



Working Scientifically Progression

	EYFS	KS1	LKS2	UKS2
Asking questions	Show curiosity and ask questions. They question why things happen.	Ask simple questions about the world around them.	Ask relevant questions considering their prior knowledge. Question stems could support this.	Independently ask a range of scientifically valid questions.
Making predictions	With support, say what they think might happen.	With support, make a simple prediction giving a reason.	Make predictions based on their scientific knowledge.	Make an informed prediction based on sound scientific understanding.
Identifying and classifying	Compare things by saying what is similar and different. Use simple criteria to sort things.	Use simple features to compare and group things into sorting rings, pre-prepared tables and Venn diagrams. Use simple identification keys to name living things	Can use their own and given criteria for grouping, sorting and classifying into tables, Venn diagrams and Carroll diagrams. Use simple keys	Independently, record classifications using tables, Venn diagrams and Carroll diagrams. Use more complex classification keys and develop their own.
Observations and measuring	Use senses to explore the world around them.	Observe closely using simple equipment e.g. magnifying glass to support identification, comparisons and noticing change Use simple measurements and equipment e.g. hand lenses, egg timers. They begin to take measurements, initially by comparisons, then using non-standard units.	Make systematic and careful observations. Take accurate measurements of length, time, temperature and capacity using standard units, using a range of equipment including thermometers and data loggers. Begin to make decisions about what equipment to use.	Make decisions about what to observe, record or measure Take measurements using a range of equipment with increasing accuracy Choose the most appropriate equipment to take measurements Take repeat readings where appropriate
Setting up tests	Experience different types of enquiries set up by a teacher. This could follow on from child led questions.	Begin to recognise different ways they might answer their questions with support from a teacher. They carry out: tests to classify; comparative tests; pattern seeking enquiries;	Help to make decisions about how to set up scientific enquiries to answer their questions. With help, can identify the type of enquiry they are using.	Independently plan investigations and select the most appropriate type of scientific enquiry to answer their questions including recognising when research is required.



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		and make observations over time.	Begin to recognise how to make a test fair. Set up simple practical enquiries themselves.	Recognise how to control variables in a fair test.
Recording data	As a group, record measurements and observations.	Record simple data to help answer questions e.g. drawings, diagrams and writing, pre-constructed tables, tally charts, pictograms and bar charts.	Record and present data in a variety of ways e.g. notes, bar charts, tables, drawings, labelled diagrams and keys.	Decide how to record data of increasing complexity using labelled scientific diagrams, notes, classification keys, tables, scatter graphs, bar graphs and line graphs.
Interpreting results	Answer how and why questions about their experiences.	Use their observations and ideas to suggest answers to questions With support, can relate this to their evidence	Using straightforward scientific evidence (e.g. measurements or observations) along with their subject knowledge to draw a conclusion and answer questions. Identify differences, similarities or changes related to simple scientific ideas and processes.	When drawing conclusions, identify scientific evidence that supports this and evidence that refutes their idea (this could be when sharing findings from different groups) Identify results that do not fit the overall pattern (anomalies)
Communicate results	Make observations of animals and plants and explain why some things occur, and talk about changes.	With help, they should communicate their findings in a range of ways and begin to use simple scientific language.	Use simple scientific language to report on findings from enquiries. Use oral and written explanations, displays or presentations of results and conclusions.	Communicate scientific ideas using relevant scientific language and illustrations. Report on conclusions, casual relationships and explanations in oral and written forms e.g. displays and presentations.
Evaluating			Find ways of improving their method Identify new questions arising from their enquiry.	Evaluate the degree of trust they have in their results by thinking about the accuracy of their method/measuring/recording



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			Make predictions for new values that would be tested using the same method.	and/or the reliability of secondary sources. Use their results to make predictions they can investigate using comparative and fair tests.
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