Scientific Enquiry Progression in Skills

Sc1: Working scientifically

Early Years

Managing Self

Children at the expected level of development will:

- Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

ELG: The Natural World

Children at the expected level of development will:

- Explore the natural world around them, making observations and drawing pictures of animals and plants;
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class;
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

KS1	Lower KS2	Upper KS2
During **Years 1 and 2,** pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:	During **Years 3 and 4,** pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:	During **Years 5 and 6,** pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:
Ensure the use of the 5 Types of Enquiry throughout the school year: sorting and classifying, comparative and fair tests, patterns seeking, researching using secondary sources, observing over time		
Asking simple questions and recognising that they can be answered in different ways	Asking relevant questions and using different types of scientific enquiries to answer them	
Performing simple tests	Setting up simple practical enquiries, comparative and fair tests	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
Observing closely, using simple equipment	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
Gathering and recording data to help in answering questions	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	Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

Identifying and classifying	Identifying differences, similarities or changes related to simple scientific ideas and processes	Identifying scientific evidence that has been used to support or refute ideas or arguments
KS1	**Lower KS2**	**Upper KS2**
Using their observations and ideas to suggest answers to questions	Using straightforward scientific evidence to answer questions or to support their findings. Using results to draw simple conclusions, make predictions for new values and suggest improvements and raise further questions	Using test results to make predictions to set up further comparative and fair tests **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
	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	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**