

St Oswald's Science Working Scientifically Progression Map

| | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Questioning and enquiring | <p>Show curiosity about objects, events and people.</p> <p>Questions why things happen.</p> <p>Comment and ask questions about aspects of their familiar world such as the place where they live or the natural world.</p> | <p>Ask simple questions about the world around them.</p> <p>Begin to recognise that questions can be answered in different ways.</p> <p>Begin to use simple secondary sources to find answers.</p> | <p>Ask simple questions about the world around them.</p> <p>Recognise that questions can be answered in different ways (noticing patterns, grouping and classifying, comparative and fair tests, research, observing changes over time).</p> <p>Use simple secondary sources to find answers.</p> | <p>Ask some relevant questions about the world and use different types of scientific enquires to answer them.</p> <p>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).</p> <p>Begin to decide when and how to use secondary sources and carry out own research.</p> | <p>Ask increasingly relevant scientific questions about the world and use different types of scientific enquires to answer them.</p> <p>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.</p> <p>Decide when and how to use secondary sources and carry out own research.</p> | <p>Explore ideas and raise different kinds of questions about scientific phenomena.</p> <p>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).</p> <p>Begin to recognise which secondary sources will be the most useful to research their ideas.</p> | <p>Use scientific experiences to explore ideas and raise different kinds of questions.</p> <p>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).</p> <p>Recognise which secondary sources will be the most useful to research their ideas.</p> |

