



# Sheldwich Primary School – EYFS, Key Stage 1 and 2 – Science Progression Map – SKILLS



|                                    | Pre School                                                                                                             | Class R                                                                                               | Class 1                                                                                                                                                                                                                                                                                                                                | Class 2                                                                                                                                                                                                                                                                                                         | Class 3                                                                                                                                                                                                                                                                                                                                   | Class 4                                                                                                                                                                                                                                                                                                                 | Class 5                                                                                                                                                                                                                                                                                                                                                                                             | Class 6                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Asking Scientific Questions</b> | Comment and ask questions about aspects of their familiar world such as the place where they live or the natural world | Explore the world around them, leading them to ask some simple scientific questions about how and why | Ask simple questions and recognise that they can be answered in different ways                                                                                                                                                                                                                                                         | Ask simple questions and recognise that they can be answered in different ways                                                                                                                                                                                                                                  | Begin to ask relevant questions and use different types of scientific enquiries to answer them                                                                                                                                                                                                                                            | Ask relevant questions and use different types of scientific enquiries to answer them                                                                                                                                                                                                                                   | Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary                                                                                                                                                                                                                                                                   | Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary with increasing confidence                                                                                                                                                                                                                               |
|                                    | Understand ‘why’ questions, like “Why do you think the caterpillar got so fat?”                                        | Ask questions to find out more and to check what has been said to them.                               | Perform simple tests with support<br><br>Explore the world around them, leading them to ask some simple scientific questions about how and why things happen<br><br>Begin to recognise ways in which they might answer scientific questions<br><br>Ask people questions and use simple secondary sources to find answers, with support | Perform simple tests<br><br>Explore the world around them, leading them to ask some simple scientific questions about how and why things happen<br><br>Recognise and suggest ways in which they might answer scientific questions<br><br>Ask people questions and use simple secondary sources to find answers. | Begin to set up simple practical enquiries, comparative and fair tests<br><br>Start to raise their own relevant questions about the world around them in response to a range of scientific experiences<br><br>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions. | Set up simple practical enquiries, comparative and fair tests<br><br>Raise their own relevant questions about the world around them in response to a range of scientific experiences<br><br>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions. | Begin to use test results to make predictions to set up further comparative and fair tests<br><br>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences<br><br>With increasing independence, make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions | Use test results to make predictions to set up further comparative and fair tests<br><br>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences<br><br>With increasing independence, make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions |

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| <b>Carry out fair testing</b> |  | Say what they think will happen<br><br>Talk about what they can see and changes<br><br>Play with scientific equipment. | Carry out simple practical tests, using simple equipment, with support<br><br>Experience different types of scientific enquiries, including practical activities<br><br>With support, talk about the aim of scientific tests they are working on<br><br>With support, start to recognise a fair test. | Carry out simple practical tests, using simple equipment<br><br>Experience different types of scientific enquiries, including practical activities<br><br>Talk about the aim of scientific tests they are working on<br><br>Begin to recognise a fair test | Begin to recognise when a fair test is necessary<br><br>Help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used<br><br>With some support, set up and carry out simple comparative and fair tests. | Recognise when a fair test is necessary<br><br>Help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used, with increasing confidence<br><br>Set up and carry out simple comparative and fair tests. | Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br><br>Make their own decisions about what observations to make, what measurements to use and how long to make them for, and whether to repeat them<br><br>Plan, set up and carry out comparative and fair tests to answer questions, including recognising and controlling variables where necessary<br><br>Use their test results to identify when further tests and | Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br><br>Make their own decisions about what observations to make, what measurements to use and how long to make them for, and whether to repeat them<br><br>Plan, set up and carry out comparative and fair tests to answer questions, including recognising and controlling variables where necessary<br><br>Use their test results to identify when further tests and |

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| <b>Observing and measuring changes</b>                         | <p>Talk about some of the things they have observed such as plants, animals, natural and found objects</p> <p>Show care and concern for living things and the environment</p> <p>Use all their senses in hands-on exploration of natural materials</p> | <p>Draw pictures of things they see</p> <p>Talk about what they can see</p> <p>Begin to make marks to collect data</p> <p>Make observations about animals and plants</p> <p>Explore the natural world around them</p> <p>Describe what they see, hear and feel while they are outside</p> | <p>Observe closely, using simple equipment, with support</p> <p>Observe the natural and humanly constructed world around them</p> <p>Observe changes over time</p> <p>Use simple measurements when appropriate</p> | <p>Observe closely, using simple equipment</p> <p>Observe the natural and humanly constructed world around them</p> <p>Observe changes over time</p> <p>Use simple measurements</p> | <p>Begin to make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment</p> <p>Make systematic and careful observations</p> <p>Observe changes over time</p> <p>Use a range of appropriate and available equipment</p> <p>Begin to ask their own questions about what they observe</p> | <p>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment</p> <p>Make systematic and careful observations</p> <p>Observe changes over time</p> <p>Use a range of appropriate and available equipment</p> <p>Ask their own questions about what they observe</p> | <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Choose the most appropriate equipment to make measurements and explain how to use it accurately</p> <p>Take repeat readings when appropriate</p> <p>Understand why we take an average in repeat readings</p> | <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Choose the most appropriate equipment to make measurements and explain how to use it accurately</p> <p>Take repeat readings when appropriate</p> <p>Understand why we take an average in repeat readings.</p> |
| <b>Identifying, classifying, recording and presenting data</b> |                                                                                                                                                                                                                                                        | <p>Begin to make marks to collect data</p>                                                                                                                                                                                                                                                | <p>Identify and classify</p> <p>Begin to use simple features to compare objects, materials and living things</p> <p>Decide how to sort and classify</p>                                                            | <p>Identify and classify</p> <p>Use simple features to compare objects, materials and living things</p> <p>Decide how to sort and classify</p>                                      | <p>Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language,</p>                                                                                                                                                                                                             | <p>Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language,</p>                                                                                                                                                                                         | <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs,</p>                                                                                                                                                                                                                       | <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs,</p>                                                                                                                                                                                                                        |

