

Progression of Science Skills

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
AREA: Asking Questions	<ul style="list-style-type: none"> Question why things happen Comment and asks questions about aspects of their familiar world such as the place where they live or the natural world 	<ul style="list-style-type: none"> Explore the world around them and raise their own simple questions Ask people questions and use simple secondary sources to find answers 	<ul style="list-style-type: none"> Ask people questions and use simple secondary sources to find answers Raise their own simple questions, recognising that they can be answered in different ways 	<ul style="list-style-type: none"> Raise their own relevant questions about the world around them Recognise when secondary sources might help them to answer questions that cannot be answered through practical investigations 	<ul style="list-style-type: none"> Raise their own relevant questions about the world around them Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations 	<ul style="list-style-type: none"> Use their science experiences to explore ideas and raise different kinds of questions Ask their own questions about scientific phenomena Talk about how scientific ideas have developed over time 	<ul style="list-style-type: none"> Use their science experiences to explore ideas and raise different kinds of questions Begin to ask their own questions about scientific phenomena of more abstract ideas Talk about how scientific ideas have developed over time
AREA: Planning and Setting Up Different Types of Enquiry	<ul style="list-style-type: none"> Show curiosity about objects, events and people Engage in open-ended activities Take risks engage in new experiences and learn by trial and error 	<ul style="list-style-type: none"> Experience different types of science enquiries, including practical activities Recognise that there are different ways to answer questions 	<ul style="list-style-type: none"> Experience different types of science enquiries: observation over time; identifying and classifying; pattern seeking; research and fair testing Begin to recognise different ways in which they might answer scientific questions 	<ul style="list-style-type: none"> Should be given a range of scientific experiences including different types of science enquiries to answer questions Set up simple practical enquiries, comparative and fair tests Start to make their own suggestions about the most appropriate type of scientific enquiry they might use to answer questions 	<ul style="list-style-type: none"> Should be given a range of scientific experiences including different types of science enquiries to answer questions Set up simple practical enquiries, comparative and fair tests Recognise when a simple fair test is necessary and help to decide how to set it up Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions 	<ul style="list-style-type: none"> Consider which types of scientific enquiry could be used to answer their own scientific questions Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions, including their own. Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why Set up more complex tests, repeating measurements when necessary and relevant Use gathered scientific knowledge to make predictions about outcomes and possible shortcomings 	<ul style="list-style-type: none"> Consider which types of scientific enquiry would be the most effective to answer their own scientific questions and why Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions, including their own. Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why Set up more complex tests, repeating measurements when necessary and relevant, explaining why this was necessary Use gathered scientific knowledge to make predictions about outcomes and possible shortcomings

AREA: Performing Tests	<ul style="list-style-type: none"> Find ways to solve problems / find new ways to do things / test their ideas 	<ul style="list-style-type: none"> Carry out simple tests, with more support Consider the role tests play in answering questions 	<ul style="list-style-type: none"> Carry out simple tests with less support Consider the role tests play in answering certain questions but not others 	<ul style="list-style-type: none"> Carry out tests, using knowledge of fair testing Discuss what type of equipment might be necessary and how to use it appropriately 	<ul style="list-style-type: none"> Carry out tests using fair testing to ensure accuracy Discuss what type of equipment might be necessary and how to use it accurately 	<ul style="list-style-type: none"> Carry out tests using fair testing to ensure accuracy, repeating these when necessary Plan and decide what type of equipment will be necessary to work accurately and ensure fair tests 	<ul style="list-style-type: none"> Carry out tests using fair testing to ensure accuracy, repeating these when necessary, explaining why Plan and decide what type of equipment will be most effective to work accurately and ensure fair tests
AREA: Using Equipment	<ul style="list-style-type: none"> Choose the resources they need for their chosen activities Handle equipment and tools effectively 	<ul style="list-style-type: none"> Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data Handle equipment safely and effectively 	<ul style="list-style-type: none"> Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data Handle equipment safely and effectively 	<ul style="list-style-type: none"> Learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately Suggest ways to handle equipment safely and effectively 	<ul style="list-style-type: none"> Learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately Suggest ways to handle equipment safely and effectively 	<ul style="list-style-type: none"> Choose the most appropriate equipment to make measurements with increasing precision. Explain how to use equipment accurately. Take repeat measurements where appropriate. Understand how to handle equipment safely and effectively 	<ul style="list-style-type: none"> Choose the most appropriate equipment to make measurements with increasing precision. Explain how to use equipment accurately. Take repeat measurements where appropriate Understand how to handle equipment safely and effectively and why
AREA: Observing and Measuring	<ul style="list-style-type: none"> Make observations of animals and plants and explain why some things occur, and talk about changes Use senses to explore the world around them 	<ul style="list-style-type: none"> Observe closely using simple equipment With help, observe changes over time Look closely at the natural and humanly-constructed world Use some simple scientific language 	<ul style="list-style-type: none"> Observe closely using simple equipment Observe changes over time more independently Look closely at the natural and humanly-constructed world Begin to use simple scientific language that relates to observations 	<ul style="list-style-type: none"> Make systematic and careful observations Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be needed to measure Take accurate measurements using standard units 	<ul style="list-style-type: none"> Make systematic and careful observations Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be needed to measure in certain ways. Take accurate measurements using standard units, deciding which to use and why 	<ul style="list-style-type: none"> Make systematic and accurate observations Make their own decisions about what observations to make, what unit of measurement to use and how long to observe for or measure to Back up decisions with evidence Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary 	<ul style="list-style-type: none"> Make systematic, precise and accurate observations Make their own decisions about what observations to make, what unit of measurement to use and how long to observe for or measure to Back up decisions with a range of evidence Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary and explaining why
AREA: Identifying and Classifying	<ul style="list-style-type: none"> Make links and notice patterns in their experience Develop ideas of grouping, sequences, cause and effect 	<ul style="list-style-type: none"> Use simple features to compare objects, materials and living things With more help, decide how to sort and group them (identifying and classifying) 	<ul style="list-style-type: none"> Use a range of simple features to compare objects, materials and living things With less help, decide how to sort and group them (identifying and classifying) 	<ul style="list-style-type: none"> Talk about criteria for grouping, sorting and classifying; and use simple keys Begin to look for naturally occurring patterns and relationships and decide 	<ul style="list-style-type: none"> Discuss and decide on criteria for grouping, sorting and classifying; and use simple keys Begin to look for naturally occurring patterns and relationships and decide what data to collect to 	<ul style="list-style-type: none"> Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment 	<ul style="list-style-type: none"> Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be

