



**St Walburga's Catholic Primary School**  
**Whole School Science Progression Overview**



EYFS	
<p><b>Early Learning Goal / EYFS Ages and Stages: Understanding the World (The World)</b></p> <ul style="list-style-type: none"> <li>Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes</li> </ul> <p><b>Physical Development (Health and Self-Care)</b></p> <ul style="list-style-type: none"> <li>Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe.</li> </ul>	<p><b>Enquiry Skills</b></p> <ul style="list-style-type: none"> <li>Show curiosity about objects, events and people</li> <li>Questions why things happen</li> <li>Engage in open-ended activity</li> <li>Take a risk, engage in new experiences and learn by trial and error</li> <li>Find ways to solve problems / find new ways to do things / test their ideas</li> <li>Develop ideas of grouping, sequences, cause and effect</li> <li>Comment and ask questions about aspects of their familiar world such as the place where they live or the natural world</li> <li>Use senses to explore the world around them</li> <li>Make links and notice patterns in their experiences</li> <li>Create simple representations of events, people and objects</li> <li>Build up vocabulary that reflects the breadth of their experience</li> </ul>
Key stage 1	
<p><b>Working Scientifically</b></p> <p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <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; gathering and recording data to help in answering questions.</li> </ul>	
Key Stage 2	
<p>During Years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <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</li> </ul>	<p>During Years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <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> </ul>

<p>and data loggers</p> <ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <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 a 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>
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**This document aims to give guidance on the progression of working scientifically skills which the children build on as they progress through the year groups. These enquiry based skills develop in conjunction with their scientific knowledge as they develop greater independence in planning and carrying out fair and comparative tests to answer a range of scientific questions. The progression can also be used to differentiate work and expectations appropriately for children working above and below ARE.**

	<b>EYFS</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
<b>Asking Questions and Carrying Out Fair and Comparative Tests</b>	<b>ELG: Playing and Exploring/ Speaking</b>	<b>Asking simple questions and recognising that they can be answered in different ways. Performing simple tests</b>		<b>Setting up simple practical enquiries, comparative and fair tests</b>		<b>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Use test results to make predictions to set up further comparative and fair tests</b>	
	<ul style="list-style-type: none"> <li>show curiosity about objects, events and people</li> <li>questions why things happen</li> <li>engage in open-ended activity</li> <li>choose the resources they need for their chosen activities</li> <li>handle equipment and tools effectively</li> </ul>	<ul style="list-style-type: none"> <li>explore the world around them, leading them to ask some simple scientific questions about how and why things happen</li> <li>begin to recognise ways in which they might answer scientific questions</li> <li>ask people questions and use simple secondary</li> </ul>	<ul style="list-style-type: none"> <li>explore the world around them, leading them to ask some simple scientific questions about how and why things happen</li> <li>begin to recognise ways in which they might answer scientific questions</li> <li>ask people questions and use simple secondary</li> </ul>	<ul style="list-style-type: none"> <li>start to raise their own relevant questions about the world around them in response to a range of scientific experiences</li> <li>start to make their own decisions about the most appropriate type</li> </ul>	<ul style="list-style-type: none"> <li>start to raise their own relevant questions about the world around them in response to a range of scientific experiences</li> <li>start to make their own decisions about the most appropriate type</li> </ul>	<ul style="list-style-type: none"> <li>With growing independence, raise their own questions about the world around them in response to a range of scientific experiences</li> <li>With increasing independence, make their own decisions about the most appropriate</li> </ul>	<ul style="list-style-type: none"> <li>With growing independence, raise their own questions about the world around them in response to a range of scientific experiences</li> <li>With increasing independence, make their own decisions about the most</li> </ul>

