St Maxentius C.E. Primary School
Part of Archbishop Temple Trust

Progression of Working Scientifically

	Research & using Secondary Sources	Identifying, classifying & grouping	Pattern seeking	Observing over time	Comparative and fair testing
Reception	I show curiosity about objects, events and people (Playing & Exploring) I question why things happen (Speaking: 30-50 months) I can take a risk, engage in new experiences and learn by trial and error (Playing & Exploring)	I can develop ideas of grouping, sequences, cause and effect (Creative & Thinking Critically)	I can closely observe what animals, people and vehicles do (The World: 80-20 months) I can use my senses to explore the world around me (Playing & exploring) I can make links and notice patterns in my own experience (Creating & Thinking Critically)	I can comment and ask questions about aspects of my familiar world such as the place where I live or the natural world (30-50 months)	I can create simple representations of events, people and objects (Being imaginative: 40-60+ months) Find ways to solve problems/find new ways to do things/test their ideas (Creating & Thinking Critically)
EYFSP	I understand some important processes and changes in the natural world around me, including the seasons and changing states of matter. (ELG: UTW)	I know some similarities and differences between the natural world around me and contrasting environments, drawing on my own experience and what has been read in class. (ELG: UTW)	I understand some important processes and changes in the natural world around me, including the seasons and changing states of matter. (ELG: UTW)	I can explore the natural world around me, making observations and drawing pictures of animals and plants (ELG: UTW)	I understand some important processes and changes in the natural world around me, including the seasons and changing states of matter. (ELG: UTW)
Year 1	**(S1)** I can ask people simple questions and use some simple secondary sources to find the answers.	**(S2)** I can use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.	**(S3)** I can observe changes over time and I begin to notice patterns and relationships, with some guidance.	**(S4)** I can look closely and use simple equipment such, as hand lenses and egg timers.	**(S5a)** With help, I can record and communicate my findings in a range of ways and begin to use simple scientific language. **(S5b)** I can perform simple tests with support.
Year 2 (NC)	**(S1)** I can ask simple questions and recognise that they can be answered in different ways.	**(S2)** I can identify and classify.	**(S3)** I can use my observations and ideas to suggest answers to questions.	**(S4)** I can observe closely, using simple equipment.	**(S5a)** I can gather and record data to help in answering questions. **(S5b)** I can perform simple tests.
Year 3	**(S1a)** I can ask questions, and with some support or guidance, use different types of enquiries to answer them. **(S1b)** I can use straightforward scientific evidence to answer given questions.	**(S2a)** I can talk about criteria for grouping, sorting and classifying and use simple keys. **(S2b)** I can record findings using simple scientific language including keys, with some support.	**(S3a)** I look for naturally occurring patterns and relationships and I can decide what data to collect to identify them. **(S3b)** With help, I can identify changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.	**(S4a)** With help, I can make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used. **(S4b)** I can collect data from my own observations and measurements, using notes, simple tables and standard units.	**(S5a)** I can set up simple practical enquiries, and know when a fair test is necessary. **(S5b)** With support, I can identify new questions arising from the data, making predictions for new values within or beyond the data, finding ways of improving what I have already done. **(S5c)** I can record findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables with some support. **(S5d)** I can report my findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Year 4 (NC)	**(S1a)** I can ask relevant questions and use different types of scientific enquiries to answer them. **(S1b)** I can use straightforward scientific evidence to answer questions or to support my findings.	**(S2)** I can gather, record, classify and present data in a variety of ways to help in answering questions **(S2b)** I record findings using simple scientific language including keys.	**(S3)** I can identify differences, similarities or changes related to simple scientific ideas and processes.	**(S4)** I make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	**(S5a)** I can set up simple practical enquiries, comparative and fair tests. **(S5b)** I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions **(S5c)** I record findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables **(S5d)** I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
Year 5	**(S1)** I can recognise which secondary sources will be most useful to research my ideas and begin to separate opinion from fact.	**(S2a)** I can use and develop keys and other information records to identify, classify and describe living things and materials. **(S2b)** I can record data and results of increasing complexity using scientific diagrams and classification keys.	**(S3)** I can identify patters that might be found in the natural environment and decide what data to collect to identify them.	**(S4a)** I can choose what observations to make, what observations to use and how long to make them for, and whether to repeat them. **(S4b)** I can choose the most appropriate equipment to take measurements and explain how to use it accurately.	**(S5a)** I can select and plan the most appropriate type of scientific enquiry to answer scientific questions. I can recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. **(S5b)** I can use results to identify when further tests or observations might be needed. **(S5c)** I can record data and results of increasing complexity using scientific diagrams and labels, tables and bar graphs.
Year 6 NC	**(S1)** I can identify scientific evidence that has been used to support or refute ideas or arguments	**(S2)** I can record data and results of increasing complexity using scientific diagrams including classification keys.	**(S3)** I can report and present findings from enquiries, including causal relationships, in oral and written forms such as displays and other presentations.	**(S4)** I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	**(S5a)** I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. **(S5b)** I can use test results to make predictions to set up further comparative and fair tests **(S5c)** I can record data and results of increasing complexity using scientific diagrams and labels, tables, scatter graphs, bar and line graphs. **(S5d)** I can report and present findings from enquiries, including conclusions and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.