

## Science skills progression map for Spring term

| KS1<br>Programme of Study   | Working scientifically  | Scientific enquiry types:  | Scientific knowledge and understanding:   |
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| Year 1<br>Seasonal Changes  | <ul style="list-style-type: none"> <li>• Asking simple questions and recognising that they can be answered in different ways.</li> <li>• Observing closely, using simple equipment.</li> <li>• Performing simple tests.</li> <li>• Identifying and classifying.</li> <li>• Using their observations and ideas to suggest answers to questions.</li> <li>• Gathering and recording data to help in answering questions.</li> </ul> | Comparative and fair testing.<br><br>Observing over time.<br><br>Pattern seeking.<br><br>Identifying, classifying & grouping.<br><br>Research using secondary sources. | Observe changes across the four seasons.<br>Observe and describe weather associated with the seasons and how day length varies  |
| Year 2<br>Living things and their habitats<br><br>(Spring Term 1 and 2) | Observing closely, gathering and recording data to help in answering questions.<br>Using observations and ideas to suggest answers to questions.<br>Asking simple questions and recognising that they can be answered in different ways.  | Grouping and classifying.<br>Noticing patterns.<br>Finding things out using secondary sources of information.  | Explore and compare the differences between things that are living, dead, and things that have never been alive.<br>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.<br>Identify and name a variety of plants and animals in their habitats, including microhabitats.<br>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.<br>Observe and describe how seeds and bulbs grow into mature plants.<br>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. |

| LKS2<br>Programme<br>of Study     | Working scientifically   | Scientific enquiry types:  | Scientific knowledge and understanding:  |
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|                                   | <ul style="list-style-type: none"> <li>Asking relevant questions and using different types of scientific enquiries to answer them.</li> <li>Setting up simple practical enquiries, comparative and fair tests.</li> <li>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</li> <li>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</li> <li>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</li> <li>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> <li>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>Identifying differences, similarities or changes related to simple scientific ideas and processes.</li> <li>Using straightforward scientific evidence to answer questions or to support their findings.</li> </ul> | <p>Comparative and fair testing.</p> <p>Observing over time.</p> <p>Pattern seeking.</p> <p>Identifying, classifying &amp; grouping.</p> <p>Research using secondary sources.</p>  |  |
| <b>Year 3</b><br><br><b>Rocks</b> | <p>Record findings using simple scientific language and drawings. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions; asking relevant questions and using different types of scientific enquiries to answer them.</p> <p>Using straightforward scientific evidence to answer questions, or to support their findings; setting up simple practical enquiries, comparative and fair tests.</p> <p>Identifying differences, similarities, or changes related to simple scientific ideas and processes.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results.</p>  | <p>Grouping and classifying.</p> <p>Carrying out simple comparative and fair tests.</p> <p>Observing change over time.</p> <p>Using secondary sources.</p> <p>Finding things out using secondary sources of information.</p> | <p>Compare and group together different kinds of rocks based on their appearance and simple physical properties.</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p> |

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| <p><b>Year 4</b></p> <p><b>Electricity</b></p> | <p>Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Setting up simple practical enquiries and recording, classifying and presenting data in a variety of ways to help answer questions.</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p> | <p>Grouping and classifying.</p> <p>Exploration.</p> | <p>Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p> |
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| UKS2<br>Programme<br>of Study               | Working scientifically   | Scientific enquiry types:   | Scientific knowledge and understanding:   |
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|   | <ul style="list-style-type: none"> <li>• Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> <li>• Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</li> <li>• Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</li> <li>• Using test results to make predictions to set up further comparative and fair tests.</li> <li>• Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> <li>• Identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul> | <p>Comparative and fair testing.</p> <p>Observing over time.</p> <p>Pattern seeking.</p> <p>Identifying, classifying &amp; grouping.</p> <p>Research using secondary sources.</p> |   |
| <b>Year 5</b><br><br><b>Earth and Space</b> | <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>   | <p>Observing changes over different periods.</p> <p>Finding things out using secondary sources of information.</p> <p>Noticing patterns.</p>                                      | <p>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</p> <p>Describe the movement of the Moon relative to the Earth.</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p> |

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|                                     | Using test results to make predictions to set up further comparative and fair test.  |  |  |
| <b>Year 6</b><br><b>Electricity</b> | <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p> | <p>Carrying out simple comparative and fair tests.</p> <p>Finding things out using secondary sources of information.</p> | <p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</p> <p>Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.</p> <p>Use recognised symbols when representing a simple circuit in a diagram</p> |