Progression of Enquiry Skills in Science

Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Explore the world around them and raise their own simple questions.	Raise their own relevant questions about the world around them.	Use their scientific experiences to explore ideas and raise different kinds of questions.
Experience different types of science enquires, including practical activities.	Exposed to different types of scientific enquiries.	Talk about how scientific ideas have developed over time.
Begin to recognise different ways in which they might answer scientific questions.	Begin to make their own decisions about the most appropriate type of scientific enquiry used to answer questions.	Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions.
Carry out simple tests.	Set up simple practical enquiries, comparative and fair tests. Recognise when a simple fair test is necessary and collaboratively set it up.	Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.
Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them by identifying and classifying.	Talk about criteria for grouping, sorting and classifying and use simple keys.	Use and develop keys and other information records to identify, classify and describe living things and materials and identify patterns that might be found in the natural environment.
Ask questions and use simple secondary sources to find answers.	Use secondary sources to help answer questions which cannot be answered through practical investigations.	Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact.
Observe closely using simple equipment with help, observe changes over time.	Make careful observations. Help to make decisions about what observations to make, how long to make them for and equipment required.	Make their own decisions about what observations to make, what measurements to use and how long to make them for.
With guidance, notice patterns and relationships.	Begin to look naturally for occurring patterns and relationships and decide what data to collect.	Look for different casual relationships in their data and identify evidence that supports their ideas or challenges it.

Use simple measurements and equipment to gather data.	Take accurate measurements with standard units. Learn how to use a range of equipment such as data loggers and thermometers appropriately.	Choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate.
Record simple data.	Collect and record data from their own observations and measurements in a variety of ways and help to make decisions about how to use analyse this data.	Decide how to record data and results of increasing complexity from a choice of familiar approaches; scientific diagrams, labels, classification keys, tables, scatter graphs and line graphs.
Use their observations and ideas to suggest answers to questions Talk about what they have found out and how they discovered it.	With help, pupils should look for changes, patterns, similarities and differences in their data to draw simple conclusions and answer questions.	Identify scientific evidence that has been used to support or challenge ideas.
With help, record and communicate findings in a range of ways and begin to use simple scientific language.	Use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results or conclusions.	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.
	With support, they should identify new questions arising from the data, making predictions for data and finding ways of improving what they have done.	User their results to make predictions and identify when further observations, comparative and fair tests might be needed.

I recognise questions can be answered in different ways

I can perform simple tests

I ask simple questions

I can compare things. I can sort and group them

I use specific scientific language

I can observe closely

I talk about what I have found out

I gather and record simple data in different ways

I can use simple equipment to make measurements

I set up my own simple tests

I ask my own questions and use different ways to answer them

I suggest improvements and raise further questions

I make observations

I use relevant scientific vocabulary

I use different equipment to measure

I draw simple conclusions and make predictions

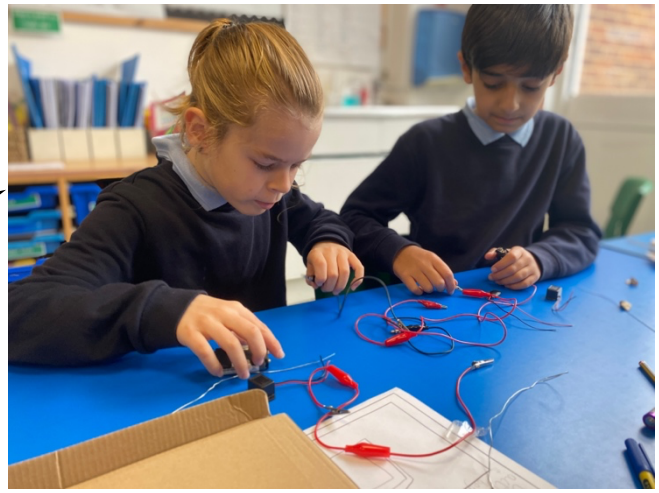
I explain what I have found out

I gather, record, classify and present data in different ways

I plan different types of scientific enquiries

I report and present findings using speaking and writing including displays and presentations

I ask different kinds of questions



I can set up fair tests when necessary

I use results to make predictions and set up more tests including for tests

I decide what observations and measurements to make

I use different scientific equipment to measure with precision. I take repeat readings when appropriate

I use relevant scientific language illustrations

I decide how to record data and results. I can use scientific diagrams, labels, classification, keys, tables, scatter, bar and line graphs