



St Barnabas
C of E Primary School

Skills Progression

Subject area: Science

Subject Intent:

Our intention for Science is so children enjoy their learning and are engaged and inspired. Our approach to Science is based on exploration and is designed to ensure the children undertake as much practical work as possible developing their enquiry skills.

| Skill | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|------------------|---|---|--|---|--|--|---|
| Asking questions | <p>I can show curiosity about objects, event and people. Playing and exploring.</p> <p>Questions why things happen, Speaking 30-50 months.</p> <p>I can make comments and ask questions about aspects of my familiar world such as the place where I live or the natural world . The World 30-50 months.</p> | <p>I can with prompting ask simple questions that can be tested.</p> <p>I can with support ask people questions and use simple secondary sources to find answers.</p> | <p>I can ask simple questions using scientific vocabulary from the National Curriculum that can be tested.</p> <p>I can ask people questions and use simple secondary sources to find answers.</p> | <p>I can ask relevant testable questions using appropriate scientific vocabulary from the National Curriculum.</p> <p>I can begin to recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.</p> | <p>I can ask and develop relevant, testable questions using appropriate scientific language from the National Curriculum.</p> <p>I can recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations</p> | <p>I can ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>I can recognise which secondary sources will be most useful to research my ideas and begin to separate opinion from fact.</p> | <p>I can use my science experiences to explore ideas and raise different kinds of questions.</p> <p>I can confidently recognise which secondary sources will be most useful to research my ideas and begin to separate opinion from fact.</p> |

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|---|--|--|--|---|---|--|---|
| Planning and setting up different types of enquiries | I can take a risk, engage in new experiences and learn by trial and error, Playing and Exploring. | I can begin to recognise different ways in which scientific questions can be answered. | I can recognise different ways in which scientific questions can be answered by a range of investigations. | I can make my own decisions about the most appropriate type of scientific enquiry needed to answer questions. I can begin to recognise when a simple fair test is necessary and help to decide how to set it up. | I can with more confidence make my own decisions about the most appropriate type of scientific enquiry needed to answer questions. I can recognise when a simple fair test is necessary and help to decide how to set it up. | I can select and plan the most appropriate type of scientific enquiry to use to answer scientific questions. I can recognise when to set up comparative and fair tests and explain which variables need to be controlled and why. | I can confidently select and plan the most appropriate type of scientific enquiry to use to answer scientific questions. I can recognise when to set up comparative and fair tests and explain which variables need to be controlled and why. I can confidently use a range of scientific activities to answer questions. I can talk about how scientific ideas have developed over time. |

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|--------------------------|--|---|--|---|--|--|--|
| Performing tests. | I can engage in open ended activity, Playing and Exploring I can find ways to solve problems/ find new ways to do things/ test my ideas, Creating and Thinking Critically | I can with support carry out simple tests with different types of scientific enquiry. | I can carry out simple tests with different types of scientific enquiry. | I can with support set up simple practical enquiries, comparative and fair tests. | I can set up simple practical enquiries, comparative and fair tests. | I can set up a range of practical enquiries, comparative and fair tests and explain which variables need to be controlled and why. | I can set up comparative fair tests with confidence and explain which variables need to be controlled and why using correct scientific vocabulary. |

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|------------------------|---|--|---|--|---|---|---|
| Using equipment | <p>I can choose the resources needed for an activity.</p> <p>ELG:Self confidence and self- Awareness.</p> <p>I can handle equipment and tools effectively. ELG Moving and Handling.</p> | I can use simple measurements and equipment (e.g hand lenses, egg timers to gather data. | I can use simple equipment to observe closely and to measure changes over time. | I can begin to take accurate measurements using standard units. Learn how to use a range of new equipment such as thermometers and data loggers appropriately. | I can take accurate measurements using standard units. Learn how to use a range of new equipment such as data loggers and thermometers appropriately. | I can choose the most appropriate equipment to make measurements. Explain how to use it accurately using scientific vocabulary. Take repeat measurements where appropriate. | Choose the most appropriate equipment to make measurements with increasing precision. Explain how to use it accurately using correct scientific vocabulary. Take repeat measurements where appropriate. |

