

Subject: Science

Theme: States of matter (Y4)

Knowledge	Skills	Vocabulary (Top 20)	Common misconceptions
<p>Compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>Understand 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).</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>Classify a variety of objects (leading to classifying these a solids, liquids or gases towards the end of the unit).</p> <p>Observe:</p> <ul style="list-style-type: none"> • Ice melt. • Water evaporate. • Gas escape from an unsealed container. <p>Comparative and fair testing:</p> <ul style="list-style-type: none"> • How does the mass of a block of ice affect how long it takes to melt? • What affects the melting rate of chocolate (size of pieces, temperature of water, type of chocolate)? • Test the viscosity of liquids. <p>Research the temperature at which materials change state.</p> <p>Research the water cycle and present their information in a variety of ways.</p>	<p>freezing heating liquid material melting solid temperature boiling cooled gas condensation degrees Celsius (°C). evaporation matter particle precipitation state viscosity water cycle water vapour</p>	<p>Some children may think:</p> <ul style="list-style-type: none"> • Solids are hard and cannot break or change shape easily and are often in one piece. • Substances made of very small particles like sugar or sand cannot be solids. • When air is pumped into balloons, they become lighter. • Water in different forms – steam, water, ice – are all different substances. • All liquids boil at the same temperature as water (100 degrees.) • Melting is the same as dissolving • The changing states of water (illustrated by the water cycle) are irreversible. • Evaporating or boiling water makes it vanish.



Love



Friendship



Compassion



Community



Trust



Forgiveness

“Let all that you do be done in love.” 1 COR 16:24

Do all the good you can.... John Wesley

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