St Oswald's Science Working Scientifically Progression Map

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Ask questions and plan enquiry	Show curiosity about objects, events and people. Questions why things happen. Comment and ask questions about aspects of their familiar world such as the place where they live or the natural world.	Ask simple questions about the world around them. Begin to recognise that questions can be answered in different ways. Begin to use simple secondary sources to find answers.	Ask simple questions about the world around them. Recognise that questions can be answered in different ways (noticing patterns, grouping, and classifying, comparative and fair tests, research, observing changes over time). Use simple secondary sources to find answers.	Ask some relevant questions about the world and use different types of scientific enquires to answer them. Begin to make decisions about which type of enquiry will be the best way of answering questions (observing over time, noticing patterns, groups and classifying, fair tests, secondary sources). Begin to decide when and how to use secondary sources and carry out own research.	Ask increasingly relevant scientific questions about the world and use different types of scientific enquires to answer them. Make decisions about which type of enquiry will be the best way of answering questions including observing over time, noticing patterns, groups and classifying, comparative and fair tests, secondary sources. Decide when and how to use secondary sources and carry out own research.	Explore ideas and raise different kinds of questions about scientific phenomena. Begin to select and plan the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping, and classifying, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information). Begin to recognise which secondary sources will be the most useful to research their ideas.	Use scientific experiences to explore ideas and raise different kinds of questions. Select and plan the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping, and classifying, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information). Recognise which secondary sources will be the most useful to research their ideas.

Set up enquiry	*Engage in open-ended activity.* *Choose the resources they need for their chosen activities.*	*Begin to say what might happen in an investigation.*	*Begin to predict what might happen in an investigation.*	*Set up some simple, practical enquiries, comparative and fair tests.* *Begin to recognise when a fair test is necessary and help decide how to set it up.* *Make predictions with reasons.*	*Set up practical enquiries, comparative and fair tests.* *Recognise when a fair test is necessary and help decide how to set it up.* *Make predictions with reasons, drawing on previous experience and knowledge.*	*Set up comparative and fair tests and begin to decide which variables to control.* *Make and explain predictions.*	*Set up comparative and fair tests and decide which variables to control and why.* *Make and explain predictions using scientific language and begin to support with scientific evidence.*
Observe and measure	*Take a risk, engage in new experiences and learn by trial and error.* *Use senses to explore the world around them.* *Handle equipment and tools effectively.* *Closely observe what animals, people and vehicles do.*	*Carry out simple tests with support.* *Talk about what they can see.* *Use simple equipment (e.g. hand lenses, egg timers) with support.* *Begin to observe and identify, compare, and describe.*	*Carry out simple tests.* *Observe closely, using simple equipment (e.g. hand lenses, egg timers).* *Observe changes over time and with support notice pattern and relationships.*	*Begin to make systematic and careful observations and, where appropriate, take accurate measurements using standard units using a range if equipment- e.g. thermometers, data loggers.* *Learn to use some new equipment- e.g. data loggers.*	*Make systematic and careful observations and where appropriate, take accurate measurements using standard units using a range if equipment- e.g. thermometers, data loggers.* *Help make decisions about what observations to make, how long to make them for and the type of equipment that might be used.*	*Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.* *Begin to make decisions about what observations to make, how long to make them for and whether to repeat them.*	*Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.* *Make decisions about what observations to make, how long to make them for and whether to repeat them.* *Choose the most appropriate equipment and use it accurately.*

	Make observations of animals and plants and explain why some things occur and talk about changes.			Begin to measure accurately using standard units including time in mins and secs.	Choose from a selection of equipment. Measure accurately using standard units including time in mins and secs.	Choose the most appropriate equipment and use it correctly. Begin to take accurate and precise measurements- N, g, kg, mm, cm, mins, secs.	Take accurate and precise measurements- N, g, kg, mm, cm, mins, secs.
Record	Develop ideas of grouping, sequences, cause and effect.	Gather and record data (e.g. simple tables) with support. With support, decide how to group objects and materials. Describe how to identify and classify with support.	Gather and record data (e.g. simple tables). Decide how to sort and group objects, materials and living things. Describe how to identify and classify.	Gather, record and begin to classify and present data in a variety of ways to help in answering questions. Begin to record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables. Begin to talk about criteria for grouping, sorting and classifying. Begin to compare and group according to behaviour or properties.	Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using scientific language, drawings, labelled diagrams, bar charts and tables. Talk about criteria for grouping, sorting and classifying and use simple keys. Compare and group according to behaviour or properties.	Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs. Begin to decide how to record data from a choice of familiar approaches. Begin to use and develop keys and other information records to identify, classify and describe living things and materials.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line or scatter graphs. Decide how to record data from a choice of familiar approaches. Use and develop keys and other information records to identify, classify and describe living things and materials.

Interpret and report	Answer how and why questions about their experiences. Know about similarities and differences in relation to places, objects, materials and living things. Develop their own narratives and explanations by connecting ideas or events.	Begin to say what happened in an investigation. Begin to talk about what they have found out. Begin to use observations to suggest answers to questions.	Say what happened in an investigation. Talk about what they have found out and begin to use simple scientific language. Use observations to suggest answers to questions.	Begin to use results to draw simple conclusions, make predictions, suggest improvements, and raise further questions. Begin to identify differences, similarities, or changes related to simple scientific ideas or processes.	Use results to draw simple conclusions, make predictions, suggest improvements and raise further questions. Report of findings from enquires, including oral and written explanations, displays or presentations of results and conclusions. Use relevant scientific language to discuss ideas and communicate findings. Identify changes, patterns, similarities, and differences in data. Identify differences, similarities, or changes related to simple scientific ideas or processes.	Begin to report and present findings from enquiries using scientific language. Begin to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms. Begin to use evidence to justify ideas and conclusions.	Report and present findings from enquiries using detailed scientific language. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms. Use evidence to justify ideas and conclusions. Identify scientific evidence that has been used to support and refute ideas.

Evaluate	*Make links and notice patterns in their experience.*	*Begin to explain what happened in an investigation and whether it surprised them.*	*Explain what happened in an investigation and whether it surprised them.*	*Begin to use results to draw simple conclusions, make predictions, suggest improvements, and raise further questions.*	*Use results to draw simple conclusions, make predictions, suggest improvements, and raise further questions.*	*Begin to use test results to make predictions and set up further comparative and fair tests.*	*Use test results to make predictions and set up further comparative and fair tests.*
Vocabulary	*Build up vocabulary that reflects the breadth of their experience.*	*Use some simple scientific language* *Begin to use some science words.* *Use comparative language with support.*	*Use simple scientific language and some science words.* *Use comparative language – bigger, faster etc*	*Begin to use some scientific language to talk and write about what they have found out.* *Begin to use relevant scientific language.* *Begin to use comparative and superlative language.*	*Use some scientific language to talk and write about what they have found out.* *Use relevant scientific language.* *Use comparative and superlative language*	*Begin to read, spell and pronounce scientific vocabulary correctly.* *Begin to use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.* *Begin to confidently use a range of scientific vocabulary.* *Begin to use scientific ideas when describing simple processes. Am beginning to use the correct science vocabulary*	*Read, spell and pronounce scientific vocabulary correctly.* *Use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.* *Confidently use a range of scientific vocabulary.* *Use scientific ideas when describing simple processes.*