



# KS2 Science – Working Scientifically Skills progression

## KS2 Statutory objectives

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:

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 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

### KS2 Progression of skills

#### Y5

#### Y6

	Y5	Y6
Observation &	<ul style="list-style-type: none"> <li>Begin to relate conclusions to patterns, previous knowledge and observational evidence</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate the results of observations</li> <li>Combine observations to give new hypotheses</li> </ul>
Conclusion	<ul style="list-style-type: none"> <li>Make judgements and conclusions about what has been seen, and support these with known facts</li> <li>Justify their own theories through observation and conclusion</li> <li>Use straightforward scientific evidence to answer questions or support findings</li> </ul>	<ul style="list-style-type: none"> <li>Look for and understand poor data</li> <li>Identify differences, similarities or changes related to simple scientific ideas and processes</li> </ul>
Enquiry, Prediction,	<ul style="list-style-type: none"> <li>Offer explanations for differences</li> </ul>	<ul style="list-style-type: none"> <li>Use a range of scientific enquiry to answer questions</li> <li>Use test results to make predictions and to set up further comparative and fair tests</li> </ul>
Testing	<ul style="list-style-type: none"> <li>Modify tests for accuracy</li> <li>Plan different types of scientific enquiries to answer questions</li> <li>Recognise and control variables</li> <li>Make practical suggestions about working methods and improvements</li> <li>Use results to draw simple conclusions, make predictions for new values, suggest improvements</li> <li>Develop further observations and experiments from results</li> </ul>	
Data Collection	<ul style="list-style-type: none"> <li>Gather and classify data in a variety of ways</li> <li>Distinguish and discriminate between different elements of data</li> </ul>	<ul style="list-style-type: none"> <li>Identify scientific evidence that has been used to support or refute ideas or arguments.</li> <li>Repeat readings when appropriate</li> <li>Take accurate measurements using a range of equipment, including thermometers, with increasing accuracy and precision</li> </ul>
Recording	<ul style="list-style-type: none"> <li>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</li> <li>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> </ul>	<ul style="list-style-type: none"> <li>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results</li> </ul>