



**Progression of Working Scientifically Skills: Science**

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Questioning	<p><b>They are beginning to ask a range of questions.</b></p> <p>They can answer how or why questions about their environment.</p> <p>They can answer how and why questions about their experiences</p> <p>They can ask appropriate questions about what they have heard.</p>	<p><b>Ask some simple questions using everyday language and begin to use some simple scientific words.</b></p> <p>Begin to recognise that questions can be answered in different ways such as: observing changes over time, grouping and classifying and simple tests.</p> <p>With support, use observations and ideas to suggest answers to questions.</p>	<p><b>Ask simple questions using everyday language and year 2 scientific language.</b></p> <p>Recognise that questions can be answered in different ways such as: observing changes over time, grouping and classifying, simple tests, researching using secondary sources and noticing patterns.</p> <p>Use observations and ideas to suggest answers to questions.</p>	<p><b>Begin to ask some relevant questions using scientific language.</b></p> <p>Begin to make some decisions about which type of enquiry will be the best way of answering questions including: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources.</p>	<p><b>Ask a range of relevant questions using scientific language.</b></p> <p>Make some decisions about which type of enquiry will be the best way of answering questions including: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources.</p>	<p><b>Begin to ask some significant scientific questions based on scientific concepts.</b></p> <p>Begin to plan different types of scientific enquiries to answer questions: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations, including recognising and controlling variables); and researching using secondary sources.</p>	<p><b>Ask a range of significant scientific questions based on scientific concepts.</b></p> <p>Plan the most appropriate type of scientific enquiry to answer questions including: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations, including recognising and controlling variables); and researching using secondary sources.</p>



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<b>Investigating</b>	<p><b>Begin to compare two things</b></p> <p>Can look for similarities and differences.</p> <p>Can identify a similarity or difference between two places, objects, materials or living things.</p>	<p><b>Begin to perform simple tests</b></p> <p>Begin to use practical resources to gather evidence to answer questions.</p> <p>With support, carry out: tests to classify; comparative tests; pattern seeking enquiries; and make observations over time.</p>	<p><b>Perform simple tests</b></p> <p>Use practical resources to gather evidence to answer questions.</p> <p>Carry out: tests to classify; comparative tests; pattern seeking enquiries; and make observations over time.</p>	<p><b>Begin to set up simple practical enquiries, comparative and fair tests</b></p> <p>Begin to select practical resources to gather evidence to answer questions generated by themselves or given to them.</p> <p>With support, they follow their plan to carry out: observations and tests to classify; comparative and simple fair tests; observations over time; and pattern seeking.</p>	<p><b>Set up simple practical enquiries, comparative and fair tests</b></p> <p>Select from a range of practical resources to gather evidence to answer questions generated by themselves or given to them.</p> <p>They follow their plan to carry out: observations and tests to classify; comparative and simple fair tests; observations over time; and pattern seeking.</p>	<p><b>Plan different types of scientific enquiries to answer questions</b></p> <p>Begin to decide for themselves how to gather evidence to answer a scientific question, choosing a type of enquiry to carry out.</p> <p>Select from a range of practical resources to gather evidence.</p> <p>Begin to recognise how secondary sources can be used to answer questions.</p> <p>Decide what observations or measurements to make over time and for how long.</p> <p>With support, look for patterns and relationships using a suitable sample.</p> <p>Carry out fair tests, beginning to recognise and control variables.</p>	<p><b>Independently, plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</b></p> <p>Decide for themselves how to gather evidence to answer a scientific question, choosing a type of enquiry to carry out and justifying their choice.</p> <p>Independently select from a range of practical resources to gather evidence.</p> <p>Recognise how secondary sources can be used to answer questions.</p> <p>Independently decide what observations or measurements to make over time and for how long.</p> <p>Look for patterns and relationships using a suitable sample.</p> <p>Carry out fair tests, recognising and controlling variables.</p>



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<b>Drawing conclusions</b>	<p><b>Begin to talk about what they have found out</b></p> <p>Begin to say what happened</p>	<p><b>Suggest answers to questions</b></p> <p>Describe what happened and whether they were surprised at the findings or not.</p> <p>Begin to orally answer questions based upon their findings and their experiences of the world</p>	<p><b>Suggest answers to questions and begin to look for patterns</b></p> <p>Use observations from their investigations to answer questions based upon their findings and their experiences of the world</p> <p>With support, begin to look for changes, patterns, similarities and differences in their findings</p>	<p><b>Draw simple conclusions and raise further questions</b></p> <p>Begin to use straightforward scientific evidence to answer questions or to support their findings using age-appropriate scientific language.</p> <p>With support, begin to look for changes, patterns, similarities and differences in their results in order to draw simple conclusions using age-appropriate scientific language.</p> <p>With support, begin to identify new questions arising from the results and make new predictions.</p>	<p><b>Use results to draw simple conclusions, suggest improvements and raise further questions</b></p> <p>Use straightforward scientific evidence to answer questions or to support their findings using age-appropriate scientific language.</p> <p>See patterns in results; begin to say what has been found out, linking cause and effect to develop simple conclusions. using age-appropriate scientific language.</p> <p>With support, begin to identify new questions arising from the results, make new predictions and suggest ways of improving what they have already done.</p>	<p><b>Draw conclusions, including any causal relationships and scientific explanations and set up further linked investigations</b></p> <p>Identify scientific evidence to support or refute ideas or arguments.</p> <p>Draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings.</p> <p>Use their findings to identify when further tests and observations are needed.</p>	<p><b>Draw conclusions, including any causal relationships and scientific explanations of and degree of trust in results and set up further linked comparative and fair tests</b></p> <p>Identify and explain the scientific evidence to support or refute ideas or arguments.</p> <p>Draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings including an analysis of the degree of trust in their findings.</p> <p>Use their findings to identify when further comparative, fair tests and observations are needed.</p>



