

### Lesson Sequence



<b>Compare and group the 3 states of matter</b>	Water is one of the most important substances on Earth. Water can be found in three different states: liquid, ice and vapour. When water gets below 0 degrees, it freezes and becomes ice. When it gets above 100 degrees or evaporates and starts to boil, it turns into a gaseous state known as vapour.
<b>Explore how particles behave in solids, liquids and gases</b>	Solids, liquids and gases are three states of matter. In solids, the particles are tightly packed together. In liquids, the particles have more movement, while in gases, they are spread out. Particles in chemistry can be atoms, ions or molecules.
<b>Investigate melting points</b>	The melting point is the temperature at which the solid and liquid forms of a pure substance can exist in equilibrium. As heat is applied to a solid, its temperature will increase until the melting point is reached. More heat then will convert the solid into a liquid with no temperature change.
<b>Explore freezing and boiling points</b>	The boiling point or temperature of water is 100°C and the freezing point or temperature of water is 0°C. This means that water exists in its liquid form in the temperature between 0°C and 100°C. Freezing and boiling points will differ between substances.
<b>Explore evaporation and condensation</b>	Evaporation is the process where water changes from a liquid to a gas or vapour. It is the main source of humidity and can easily be seen through 'disappearing' puddles or boiling water. Condensation is the change of water from its gas form into liquid water and is the reverse of evaporation.
<b>Understand the water cycle</b>	The water cycle is the way in which water moves all around the world. It is the process that permits water to travel from the Earth's surface to the atmosphere and then back down to the ground again. Evaporation is the first step. When this water vapour begins to cool down, it turns into liquid water again. Once this is done, water will then fall from the sky as rain, snow, hail or sleet. This process is known as precipitation and happens a lot in the UK. The process then begins again from the water that has formed in rivers, seas, and lakes.

### Progress Map

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Details including Homes</b>						
Flora						
<b>Using Maps and Text Problems</b>						
<b>Evolution and Extinction</b>						
<b>Seasonal Changes</b>						
Forces			Forces and Magnets		Forces	
Light						
Sound						
<b>Earth and Space</b>						
Electricity						
Materials	Everyday Materials	Use of Secondary Materials	Recycling	States of Matter	Preparation and Change of Materials	

### Working Scientifically



Asking Questions



Making Predictions



Setting Up Tests



Observing and Measuring



Recording Data



Interpreting and Communicating Results



Evaluating



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### What will I know by the end of the unit?

- I know the simple descriptions of the states of matter (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container)
- I can compare and group materials, according to whether they are solids, liquids or gases
- I know that some materials change state when they are heated or cooled and can measure or research the temperature at which this happens in degrees Celsius (°C) – water, metals, materials
- I know water as a solid, a liquid and a gas and how this changes when it is heated or cooled.
- I know the effect of temperature on substances such as chocolate, butter, cream and why this might be important to know.
- I know the part played by evaporation and condensation in the water cycle
- I know that the rate of evaporation is related to temperature.

### Vocabulary

	thermometer	an instrument that measures temperature in degrees Celsius (°C) or Fahrenheit (°F)
	melting point	the point where a solid melts and forms a liquid when heated
	freezing point	the point where a liquid freezes and forms a solid when cooled
	boiling point	the point where a liquid evaporates and forms a gas when heated
	solid	state of matter that holds its form and shape
	liquid	state of matter which flows and forms a pool
	gas	state of matter which flows, can spread out and can be squashed
	evaporation	the process where a liquid turns into a gas when heated
	particles	one very small part of matter
	condensation	the process where a gas forms a liquid when cooled
	water vapour	the name of water as a gas
	substance	the material, or matter, of which something is made