

Working Scientifically

National Curriculum Links	Planning	Obtaining and Presenting Evidence	Considering Evidence and Evaluating
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,	- Can they explore different ways to test an idea and choose the best way, and give reasons? - Can they vary one factor whilst keeping the others the same in an experiment? Can they explain why they do this? - Can they plan and carry out an investigation by controlling variables fairly and accurately? - Can they make a prediction with reasons? - Can they use information to help make a prediction? - Can they use test results to make further predictions and set up further comparative tests? - Can they explain (in simple terms) a scientific idea and what evidence supports it? - Can they present a report of their findings through writing, display and presentation?	- Can they explain why they have chosen specific equipment? (incl ICT based equipment) - Can they decide which units of measurement they need to use? - Can they explain why a measurement needs to be repeated? - Can they record their measurements in different ways? (incl bar charts, tables and line graphs) - Can they take measurements using a range of scientific equipment with increasing accuracy and precision?	- Can they find a pattern from their data and explain what it shows? - Can they use a graph to answer scientific questions? - Can they link what they have found out to other science? - Can they suggest how to improve their work and say why they think this? - Can they record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models? - Can they report findings from investigations through written explanations and conclusions?
	More Challenging		
	- Can they choose the best way to answer a question? - Can they use information from different sources to answer a question and plan an investigation? - Can they make a prediction which links with other scientific knowledge? - Can they identify the key factors when planning a fair test?	- Can they plan in advance which equipment they will need and use it well? - Can they make precise measurements? - Can they collect information in different ways? - Can they record their measurements and observations systematically?	- Can they draw conclusions from their work? - Can they link their conclusions to other scientific knowledge? - Can they explain how they could improve their way of working?

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.	Can they explain how a scientist has used their scientific understanding plus good ideas to have a breakthrough?	Can they explain qualitative and quantitative data?	
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