		<p>sources to find answers</p> <ul style="list-style-type: none"> <li>• carry out simple practical tests, using simple equipment</li> <li>• experience different types of scientific enquiries, including practical activities</li> <li>• talk about the aim of scientific tests they are working on</li> </ul>	<p>sources to find answers</p> <ul style="list-style-type: none"> <li>• carry out simple practical tests, using simple equipment</li> <li>• experience different types of scientific enquiries, including practical activities</li> <li>• talk about the aim of scientific tests they are working on</li> </ul>	<p>of scientific enquiry they might use to answer questions</p> <ul style="list-style-type: none"> <li>• recognise when a fair test is necessary</li> <li>• help decide how to set up a fair test, making decisions about what other observations to make, how long to make them for and the type of simple equipment that might be used</li> </ul>	<p>of scientific enquiry they might use to answer questions</p> <ul style="list-style-type: none"> <li>• recognise when a fair test is necessary</li> <li>• help decide how to set up a fair test, making decisions about what other observations to make, how long to make them for and the type of simple equipment that might be used</li> </ul>	<p>type of scientific enquiry they might use to answer questions</p> <ul style="list-style-type: none"> <li>• explore and talk about their ideas, raising different kinds of scientific questions</li> <li>• ask their own questions about scientific phenomena</li> <li>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions</li> <li>• make their own decision about what observations to make, what measurements to use, how long to make them for and whether to repeat them</li> <li>• plan, set up and carry out fair tests to answer questions, including recognising and controlling the variables where necessary.</li> </ul>	<p>appropriate type of scientific enquiry they might use to answer questions</p> <ul style="list-style-type: none"> <li>• explore and talk about their ideas, raising different kinds of scientific questions</li> <li>• ask their own questions about scientific phenomena</li> <li>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions</li> <li>• make their own decision about what observations to make, what measurements to use, how long to make them for and whether to repeat them</li> <li>• plan, set up and carry out fair tests to answer questions, including recognising and controlling the variables where necessary.</li> </ul>
<p><b>Observing and Measuring Changes</b></p>	<p><b>ELG: Understanding the World</b></p>	<p><b>Observing closely using simple equipment</b></p>	<p><b>Making systematic and careful observations and, where appropriate taking accurate measurements using standard units, using a range of equipment including thermometers and data loggers.</b></p>	<p><b>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</b></p>			

	<ul style="list-style-type: none"> <li>make observations of animals and plants and explain why some things occur, and talk about changes</li> </ul>	<ul style="list-style-type: none"> <li>observe the natural and humanly constructed world around them.</li> <li>observe changes over time.</li> <li>use simple measurements and equipment</li> <li>make careful observations, sometimes using equipment to help them observe carefully.</li> </ul>	<ul style="list-style-type: none"> <li>observe the natural and humanly constructed world around them.</li> <li>observe changes over time.</li> <li>use simple measurements and equipment</li> <li>make careful observations, sometimes using equipment to help them observe carefully.</li> </ul>	<ul style="list-style-type: none"> <li>make systematic and careful observations</li> <li>observe changes over time</li> <li>use a range of equipment including thermometers and data loggers</li> <li>ask their own questions about what they observe</li> <li>where appropriate, take accurate measurements using standard units using a range of equipment.</li> </ul>	<ul style="list-style-type: none"> <li>make systematic and careful observations</li> <li>observe changes over time</li> <li>use a range of equipment including thermometers and data loggers</li> <li>ask their own questions about what they observe</li> <li>where appropriate, take accurate measurements using standard units using a range of equipment.</li> </ul>	<ul style="list-style-type: none"> <li>choose the most appropriate equipment to take measurements</li> <li>take measurement using a range of scientific equipment with increasing accuracy and precision</li> <li>make careful and focused observations</li> <li>know the importance of taking repeat readings where appropriate</li> </ul>	<ul style="list-style-type: none"> <li>choose the most appropriate equipment to take measurements</li> <li>take measurement using a range of scientific equipment with increasing accuracy and precision</li> <li>make careful and focused observations</li> <li>know the importance of taking repeat readings where appropriate</li> </ul>
<b>Identifying, Classifying, Recording and Presenting Data</b>	<b>ELG: Understanding the World</b>	<b>Identifying and classifying</b> <b>Gathering and recording data to help in answering questions</b>		<b>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</b> <b>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</b>		<b>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</b>	
	<ul style="list-style-type: none"> <li>know about similarities and differences in relation to places, objects, materials and living things</li> <li>talk about the features of their own immediate environment and how environments might vary from one another</li> </ul>	<ul style="list-style-type: none"> <li>use simple features to compare objects, materials and living things</li> <li>decide how to sort and classify objects into simple groups with some help</li> <li>Record and communicate findings in arrange of ways with support</li> <li>Sort, group, gather and record data in a variety of ways to help in answering questions such as sorting diagrams,</li> </ul>	<ul style="list-style-type: none"> <li>use simple features to compare objects, materials and living things</li> <li>decide how to sort and classify objects into simple groups with some help</li> <li>Record and communicate findings in arrange of ways with support</li> <li>Sort, group, gather and record data in a variety of ways to help in answering questions such as sorting diagrams,</li> </ul>	<ul style="list-style-type: none"> <li>talk about criteria for grouping, sorting and classifying</li> <li>group and classify things</li> <li>collect data from their own observations and measurements</li> <li>present data in a variety of ways to help in answering questions</li> <li>use, read and spell scientific vocabulary correctly and with confidence using</li> </ul>	<ul style="list-style-type: none"> <li>talk about criteria for grouping, sorting and classifying</li> <li>group and classify things</li> <li>collect data from their own observations and measurements</li> <li>present data in a variety of ways to help in answering questions</li> <li>use, read and spell scientific vocabulary correctly and with confidence using</li> </ul>	<ul style="list-style-type: none"> <li>independently group, classify and describe living things and materials;</li> <li>use and develop keys and other information records to identify, classify and describe living things and materials</li> <li>how to record data from a choice</li> </ul>	<ul style="list-style-type: none"> <li>independently group, classify and describe living things and materials</li> <li>use and develop keys and other information records to identify, classify and describe living things and materials;</li> <li>how to record data from a choice of familiar approaches</li> </ul>

