

Progression in working scientifically skills	<u>Year 1 / 2</u>	<u>Year 3 / 4</u>	<u>Year 5 / 6</u>
<p><b>Questioning</b> <i>Asking questions and recognising that they can be answered in different ways.</i></p>	<p>Asking simple questions and recognising that they can be answered in different ways.</p> <ul style="list-style-type: none"> <li>• Children develop their ability to ask questions</li> </ul>	<p>Answering relevant questions and using different types of scientific enquires to answer them.</p> <ul style="list-style-type: none"> <li>• Children use their prior knowledge when asking questions</li> </ul>	<p>Planning different types of scientific enquires to answer questions, including recognising and controlling variables where necessary.</p> <ul style="list-style-type: none"> <li>• Children independently ask scientific questions</li> <li>• Children decide for themselves how to gather evidence to answer a scientific question</li> </ul>
<p><b>Observing</b> <i>Making observations and taking measurements</i></p>	<p>Observing closely, using simple equipment.</p> <ul style="list-style-type: none"> <li>• Children make careful observations, which may notice change, aided by simple equipment (magnifying glasses or digital microscopes)</li> <li>• Children take measurements using non-standard units</li> </ul>	<p>Making systematic and careful observations, and where appropriate, take accurate measurements using a range of equipment.</p> <ul style="list-style-type: none"> <li>• Children make systematic and careful observations</li> <li>• Use a range of equipment for measuring length, time, temperature and capacity, using standard measurements</li> </ul>	<p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <ul style="list-style-type: none"> <li>• Children can select the correct measuring equipment to give the most precise results</li> <li>• During an enquiry, children can make decisions e.g. whether they need to: take repeat readings, increase a sample size or adjust the observation</li> </ul>
<p><b>Fair and comparative testing (including use of equipment)</b> <i>Engaging in practical enquiry to answer questions</i></p>	<p>Performing simple tests.</p> <ul style="list-style-type: none"> <li>• Children use practical resources to gather evidence to answer questions.</li> </ul>	<p>Setting up simple practical enquires, comparatives and fair tests.</p> <ul style="list-style-type: none"> <li>• Children select from a range of practical resources to gather evidence to answer questions.</li> </ul>	<p>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <ul style="list-style-type: none"> <li>• Children select from a range of practical resources to gather evidence to answer their own questions.</li> </ul>

<p><b><i>Identifying, Classifying and grouping</i></b>  <i>Using observations, tests and practical enquiry to answer questions.</i></p>	<p>Identifying and classifying.</p>	<p>Children use their own plans to observe, identify and classify.</p>	<p>Children use their own plans and adapt variables to observe, identify and classify.</p>
<p><b><i>Reporting - Analysing and presenting data</i></b>  <i>Recording and presenting evidence to answer questions and draw conclusions.</i></p>	<p>Gathering and recording data to help in answering questions</p>	<p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions, using scientific language and diagrams.</p>	<p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p>
	<ul style="list-style-type: none"> <li>• Children use their observations and testing to compare objects, materials and living things.</li> </ul>	<ul style="list-style-type: none"> <li>• Children follow their plan to carry out observations and tests to classify; comparative and simple fair tests; observations over time; and pattern seeking</li> </ul>	<ul style="list-style-type: none"> <li>• Children follow their plan to carry out observations; they decide what observations to make over time and for how long.</li> </ul>
	<ul style="list-style-type: none"> <li>• Children record observations and measurements using prepared resources.</li> <li>• Children classify using simple prepared tables or sorting rings.</li> </ul>	<ul style="list-style-type: none"> <li>• Children sometimes decide how to record and present evidence.</li> <li>• They record measurements and classifications using a variety of templates e.g. bar charts, tally charts or tables.</li> <li>• They draw conclusions based on their evidence and current subject knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>• Children decide how to record and present evidence using observations, classifications and measurements.</li> <li>• Children present the same data in different ways in order to help with answering the question.</li> <li>• In their conclusions, children identify causal relationships and patterns.</li> </ul>