



## Curriculum Map- Science

Below is a curriculum map, showing what is taught at each stage of the year.

	Term 1.1	Term 1.2	Term 2.1	Term 2.2	Term 3.1	Term 3.2
<b>Year 7</b>		<b>Introduction to Science</b> <b>The Cell</b> - Cells, organelles and specialisation <b>Energy</b> - Energy stores and transfers <b>Particle Theory</b> - States of matter and changes of state <b>Organisation 1</b> - Tissues, organs and systems	<b>Elements and the Periodic Table</b> - Elements and the properties and arrangement in the periodic table. <b>Forces 1</b> - Contact and non-contact forces. Newtons 1st & 3rd Law <b>Organisation 2</b> - The reproductive system <b>Electricity &amp; Magnetism</b> - Charge, current and circuit diagrams <b>Separating Mixtures</b> - Mixtures and compounds and separating techniques		<b>Interdependence</b> - Feeding relationships, classification and adaptation <b>What is a chemical reaction?</b> - Acids and bases. Types of chemical reactions. Word & symbol equations. <b>Space</b> - The solar system, days, seasons and eclipses	
<b>Year 8</b>		<b>What is a chemical reaction?</b> - Acids and bases. Types of chemical reactions. Word & symbol equations. <i>(*from Y7 due to lockdown)</i> <b>Bioenergetics 1</b> - Respiration in cells <b>The Atom</b> - <i>The structure of the atom and its discovery (already covered during lockdown so not included in Y8 2021-2022)</i> <b>Waves</b> - Properties of waves. Light, colour & sound <b>Transport</b> - How the reactants & products of respiration are transported <b>Particle Theory</b> - States of matter and changes of state	<b>Electronic Structure</b> - Electrons and their arrangement in the atom <b>Organisation 3</b> - Communicable & non-communicable disease <b>Atoms and bonding</b> - How atoms form bonds <b>Electricity1</b> - Current, series and parallel circuits <i>(*extended unit due to reduced coverage of Y7 electricity during lockdown)</i>		<b>Biodiversity</b> - Biodiversity and its importance in ecosystems <b>Energy changes and rate of reaction</b> - Energy needed to break and form bonds <b>Forces2</b> - Resultant forces, motion and acceleration	
<b>Year 9</b>		<b>Genetics</b> - Inheritance, selective breeding and natural selection <b>Reactivity Series</b> - Reactivity of metals and its applications	<b>Electricity2 &amp; 3</b> - Voltage and electricity generation. Resistance and comparing sources of energy <b>Quantitative Chemistry</b> - Conservation of mass and calculating masses in reactions		<b>Atomic structure &amp; the periodic table</b> -The development of the periodic table and evidence for the nuclear model of the atom. Properties of group 1, 7 & 0 elements.	

	<p><b>Forces3</b> - Newton's 2nd Law, Pressure, Moments and Hooke's Law</p> <p><b>Photosynthesis</b> - Plants and photosynthesis</p> <p><b>Bonding- Structure and Properties</b> - How properties of substances relates to their bonding.</p> <p><b>Electricity2</b> - Voltage and electricity generation</p>		<p><b>Cosmology</b> - The life cycle of stars, The Big Bang and Red-Shift</p> <p><b>Begin preparing for KS4</b></p> <p><b>Cell Biology-</b> Microscopy, cell differentiation, division and transport</p>		<p><b>Energy</b> - Energy stores, systems, transfers and resources</p>	
<b>Year 10</b>	<p><b>Atomic structure &amp; the periodic table</b>-The development of the periodic table and evidence for the nuclear model of the atom. Properties of group 1,7 &amp; 0 elements.</p> <p><b>Organisation</b> - Digestive system &amp; enzymes, disease and cancer</p>	<p><b>Bonding, structure &amp; properties of matter</b> - Chemical bonding and properties of different materials</p> <p><b>Electricity</b> - Charge, current, resistance, potential difference and domestic electricity supply</p>	<p><b>Infection &amp; response</b> - Pathogens, immunity and drug development</p> <p><b>Quantitative chemistry</b> - Chemical measurements, moles and concentrations</p>	<p><b>Energy changes</b> - Reaction profiles and bond energies</p> <p><b>Bioenergetics</b> - Factors affecting photosynthesis and respiration</p>	<p><b>Particle model of matter</b> - Changes of state, specific heat capacity and specific latent heat</p> <p><b>Chemical changes</b> - The reactivity series and electrolysis and neutralisation reactions</p>	<p><b>Atomic structure</b> - Nuclear radiation and radioactive decay</p>
<b>Year 11</b>	<p><b>Chemical changes</b> - The reactivity series and electrolysis and neutralisation reactions</p> <p><b>Energy changes</b> - Reaction profiles and bond energies</p> <p><b>Homeostasis &amp; response</b> - Nervous and hormonal control</p>	<p><b>The rate &amp; extent of chemical change</b> - Collision theory, catalysts and reversible reactions</p> <p><b>Forces</b> - Calculating resultant forces and acceleration. Momentum</p>	<p><b>Inheritance, variation &amp; evolution</b> - Inheritance, genetic engineering &amp;</p> <p><b>Organic chemistry</b> - Petrochemicals and their properties</p> <p><b>Chemical analysis</b> - Purity, formulations, chromatography and gas tests</p>	<p><b>Waves</b> - Properties of waves, the electromagnetic spectrum and its applications</p> <p><b>Ecology</b> - Biodiversity, interdependence and human impact</p>	<p><b>Chemistry of the atmosphere</b> - The changing atmosphere, greenhouse effect and atmospheric pollutants</p> <p><b>Using resources</b> - Sustainable development, water treatment and life cycle assessments</p> <p><b>Magnetism &amp; Electromagnetism</b> - Magnetic fields and the motor effect</p> <p><b>*Space</b> - The Solar System, Stars, The Big Bang (Triple Science Only)</p>	<p><b>Revision and preparation for exams.</b></p>