



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

	Nursery/Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically	<p>Understanding of the World</p> <ul style="list-style-type: none"> Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes. 	<p>Sticky Knowledge:</p> <ul style="list-style-type: none"> Ask questions such as, "Why are flowers different colours?" Set up a test to see which materials keep things warmest, know if the test has been successful and say what has been learned Explain to someone what has been learned and draw conclusions from the questions asked Use measures appropriate to Year 1 	<p>Sticky Knowledge:</p> <ul style="list-style-type: none"> Ask questions such as, "How long are roots of tall trees?" Use equipment to observe changes to the local area over the year Use microscopes to find out more about small creatures and plants Know how to set up a fair test Classify or group things according to a given criteria Draw conclusions from fair tests Use measures appropriate to Year 2 	<p>Sticky Knowledge:</p> <ul style="list-style-type: none"> Ask questions Make observations related to shadows and plants Conduct comparative and fair tests, explaining why a test is fair Use measures appropriate to Year 3 Group information according to common factors Present findings using written explanations and diagrams Make sense of findings and draw conclusions 	<p>Sticky Knowledge:</p> <ul style="list-style-type: none"> Ask questions Use research to find out answers to questions Set up and carry out fair and comparative tests, explaining why it is fair Use measures appropriate to Year 4 Gather and record information Present findings using written explanations and diagrams Use plausible reasons when making predictions Make sense of findings and draw conclusions 	<p>Sticky Knowledge:</p> <ul style="list-style-type: none"> Set up fair tests and enquiry based investigations Know what the variables are in a given enquiry Use measures appropriate to Year 5 Use a range of scientific instruments Record data in a variety of ways Create new investigations taking account of previous learning Evaluate findings Draw clear conclusions and make links to other work 	<p>Sticky Knowledge:</p> <ul style="list-style-type: none"> Know which type of investigation is needed Set up fair and enquiry based tests Identify variables Justify which variable has been isolated Record and present data in a variety of ways Make predictions using prior investigative work Draw clear conclusions and relate to other work in the class Give examples of something they've focused on when supporting a scientific theory
			<p>NC Knowledge</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>NC Knowledge</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>NC Knowledge</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 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 		