

# St. Bede's Catholic Primary School Curriculum Progression for Science



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Questioning and enquiry		National Curriculum. Pupils should be taught to:		National Curriculum. Pupils should be taught to:			
	<p><b>30-50 Months</b> Ask questions about aspects of their familiar world, such as the place they live or their natural world.</p> <p><b>40-60 Months</b></p>	<ul style="list-style-type: none"> <li>Ask simple questions about the world around us.</li> <li>Begin to recognise that they can be answered in different ways.</li> </ul>	<ul style="list-style-type: none"> <li>Ask questions about the world around us.</li> <li>Recognise that they can be answered in different ways.</li> </ul>	<ul style="list-style-type: none"> <li>Ask some relevant questions and use different types of scientific enquiries to answer them.</li> <li>Begin to explore everyday phenomena and the relationships between living things and familiar environments.</li> <li>Begin to develop their ideas about functions, relationships and interactions.</li> <li>Begin to raise their own questions about the world around them.</li> <li>Begin to make some decisions about which types of enquiry will be the best way of answering</li> </ul>	<ul style="list-style-type: none"> <li>Ask relevant questions and use different types of scientific enquiries to answer them.</li> <li>Explore everyday phenomena and the relationships between living things and familiar environments.</li> <li>Begin to develop their ideas about functions, relationships and interactions.</li> <li>Raise their own questions about the world around them.</li> <li>Make some decisions about which types of enquiry will be the best way of answering questions.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> <li>Begin to explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically.</li> <li>Begin to recognise some more abstract ideas and begin to recognise how these ideas help them to understand how the world operates.</li> <li>Begin to recognise scientific ideas change and develop over time.</li> <li>Begin to select the most appropriate ways to answer science questions using different types of scientific enquiry</li> </ul>	<ul style="list-style-type: none"> <li>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> <li>Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically.</li> <li>Begin to recognise more abstract ideas and begin to recognise how these ideas help them to understand how the world operates.</li> <li>Begin to recognise scientific ideas change and develop over time.</li> <li>Select the most appropriate ways to answer science questions using different types of scientific enquiry.</li> </ul>

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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Observing + measuring Pattern seeking		National Curriculum. Pupils should be taught to:		National Curriculum Pupils should be taught to:			
	<ul style="list-style-type: none"> <li>• <b>30-50 Months</b></li> <li>• To observe the effects of physical activity on their bodies.</li> <li>• To talk about some of the things they have observed, such as plants, animals, natural and found objects.</li> <li>• To talk about why things happen and how things work.</li> <li>• To develop an understanding of growth, decay and changes over time.</li> <li>• To show care and concern for living things and the environment.</li> <li>• <b>Early Learning Goal</b></li> <li>• To look closely at similarities, patterns and change.</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to observe closely, using simple equipment.</li> <li>• Use simple observations and ideas to suggest answers to questions.</li> <li>• To observe simple changes over time and, with guidance, begin to notice patterns and relationships.</li> <li>• To say what I am looking for and what I am measuring.</li> <li>• To know how to use simple equipment safely.</li> <li>• Use simple measurements and equipment with support (eg hand lenses and egg timers) Begin to progress from non-standard units, reading mm, m, cl, l, °C</li> </ul>	<ul style="list-style-type: none"> <li>• Observe closely, using simple equipment.</li> <li>• Use observations and ideas to suggest answers to questions.</li> <li>• To observe changes over time and, with guidance, begin to notice patterns and relationships.</li> <li>• To say what I am looking for and what I am measuring.</li> <li>• To know how to use simple equipment safely Use simple measurements and equipment with increasing independence (eg hand lenses and egg timers)</li> <li>• Begin to progress from non-standard units, reading mm, cm, m, ml, l, °C</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</li> <li>• Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.</li> <li>• 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.</li> <li>• Learn to use some new equipment appropriately (eg data loggers).</li> <li>• Begin to see a pattern in my results.</li> </ul>	<ul style="list-style-type: none"> <li>• Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</li> <li>• Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.</li> <li>• 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.</li> <li>• Learn to use new equipment appropriately (eg data loggers).</li> <li>• Can see a pattern in my results.</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</li> <li>• Begin to identify patterns that might be found in the natural environment.</li> <li>• Begin to 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.</li> <li>• Choose the most appropriate equipment and explain how to use it accurately.</li> <li>• Begin to interpret data and find patterns.</li> <li>• Select equipment on my own.</li> </ul>	<ul style="list-style-type: none"> <li>• Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</li> <li>• Identify patterns that might be found in the natural environment.</li> <li>• Make their own decisions about what observations to make, what measurements to use and how long to make them</li> </ul>

