

Working Scientifically – progression of key skills

NC: 'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group.

Types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources.

Pupils should seek answers to questions through collecting, analysing and presenting data.

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • Be curious about the world around them • Ask simple questions • Talk about what they can see, hear, smell, taste and touch • Say what might happen • Draw observations 	<ul style="list-style-type: none"> • Know how to ask simple scientific questions. • Know how to use simple equipment to make observations. • Know how to carry out simple tests. • Know how to explain to others what they have found out. • Know how to use simple data to answer questions. • Make simple predictions 		<ul style="list-style-type: none"> • Know how to ask relevant scientific questions. • Know how to use observations and knowledge to answer scientific questions. • Know how to set up a simple enquiry to explore a scientific question. • Know how to set up a fair test and explain why it is fair. • Know how to set up a test to compare. • Make careful and accurate observations, including the use of standard units. • Know how to use equipment to make measurements. • Gather, record, classify and present data in different ways to answer scientific questions. • Know how to use diagrams, keys, bar charts and tables; using scientific language. • Know how to use findings to report in different ways (oral & written). • Know how to draw conclusions and suggest improvements. • Know how to make a prediction with a reason and record results • Know how to identify differences, similarities and changes to a related enquiry. 		<ul style="list-style-type: none"> • Know how to plan different types of scientific enquiry. • Know how to control variables in an enquiry. • Measure accurately and precisely using a range of equipment. • Know how to record data and results using scientific diagrams and labels, classification keys, tables, bar and line graphs. • Make predictions, recording results and drawing conclusions. • Use the outcome of test results to make predictions and set up further comparative and fair tests. • Report findings from enquiries in a range of ways. • Know how to explain a conclusion from enquiry. • Explain causal relationships in an enquiry. • Know how to relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory. • Read, spell and pronounce scientific vocabulary accurately. 	