

## Year 7 Sciences Curriculum Map

| Subject/Term                                                                                                                                                                                                                        | Term 1 Knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Term 2 Knowledge                                      | Term 3 Knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Term 4 Knowledge                                               | Term 5 Knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Term 6 Knowledge |
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| <b>Science</b><br><b>Rotation of 5</b><br><i>Skills: Scientific thinking; Experimental skills; Analysis and evaluation; Scientific vocabulary</i>                                                                                   | Cells; Particle model; Forces                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Human reproduction; Separating mixtures; Energy costs | Variation; Acids and alkalis; Electricity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Interdependence; Metals & non-metals; Friction & energy stores | Rocks; Space                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |
| <b>Geography</b><br><b>5 units covered</b><br><i>Skills: Knowledge; Understanding; Enquiry</i>                                                                                                                                      | G1 It's your planet - Origins; Life; Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | G2 Maps and The UK – Skills; Physical; Human          | G3 Glaciers – Processes; Landscapes; Landforms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | G4 Africa – Countries; Physical; Human                         | G5 Rivers and Floods – Processes; Landscapes; Landforms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |
| <b>Maths</b><br><b>9 units covered</b><br><i>Skills: Number Place Value &amp; Four Operations; Number FDP &amp; Ratio; Measurement &amp; Units; Geometry, Angles &amp; Shapes; Statistics; Problem Solving &amp; Investigations</i> | Number 1: <ul style="list-style-type: none"> <li>Ordering integers and decimals</li> <li>Working with negative numbers</li> <li>Four operations, including decimals</li> <li>Rounding to decimal places</li> <li>Working with fractions</li> </ul> Algebra 1: <ul style="list-style-type: none"> <li>Algebraic notation</li> <li>Collecting like terms</li> <li>Multiply &amp; divide expressions</li> <li>Substitution</li> <li>Expanding brackets</li> </ul> Geometry & Data 1: <ul style="list-style-type: none"> <li>Properties of 2D and 3D shapes</li> <li>Perimeter of shapes</li> <li>Area of shapes (including circles)</li> <li>Volume of prisms</li> <li>Pythagoras introduction</li> </ul> |                                                       | Number 2: <ul style="list-style-type: none"> <li>Properties of Number</li> <li>Products of Prime Numbers</li> <li>Percentage of an amount</li> <li>Percentage increase and decrease</li> <li>Writing numbers as percentages</li> </ul> Algebra 2: <ul style="list-style-type: none"> <li>Writing expressions</li> <li>Factorising</li> <li>Solve equations (two step and brackets)</li> <li>Solve equations (unknown on both sides)</li> <li>Forming and solving equations</li> </ul> Geometry & Data 2: <ul style="list-style-type: none"> <li>Two-way tables</li> <li>Pie charts</li> <li>Scatter graphs</li> <li>Averages and range</li> <li>Mean and mode from a table</li> </ul> |                                                                | Number 3: <ul style="list-style-type: none"> <li>Fraction, decimal &amp; percentage conversion</li> <li>Ordering FDP</li> <li>Ratio notation</li> <li>Sharing in a given ratio</li> <li>Proportion and unitary method</li> </ul> Algebra 3: <ul style="list-style-type: none"> <li>Working with sequences</li> <li>Finding nth term for linear sequences</li> <li>Inequality notation</li> <li>Solve inequalities (including negatives)</li> <li>Solve inequalities (unknown on both sides)</li> </ul> Geometry & Data 3: <ul style="list-style-type: none"> <li>Angle terminology</li> <li>Scale drawings and constructions</li> <li>Angles in parallel lines</li> <li>Angles in polygons</li> <li>Bearings</li> </ul> |                  |