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<b>Identifying &amp; Classifying</b>	<p><b>They are beginning to sort items using their senses</b></p> <p>Use all their senses in hands-on exploration.</p> <p>Explore collections of materials with similar and/or different properties.</p> <p>They can sort items by simple observable features.</p>	<p><b>Use their observations to identify &amp; classify.</b></p> <p>Make careful observations to identify features and notice changes.</p> <p>Sort and group living things or materials using similarities and differences.</p> <p>Use simple charts to identify unknown animals and plants.</p> <p>Begin to identify and describe how they group items.</p>	<p><b>Use given criteria to identify and classify.</b></p> <p>Sort and classify things according to given criteria.</p> <p>Classify items using simple prepared tables and sorting rings.</p> <p>Describe the characteristics they used to identify a living thing.</p>	<p><b>Identify and classify in different ways.</b></p> <p>Record classifications using Venn diagrams, Carroll diagrams, tables etc.</p> <p>Compare, classify and group items using Scientific criteria (e.g. magnetic, not magnetic).</p> <p>Independently, classify and group in different ways.</p>	<p><b>With support, use similarities and differences in order to group and identify.</b></p> <p>Begin to identify similarities/differences/changes when talking about scientific processes.</p> <p>Use and begin to create simple keys.</p>	<p><b>Use similarities and differences in order to group and identify.</b></p> <p>Accurately, identify similarities/differences/changes when talking about scientific processes and materials.</p>	<p><b>Independently, use similarities and differences in order to group and identify.</b></p> <p>Independently, identify similarities/differences/changes when talking about scientific processes and living things.</p> <p>Use and develop keys to identify, classify and describe living things.</p> <p>Identify and explain patterns seen in the natural environment.</p>



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<b>Recording and Presenting</b>	<p><b>Begin to record and present</b></p> <p>To draw pictures (of plants and animals)</p> <p>To create group/class block graphs to record votes/findings</p> <p>To present what they found out orally</p>	<p><b>With support, record and present simple findings and ideas</b></p> <p>To begin to draw diagrams and label</p> <p>To draw pictures (or take photographs) over a period of time</p> <p>To present grouping in a simple format</p> <p>To begin to complete simple tally tables, block graphs and pictograms</p> <p>To present findings orally.</p>	<p><b>Record and present simple findings and ideas</b></p> <p>To draw diagrams, using observations, and label parts, including over a period of time</p> <p>To present grouping in a given format</p> <p>To complete simple tally tables, block graphs and pictograms with a simple scale</p> <p>To present findings orally, with simple scientific language, and visually.</p>	<p><b>With support, record and present results and ideas</b></p> <p>To produce detailed labelled diagrams using observations, including over a period of time</p> <p>To begin to present results by creating or completing Venn and Carroll diagrams, tally, columned tables and simple bar charts, using scales</p> <p>To present results orally, visually or in written form with support, using simple scientific language</p>	<p><b>Record and present results and ideas</b></p> <p>To produce detailed labelled diagrams using observations, including over a period of time</p> <p>To present results by creating or completing Venn and Carroll diagrams, simple keys, tally, columned tables and simple bar charts, using scales</p> <p>To present results orally, visually or in written form, using key vocabulary and scientific language</p>	<p><b>With support, record and present data and ideas in detail</b></p> <p>To produce detailed labelled diagrams using observations, including over a period of time</p> <p>To present data by creating Venn and Carroll diagrams, keys, columned tables, scatter graphs, bar charts and line graphs, using appropriate scales</p> <p>To present results orally, visually and in written form, using key vocabulary and scientific language</p>	<p><b>Independently, record and present data and ideas in detail</b></p> <p>To independently produce detailed and accurate labelled diagrams using observations, including over a period of time</p> <p>To choose the most appropriate form to present data: Venn and Carroll diagrams, keys, columned tables, scatter graphs, bar charts and line graphs, using appropriate scales</p> <p>To present results orally, visually and in written form, using relevant key vocabulary and scientific language</p>