		pictograms, tally charts, block diagrams and simple tables	pictograms, tally charts, block diagrams and simple tables	<ul style="list-style-type: none"> <li>their own growing word, reading and spelling knowledge</li> <li>record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables</li> </ul>	<ul style="list-style-type: none"> <li>their own growing word, reading and spelling knowledge</li> <li>record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables</li> </ul>	<ul style="list-style-type: none"> <li>of familiar approaches</li> <li>record data and results of increasing complexity using scientific diagrams and labels, classification, keys, tables, bar graphs and line graphs</li> </ul>	<ul style="list-style-type: none"> <li>record data and results of increasing complexity using scientific diagrams and labels, classification, keys, tables, bar graphs and line graphs</li> </ul>
<b>Drawing Conclusions, Noticing Patterns and Presenting Findings</b>	<b>ELG: Understanding/ Speaking/ The World</b>	<b>Using their observations and ideas to suggest answers to questions</b>		<b>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</b>		<b>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.</b>	
	<ul style="list-style-type: none"> <li>answer how and why questions about their experiences</li> <li>make observations of animals and plants and explain why some things occur, and talk about changes</li> <li>develop their own narratives and explanations by connecting ideas or events</li> </ul>	<ul style="list-style-type: none"> <li>begin to notice links between cause and effect with support</li> <li>begin to notice patterns and relationships with support</li> <li>begin to draw simple conclusions</li> <li>identify and discuss difference between their results</li> <li>use simple and scientific language</li> <li>read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1</li> </ul>	<ul style="list-style-type: none"> <li>begin to notice links between cause and effect with support</li> <li>begin to notice patterns and relationships with support</li> <li>begin to draw simple conclusions</li> <li>identify and discuss difference between their results</li> <li>use simple and scientific language</li> <li>read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1</li> </ul>	<ul style="list-style-type: none"> <li>draw simple conclusions from their results</li> <li>make predictions</li> <li>suggest improvements to investigations</li> <li>raise further questions which could be investigated</li> <li>first talk about, and then go on to write about, what they have found out</li> <li>report and present their results and conclusions to others in written and oral forms with</li> </ul>	<ul style="list-style-type: none"> <li>draw simple conclusions from their results</li> <li>make predictions</li> <li>suggest improvements to investigations</li> <li>raise further questions which could be investigated</li> <li>first talk about, and then go on to write about, what they have found out</li> <li>report and present their results and conclusions to others in written and oral forms with</li> </ul>	<ul style="list-style-type: none"> <li>notice patterns</li> <li>draw conclusions based on their data and observations</li> <li>use their scientific knowledge and understanding to explain their findings</li> <li>read, spell and pronounce scientific vocabulary correctly</li> <li>identify patterns that might be found in the natural environment</li> <li>look for different causal relationships in</li> </ul>	<ul style="list-style-type: none"> <li>notice patterns</li> <li>draw conclusions based on their data and observations</li> <li>use their scientific knowledge and understanding to explain their findings</li> <li>read, spell and pronounce scientific vocabulary correctly</li> <li>identify patterns that might be found in the natural environment</li> <li>look for different causal relationships in</li> </ul>

