

Year 5 Progression map – The scientific method		
National curriculum objectives:	Scope:	Coherence:
<ul style="list-style-type: none"> 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 <p>Misconceptions:</p> <ul style="list-style-type: none"> accuracy and precision are the same thing A hypothesis must be proven true A hypothesis and prediction are the same thing Investigations are all about fair testing That experiments always give clear results 	<p>Substantive knowledge:</p> <ol style="list-style-type: none"> What is the scientific method? What are variables? What is the best equipment for the job? Is the data reliable? How did the scientific method transform blood transfusions? How did the scientific method help us learn about chimpanzees? <p>Disciplinary knowledge:</p> <ul style="list-style-type: none"> Design comparative test for a wheelchair ramp Comparative test – vinegar volcano Comparative test – data logger Fair testing Secondary research – blood transfusions Secondary research and observation over time <p>Key scientists:</p> <ul style="list-style-type: none"> Galileo Galilei Dr Charles Richard Drew Dr Jane Goodall 	<p>English:</p> <p>Reporting on findings, including oral and written explanations, text comprehension, discussing understanding and explaining meaning of words in context, predicting what might happen from details specified and implied</p> <p>Key vocabulary:</p> <p>Hypothesis, variables, Bunsen burner, data, measuring cylinder, pipette, accurate, average, conclusion, precision, precise, repeatable</p> <p>Maths:</p> <p>Taking accurate and measurements using standard units, calculate averages, decimal places</p> <p>History:</p> <p>History of various scientific discoveries</p>
Builds on:	Future learning:	Further reading:
Working Scientifically KS2:	Working scientifically	Awesome science experiments Experiments with the Scientific Method (In the Science Lab)

Plants, States of Matter, Living Things and Their Habitats, Animals Including Humans, Earth and space, Properties and changes of materials.		
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