





SCIENCE: YEAR 4 –STATES OF MATTER

Key Vocabulary	
Boiling point	the temperature at which a liquid boils and turns to vapour
Condensation	Changing a gas into a liquid
Evaporation	Changing a liquid into a gas
Freezing point	The temperature at which a substance freezes. The freezing point of water is 0°C
Gas	a substance which will expand freely to fill a whole container and has no fixed shape or volume
Liquid	a substance that flows freely but is of constant volume
Melting point	the temperature at which a given solid will melt
Particles	a tiny amount or small piece
Precipitation	liquid or solid particles that fall from a cloud as rain, sleet, hail or snow.
Solid	A substance that keeps its own shape unless a force is applied to it
Thermometer	An instrument for measuring temperature
Water cycle	the process by which water on the earth evaporates, then condenses in the atmosphere, and then returns to earth in the form of precipitation.

Objectives
<ul style="list-style-type: none"> Compare and group materials together, according to whether they are solids, liquids or gases Observe 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) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Key Information	
<p>Solids</p> 	<p>Stays the same shape Can be held in your hands Can be cut into a new shape</p> <p>Examples - wood, metal, rock, ice</p>
<p>Liquids</p> 	<p>Flows and can be poured Changes shape to its container Volume never changes</p> <p>Examples - water, juice, oil</p>
<p>Gases</p> 	<p>Often invisible Always fills its container Shape & volume change</p> <p>Examples - oxygen, hydrogen, carbon dioxide</p>



Robert Boyle
1627-1691

Boyle discovered that the volume of a gas decreases with increasing pressure and vice versa—the famous Boyle's law

