



Science Progression Map

Concept	EYFS			Y1/2	Y3/4	Y5/6
	Pre-nursery	Nursery	Reception			
Asking questions and recognising that they can be answered in different ways.	I show curiosity in my environment	I show curiosity in my environment With help, I can choose equipment to help me follow my own enquiry of interest	I select equipment to help me follow my own enquiry of interest, eg, Which mini beasts live in the outdoor classroom? I take part in simple experiments led by an adult (floating and sinking) discussing the differences in the objects. I can carry out a simple set up experiment (sorting materials) that enables me to talk about similarities	Asking simple questions and recognising that they can be answered in different ways. I can ask questions (such as what something is, how things are similar and different, the ways things work, which alternative is better, how things change and how they happen). I can sometimes answer these questions. I can answer questions when my teacher explains it through a scenario. I can plan how to use the resources provided to answer the questions. I can recognise how I can enquire in different ways, meaning I understand that there are different ways in which questions can be answered.	Asking relevant questions and using different types of scientific enquiries to answer them I can draw on prior knowledge to help answer a question. I can use a range of question stems to ask a relevant question. I can sometimes answer these questions. I can answer questions that my teacher asks by thinking about what I already know. I can use resources to gather evidence for a question. I can recognise when secondary sources can be used to answer questions that cannot be answered through practical work. I can identify the type of enquiry that I have chosen to answer my question (i.e. pattern seeking or comparative and fair test).	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. I can independently ask scientific questions. I can ask questions stimulated by a scientific experience. I can ask questions based on my developed understanding following an enquiry or investigation. I can use resources to gather evidence for a question. I can choose a type of enquiry suitable to carry out my question and justify my choice. I can recognise when secondary sources can be used to answer questions that cannot be answered through practical work.
Making observations and taking measurements	I show curiosity in my environment. I use all my senses in hands-on exploration	I show curiosity in my environment. I use all my senses in hands-on exploration	I make observations of animals. I make observations of plants. I observe and talk about the changes in objects over a period (melting).	Observing closely, using simple equipment I can explore the world around me. I can make careful observations of the things around me to support identification, comparison and change. I can use my senses to make my observations. I can use supported resources (i.e., magnifying glasses) to choose which senses to use more. I can take measurements by drawing comparisons. I can take measurements using non-standard units.	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers I can make systematic and careful observations. I can use a range of equipment for measuring length, time, temperature and capacity. I can use standard units for my measurements.	Making measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate I can select a suitable measuring method and therefore equipment to give the most precise results (e.g. ruler, tape measure or force meter). I can select an appropriate scale to use. I can decide whether I need to take repeat readings and why I might do this. During an enquiry, I can make decisions to alter my data collection based on my assessment of how the enquiry is going (e.g. I need more measurements, I need a bigger sample size).



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Engaging in practical enquiry to answer questions.			<p>I can classify materials based on their similarities and differences</p>	<p>Performing simple tests I can use practical resources provided to gather evidence to answer questions created by myself or my teacher.</p> <p>I can carry out: tests to classify; comparative tests; pattern seeking enquiries; and make observations over time.</p> <p>Identifying and classifying I can use my observations and testing to compare objects, materials and living things. I can sort and group these things, identifying my own criteria for sorting. I can use simple secondary sources (such as identification sheets) to name living things. I can describe the characteristics I used to identify a living thing.</p>	<p>Setting up simple practical enquiries, comparative and fair tests I can select from a range of practical resources to gather evidence to answer questions generated by myself or the teacher.</p> <p>I can follow my plan to carry out: observations and tests to classify; comparative and simple fair tests; observations over time; and pattern seeking.</p>	<p>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary I can select from a range of practical resources to gather evidence to answer their questions.</p> <p>I can carry out fair tests, recognising and controlling variables.</p> <p>I can decide what observations or measurements to make over time and for how long.</p> <p>I can look for patterns and relationships using a suitable sample.</p>
Recording and presenting evidence.		With help I record my observaitons in photographs	<p>I record my observations in drawings, writing and photographs.</p>	<p>Gathering and recording data to help in answering questions I can record my observations e.g. using photographs, videos, drawings, labelled diagrams or in writing. I can record my measurements e.g. using prepared tables, pictograms, tally charts and block graphs. I can classify using simple prepared tables and sorting rings.</p>	<p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables I can sometimes decide how to record and present evidence. I can record my observation e.g. using photographs, videos, pictures, labelled diagrams or writing. I can record my measurements e.g. using tables, tally charts and bar charts (given templates when needed). I can record classifications e.g. using tables, Venn diagrams, Carroll diagrams. With help, I can present the same data in different ways in order to help answer the question.</p>	<p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs I can decide how to record and present evidence. I can record observations e.g. using annotated photographs, videos, labelled diagrams, observational drawings, labelled scientific diagrams or writing. I can record measurements e.g. using tables, tally charts, bar charts, line graphs and scatter graphs. I can record classifications e.g. using tables, Venn diagrams, Carroll diagrams and classification keys. I can present the same data in different ways in order to help with answering the question.</p>

<p>Answering questions and concluding.</p>				<p>Using their observations and ideas to suggest answers to questions I can use my experiences of the world to suggest appropriate answers to questions.</p> <p>With help, I can relate these to my evidence e.g. observations I have made, measurements I have taken or information I have gained from secondary sources.</p> <p>I can recognise 'biggest and smallest', 'best and worst' etc. from my data.</p>	<p>Using straightforward scientific evidence to answer questions or to support their findings I can answer my own and others' questions based on observations I have made, measurements I have taken or information I have gained from secondary sources.</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes I can interpret the data to generate simple comparative statements based on my evidence. I can begin to identify naturally occurring patterns and causal relationships.</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions I can draw conclusions based on my evidence and current subject knowledge.</p>	<p>Identifying scientific evidence that has been used to support or refute ideas or arguments I can answer my own and others' questions based on observations I have made, measurements I have taken or information I have gained from secondary sources.</p> <p>When doing this, I can discuss whether other evidence e.g. from other groups, secondary sources and my scientific understanding, supports or refutes their answer. I can talk about how scientific ideas change due to new evidence being gathered.</p> <p>I can talk about how new discoveries change scientific understanding.</p> <p>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations In my conclusions, I can: identify causal relationships and patterns in the natural world from my evidence; identify results that do not fit the overall pattern; and explain my findings using my subject knowledge.</p>
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Evaluating and predicting.		I am beginning to make simple predictions with help from an adult.	I can make simple predictions with help from an adult.		<p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>I can identify ways in which I adapted my method as I progressed or how I would do it differently if I repeated the enquiry.</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>I can use my evidence to suggest values for different items tested using the same method.</p> <p>Following a scientific experience, I can ask further questions which can be answered by extending the same enquiry.</p>	<p>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</p> <p>I can evaluate, for example, the choice of method used, the control of variables, the precision and accuracy of measurements and the credibility of secondary sources used.</p> <p>I can identify any limitations that reduce the trust I have in my data.</p> <p>Using test results to make predictions to set up further comparative and fair tests</p> <p>I can use the scientific knowledge gained from enquiry work to make predictions I can investigate using comparative and fair tests.</p>
Communicating findings.					<p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>I can communicate my findings to an audience both orally and in writing, using appropriate scientific vocabulary.</p>	<p>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</p> <p>I can communicate my findings to an audience using relevant scientific language and illustrations.</p>