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|                                                                       |                                                                  |                                                                                                                                                           | <p>objects into simple groups with some help</p> <p>Record and communicate findings in a range of ways with support</p> <p>Sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams and simple tables, with support.</p> | <p>objects into simple groups with some help</p> <p>Record and communicate findings in a range of ways with support</p> <p>Sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts and simple tables.</p> | <p>drawings, labelled diagrams, keys, and tables, with some support</p> <p>Talk about criteria for grouping, sorting and classifying</p> <p>Group and classify things</p> <p>Collect data from their own observations and measurements</p> <p>Present data in a variety of ways to help in answering questions</p> <p>Use scientific vocabulary correctly and with confidence</p> | <p>drawings, labelled diagrams, keys, and tables</p> <p>Talk about criteria for grouping, sorting and classifying</p> <p>Group and classify things</p> <p>Use and develop keys and other information records to identify, classify and describe living things and materials</p> <p>Collect data from their own observations and measurements</p> <p>Present data in a variety of ways to help in answering questions;</p> <p>Use scientific vocabulary correctly and with confidence</p> | <p>bar and line graphs</p> <p>Independently group, classify and describe living things and materials</p>                                                                 | <p>bar and line graphs</p> <p>Independently group, classify and describe living things and materials</p>                                                                 |
| <b>Drawing conclusions, noticing patterns and presenting findings</b> | <p>Begin to talk about why things happen and how things work</p> | <p>Talk about similarities and differences in relation to materials and living things</p> <p>Use talk to help work out problems and organise thinking</p> | <p>Use their observations and ideas to suggest answers to questions, with some help</p> <p>Notice links between cause and effect with support</p>                                                                                                                                          | <p>Use their observations and ideas to suggest answers to questions;</p> <p>Notice links between cause and effect with support</p>                                                                                                                                                                     | <p>Begin to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p>                                                                                                                                                                                                                                         | <p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p>                                                                                                                                                                                                                                                                                                                                                         | <p>Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written</p> | <p>Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written</p> |

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|                                                                       |  | and activities, and to explain how things work and why they might happen | <p>Begin to notice patterns and relationships with support</p> <p>Begin to draw simple conclusions</p> <p>Identify and discuss differences between their results, with support</p> <p>Use simple and scientific language</p> <p>Talk about their findings</p> | <p>Begin to notice patterns and relationships with support</p> <p>Begin to draw simple conclusions</p> <p>Identify and discuss differences between their results;</p> <p>Use simple and scientific language</p> <p>Talk about their findings</p> | <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Draw simple conclusions from their results</p> <p>Make predictions</p> <p>Suggest improvements to investigations</p> <p>Raise further questions which could be investigated</p> | <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Draw simple conclusions from their results</p> <p>Make predictions</p> <p>Suggest improvements to investigations</p> <p>Raise further questions which could be investigated</p> | <p>forms such as displays and other presentations</p> <p>Notice patterns</p> <p>Draw conclusions based in their data and observations</p> <p>Use their scientific knowledge and understanding to explain their findings</p> <p>Identify patterns that might be found in the natural environment</p> <p>Discuss the degree of trust they can have in a set of results</p> | <p>forms such as displays and other presentations</p> <p>Notice patterns;</p> <p>Draw conclusions based in their data and observations</p> <p>Use their scientific knowledge and understanding to explain their findings</p> <p>Identify patterns that might be found in the natural environment</p> <p>Discuss the degree of trust they can have in a set of results</p> |
| <b>Using Scientific evidence and secondary sources of information</b> |  |                                                                          | Use simple secondary sources to find answers, with support                                                                                                                                                                                                    | Use simple secondary sources to find answers                                                                                                                                                                                                     | <p>Begin to use straightforward scientific evidence to answer questions or to support their findings</p> <p>Make links between their own science results and other scientific evidence</p> <p>Identify similarities,</p>                                                                                                   | <p>Use straightforward scientific evidence to answer questions or to support their findings</p> <p>Make links between their own science results and other scientific evidence</p> <p>Identify similarities,</p>                                                                                                            | <p>Identify scientific evidence that has been used to support or refute ideas or arguments</p> <p>Use primary and secondary sources of evidence to justify ideas</p> <p>Recognise where secondary sources will be most useful to</p>                                                                                                                                     | <p>Identify scientific evidence that has been used to support or refute ideas or arguments</p> <p>Use primary and secondary sources of evidence to justify ideas</p> <p>Recognise where secondary sources will be most useful to</p>                                                                                                                                      |

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|  |  |  |  |  | <p>differences, patterns and changes relating to simple scientific ideas and processes</p> <p>Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations</p> | <p>differences, patterns and changes relating to simple scientific ideas and processes</p> <p>Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations</p> | <p>research ideas and begin to separate opinion from fact</p> <p>Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas</p> <p>Talk about how scientific ideas have developed over time</p> | <p>research ideas and begin to separate opinion from fact</p> <p>Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas</p> <p>Talk about how scientific ideas have developed over time</p> |
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