

St Mark's CE Primary School
Science Curriculum Map: Working Scientifically



Year	National Curriculum	Sticky Knowledge	Vocab
R	<ul style="list-style-type: none"> Ask a relevant scientific question to find out more, explain how things work and why they might happen. With support, use simple equipment, such as timers, rulers and containers, to measure length, height, capacity and time. Observe how activities are going and adapt their ideas if necessary. Record data in simple tables and pictograms. Represent scientific observations by mark making, drawing or creating simple charts and tables. Offer explanations for why things happen, making use of vocabulary, such as, because, then and next. 	<ul style="list-style-type: none"> Question words include who, why, what, when, where and how. When we try things out to see if they work, it is called a test. Data can be recorded in tables and pictograms. 	Look Change Same Different Guess Find out Why Because Then Next Measure Draw
1&2	<ul style="list-style-type: none"> Ask simple questions and recognise that they can be answered in different ways Observe closely, using simple equipment Perform simple tests Identify and classify Use their observations and ideas to suggest answers to questions Gather and record data to help in answering questions 	Year One: <ul style="list-style-type: none"> Question words include what, why, how, when, who and which. Simple tests can be carried out by following a set of instructions. Simple equipment can be used to measure distance, height, weight and time. Data can be recorded and displayed in different ways, including tables, pictograms and drawings. The results are information that has been found out from an investigation. 	Question Test Observe Measure Sort Same Different Results Record Equipment Compare Predict
		Year Two: <ul style="list-style-type: none"> Questions can help us find out about the world. Tests can be carried out by following a set of instructions. A prediction is a guess at what might happen in an investigation. Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. Data can be recorded and displayed in different ways, including tables, charts, pictograms and drawings. The results are information that has been found out from an investigation and can be used to answer a question. 	
3&4	<ul style="list-style-type: none"> Ask relevant questions and use different types of scientific enquiries to answer them Set up simple practical enquiries, comparative and fair tests Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gather, record, classify and present data in a variety of ways to help in answering questions 	Year 3: <ul style="list-style-type: none"> Questions can help us find out about the world and can be answered in different ways. Tests can be set up and carried out by following or planning a set of instructions. A prediction is a best guess for what might happen in an investigation based on some prior knowledge. Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Taking repeat readings can increase the 	Enquiry Fair test Predict Observe Measure Data Record Compare Results Conclude Evidence Improve



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	<ul style="list-style-type: none"> Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identify differences, similarities or changes related to simple scientific ideas and processes use straightforward scientific evidence to answer questions or to support their findings. 	<ul style="list-style-type: none"> accuracy of the measurement. An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features. Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions. Results are information that has been discovered as part of an investigation. A conclusion is the answer to a question that uses the evidence collected. <p>Year Four:</p> <ul style="list-style-type: none"> Questions can help us find out about the world and can be answered using scientific enquiry. Scientific enquiries can be set up and carried out by following or planning a method. A prediction is a statement about what might happen in an investigation, based on some prior knowledge or understanding. A fair test is one in which only one variable is changed and all others remain constant. Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers ($^{\circ}\text{C}$), and metre sticks, rulers or trundle wheels (millimetres, centimetres, metres). An observation involves looking closely at objects, materials and living things. Observations can be made regularly to identify changes over time. Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams. Results are information, such as data or observations, that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected. 	
5&6	<ul style="list-style-type: none"> Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Use test results to make predictions to set up further comparative and fair tests Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral 	<ul style="list-style-type: none"> Year 5: Questions can help us find out about the world and can be answered using a range of scientific enquiries. A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Specialised equipment is used to take measurements in standard units. Examples include data loggers plus sensors, such as light (lux), sound (dB) and temperature ($^{\circ}\text{C}$); timers (seconds, minutes and hours); thermometers ($^{\circ}\text{C}$), and measuring tapes (millimetres, centimetres, metres). An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over 	Variable Accuracy Precision Repeat readings Causal relationship Prediction Evidence Conclusion Refute Classify Line graph Interpretation

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	<p>and written forms such as displays and other presentations</p> <ul style="list-style-type: none"> Identify scientific evidence that has been used to support or refute ideas or arguments 	<p>time.</p> <ul style="list-style-type: none"> An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time. Data can be recorded and displayed in different ways, including tables, bar and line charts, classification keys and labelled diagrams. The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected. <p>Year 6:</p> <ul style="list-style-type: none"> Questions can help us find out about the world and can be answered using a range of scientific enquiries, including fair tests, research and observation. A method is a set of clear instructions for how to carry out a scientific investigation, including what equipment to use and observations to make. A variable is something that can be changed during a fair test. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Specialised equipment is used to take accurate measurements in standard units. Examples include data loggers plus sensors, such as light (lux), sound (dB) and temperature (°C); timers (seconds, minutes and hours); thermometers (°C) and measuring tapes (millimetres, centimetres, metres). An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time, identify processes and make comparisons. Data can be recorded and displayed in different ways, including tables, bar and line charts, scatter graphs, classification keys and labelled diagrams. The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered, using correct, precise terminology and collected evidence. 	
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