



Working Scientifically Progression

	EYFS	KS1	Lower KS2	Upper KS2
<p>Ask questions and plan enquiries</p>	<p>Make comments about what they have heard and ask questions to clarify their understanding.</p> <p>Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions</p>	<p>Asking simple questions and recognise that they can be answered in different ways.</p> <p>With teacher guidance devise questions which can be used to plan investigations with provided resources.</p> <p>Discuss together with teacher about how to use resources provided to answer questions.</p>	<p>Ask relevant questions and using different types of scientific enquiries to answer them.</p> <p>Independently use a range of question stems to form relevant questions.</p> <p>From a given range of resources decide how to gather evidence to answer questions.</p> <p>Recognise when secondary sources are needed to answer questions.</p> <p>Identify the type of enquiry chosen to answer questions.</p>	<p>Use acquired knowledge and previous experiences to ask scientific questions.</p> <p>Select and justify the type of enquiry to be used.</p> <p>Independently plan different types of scientific enquiries to answer their own questions, including recognising and controlling variables where necessary.</p> <p>Locate and use relevant secondary sources to answer questions which can not be addressed through practical work.</p>
<p>Set up and carry out an enquiry</p>	<p>Show an ability to follow instructions involving several ideas or actions</p> <p>Identify sort and group according to given criteria.</p> <p>Talk about what they are doing.</p>	<p>Perform simple tests with provided resources to: classify, compare, look for patterns and make observations over time</p> <p>Identify own criteria for sorting.</p> <p>Use simple secondary sources to help identify features and answer class questions.</p> <p>Talk about what they are doing and trying to find out using simple scientific vocabulary</p>	<p>Set up simple practical enquiries, comparative and fair tests from a range of practical resources.</p> <p>Follow a group plan with the identified resources to: classify, compare, look for patterns and make observations over time</p> <p>Use note taking guides and suggested texts to complete secondary research.</p>	<p>Select from a range of practical equipment to set up fair tests which will provide relevant and accurate data.</p> <p>Be able to recognise and control variables.</p> <p>Decide when and how to observe and take measurements at appropriate intervals.</p> <p>Discuss different ways to group and classify using scientific knowledge and language to justify criteria.</p>



	EYFS	KS1	Lower KS2	Upper KS2
<p>Observe and measure</p>	<p>Make observations using senses.</p> <p>Use a range of small tools, including scissors, paint brushes and cutlery</p> <p>Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps</p>	<p>Make careful observation to identify, compare and notice change</p> <p>Observe closely, using simple equipment.</p> <p>Make measurements using no standard units.</p>	<p>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment.</p> <p>Identify differences, similarities and changes related to simple scientific ideas and processes</p>	<p>Select most appropriate equipment to get accurate results.</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Make adaptations during enquiries as needed to take repeat reading, increase sample size, change units of measurements, frequency of readings or look for further sources.</p>
<p>Record</p>	<p>Explore the natural world around them, making observations and drawing pictures</p> <p>Begin to show accuracy and care when drawing</p> <p>Record using simple drawings, tick sheets, collecting artefacts.</p>	<p>Gather and record data to help in answering questions.</p> <p>Record findings using: simple tables and tick sheets, prepared tables, tally charts, pictographs and block graphs</p>	<p>Gather, record, classify and present data in a variety of ways to help in answering questions, sometimes choosing which to use.</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables(from editable given templates)</p> <p>Record classifications based on own criteria using tables, Venn and Carroll diagrams.</p>	<p>Independently decide how to record and present data.</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs and related scientific vocabulary.</p> <p>Present the same data in different ways to help with answering the questions.</p>



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<p>Interpret and report</p>	<p>Share their creations, explaining the process they have used</p> <p>Offer explanations for why things might happen, making use of recently introduced vocabulary</p> <p>Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary</p>	<p>Using their observations and ideas to suggest answers to questions</p> <p>Recognise biggest/ smallest, least/most, best worst from their data.</p>	<p>Using their observations, measurements or information found to suggest answers to their own and others' questions</p> <p>Generate simple comparative statements from their data.</p> <p>Begin to identify naturally occurring patterns and causal relationships.</p> <p>Use results and current knowledge to draw simple conclusions.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>	<p>Report and present findings from enquiries, to answer their own and others' questions; including conclusions, causal relationships and explanations in oral and written forms such as displays and other presentations</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Talk about how scientific ideas and understanding change due to new discoveries.</p>
<p>Evaluate</p>	<p>Make direct comparisons</p> <p>Say what they have noticed or found out.</p>	<p>Give opinions about what they have found out.</p> <p>Suggest anything they could do differently next time.</p> <p>Attempt to suggest why their discoveries happened</p>	<p>Identify ways methods were adapted methods during testing.</p> <p>Make predictions for new results based on additional or different variables using the same methods.</p> <p>Suggest improvements and raise further questions which could be investigated by extending the same enquiry.</p> <p>Use straightforward scientific evidence to answer questions or to support their findings</p>	<p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>Evaluate choice of method and equipment in relation to control of variables, accuracy of measurements or reliability of secondary sources.</p> <p>Identify any limitations in their data.</p>

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