

Progression in Working Scientifically Silver Threads Curriculum Mapping – What does it look like?

Silver Threads:	Research	Identifying and Classifying	Observing Over Time	Pattern Seeking	Comparative and Fair Testing.
EYFS Taken from ELG 2021	<p>Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.</p> <p>Make comments about what they have heard and ask questions to clarify their understanding.</p> <p>Offer explanations for why things might happen, making use of recently introduced vocabulary.</p> <p>Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</p>	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</p> <p>Express their ideas and feelings about their experiences using full sentences.</p> <p>Offer explanations for why things might happen, making use of recently introduced vocabulary.</p>	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p>Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</p> <p>Express their ideas and feelings about their experiences using full sentences.</p> <p>Offer explanations for why things might happen, making use of recently introduced vocabulary.</p>	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</p> <p>Express their ideas and feelings about their experiences using full sentences.</p> <p>Offer explanations for why things might happen, making use of recently introduced vocabulary.</p>	<p>Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</p> <p>Express their ideas and feelings about their experiences using full sentences.</p> <p>Offer explanations for why things might happen, making use of recently introduced vocabulary.</p>

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<p>Year 1 and 2 Taken from Science Programme of Study Working Scientifically</p> <p>(Pupils are not expected to cover each aspect for every area of study, but to have met expectations by the end of Year 2.)</p>	<p>Be curious. Ask simple scientific questions and recognise that they can be answered in different ways. Find things out using secondary sources of information. Talk about what has been found out using simple scientific language. Record findings with help.</p>	<p>Identify, group and classify things.</p>	<p>Use simple equipment to observe closely. Use simple equipment to make observations over time. Ask simple scientific questions about what they notice. Gather and record data to help answer questions. Talk about what has been found out using simple scientific language. Record findings with help.</p>	<p>Notice patterns and relationships with guidance. Ask simple scientific questions about what they notice. Gather and record data to help answer questions. Talk about what has been found out using simple scientific language. Record findings with help.</p>	<p>Carry out simple comparative tests. Gather and record data to help answer questions. Talk about what has been found out using simple scientific language. Record findings with help.</p>

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<p>Year 3 and 4</p> <p>Taken from Science Programme of Study Working Scientifically</p> <p>(Pupils are not expected to cover each aspect for every area of study, but to have met expectations by the end of Year 4.)</p>	<p>Ask their own relevant scientific questions.</p> <p>Make some decisions about the most appropriate type of scientific enquiry to use to answer their questions.</p> <p>Find things out using secondary sources of information to answer scientific questions.</p> <p>Recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Report findings in different ways, including oral and written explanations, displays and presentations.</p>	<p>Set up simple practical enquiries.</p> <p>Use simple keys.</p> <p>Report findings in different ways using scientific language, including oral and written explanations.</p> <p>Make predictions and raise further questions with support.</p>	<p>Help make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used to answer scientific questions.</p> <p>Set up simple practical enquiries.</p> <p>Make systematic and careful observations.</p> <p>Take accurate measurements using standard units.</p> <p>Use a range of equipment, including thermometers and data loggers.</p> <p>Gather, record, classify and present data in a variety of ways to answer scientific questions.</p> <p>Report findings in different ways using scientific language, including oral and written explanations.</p> <p>With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</p> <p>Suggest improvements to what they have done.</p> <p>Make predictions and raise further questions with support.</p>	<p>Set up simple practical enquiries.</p> <p>Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.</p> <p>Help make decisions about how to record and analyse data gathered.</p> <p>Gather, record, classify and present data in a variety of ways to answer scientific questions.</p> <p>Report findings in different ways using scientific language, including oral and written explanations.</p> <p>With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</p> <p>Suggest improvements to what they have done.</p> <p>Make predictions and raise further questions with support.</p>	<p>Recognise when a simple fair test is necessary and help to decide how to set it up.</p> <p>Set up simple comparative and fair tests.</p> <p>Carry out simple comparative and fair tests.</p> <p>Help make decisions about how to record and analyse data gathered.</p> <p>Gather, record, classify and present data in a variety of ways to answer scientific questions.</p> <p>Report findings in different ways using scientific language, including oral and written explanations.</p> <p>With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</p> <p>Suggest improvements to what they have done.</p> <p>Make predictions and raise further questions with support.</p>

