooled conder into a
	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.	Liquid to Solid	When freeze become 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.



A solid melts

and changes to a liquid.

evaporates into a gas

when heated.

When a gas is

cooled it

condenses

into a liquid.

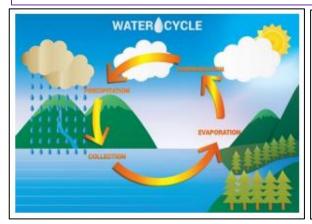
When a liquid

freezes it

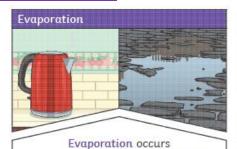
becomes a

A 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.



- Water from lakes, puddles, rivers and seas is evaporated by the sun's heat, turning it into water vapour.
- This water vapour rises, then cools down to form water droplets in clouds (condensation).
- When the droplets get too heavy, they fall back to the earth as rain, sleet, hail or snow (precipitation).



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.



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.