




Science Progression of Pitch – Working Scientifically

In the Primary Science curriculum, five types of enquiry are explicitly named in all year groups

- ✓ Observing changes over time
- ✓ Noticing patterns
- ✓ Grouping and classifying things (noticing similarities and differences)
- ✓ Comparative and fair testing
- ✓ Finding things out using secondary sources of information (researching)

Modelling is not explicitly mentioned but will be used. These types of enquiry will be used by children from year 1 to year 6 across the different subject areas as appropriate

Enquiry Type	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>Make observations of plants and animals and explain why some things occur.</p> <p>Seasonal change.</p>	<p>Use their own senses to describe.</p> <p>Talk about what they have found out and how they found out.</p> <p>Observe closely with support and scaffolding, using simple equipment.</p> <p>Notice patterns and relationships in observations independently.</p>	<p>Observe closely, using simple equipment.</p> <p>Record in a range of ways and begin to use simple scientific language.</p> <p>Notice patterns and relationships in their observations independently and use these to create a new enquiry.</p>	<p>Write about what has been found out.</p> <p>Form decisions about what observations to make and how long to make them for.</p>	<p>Help to make decisions about the type of simple equipment that might be used.</p> <p>Learn how to use new equipment appropriately.</p>	<p>Use a range of scientific equipment with increasing accuracy and precision.</p> <p>Make decisions about what observations to make, what measurements to use, and how long make them for.</p>	<p>Record data and results of increasing complexity using scientific diagrams and labels, tables and bar and line graphs.</p>
	<p>Look at similarities, differences, patterns and change in relation to places, objects, materials and living things.</p>	<p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>With help, record in a range of ways and begin to use simple scientific language.</p>	<p>Make tables and charts to help display data.</p> <p>Secondary sources.</p>	<p>Ask unprompted questions about what is observed</p> <p>Decide which types of scientific enquiry are likely to be the best ways of answering questions posed</p>	<p>Raise questions independently</p> <p>Record in notes, drawings, labelled diagrams, bar charts and simple tables so that patterns are clear.</p>	<p>Independently suggest reasons for similarities and differences.</p>	<p>Recognise how abstract ideas help them to understand and predict how the world operates.</p>
	<p>Group objects by colour, size and shape.</p>	<p>Describe how to identify and group familiar objects, biological beings or physical/chemical states.</p>	<p>Identifying and classifying groups of biological/chemical/physical materials independently</p>	<p>Discuss the criteria for grouping, sorting and classifying.</p>	<p>Use and design simple keys.</p>	<p>Use simple models to describe scientific ideas.</p>	<p>Use and design classification keys.</p>

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	<p>Look at similarities, differences in relation to places, objects, materials and living things.</p>	<p>Notice patterns and relationships in their observations.</p> <p>Make predictions around 'what might happen next.'</p>	<p>Undertake simple tests where they have been given the opportunity to select factors to change.</p> <p>Answer questions using data.</p> <p>Communicate what they have found out and how they found out.</p> <p>Evaluate their enquiry- do they know the answer?</p>	<p>Use standard units in testing to keep outcomes in the same measure.</p> <p>Explore the strengths of their own enquiry.</p> <p>Identify how a scientific concept's properties could be used creatively.</p>	<p>Recognise when a simple fair test is necessary.</p> <p>Collect data from their own observations and measurements and consider whether it is useful or right.</p> <p>Identify new questions arising from the data, making predictions for new values within or beyond the data collected.</p> <p>Find ways of improving what they have already done to solve an enquiry.</p>	<p>Draw conclusions based on data and observations.</p> <p>Plan different types of enquiry to answer questions.</p> <p>Use scientific knowledge and understanding to explain any findings.</p> <p>Recognise and control variables where necessary.</p> <p>Report and present findings from enquires, including conclusions, causal relationships and explanations of results.</p>	<p>Use evidence to justify ideas.</p> <p>Use test results to make predictions to set up further comparative and fair test.</p> <p>Analyse functions, relationships and interactions.</p>
	<p>Use a range of age-appropriate non-fiction texts.</p>	<p>Use observations to compare and contrast at first hand or through videos and photographs.</p> <p>Suggest answers to questions from own knowledge.</p>	<p>Gather and record data to suggest answers to their questions.</p> <p>Research simple secondary sources to find answers.</p> <p>Take measurements.</p>	<p>Identify how these properties make a scientific concept useful,</p> <p>Testing and develop ideas about everyday phenomena and the relationships between living things and familiar environments with the use of secondary resources.</p>	<p>Recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.</p>	<p>Use a wide range of secondary sources of information</p> <p>Recognise when secondary sources will be most useful to research ideas.</p>	<p>Recognise that scientific ideas change and develop over time</p> <p>Begin to separate opinion from fact.</p>