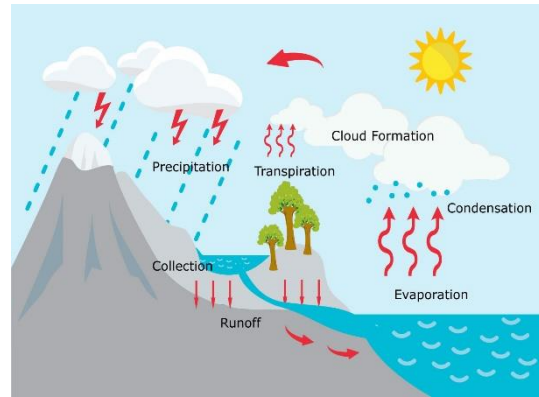


STATES OF MATTER – Knowledge Organiser Year 4 Autumn 1

Vocabulary	
materials	The substances from which all objects are made.
object	A single thing that can be seen or felt.
matter	The 'stuff' that everything in the Universe is made from.
property	The appearance, characteristics and behaviour of a material.
volume	The amount of space an object takes up.
compress	To reduce in size, quantity or volume by pressure.
process	A series of actions or steps.
heating	Increasing the temperature.
cooling	Decreasing the temperature.
melting	The change of state from solid to liquid.
freezing / solidification	The change of state from liquid to solid.
melting point	The temperature at which a solid changes to a liquid.
freezing point	The temperature at which a liquid changes to a solid.
temperature	A measurement of how hot or cold something is.
thermometer	An instrument used to measure temperature.
evaporation	The change of state from liquid to gas.
condensation	The change of state from gas to liquid.
precipitation	When water falls from the clouds as rain, snow, sleet or hail.

The Water Cycle



The water cycle is the continuous journey of water from the land to the sky and back to the land again. This constant movement of water is happening all the time and is vital to supporting life on earth.

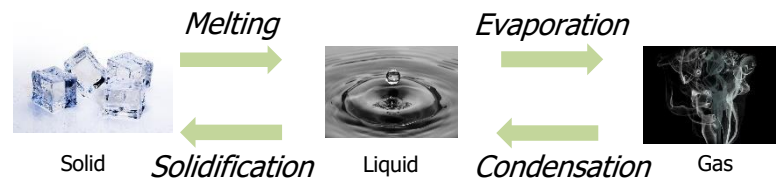
There are four main stages in the water cycle:

**Evaporation** happens when warmth from the sun causes water (liquid) from the sea, lakes and rivers to rise into the air and turn to vapour (gas).

**Condensation** happens when the water vapour cools and turns back into drops of water which form clouds in the sky.

**Precipitation** is when the clouds get too heavy and water falls from the clouds in the form of rain, snow, sleet or hail.

**Run off** happens when the majority of this water runs over the land and flows back into lakes and rivers or gets carried back to the sea.



Properties

Solids, liquids and gases are called the states of matter. The properties of these states are different and can be used to help identify whether a material is a solid, a liquid or a gas.

Property	State of Matter		
	Solid	Liquid	Gas
Shape	Fixed	No fixed shape	No fixed shape
Volume	Fixed	Fixed	No fixed volume
Ability to squash/ compress	Can't be compressed	Can't be compressed	Can be compressed
Ability to pour and flow	Can't be poured and it doesn't flow	Can be poured and it does flow	Can be poured and it does flow