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				<ul style="list-style-type: none"> <li>• Begin to choose from a selection of equipment.</li> <li>• Begin to observe and measure accurately using standard units including time in minutes and seconds.</li> </ul>	<ul style="list-style-type: none"> <li>• Can choose from a selection of equipment.</li> <li>• Can observe and measure accurately using standard units including time in minutes and seconds.</li> </ul>	<ul style="list-style-type: none"> <li>• Can make a set of observations and say what the interval and range are.</li> <li>• Begin to take accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm<sup>2</sup>V, km/h, m per sec, m/ sec Graphs – pie, line</li> </ul>	<p>for and whether to repeat them.</p> <ul style="list-style-type: none"> <li>• Choose the most appropriate equipment and explain how to use it accurately.</li> <li>• Can interpret data and find patterns.</li> <li>• Select equipment on my own.</li> <li>• Can make a set of observations and say what the interval and range are.</li> <li>• Accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm<sup>2</sup>V, km/h, m per sec, m/ sec Graphs – pie, line, bar (Year 6)</li> </ul>
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# St. Bede's Catholic Primary School Curriculum Progression for Science



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Investigating		National Curriculum Pupils should be taught to:					
		<ul style="list-style-type: none"> <li>Perform simple tests with support.</li> <li>To begin to discuss my ideas about how to find things out.</li> <li>To begin to say what happened in my investigation.</li> </ul>	<ul style="list-style-type: none"> <li>Perform simple tests.</li> <li>To discuss my ideas about how to find things out.</li> <li>To say what happened in my investigation.</li> </ul>	<ul style="list-style-type: none"> <li>Set up some simple practical enquiries, comparative and fair tests.</li> <li>Begin to recognise when a simple fair test is necessary and help to decide how to set it up.</li> <li>Begin to think of more than one variable factor</li> </ul>	<ul style="list-style-type: none"> <li>Set up simple practical enquiries, comparative and fair tests.</li> <li>Recognise when a simple fair test is necessary and help to decide how to set it up.</li> <li>Can think of more than one variable factor.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to use test results to make predictions to set up further comparative and fair tests.</li> <li>Begin to recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.</li> <li>Begin to suggest improvements to my method and give reasons.</li> <li>Begin to decide when it is appropriate to do a fair test.</li> </ul>	<ul style="list-style-type: none"> <li>Use test results to make predictions to set up further comparative and fair tests.</li> <li>Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.</li> <li>Suggest improvements to my method and give reasons.</li> <li>Decide when it is appropriate to do a fair test.</li> </ul>

# St. Bede's Catholic Primary School Curriculum Progression for Science



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recording and reporting findings		National Curriculum Pupils should be taught to:		National Curriculum Pupils should be taught to:			
		<ul style="list-style-type: none"> <li>Gather and record data with some adult support, to help in answering questions.</li> <li>Begin to record simple data.</li> <li>Begin to record and communicate their findings in a range of ways.</li> <li>Can show my results in a simple table that my teacher has provided</li> </ul>	<ul style="list-style-type: none"> <li>Gather and record data to help in answering questions.</li> <li>Record simple data.</li> <li>Record and communicate their findings in a range of ways.</li> <li>Can show my results in a table that my teacher has provided</li> </ul>	<ul style="list-style-type: none"> <li>Gather, record, and begin to classify and present data in a variety of ways to help in answering questions.</li> <li>Begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</li> <li>Begin to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> <li>Begin to use notes, simple tables and standard units and help to decide how to record and analyse their data.</li> <li>Begin to record results in tables and bar charts.</li> </ul>	<ul style="list-style-type: none"> <li>Gather, record, classify and present data in a variety of ways to help in answering questions.</li> <li>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</li> <li>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> <li>Use notes, simple tables and standard units and help to decide how to record and analyse their data.</li> <li>Can record results in tables and bar charts.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.</li> <li>Begin to report and present findings from enquiries.</li> <li>Begin to decide how to record data from a choice of familiar approaches.</li> <li>Begin to choose how best to present data.</li> </ul>	<ul style="list-style-type: none"> <li>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.</li> <li>Report and present findings from enquiries.</li> <li>Decide how to record data from a choice of familiar approaches.</li> <li>Can choose how best to present data</li> </ul>

