

Year 8 Sciences Curriculum Map

Subject/Term	Term 1 Knowledge	Term 2 Knowledge	Term 3 Knowledge	Term 4 Knowledge	Term 5 Knowledge	Term 6 Knowledge
Science Rotation of 5 <i>Skills: Scientific thinking; Experimental skills; Analysis and evaluation; Scientific vocabulary</i>	Digestion The periodic table Light	Breathing and Respiration Elements Heating and cooling	Inheritance Types of chemical Reaction Magnets and electromagnets	Photosynthesis Energy changes in Reactions Levers and pressure	Evolution Earth's Structure	
Geography 5 units covered <i>Skills: Knowledge; Understanding; Enquiry</i>	G1 Population - Growth; Impacts; The Future	G2 Coasts – Processes; Landforms; Management	G3 International Development – Indicators; Case Studies; Causes	G4 Weather and Climate Change – Causes; Measuring; Characteristics	G5 Asia and China – Countries; Physical; Human	
Maths <i>Skills: Number Place Value & Four Operations; Number FDP & Ratio; Measurement & Units; Geometry, Angles & Shapes; Statistics; Problem Solving & Investigations</i>	Number 1: <ul style="list-style-type: none"> Rounding to significant figures Bounds of errors Laws of indices Standard form Simplifying surds Algebra 1: <ul style="list-style-type: none"> Developing algebraic skills Working with terms and expressions Expanding double brackets Expanding triple brackets Factorising quadratic expressions Geometry & Data 1: <ul style="list-style-type: none"> Area and perimeter of compound shapes Area and circumference of circles Volume of prisms, pyramids & spheres Surface area of prisms Pythagoras 		Number 2: <ul style="list-style-type: none"> LCM and HCF using prime factors Use of venn diagrams Developing percentages skills Simple and compound interest Reverse percentages Algebra 2: <ul style="list-style-type: none"> Developing skills with algebraic equations Solving equations with fractions Forming and solving equations Rearranging formulae Simultaneous equations Geometry & Data 2: <ul style="list-style-type: none"> Probability scales and language Probability of a single event Listing outcomes Expectation Tree diagrams and venn diagrams 		Number 3: <ul style="list-style-type: none"> Recurring decimal conversions Developing ratio skills Exchange rate calculations Proportion, including graphically Direct proportion, including algebraically Algebra 3: <ul style="list-style-type: none"> Straight lines in four quadrants Plotting linear graphs Gradient and y-intercept Equation of a straight line Plotting quadratic graphs Geometry & Data 3: <ul style="list-style-type: none"> Developing angles skills Bearings using angle facts Angles in polygons, interior and exterior Right-angled trigonometry Similarity and congruence 	
Computing	HTML - Students will learn how to use and	Python - Students will learn how to solve a	MicroBit - Students will extend learning of	Networks - Students will learn the hardware and	Project - Students will study several key	Cryptography - Students will learn a

<p><i>Skills: Computational Thinking; Problem Solving; Analysis, Evaluation and Implementation; Technical Vocabulary</i></p>	<p>combine multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users. They will create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability.</p>	<p>variety of computational problems; make appropriate use of data structures; design and develop modular programs that use procedures and functions. They will understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem.</p>	<p>MicroBit programming from year 7 to include knowledge of physical programming and the ways in which we can use a microcontroller in interact with the physical world.</p>	<p>software components that make up computer systems, and how they communicate with one another and with other systems. They will learn a range of ways to use technology safely, respectfully, responsibly and securely.</p>	<p>algorithms that reflect computational thinking (for example, ones for sorting and searching); use logical reasoning to compare the utility of alternative algorithms for the same problem.</p>	<p>range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns.</p>
<p>PE Rotation of 5 units <i>Skills: Demonstrate; Analyse; Apply; Evaluate</i></p>	<p>Outwitting opponents: passing Defence / intercepting Attacking / shooting Basic rules of the game Movement</p>	<p>Racket sports: variety of shots Movement across court Rallying Basic rules of the game</p>	<p>Athletics: short distance / middle distance Jumps Throws How to measure and time</p>	<p>Striking and fielding: throwing and catching Fielding Basic rules of the game Hitting Bowling</p>	<p>Creative movement / fitness: choreography Routines Sequences Components of fitness Healthy lifestyles</p>	
<p>DTA Rotation of 5 units <i>Skills: Investigation; Analyse; Generate Ideas; Make; Evaluate</i></p>	<p>DT: Multi-Materials Materials and working properties, CAD/CAM and iterative design (design decisions)</p>	<p>DT: Graphic Products Material classifications and working properties, papers and boards, CAD and iterative design.</p>	<p>DT: Textiles Materials and working properties and iterative design. User needs and functionality. Health & Safety.</p>	<p>Art & Design Formal elements and artist analysis.</p>	<p>Food & Nutrition Health & Safety, introduction to the food room. Eatwell guide, 8 healthy eating tips, nutrients and food groups.</p>	