

Progression in Working Scientifically			
EYFS	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
<p>Show curiosity about objects, events and people <i>Playing & Exploring</i> Questions why things happen Speaking: 30-50 months</p>	<p>Experience different types of science enquiries, including practical activities.</p> <p>Explore the world around them and raise their own simple questions.</p>	<p>Raise their own relevant questions about the world around them.</p>	<p>Use their science experiences to explore ideas and raise different kinds of questions.</p>
<p>Engage in open-ended activity <i>Playing & Exploring</i>. Take risks, engage in new experiences, and learn by trial and error - <i>Playing & Exploring</i>.</p>	<p>Begin to recognise different ways in which they might answer scientific questions.</p>	<p>Engage in a range of scientific experiences including different types of science enquiries to answer questions.</p>	<p>Talk about how scientific ideas have developed over time.</p>
<p>Find ways to solve problems / find new ways to do things / test their ideas <i>Creating & Exploring</i></p>	<p>Carry out simple tests.</p>	<p>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer</p>	<p>Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions.</p>

<i>Thinking Critically.</i>		questions.	
Show curiosity about objects, events and people - Playing & Exploring. Questions why things happen <i>Speaking: 30-50 months.</i>	Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying).	Set up simple practical enquiries, comparative and fair tests. Recognise when a simple fair test is necessary and help to decide how to set it up.	Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled - and why.
Develop ideas of grouping, sequences, cause and effect <i>Creating & Thinking Critically.</i> Know about similarities and differences in relation to places, objects, materials and living things. <i>ELG: The World.</i>	Ask people questions and use simple secondary sources to find answers.	Talk about criteria for grouping, sorting and classifying; use simple keys.	Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment.

<p>Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. <i>The World: 30-50 months.</i></p> <p>Closely observe what animals, people and vehicles do. <i>The World 8-20 months.</i> Use senses to explore the world around them <i>Playing & Exploring.</i></p>	<p>Observe closely using simple equipment.</p> <p>With help, observe changes over time.</p>	<p>Recognise when and how secondary sources might help them to answer questions, that cannot be answered through practical investigations.</p>	<p>Recognise which secondary sources will be most useful to research their ideas, and begin to separate opinion from fact.</p>
<p>Make links and notice patterns in their experience. <i>Creating & Thinking Critically.</i></p>	<p>With guidance, they should begin to notice patterns and relationships.</p>	<p>Take systematic and careful observations.</p> <p>Help to make decisions about what observations to make, how long to make them for, and the type of simple equipment</p>	<p>Make their own decisions about what observations to make, what measurements to use and how long to make them for.</p>

		that might be used.	
Choose the resources they need for their chosen activities ELG: <i>Self Confidence & Self-Awareness</i> . Handle equipment and tools effectively. ELG: <i>Moving & Handling</i> .	Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data.	Begin to look for naturally occurring patterns and relationships, and decide what data to collect to identify them.	Look for different causal relationships in their data and identify evidence that refutes or supports their ideas.
Create simple representations of events, people and objects. <i>Being Imaginative: 40-60+ months</i> .	Record simple data.	Take accurate measurements using standard units learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately.	Choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate.
Answer how and why questions about their experiences. ELG:	Use their observations and ideas to suggest answers to questions.	Collect and record data from their own observations and	Decide how to record data and results of increasing complexity from a choice of familiar

<p><i>Understanding.</i> Make observations of animals and plants and explain why some things occur, and talk about changes. <i>ELG: The World.</i></p>	<p>Talk about what they have found out and how they found it out.</p>	<p>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>approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p>
<p>Develop their own narratives and explanations by connecting ideas or events. <i>ELG: Speaking</i> Builds up vocabulary that reflects the breadth of their experience. <i>Understanding: 30-50 months.</i></p>	<p>With help, they should record and communicate their findings in a range of ways and begin to use simple scientific language</p>	<p>With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</p>	<p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p>
		<p>Use relevant simple scientific language to discuss their ideas and</p>	<p>Use relevant scientific language and illustrations to discuss, communicate and justify their</p>

		<p>communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions.</p>	<p>scientific ideas, 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>With support, children should 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 have already done.</p>	<p>Use their results to make predictions, and identify when further observations, comparative and fair tests might be needed.</p>