Working scientifically progression

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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.	• asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions		• asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • 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 • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings.		• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • 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 a degree of trust in results, in oral and written forms such as displays and other presentations • identifying scientific evidence that has been used to support or refute ideas or arguments	

Key working scientifically vocabulary			
To… question answer describe group explore	To… observe identify sort record test predict compare equipment chart bar chart diagram data	To… measure classify conclude present investigate similarities differences results fair test method key table bar graph result research	To… enquire analyse evaluate variables control classification precise reliable scatter graph line graph interpret discrete continuous data theory hypothesis
Asking questions and recognising that they can be answered in different ways			
I can ask **questions**.	I can ask simple **questions**	I can ask relevant **questions** and use different types of scientific enquiries to answer them	I can plan different types of scientific **enquiries** to answer questions, including recognising and controlling variables where necessary.
Making observations and taking measurements			
I can **describe** objects, materials and living things. I can **explore** the world around me.	I can **observe** closely using simple equipment	I can make systematic and careful **observations** I can take accurate **measurements** using a range of equipment, including thermometers and data loggers.	I can take **measurements** using a range of scientific equipment, with increasing accuracy and precision. I can take repeat readings when appropriate.
Engaging in practical enquiry to answer questions			
I can put objects into **groups**	I can perform simple **tests** and **investigations** I can **identify** and **sort** different objects, materials and living things.	I can set up simple practical **enquiries** and **investigations** using **comparative** and **fair tests**.	I can plan different types of scientific **enquiries** to answer questions, including recognising and controlling **variables** where necessary.
Recording and presenting evidence			

	I can gather and **record** data to help in answering questions	I can gather, **record**, **classify** and **present** data in a variety of ways. I can **record** findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.	I can **record** data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
Answering questions and concluding			
I can **answer** simple questions. I can find **patterns**.	I can use my **observations** and ideas to suggest **answers** to questions	I can use straightforward scientific evidence to **answer** questions. I can identify **differences, similarities** or changes.	I can **report** and **present** findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms.
Evaluating and raising further questions and predictions			
	I can make **predictions**	I can use results to draw simple **conclusions**, make predictions for new values, suggest improvements and raise further questions.	I can use test results to make **predictions** to set up further comparative and fair tests. I can **evaluate** my findings.