



Mugginton CE Primary Science Enquiry Skills Progression September 2021



	Y1	Y2	Y3	Y4	Y5	Y6
	<i>Building understanding</i>		<i>Expand understanding</i>		<i>Refine and manipulate</i>	
NC Programme of Study	<p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> 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. 		<p>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> 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. 		<p>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:</p> <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 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. 	
Enquiry Skills	<p>The children explore the world around them, ask simple questions and recognise that these can be answered in different ways. They perform simple tests. They compare things by sorting and grouping them. They use observation to suggest answers to their questions. They use simple equipment to measure. They gather and record simple data in a variety of ways. They begin to notice patterns and relationships in their data. They talk about what they have found out using simple scientific language.</p>		<p>The children ask their own questions and answer them in different ways, suggesting improvements and raising further questions. They set up their own simple tests. They make careful observations. They use equipment accurately to measure in standard units. They gather, record and present data using drawings, labelled diagrams, keys, bar charts and tables. They explain their results both orally and in writing. They draw conclusions and use these to make new predictions. They use relevant scientific language.</p>		<p>The children ask different kinds of questions. They plan different types of scientific enquiries to answer their questions. They set up fair tests. They decide what observations and measurements to make. They use different scientific equipment to measure with precision, repeating them when appropriate. To make their own decisions about how to record their data using scientific diagrams, labels, classification, keys, tables, scatter, bar and line graphs. They make choices about how to present their findings: this could be orally, in writing, through displays or presentations. They use their results to make predictions and set up further fair tests. They use relevant scientific language and illustrations.</p>	
Key Vocabulary	<p>question, answer, observe, observing, equipment, identify, classify, sort, group, record, diagram, chart, map, data, compare, contrast, describe.</p>		<p>research, questions, scientific enquiry, comparative, fair test, systematic, observation, accurate, measurement, thermometer, data, logger, gather, record, classify, present, drawings, labelled diagrams, keys, bar charts, tables, conclusion, prediction, differences, similarities, changes, evidence, improve, secondary sources, guides, keys, construct, interpret.</p>		<p>plan, variables, measurements, accuracy, precision, repeat readings, scientific diagrams, labels, classification keys, tables, scatter graphs, bar graph, line graph, predictions, comparative test, fair test, conclusions, explanations, evidence, support, refute, identify, classify, describe, patterns, systematic, quantitative.</p>	