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| <b>Computing</b><br><b>6 units covered</b><br><i>Skills:</i><br><i>Computational Thinking;</i><br><i>Problem Solving;</i><br><i>Analysis,</i><br><i>Evaluation and Implementation;</i><br><i>Technical Vocabulary</i> | Welcome to Computing<br>Students will study a range of ways to use technology whilst ensuring they do so safely, respectfully, responsibly and securely.<br>Digital Identity, protection of online identity and assets and privacy are covered as is how to recognise inappropriate content, contact and conduct and how to react (including reporting concerns).<br>How to use basic office applications and produce original content is also covered. | Introduction to Programming<br>Students will learn how to undertake a creative project involves design, planning, implementation and testing.<br>Students will first examine and recognise their audience and then create an appropriate solution in code before testing and fixing any issues.<br>The solution is then evaluated against their initial success criteria and opportunities for improvement are visited to improve the end product for the target audience. | Programming with Text<br>Students will learn how to use a text based programming language to create solutions to a variety of problems.<br>As part of this students will learn how to make appropriate use of types, data structures, iteration and develop modular programs that use procedures and functions to create effective code. | Digital Systems<br>Students will study the hardware and software components that make up computer systems and how they communicate with one another and with other systems.<br>Students will learn how to represent numbers and text using Binary and hexadecimal, the need to do this and how this is achieved and used in the real world.<br>Students will know about storage and data sizing and how the impacts and importance of these have changed over time. | Data Handling<br>Students will learn how to design, use and evaluate data using computer based systems, how to design collection mechanisms, collect data and produce meaningful and easy to read output.<br>Privacy, purpose and intent of data collection is covered alongside weighing this against privacy and legality. | Networks and Communications<br>Students will study how computer systems communicate and how this data is transferred in a secure fashion.<br>Students will cover the key concepts of data encryption and why this is required before creating and implementing encryption systems both on and offline. |
| <b>PE</b><br><b>5 units covered</b><br><i>Skills include:</i><br><i>Teamwork;</i><br><i>Communication;</i><br><i>Listening;</i><br><i>Motivation;</i><br><i>Determination;</i><br><i>Confidence</i>                   | Social Belonging<br><br>Team Challenges<br>Team Sports<br>Fitness Challenge<br>Orienteering                                                                                                                                                                                                                                                                                                                                                             | Motivation<br><br>Rugby<br>Trampolining (PE2)<br>Gymnastics (PE3)<br>Rounders (PE1)<br>Tennis (PE2)<br>Softball (PE3)                                                                                                                                                                                                                                                                                                                                                      | Motor Competence<br><br>Basketball (PE1)<br>Gymnastics (PE2)<br>Handball (PE3)<br>Athletics (PE1)<br>Athletics (PE2)<br>Athletics (PE3)                                                                                                                                                                                                  | The Value of PE<br><br>Trampolining (PE1)<br>HRF (PE2)<br>Rugby (PE3)<br>Tennis (PE1)<br>Rounders (PE2)<br>Cricket (PE3)                                                                                                                                                                                                                                                                                                                                            | Confidence<br><br>Football (PE1)<br>Netball (PE2)<br>Football (PE3)<br>Gymnastics (PE1)<br>Football (PE2)<br>Trampolining (PE3)                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        |
| <b>DTA</b><br><b>Rotation of 5 units</b><br><i>Skills:</i><br><i>Investigation;</i><br><i>Analyse;</i><br><i>Generate Ideas;</i><br><i>Make; Evaluate</i>                                                             | DT – Multi-Materials - Materials and working properties, iterative design (design decisions).                                                                                                                                                                                                                                                                                                                                                           | DT – Graphic Products - Material classifications and working properties, papers and boards, CAD and iterative design.                                                                                                                                                                                                                                                                                                                                                      | DT – Textiles - Materials and working properties and iterative design. User needs and functionality. Health & Safety.                                                                                                                                                                                                                    | Art & Design - Formal elements and artist analysis.                                                                                                                                                                                                                                                                                                                                                                                                                 | Food & Nutrition - Health & Safety, introduction to the food room. Eatwell guide, 8 healthy eating tips, nutrients and food groups.                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                        |