Science Skills Progression

EYFS - ELG statement: **UW - People and Communities:** They know about similarities and differences between themselves and others, and among families, communities and traditions. **UW - The world**: Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments may vary one from another. They make observations of animals and plants and explain why some things occur, and talk about changes. **UW - Technology:** Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

	Y1	Y2	Y3	Y4	Y5	Y6
General / asking questions	Understand the concept of 'a question' by demonstrating curiosity of the world around them.	Be able to ask a question. Understand that some questions can be answered in different ways e.g. testing, observing, research	Be able to ask relevant questions. Be able to suggest one way of finding an answer to a question, e.g. by research, by testing With support, make own decisions about which method of enquiry is best to answer a question.	Be able to ask relevant questions. Be able to suggest more than one way of finding an answer to a question, e.g. by research, by testing. Make own decisions about which method of enquiry is best to answer a question.	Be able to ask appropriate questions that can be investigated/tested. Explore ideas to understand that a range of enquiries can be used together to answer a question.	Refine a scientific question so that it can be investigated/tested. Plan a range of enquiries which can be used together to explore an answer to a question.
Observing changes over time	Understand that observation involves all of the senses. Begin to recognise that some observable features may change over time, e.g. the size of a plant. Use simple equipment provided, e.g. hand lenses, to make simple observations.	Recognise that some observable features may change over time, e.g. the size of a plant. Recognise that some observable features may change over time, and suggest reasons why they have occurred. Use a range of equipment provided, e.g. hand lenses, to make more accurate observations.	Make increasingly careful observations. Be able to select appropriate equipment to observe and measure Accurately use standard measures.	Make systematic observations. Be able to select and use appropriate equipment and explain why particular equipment chosen is appropriate to the task. Use an increasing range of standard measures accurately.	Make their own decisions about what observations to make, what measurements to use and for how long to make them, and whether to repeat them. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Make their own informed decisions about what observations to make, what measurements to use and for how long to make them, and whether to repeat them. Taking accurate measurements, using a range of scientific equipment, with increasing precision, taking repeat readings when appropriate.
Comparative and fair tests	Be able to compare the features of two objects.	Be able to compare the features of two objects; identify and explain what	Suggest and explain a practical way to find something out.	Suggest and make decisions about which practical method is best to	Planning different types of scientific enquiries to answer questions.	Planning different types of scientific enquiries to answer questions, including

		has changed.		find something out.		recognising and controlling variables where necessary.
	Identify what a variable is. Performing simple comparative tests	Identify the two variables in an investigation. Start to recognise when a test is not fair and suggest improvements. Performing simple tests.	With others, help to set up a fair test which has two clear variables.	Setting up simple practical enquiries, comparative and fair tests.	Recognise how to set up comparative and fair tests and explain which variables need to be controlled and why.	Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.
Identifying and classifying	Identify, sort and group objects and living things in their own way.	Identify and classify by recognising similarities and differences.	Be able to group objects and living things in different ways and talk about criteria for grouping, sorting and classifying. e.g. criteria for sorting rocks physical appearance, hardness, texture etc.	Be able to gather, record, classify and present data in a variety of ways to help in answering questions	Be able to independently use simple databases or keys to identify or classify living things, objects or events.	Be able to create more complex forms of classification tools, e.g. databases, branching keys. Understand that broad groupings, such as micro-organisms, plants and animals can be subdivided.
Looking for naturally occurring patterns and relationships	With help, begin to notice what has changed when observing things or events Talk about what they found out or what they think might happen With help begin to recognise links between observations and answers to questions	To begin to notice patterns and relationships from their observations Use evidence to suggest answers to their questions and begin to think about predictions Begin to use simple scientific language to talk about what they found out	Make simple predictions With help, look for changes, patterns, similarities and differences in their data Notice patterns and relationships Recognise links between observations and answers to questions Begin to draw simple conclusions from their observations Say whether what happened was what they expected and with support, identify new questions arising from their data	Be able to collect data from their own observations and measurements Use evidence and patterns in their data to draw simple conclusions, answer questions and make predictions Recognise when a result seems unusual, find ways to improve what they have done and identify when repeated results are necessary	Identify patterns that might be found in the natural environment Identify and offer explanations for anomalous results To recognise when evidence supports an idea or not	Systematically investigate the relationship between phenomena e.g light and shadows Look for causal relationships in their data and identify evidence that refutes or supports their ideas Find out how scientific ideas have changed and developed over time as new evidence is discovered

Recording and reporting findings	With help, they should record and communicate their findings in a range of ways (notes, tables and standard units) and begin to use simple scientific language.	Continue to use simple scientific language. Help to make decisions on how to record and analyse data in a range of ways. Begin to identify relevant evidence used to draw conclusions.	Use simple scientific language, drawings, labelled diagrams and keys when recording findings. Reporting on findings from enquiries including oral and written explanations of results and conclusions.	Record findings using relevant scientific language, drawings, labelled diagrams, keys, bar charts and tables. Reporting on findings from enquiries including oral and written explanations, displays and presentations of results and conclusions.	Record findings using relevant scientific language, drawings, labelled diagrams, keys, bar charts and tables. Report findings from enquiries including conclusions, causal relationships in oral and written forms such as displays and other presentations.	Recording findings using precise scientific language, drawings, labelled diagrams, keys, bar charts, line graphs and tables. Report 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.
Researching and using secondary sources	Use simple secondary sources, e.g. books, film, internet, to find information.	Use information from given secondary sources to help answer a question.	Use information from secondary sources to help answer a question	Use secondary sources and recognise when and how secondary sources might help answer questions that cannot be answered through practical investigations.	Use a range of secondary sources and recognise which source will be most useful to research their ideas and begin to separate opinion from fact.	Use secondary sources, e.g. internet links to research objects, events and phenomena that cannot be experienced in the classroom, e.g. planetary movements, animals from around the world. Identify scientific evidence that has been used to support or refute ideas or arguments.