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|--------------------------------|---|---|--|---|--|--|--|
| Observing and Measuring | <p>Closely observes what animals, people and vehicles do, The World 8-20 months.</p> <p>Use senses to explore the world around them. Playing and Exploring.</p> | I can begin to observe closely using simple equipment with help, observe changes over time. | I can observe closely using simple equipment with help, observe changes over time. | I can begin to make systematic and careful observations. Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used. | I can make systematic and careful observations. Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used. | I can make a decision about what observations to make, what measurements to use and how long to make them fo | I can confidently make a decision about what observations to make, what measurements to use and how long to make them for. |

| Skill | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|-------------------------------------|--|--|---|---|---|---|---|
| Identifying and classifying | <p>I can develop ideas of grouping, sequences, cause and effect, Creating and Thinking Critically.</p> <p>I know about similarities and differences in relation to places, objects, materials and living things, ELG: The World.</p> | I can with prompting use simple features to compare objects, materials and living things and, with help decide how to sort and group them. | I can use simple features to compare objects, materials and living things and, with help decide how to sort and group them. | I can begin to use criteria for grouping, sorting and classifying and use simple keys using scientific language | I can use criteria for grouping, sorting and classifying and use simple keys using scientific language. | I can confidently use criteria for grouping, sorting and classifying and use simple keys using appropriate scientific language. | I can use and develop keys and other information records to identify, classify and describe living things and materials. Identify patterns that might be found in the natural environment. |
| Skill | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Gathering and recording data | <p>I can create simple representations of events, people and objects. Being imaginative 40-60+ months.</p> <p>Make links and notice patterns in their experience, Creating and Thinking Critically.</p> | <p>I can record simple data.</p> <p>I can with guidance, begin to notice patterns and relationships.</p> | <p>I can collect and record simple data relevant to the answering of questions.</p> <p>I can notice patterns and relationships.</p> | <p>I can collect and record data from my own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data.</p> <p>I can begin to look for naturally occurring patterns and relationships and begin decide what data to collect to identify them.</p> | <p>I can collect and record data from my own observation and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and graphs to help make decisions about how to analyse this data.</p> <p>I can look for naturally occurring patterns and relationships and decide what data to collect to identify them</p> | <p>I can begin decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>I can look for different causal relationships in their data and begin to identify evidence that refutes or supports an idea.</p> | <p>I can more confidently decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>I can look for different causal relationships in their data and identify evidence that refutes or supports an idea.</p> |

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|---|--|--|---|--|---|---|--|
| Reporting, presenting and communicating data/ findings. | <p>I can develop my own narratives and explanations by connecting ideas or events, ELG: Speaking I can build up vocabulary that reflects the breadth of my experience. Understanding: 30-50 months.</p> <p>I can answer how and why questions about their experiences. ELG Understanding.</p> <p>Make observations of animals and plants and explain why some things occur and talk about changes, ELG The World.</p> | <p>I can with help record and communicate my findings in a range of ways and begin to use simple scientific language.</p> <p>I can begin to use my observations and ideas to suggest answers to questions.</p> <p>I can talk about what I have found out and how I found it out.</p> | <p>I can record and communicate my findings in a range of ways and begin to use simple scientific language.</p> <p>I can use my observations and ideas to suggest answers to questions.</p> | <p>I can use relevant simple scientific language to discuss my ideas and communicate my findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>I can with support, identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they all have already done.</p> <p>I can with support look for changes, patterns, similarities and differences in my data in order to draw simple conclusions and answer questions</p> | <p>I can use relevant simple scientific language to discuss my ideas and communicate my findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>I can identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they all have already done.</p> <p>I can look for changes, patterns, similarities and differences in my data in order to draw simple conclusions and answer questions</p> | <p>I can confidently use relevant scientific language and illustrations to discuss, communicate and justify a scientific idea. Use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results.</p> <p>I can use my results to make predictions and identify when further observations, comparative and fair tests might be needed</p> <p>I can confidently look for changes, patterns, similarities and differences in my data in order to draw simple conclusions and answer questions</p> | <p>I can confidently use relevant scientific language and illustrations to discuss, communicate and justify a scientific idea. Use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results.</p> <p>I can confidently use my results to make predictions and identify when further observations, comparative and fair tests might be needed.</p> <p>I can identify scientific evidence that has been used to support or refute ideas or arguments.</p> |

