

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; Magnets and electromagnets	Evolution; Types of chemical reaction; Levers and Pressure	Natural Selection; Energy change in reactions; Friction and Energy Transfers	Projects	
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 9 units covered <i>Skills: Number Place Value & Four Operations; Number FDP & Ratio; Measurement & Units; Geometry, Angles & Shapes; Statistics; Problem Solving & Investigations</i>	Number 1: - Rounding to significant figures - Bounds of errors - Laws of indices - Standard form - Simplifying surds Algebra 1: - Developing algebraic skills - Working with terms and expressions - Expanding double brackets - Expanding triple brackets - Factorising quadratic expressions Geometry & Data 1: - Area and perimeter of compound shapes - Area and circumference of circles - Volume of prisms, pyramids & spheres - Surface area of prisms - Pythagoras		Number 2: - LCM and HCF using prime factors - Use of venn diagrams - Developing percentages skills - Simple and compound interest - Reverse percentages Algebra 2: - Developing skills with algebraic equations - Solving equations with fractions - Forming and solving equations - Rearranging formulae - Simultaneous equations Geometry & Data 2: - Probability scales and language - Probability of a single event - Listing outcomes - Expectation - Tree diagrams and venn diagrams		Number 3: - Recurring decimal conversions - Developing ratio skills - Exchange rate calculations - Proportion, including graphically - Direct proportion, including algebraically Algebra 3: - Straight lines in four quadrants - Plotting linear graphs - Gradient and y-intercept - Equation of a straight line - Plotting quadratic graphs Geometry & Data 3: - Developing angles skills - Bearings using angle facts - Angles in polygons, interior and exterior - Right-angled trigonometry - Similarity and congruence	

PE 4 units covered <i>Skills include:</i> <i>Communication;</i> <i>Resilience;</i> <i>Embracing failure;</i> <i>Leadership;</i> <i>Perseverance;</i> <i>Responsibility;</i> <i>Asking questions;</i> <i>Conflict resolution</i>	Tactics and strategies Team Challenges - House sport Team Sports - Netball, football, hockey, handball, rugby, etc.		Technique and performance Athletics Trampolining Gymnastics Fitness		Motor Competence Dance Trampolining Striking and fielding		OAA House Sport Team building activities OAA – Orienteering
Computing 6 topics covered <i>Skills:</i> <i>Computational Thinking;</i> <i>Problem Solving;</i> <i>Analysis,</i> <i>Evaluation and Implementation;</i> <i>Technical Vocabulary;</i> <i>Digital Literacy & Communication</i>	Topic 1: Cybersecurity & Ethics Students explore common cybersecurity threats including malware, phishing and social engineering and learn how these threats exploit both technical weaknesses and human behaviour. They investigate passwords, encryption, data protection and privacy alongside the ethical issues surrounding responsible technology use.	Topic 2: Spreadsheets & Data Analysis Students learn how spreadsheets can organise, manipulate and analyse data. They explore formulas including SUM, AVERAGE, MIN and MAX, alongside sorting, filtering, conditional formatting and charts. Students also learn how functions such as IF and COUNTIF can be used to analyse larger datasets.	Topic 3: Algorithms Students learn how algorithms are designed to solve problems and process information efficiently. They explore linear and binary search, sorting algorithms and the importance of efficiency, using tracing and comparison to investigate how different algorithms operate.	Topic 4: Data & Databases Students learn how organisations collect, store and manage structured data. They explore fields, records and data types, validation, searching, sorting and queries, developing practical skills in creating and maintaining databases.	Topic 5: Text-Based Programming (Python) Students build on visual programming by learning to create programs using Python. They explore variables, input and output, selection and iteration, while developing an understanding of program structure, syntax and debugging.	Topic 6: Websites (HTML) Students learn how websites are created using HTML. They explore webpage structure and common HTML elements including text, images and hyperlinks, alongside navigation, usability, accessibility and testing	
DTA Rotation of 5 units <i>Skills:</i> <i>Investigation;</i> <i>Analyse;</i> <i>Generate Ideas;</i> <i>Make; Evaluate</i>	DT – Material Workshop - Timber, manufacturing processes and production, technical drawings and quality control.	DT – CAD/Graphics - Ergonomics and emerging technologies. Design decisions and purpose/User needs	DT – Textiles - Developing sewing and machine skills. Decorating processes and materials analysis of SMART/NEW materials. User needs. Revision of Health & Safety.	Art & Design - Formal elements, colour, pattern and form. Annotated sketches and analysis	Food & Nutrition - Macronutrients, micronutrients, nutritional analysis.		