



TSS Primary Science MTP 2023-2024 Year 4 Block 3 – Chemistry

Key Targets and Learning Objectives		Key Activities	Equipment
<ul style="list-style-type: none"> • Describe the particle model for solids and liquids • Understand the differences between materials, substances and particles • Know that particles are in constant motion, even when in a solid • Use the particle model to explain the properties of solids and liquids • Describe and explain how some solids can behave like liquids (e.g. powders), referring to the particle model • Describe solidification/freezing and melting, using the particle model to describe the change of state • Understand that the change of state of a substance is a physical process • Know that some substances will react with another substance to produce one or more new substances, and this is called a chemical reaction • <i>Use models, including diagrams, to represent and describe scientific phenomena and ideas (WS)</i> 		<p>Lesson 1 – Pre-block test. Demonstrate food dye particles moving through a liquid. Children role play the particle model and then record their own in books.</p> <p>Lesson 2 – Identifying solids, liquids and gases in different objects. Show several materials, which the chn group into the correct category.</p> <p>Lesson 3 – Measure the melting points of different solids and describe the process of changing between states. Measure the speed at which different solids melt and record results in tables.</p> <p>Lesson 4 – Look at the properties of water (boiling point / melting point). Investigate what happens to the melting point when salt is added.</p> <p>Lesson 5 – Investigate the difference between a change of state and chemical change. Children observe a chemical change – bicarbonate soda + vinegar, then they set up a change of state by making their own ice cream through measuring correct quantities.</p> <p>Lesson 6 – Post-block test. Children create an advertisement poster for their ice cream – then they test it!</p> <p>STEAM activity – Which material is best to make a kite? Children test out different materials to see!</p>	<ul style="list-style-type: none"> • Food dye • Plasticine • Various solids (e.g. chocolate, butter, wax etc), liquids (water, orange, milk etc) and gas (balloons, fizzy drink etc) • Salt • Vinegar and soda powder • Measuring equipment (scales etc) • Sticks • Different materials to test kites (plastic, silk, canvas etc) • Large and small food bags • Full fat milk • Vanilla flavouring
Key vocabulary	Going Green Link	Integration of technology	
Compare, solid, liquid, gas, material, particle, substance, property, powder, change of state, states of matter, solidifying, melting, chemical reaction, reversible, irreversible	<ul style="list-style-type: none"> - Link global warming to the melting of the ice caps and the knock-on effect this has to climate change 	<ul style="list-style-type: none"> - iPads for use in research - Recording videos of chemical change to watch in slow-mo 	