

| Autumn Term 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Autumn Term 2                                                                                                                                                                                                                                                                                                                    | Spring Term 1                                                                                                                                                                                                                                                                                                                                                                                                                                                | Spring Term 2                                                                                                                                                                                                                                                                                                                                                                                    | Summer Term 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Summer Term 2                                                                                                                                                                                                                                                       |
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| <p><b>Interdependence and Variation</b> (Biology) – ecosystems, food chains, adaptation and variation.</p> <p><b>Solids, Liquids and Gases:</b> Students explore the properties and behaviour of solids, liquids, and gases using the particle model, including changes of state and gas pressure.</p> <p><b>Forces:</b> Students explore how forces act between objects, including contact and non-contact forces, and investigate their effects using measurements, diagrams, and calculations.</p> | <p><b>Systems to Cells</b> (Biology) – organs, organ systems and the structure of plant and animal cells.</p> <p><b>Solutions:</b> Students investigate pure substances, mixtures, and diffusion, while developing practical skills in making predictions, carrying out investigations, and recording accurate observations.</p> | <p><b>Solar System:</b> Students explore the Solar System, gravity, day and night, the seasons, and how our understanding of Earth's place in space has developed over time.</p> <p><b>Reproduction</b> (Biology) – human reproductive systems, fertilisation, development and plant reproduction.</p>                                                                                                                                                       | <p><b>Sound, Light and Vision:</b> Students investigate the properties of sound and light, including waves, reflection, colour, vision, and how sound and light travel.</p> <p><b>Separation of Mixtures:</b> Students investigate methods of separating mixtures, including filtration, evaporation, distillation, and chromatography, while developing practical and investigative skills.</p> | <p><b>Diffusion:</b> Students investigate how substances move into and between cells by diffusion while developing practical and investigative skills.</p> <p><b>Heating and Cooling:</b> Students explore how energy is transferred by conduction and radiation, the role of insulation, and how particle behaviour explains heating and cooling.</p> <p><b>Healthy Eating and Digestion:</b> Students explore the components of a balanced diet, food tests, and how the digestive system breaks down and absorbs nutrients.</p>                                                                                                                                                                                         | <p><b>Climate change and living sustainably:</b> This unit introduces the greenhouse effect, global warming and the impact of climate change on weather events. It explores some actions that can be taken to use resources, and to live, in a sustainable way.</p> |
| Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                  | Key Concepts/ Skills                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                  | Reading                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| <p>Teachers regularly mark students' work and provide feedback to help students reflect on their learning and make improvements. Assessment focuses on applying knowledge, using scientific vocabulary accurately, and explaining scientific ideas clearly.</p>                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                  | <p>Throughout the year students develop important scientific skills, including:</p> <ul style="list-style-type: none"> <li>Working scientifically and planning investigations</li> <li>Making observations and recording results</li> <li>Analysing data and drawing conclusions</li> <li>Interpreting graphs and scientific diagrams</li> <li>Using scientific vocabulary accurately</li> <li>Applying knowledge to explain real-world phenomena</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                  | <p>Students develop their scientific literacy through reading scientific texts, case studies, and explanations of real-world scientific discoveries. Students practise interpreting diagrams, graphs, and written information to build confidence in reading scientific material.</p> <p>Students are taught the BUG strategy to help them approach exam questions effectively:</p> <ul style="list-style-type: none"> <li>B – Box the command word</li> <li>U – Underline key information in the question</li> <li>G – Glance back at the question to check that the answer fully addresses what has been asked</li> </ul> <p>This supports students in developing strong exam technique and clear written responses.</p> |                                                                                                                                                                                                                                                                     |
| Enrichment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                  | Careers                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                  | Useful resources and revision                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                     |
| <p>Students have opportunities to take part in enrichment activities such as:</p> <ul style="list-style-type: none"> <li>Science Club</li> <li>British Science Week activities</li> <li>STEM challenges and competitions</li> <li>Practical investigations and demonstrations</li> </ul>                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                  | <p>Throughout the curriculum, students are introduced to careers that use science, including:</p> <ul style="list-style-type: none"> <li>Medicine and healthcare</li> <li>Engineering and technology</li> <li>Environmental science</li> <li>Research and laboratory science</li> </ul>                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                  | <p>Students can support their learning using:</p> <ul style="list-style-type: none"> <li>Knowledge organisers and revision materials</li> <li>Teacher resources and recommended websites</li> <li>Educational science videos and reading materials</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                     |

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|  | These links help students understand how science connects to real-world careers and future opportunities. |  |
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