



KS1 and KS2 Skills Progression Map - Science

		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Science skills progression	Planning							
	Asking Questions	Asks questions about aspects of their familiar world.	Recognises the difference between a statement and a question. Begins to shape questions using different question stems.	With support, suggest own questions that they might investigate.	Asks questions independently and generate own ideas to explore through Scientific enquiry.	Asks questions and offers ideas for a range of scientific enquiry. With support, improves focus of question to clarify its scientific purpose.	Independently asks questions and offers ideas for scientific enquiry, which have a clear scientific purpose.	Recognises scientific questions that do not yet have definitive answers.
	Planning in detail	Generating a variety of ideas for testing (not always appropriate/ realistic).	Decides which questions can be answered practically and which cannot. Suggests next step, or a sequence of steps, in a plan.	Decides independently simple questions that could be answered practically and some that cannot.	Recognises when to answer a question by using a fair test method and when other methods might be needed. In a fair test identifies what to keep the same and sometimes ant to change and measure.	Knows when to answer a question by using a fair test method and when better evidence could be generated in other ways, e.g. through a survey, diary/log or research. Sets up a fair test controlling variables, what to keep the same, what to change, measure or observe.	Identifies the most appropriate enquiry methods to use to generate evidence needed to solve problems and answer scientific questions. Plan familiar enquiry types in appropriate detail.	Selects methods to use to solve problems or answer questions, including a full range of enquiry methods, which are planned in detail.
	Observing							
	Using Equipment	Measure by direct comparison. Non-standard units of measurement. Simple comparative vocabulary – bigger, smaller.	Begins to choose appropriate equipment to use to make observations and follows simple instructions for using it correctly and safely.	Chooses appropriate equipment from a selection and follows instructions for using it, sometimes working independently of adult support.	Selects from a wider range of equipment what to use in an investigation. Uses basic equipment correctly, safely and with increasing accuracy.	Uses a wide range of equipment for example thermometers and data loggers, correctly, safely, and accurately. Deals with most equipment difficulties independently before asking for help if necessary.	Selects the most appropriate equipment to use in a range of contexts and enquiries. Takes measurements using a range of science equipment with increasing accuracy and precision.	Explains why particular pieces of equipment or information sources will provide better quality evidence.

	Making Observations	<p>General sensory observations of animals and plants.</p> <p>Simple descriptions of the world around them.</p> <p>Looking at objects and pictures and discussing what they can see.</p>	<p>Makes relevant observations in familiar contexts.</p> <p>With support take some non-standard measurements.</p>	<p>Makes relevant observations. Takes non-standard measurements. Begins to use basic equipment for measuring length or mass, in standard units.</p>	<p>Makes relevant observations throughout an investigation.</p> <p>Uses standard measuring equipment for quantities, such as volume and temperature.</p>	<p>Chooses to make a series of observations that will add to the evidence they collect while investigating.</p> <p>With support, takes accurate readings on measuring equipment, recognising when to repeat them.</p>	<p>Chooses to make a series of observations or measurements that will add to the quality of the evidence collected while investigating.</p>	<p>Repeats sets of observations or measurements, where appropriate, selecting suitable ranges and intervals, to give sufficient depth of evidence.</p>
	Recording Presenting Evidence	<p>Talking about objects and events.</p> <p>Simple recording – pictures/images.</p>	<p>Use drawings and labels to present evidence.</p> <p>With support, uses prepared simple tables and charts, including ICT forms.</p>	<p>Uses drawings and labels to present evidence.</p> <p>Uses prepared tables and block graphs, including Computing forms.</p>	<p>Gathers, records, classifies and presents data in a variety of ways to help in answering questions.</p> <p>Sometimes creates own tables and bar charts, using ICT where appropriate.</p> <p>Interprets a line graph with support.</p>	<p>Selects the most appropriate way to present evidence they have collected.</p> <p>Records findings using drawings, labelled diagrams, bar charts, tables and graphs, using ICT where appropriate.</p> <p>Uses simple scientific language effectively to communicate outcomes.</p>	<p>Records data and results of increasing complexity using scientific diagrams, classification keys, tables, bar and line graphs and models.</p> <p>Communicates findings in written form, displays and uses other forms of presentation. Uses scientific language to communicate increasingly detailed analysis.</p>	<p>Decides on the most appropriate formats to present sets of scientific data, such as using line graphs for continuous variables.</p> <p>Communicates findings in written form, across a range of genre, and uses multi-media and other forms of presentation.</p>
	Concluding Drawing Conclusions	<p>Noticing ‘which worked best’ – simple comparative statements.</p> <p>Answer initial question simply.</p> <p>Answer how and why questions about their experiences.</p>	<p>Describes simple observations of an object with support and makes a simple comparison.</p>	<p>Describes what has happened, making comparisons where appropriate. With support, sequences results, e.g. from smallest to largest.</p>	<p>Reports on findings from enquiries, including oral and written, displays or presentations of results and conclusions.</p> <p>Makes a general statement about simple patterns they notice in a set of results.</p>	<p>Makes a comparative statement, sometimes referring to the factors under investigation.</p> <p>Identifies differences, similarities, or changes related to simple scientific ideas and processes.</p> <p>Uses straightforward scientific evidence to answer questions or</p>	<p>Where appropriate, makes a comparative statement, describing relationships between factors being investigated.</p> <p>Uses simple models to help describe scientific ideas.</p>	<p>Uses scientific evidence to answer questions or support findings.</p> <p>Draws valid conclusions that utilise more than one piece of supporting evidence.</p>

						to support their findings.		
	Explaining Evidence		With support, recognises the links between cause and effect in simple, familiar situations.	Recognises the link between cause and effect in simple, familiar situations. Begins to notice simple patterns in results.	Provides explanations for simple patterns in results, referring to everyday experiences when explaining reasoning.	Relates explanations of patterns in results to scientific knowledge and understanding when explaining reasoning.	Relates explanations of evidence gathered to scientific knowledge and understanding. Makes generalisations about what that evidence seems to indicate.	Provides explanations for differences repeated observations or measurements, identifying reasons for any anomalies noticed.
	Evaluating Outcomes		Reviews their work and with support, recognises some of the difficulties encountered.	Reviews their work and recognises some of the difficulties encountered. With support, suggests how these might have been avoided.	Suggests how an enquiry might be improved. With support, recognises some of the limitations and significance of evidence.	Suggest how much to trust results, identifying some of the limitations of evidence. Suggests new questions and predictions for setting up further tests.	Recognises some of the limitations of their evidence and can suggest why it should not be trusted. Uses test results to set up further comparative tests.	Evaluates the effectiveness of their working methods, making practical suggestions for improving them. Identifies scientific evidence that has been used to support or refute ideas or arguments.