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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Identifying, grouping and classifying		National Curriculum. Pupils should be taught to:		National Curriculum Pupils should be taught to:			
		<ul style="list-style-type: none"> <li>Identify and classify with some support.</li> <li>To begin to observe and identify, compare and describe.</li> <li>To begin to use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and classify.</li> <li>Observe and identify, compare and describe.</li> <li>Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to identify differences, similarities or changes related to simple scientific ideas and processes.</li> <li>Begin to talk about criteria for grouping, sorting and classifying and use simple keys.</li> <li>Begin to compare and group according to behaviour or properties, based on testing.</li> </ul>	<ul style="list-style-type: none"> <li>Identify differences, similarities or changes related to simple scientific ideas and processes.</li> <li>Talk about criteria for grouping, sorting and classifying and use simple keys.</li> <li>Compare and group according to behaviour or properties, based on testing.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to use and develop keys and other information records to identify, classify and describe living things and materials</li> </ul>	<ul style="list-style-type: none"> <li>Use and develop keys and other information records to identify, classify and describe living things and materials.</li> </ul>

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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Research					National Curriculum Pupils should be taught to:		
		<ul style="list-style-type: none"> <li>To begin to use simple secondary sources to find answers.</li> <li>To begin to find information to help me from books and computers with help.</li> </ul>	<ul style="list-style-type: none"> <li>Use simple secondary sources to find answers.</li> <li>Can find information to help me from books and computers with help</li> </ul>	<ul style="list-style-type: none"> <li>Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations</li> </ul>	<ul style="list-style-type: none"> <li>Begin to recognise which secondary sources will be most useful to research their ideas</li> </ul>	<ul style="list-style-type: none"> <li>Recognise which secondary sources will be most useful to research their ideas.</li> </ul>

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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Conclusions		National Curriculum Pupils should be taught to:		National Curriculum Pupils should be taught to:			
		<ul style="list-style-type: none"> <li>• Begin to talk about what they have found out and how they found it out</li> <li>• To begin to say what happened in my investigation.</li> <li>• To begin to say whether I was surprised at the results or not.</li> <li>• To begin to say what I would change about my investigation.</li> </ul>	<ul style="list-style-type: none"> <li>• Talk about what they have found out and how they found it out.</li> <li>• To say what happened in my investigation.</li> <li>• To say whether I was surprised at the results or not.</li> <li>• To say what I would change about my investigation.</li> </ul>	<ul style="list-style-type: none"> <li>• I am beginning to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</li> <li>• Am beginning to use straightforward scientific evidence to answer questions or to support their findings.</li> <li>• With help, am beginning to look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</li> <li>• With support, am beginning to identify new questions arising from the data, make new predictions and find ways of improving what they have already done.</li> <li>• Am beginning to see a pattern in my results.</li> <li>• Am beginning to say what I found out, linking cause and effect.</li> <li>• Am beginning to say how I could make it better</li> </ul>	<ul style="list-style-type: none"> <li>• Using results to draw simple conclusions , make predictions for new values, suggest improvements and raise further questions.</li> <li>• Use straightforward scientific evidence to answer questions or to support their findings.</li> <li>• With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</li> <li>• With support, identify new questions arising from the data, make new predictions and find ways of improving what they have already done.</li> <li>• Can see a pattern in my results.</li> <li>• Can say what I found out, linking cause and effect.</li> <li>• Can say how I could make it better.</li> </ul>	<ul style="list-style-type: none"> <li>• Am beginning to report and present 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>• Begin to identify scientific evidence hat has been used to support or refute ideas or arguments.</li> <li>• Begin to draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings.</li> <li>• Begin to use test results to make predictions to set up further</li> </ul>	<ul style="list-style-type: none"> <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>• Identify scientific evidence that has been used to support or refute ideas or arguments.</li> <li>• Draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings.</li> <li>• Use test results to make predictions to set up further comparatives and fair tests.</li> <li>• Look for different causal relationships in their data and identify evidence that refutes or supports their ideas.</li> </ul>

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				<ul style="list-style-type: none"> <li>Am beginning to answer questions from what I have found out.</li> </ul>	<ul style="list-style-type: none"> <li>Can answer questions from what I have found out</li> </ul>	<p>comparatives and fair tests.</p> <ul style="list-style-type: none"> <li>Begin to look for different causal relationships in their data and identify evidence that refutes or supports their ideas.</li> <li>Use their results to identify when further tests and observations are needed.</li> <li>Begin to separate opinion from fact.</li> <li>Begin to draw conclusions and identify scientific evidence.</li> <li>Can use simple models.</li> <li>Know which evidence proves a scientific point.</li> <li>Begin to use test results to make predictions to set up further comparative and fair tests.</li> </ul>	<ul style="list-style-type: none"> <li>Use their results to identify when further tests and observations are needed.</li> <li>Separate opinion from fact.</li> <li>Can draw conclusions and identify scientific evidence.</li> <li>Can use simple models.</li> <li>Know which evidence proves a scientific point.</li> <li>Use test results to make predictions to set up further comparative and fair tests.</li> </ul>
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