	<ul style="list-style-type: none"> Know about similarities and differences in relation to places, objects, materials and living things 	<ul style="list-style-type: none"> With guidance, they should begin to notice patterns and relationships 	<ul style="list-style-type: none"> With guidance, they should begin to notice patterns and relationships 	<p>what data to collect to identify them</p>	<p>identify them – making decisions about the best units to use</p>	<ul style="list-style-type: none"> Identify scientific evidence that has been used to support or refute ideas or arguments 	<p>found in the natural environment</p> <ul style="list-style-type: none"> Identify scientific evidence that has been used to support or refute ideas or arguments, explaining how it has been used
<p>AREA: Gathering and Recording Data</p>	<ul style="list-style-type: none"> Closely observe what animals, people and vehicles do Create simple representations of events, people and objects 	<ul style="list-style-type: none"> Record simple data Gather and record data, organising this appropriately (using the correct headings of a table, for example) 	<ul style="list-style-type: none"> Record simple data Gather and record data, showing some understanding of how this can be done (using a table for amount over time, for example) 	<ul style="list-style-type: none"> Collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data With more help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions 	<ul style="list-style-type: none"> Collect and record data from their own observations using appropriate units of measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data With less help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions 	<ul style="list-style-type: none"> Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact Make their own decisions about what observations to make, what measurements to use and how long to make them for Decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs 	<ul style="list-style-type: none"> Recognise which secondary sources will be most useful to research their ideas, separating opinion from fact more readily Make their own decisions about what observations to make, what measurements to use and how long to make them for, backing this up with evidence Decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
<p>AREA: Reporting, Presenting and Communicating Data/ Findings.</p>	<ul style="list-style-type: none"> Build up vocabulary that reflects the breadth of their experience Develop their own narratives and explanations by connecting ideas or events Answer how and why questions about their experiences 	<ul style="list-style-type: none"> Use their observations and ideas to suggest answers to questions Talk about what they have found out and how they found it out With less help, they should record and communicate their findings in a range of ways and begin to use simple scientific language 	<ul style="list-style-type: none"> Use their observations and ideas to suggest answers to questions, including where there is more than one possible answer Talk about what they have found out, including data, and how they found it out With more help, they should record and communicate their findings in a range of ways and begin to use simple scientific language 	<ul style="list-style-type: none"> Use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions With more support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done Read and spell specific scientific language correctly 	<ul style="list-style-type: none"> Use increasingly relevant and precise simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions With less support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done 	<ul style="list-style-type: none"> Look for different causal relationships in their data and identify evidence that refutes or supports their ideas Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas Use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results Use their results to make predictions and identify when further observations, comparative and fair tests might be needed 	<ul style="list-style-type: none"> Look for different causal relationships in their data and identify evidence that refutes or supports their ideas, giving reasons why Use a variety of relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas Use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results Use their results to make new predictions and identify when further observations, comparative

					<ul style="list-style-type: none">• Read and spell specific scientific language correctly, with confidence	<ul style="list-style-type: none">• Read, spell and pronounce scientific vocabulary correctly	<p>and fair tests might be needed</p> <ul style="list-style-type: none">• Read, spell and pronounce a range of scientific vocabulary correctly with confidence
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