



## YEAR 7 SCIENCE 2023-2024

YEAR	MICHAELMAS 1	MICHAELMAS 2	LENT 1	LENT 2	TRINITY 1	TRINITY 2
7	<p><b>Skills in Science</b> In this unit pupils will learn the practical and analytical skills needed for science</p> <p><b>Big Idea: Matter</b> <b>Particle Model</b> In this unit pupils will learn about the particle model, states of matter and properties, changes of state including melting, freezing, boiling and evaporation, diffusion and gas pressure</p>	<p><b>Big Idea: Organisms</b> <b>Movement and Cells</b> In this unit pupils will learn about the levels of organisation in organisms, the structure and function of the skeleton, the role of joints and muscles, plant and animal cells, specialised cells, diffusion of substances in cells and unicellular organisms</p> <p><b>Big Idea: Forces</b> <b>Speed and Gravity</b> In this unit pupils will learn about types of forces, balanced and unbalanced forces and resultant forces. They will also learn about speed, distance time graphs, mass, weight gravity and orbits.</p>	<p><b>Big Idea: Matter</b> <b>Separating Mixtures</b> In this unit pupils will learn about solutions, how they are produced, solubility of solutions and saturated solutions. Pupils will also learn about how to separate solutions using filtration, crystallisation, distillation and chromatography.</p> <p><b>Big Idea: Energy</b> <b>Energy Costs &amp; Transfers</b> In this unit pupils will learn about the different energy stores and how energy can be transferred via different pathways, dissipation of energy and energy efficiency. Pupils will also learn about energy resources, food as a fuel and the ways that energy use can be calculated in homes.</p>	<p><b>Big Idea: Reactions</b> <b>Acids and Alkalis</b> In this unit pupils will learn about how to identify that a chemical reaction has taken place, properties of acids and alkalis, the pH scale, neutralisation and making salts. Pupils will also learn about properties of metals and non-metals, the reactions of metals with oxygen, acids and water, the reactivity series and displacement reactions.</p> <p><b>Big Idea: Ecosystems</b> <b>Interdependence</b> In this unit pupils will learn about food chains, webs and what happens when they are disrupted, ecosystems and competition within the ecosystem. Pupils will also learn about the structure and function of the parts of a flower, pollination, plant fertilisation, germination and seed dispersal.</p>	<p><b>Big Idea: Earth</b> <b>Earth Structure and Universe</b> In this unit pupils will learn about the structure of the earth and the formation of sedimentary, igneous and metamorphic rocks leading on to the rock cycle. Pupils will also learn about the solar system and our place in the universe and the phenomena of day, night, seasons and the phases of the moon.</p>	