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<p>Year 5 and 6</p> <p>Taken from Science Programme of Study Working Scientifically</p> <p>(Pupils are not expected to cover each aspect for every area of study, but to have met expectations by the end of Year 6.)</p>	<p>Ask their own relevant scientific questions.</p> <p>Use evidence to justify their scientific ideas.</p> <p>Plan the most appropriate ways to answer scientific questions using different types of scientific enquiry.</p> <p>Find things out using a wide range of secondary sources of information to answer scientific questions.</p> <p>Begin to separate opinion from fact.</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Begin to recognise that scientific ideas change and develop over time (See Ogden trust Ideas Over Time sheet).</p> <p>Read, spell and pronounce scientific vocabulary correctly.</p>	<p>Plan the most appropriate ways to answer scientific questions using different types of scientific enquiry.</p> <p>Use and develop classification keys and other information records to identify, classify and describe living things and materials.</p>	<p>Plan the most appropriate ways to answer scientific questions using different types of scientific enquiry.</p> <p>Make their own decisions about what observations to make, what measurements to use and how long to make them for.</p> <p>Choose the most appropriate equipment to make measurements and explain how to use it accurately.</p> <p>Take increasingly accurate measurements using a range of scientific equipment with precision.</p> <p>Decide to take repeat readings when appropriate.</p> <p>Decide how to record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Explain causal relationships in the data from their enquiries.</p> <p>Identify and explain evidence from their enquiries that refutes or supports their theory.</p> <p>Continued over page...</p>	<p>Plan the most appropriate ways to answer scientific questions using different types of scientific enquiry.</p> <p>Make their own decisions about what observations to make, what measurements to use and how long to make them for.</p> <p>Choose the most appropriate equipment to make measurements and explain how to use it accurately.</p> <p>Take increasingly accurate measurements using a range of scientific equipment with precision.</p> <p>Decide to take repeat readings when appropriate.</p> <p>Decide how to record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Explain causal relationships in the data from their enquiries.</p> <p>Identify and explain evidence from their enquiries that refutes or supports their theory.</p> <p>Continued over page...</p>	<p>Plan the most appropriate ways to answer scientific questions using different types of scientific enquiry.</p> <p>Recognise when and how to set up comparative and fair tests.</p> <p>Recognise which variables need to be controlled and why.</p> <p>Make their own decisions about what observations to make, what measurements to use and how long to make them for.</p> <p>Choose the most appropriate equipment to make measurements and explain how to use it accurately.</p> <p>Take increasingly accurate measurements using a range of scientific equipment with precision.</p> <p>Decide to take repeat readings when appropriate.</p> <p>Decide how to record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Explain causal relationships in the data from their enquiries.</p> <p>Identify and explain evidence from their enquiries that refutes or supports their theory.</p> <p>Continued over page...</p>

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			<p>Explain the degree of trust in results.</p> <p>Use their scientific knowledge and understanding to explain their findings.</p> <p>Draw conclusions based on their data and observations.</p> <p>Use results to identify whether further tests and observations might be needed.</p> <p>Report and present findings from enquiries in oral and written forms, such as displays and other presentations.</p>	<p>Explain the degree of trust in results.</p> <p>Use their scientific knowledge and understanding to explain their findings.</p> <p>Draw conclusions based on their data and observations.</p> <p>Use results to identify whether further tests and observations might be needed.</p> <p>Report and present findings from enquiries in oral and written forms, such as displays and other presentations.</p>	<p>Explain the degree of trust in results.</p> <p>Use their scientific knowledge and understanding to explain their findings.</p> <p>Draw conclusions based on their data and observations.</p> <p>Use test results to make predictions and set up further comparative and fair tests.</p> <p>Report and present findings from enquiries in oral and written forms, such as displays and other presentations.</p>
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