		<ul style="list-style-type: none"> <li>▪ talk about their findings to a variety of audiences in a variety of ways</li> </ul>	<ul style="list-style-type: none"> <li>▪ talk about their findings to a variety of audiences in a variety of ways</li> </ul>	increasing confidence.	increasing confidence.	<p>their data</p> <ul style="list-style-type: none"> <li>• discuss the degree of trust they can have in a set of results</li> <li>• independently report and present their conclusions to others in oral and written work</li> </ul>	<p>their data</p> <ul style="list-style-type: none"> <li>• discuss the degree of trust they can have in a set of results</li> <li>• independently report and present their conclusions to others in oral and written work</li> </ul>
<b>Using Scientific Evidence and Secondary Sources of Information</b>				<p><b>Identifying differences, similarities or changes related to simple scientific ideas and processes.</b></p> <p><b>Using straightforward scientific evidence to answer questions or to support their findings.</b></p>		<p><b>Identifying scientific evidence that has been used to support or refute ideas or arguments.</b></p>	
				<ul style="list-style-type: none"> <li>• make links between their own science results and other scientific evidence;</li> <li>• use straightforward scientific evidence to answer questions or support their findings</li> <li>• identify similarities, differences, patterns and changes relating to simple scientific ideas and processes</li> <li>• recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations</li> </ul>	<ul style="list-style-type: none"> <li>• make links between their own science results and other scientific evidence;</li> <li>• use straightforward scientific evidence to answer questions or support their findings</li> <li>• identify similarities, differences, patterns and changes relating to simple scientific ideas and processes</li> <li>• recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations</li> </ul>	<ul style="list-style-type: none"> <li>• use primary and secondary sources evidence to justify ideas</li> <li>• identify evidence that refutes or supports their ideas</li> <li>• recognise where secondary sources will be most useful to research ideas and begin to separate opinion from fact</li> <li>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas;</li> <li>• talk about how scientific ideas have developed over time</li> </ul>	<ul style="list-style-type: none"> <li>• use primary and secondary sources evidence to justify ideas</li> <li>• identify evidence that refutes or supports their ideas</li> <li>• recognise where secondary sources will be most useful to research ideas and begin to separate opinion from fact</li> <li>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas;</li> <li>• talk about how scientific ideas have developed over time</li> </ul>

Using Scientific vocabulary	Show curiosity about objects, events and people Questions why things happen Engage in open-ended activity	Read and spell scientific vocabulary at a level consistent with their increasing word and spelling knowledge at Key Stage 1			Read and spell scientific vocabulary correctly and with confidence using their growing word reading and spelling knowledge		Read, spell and pronounce scientific vocabulary correctly	
	<ul style="list-style-type: none"> <li>build up vocabulary that reflects the breadth of their experience</li> </ul>	<ul style="list-style-type: none"> <li>questions, answers, equipment, gather, measure, record, results, sort, group, test, explore, observe, compare, describe, similar/ities, different/ces</li> </ul>	<ul style="list-style-type: none"> <li>previous vocab plus observe changes over time, notice patterns, secondary sources, identify, classify, data,</li> </ul>	<ul style="list-style-type: none"> <li>previous vocab plus scientific enquiry, changes over time, notice patterns, secondary sources, comparative tests, fair tests, careful, accurate, observations, equipment, gather, measure, record, data, evidence, results, keys, bar charts, table, results, conclusions, predictions, support, thermometers</li> </ul>	<ul style="list-style-type: none"> <li>previous vocab plus enquiry types increase, decrease, identify, classify, order, notice patterns, relationships, appearance, present results, data loggers</li> </ul>	<ul style="list-style-type: none"> <li>previous vocab plus, notice patterns, relationships, independent variable,</li> <li>dependent variable, controlled variable, accuracy, precision, degree of trust, classification keys, scatter graphs, line graphs, causal relationships, support/refute, data loggers</li> <li>explore the etymology/ origin of word families and their meanings</li> </ul>	<ul style="list-style-type: none"> <li>Previous vocab plus opinion/fact, confidently name scientific enquiry types</li> <li>explore the morphology (prefix, suffix and root) of scientific words to aid reading</li> <li>explore the etymology/ origin of word families and their meanings</li> </ul>	