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| <p>Investigating, recording and reporting findings, drawing conclusions</p> | <p>Engage in open-ended activity.</p> <p>Take a risk, engage in new experiences and learn by trial and error.</p> <p>Use senses to explore the world around them.</p> <p>Choose the resources they need for their chosen activities.</p> <p>Handle equipment and tools effectively.</p> <p>Answer how and why questions about their experiences.</p> | <p>Carry out simple tests with support.</p> <p>Begin to say what might happen in an investigation.</p> <p>Begin to say what happened in an investigation.</p> <p>Gather and record data with support.</p> <p>Begin to talk about what they have found out.</p> <p>Begin to explain what happened in an investigation.</p> | <p>Carry out simple tests.</p> <p>Begin to predict what might happen in an investigation.</p> <p>Say what happened in an investigation.</p> <p>Gather and record data (e.g. simple tables).</p> <p>Talk about what they have found out and begin to use simple scientific language.</p> <p>Explain what happened in an investigation and whether it surprised them.</p> | <p>Set up some simple, practical enquiries, comparative and fair tests.</p> <p>Begin to recognise when a fair test is necessary and help decide how to set it up.</p> <p>Make predictions with reasons.</p> <p>Gather, record and begin to classify and present data in a variety of ways to help in answering questions.</p> <p>Begin to record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.</p> <p>Begin to use results to draw simple conclusions, make predictions, suggest</p> | <p>Set up practical enquiries, comparative and fair tests.</p> <p>Recognise when a fair test is necessary and help decide how to set it up.</p> <p>Make predictions with reasons, drawing on previous experience and knowledge.</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>Record findings using scientific language, drawings, labelled diagrams, bar charts and tables.</p> <p>Use results to draw simple conclusions, make predictions, suggest improvements and raise further questions.</p> | <p>Set up comparative and fair tests and begin to decide which variables to control.</p> <p>Make and explain predictions.</p> <p>Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs.</p> <p>Begin to report and present findings from enquiries using scientific language.</p> <p>Begin to decide how to record data from a choice of familiar approaches.</p> <p>Begin to report and present findings from enquiries, including conclusions, causal relationships and explanations of and</p> | <p>Set up comparative and fair tests and decide which variables to control and why.</p> <p>Make and explain predictions using scientific language and begin to support with scientific evidence.</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line or scatter graphs.</p> <p>Report and present findings from enquiries using detailed scientific language.</p> <p>Decide how to record data from a choice of familiar approaches.</p> <p>Report and present findings from enquiries, including conclusions, causal relationships and explanations of and</p> |
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| | | | | <p>improvements and raise further questions.</p> | <p>Report of findings from enquires, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Use relevant scientific language to discuss ideas and communicate findings.</p> <p>Identify changes, patterns, similarities and differences in data.</p> <p>Suggest how to improve an investigation.</p> | <p>degree of trust in results, in oral and written forms.</p> <p>Begin to use evidence to justify ideas and conclusions.</p> <p>Begin to use test results to make predictions and set up further comparative and fair tests.</p> | <p>degree of trust in results, in oral and written forms.</p> <p>Use evidence to justify ideas and conclusions.</p> <p>Identify scientific evidence that has been used to support and refute ideas.</p> <p>Use test results to make predictions and set up further comparative and fair tests.</p> |
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| <p>Observing, measuring and pattern seeking</p> | <p>Make links and notice patterns in their experience.</p> <p>Closely observe what animals, people and vehicles do.</p> <p>Make observations of animals and plants and explain why some things occur, and talk about changes.</p> | <p>Talk about what they can see.</p> <p>Use simple equipment with support.</p> <p>Begin to use observations to suggest answers to questions.</p> | <p>Observe closely, using simple equipment (e.g. hand lenses, egg timers).</p> <p>Use observations to suggest answers to questions.</p> <p>Observe changes over time (with support) and begin to notice patterns.</p> | <p>Begin to make systematic and careful observations and where appropriate, take accurate measurements using standard units using a range of equipment- e.g. thermometers, data loggers.</p> <p>Learn to use some new equipment- e.g. data loggers.</p> <p>Begin to measure accurately using standard units including time in mins and secs.</p> | <p>Make systematic and careful observations and where appropriate, take accurate measurements using standard units using a range of equipment- e.g. thermometers, data loggers.</p> <p>Help make decisions about what observations to make, how long to make them for and the type of equipment that might be used.</p> <p>Choose from a selection of equipment.</p> | <p>Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</p> <p>Begin to make decisions about what observations to make, how long to make them for and whether to repeat them.</p> <p>Choose the most appropriate equipment and use it correctly.</p> <p>Begin to take accurate and precise measurements- N, g, kg, mm, cm, mins, secs.</p> | <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</p> <p>Make decisions about what observations to make, how long to make them for and whether to repeat them.</p> <p>Choose the most appropriate equipment and use it accurately.</p> <p>Take accurate and precise measurements- N, g, kg, mm, cm, mins, secs.</p> |
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| <p>Identifying, grouping and classifying</p> | <p>Develop ideas of grouping, sequences, cause and effect.</p> <p>Know about similarities and differences in relation to places, objects, materials and living things.</p> <p>Develop their own narratives and explanations by connecting ideas or events.</p> | <p>Identify and classify with support.</p> <p>Begin to observe and identify, compare and describe.</p> <p>With support, decide how to group objects and materials.</p> | <p>Identify and classify with support.</p> <p>Decide how to sort and group objects, materials and living things.</p> | <p>Begin to identify differences, similarities, or changes related to simple scientific ideas or processes.</p> <p>Begin to talk about criteria for grouping, sorting and classifying.</p> <p>Begin to compare and group according to behaviour or properties.</p> | <p>Identify differences, similarities, or changes related to simple scientific ideas or processes.</p> <p>Talk about criteria for grouping, sorting and classifying and use simple keys.</p> <p>Compare and group according to behaviour or properties.</p> | <p>Begin to use and develop keys and other information records to identify, classify and describe living things and materials.</p> | <p>Use and develop keys and other information records to identify, classify and describe living things and materials.</p> |
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| 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, later, 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, later, 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 conventions such as trend, rogue result, support prediction and -er word generalisation. 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 conventions such as trend, rogue result, support prediction and -er word generalisation. Use scientific ideas when describing simple processes. |
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