St Peter's Catholic Primary School

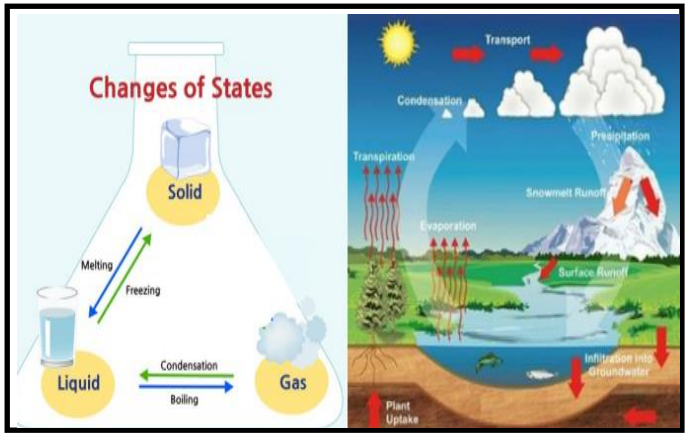
YEAR 4: Science States of Matter

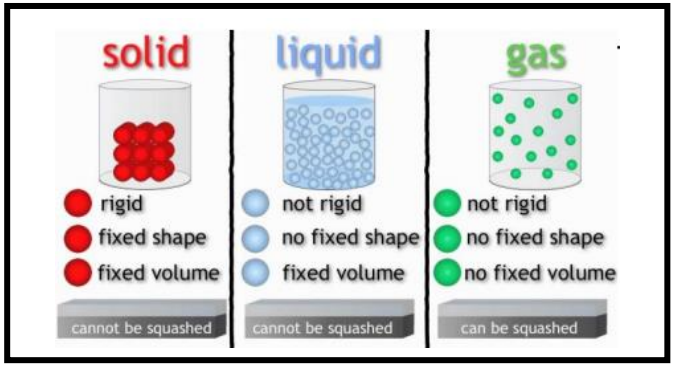
What I should already know:

- That some materials are used for certain purposes because of their properties.

At the end of this topic, I will know:

- How to compare and group materials together, according to whether they are solids, liquids or gases.
- That some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
- The part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.





Key Facts:
A solid keeps its shape and has a fixed volume.
A liquid has a fixed volume but changes in shape to fit the container. A liquid can be poured.
A gas fills all available space; it has no fixed shape or volume.
Melting is a state change from solid to liquid
Freezing is a state change from liquid to solid. The freezing point of water is 0oC.
Boiling is a change of state from liquid to gas that happens when a liquid is heated to a specific temperature and bubbles of the gas can be seen in the liquid. Water boils when it is heated to 100oC.
Evaporation is the same state change as boiling (liquid to gas), but it happens slowly at lower temperatures.
Condensation is the change back from a gas to a liquid caused by cooling.

Vocabulary	
states of matter	Materials can be one of three states: solids, liquids or gases. Some materials can change from one state to another and back again.
solids	These are materials that keep their shape unless a force is applied to them. They can be hard, soft or even squashy. Solids take up the same amount of space no matter what has happened to them.
liquids	Liquids take the shape of their container. They can change shape but do not change the amount of space they take up. They can flow or be poured.
gases	Gases can spread out to completely fill the container or room they are in. They do not have any fixed shape but they do have a mass.
water vapour	This is water that takes the form of a gas. When water is boiled, it evaporates into a water vapour.
melt	This is when a solid changes to a liquid.
freeze	Liquid turns to a solid during the freezing process.
evaporate	Turn a liquid into a gas.
condense	Turn a gas into a liquid.