



# Science



Working Scientifically- Questioning						
Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NC aims	Asking simple questions and recognising that they can be answered in different ways		Asking relevant questions and using different types of scientific enquiries to answer them		Identifying scientific evidence that has been used to support or refute ideas or arguments.	
Skills	Ask simple scientific questions.	Ask and answer scientific questions about the world around them.	Ask questions about the world around them and explain that they can be answered in different ways.	Ask relevant scientific questions, independently, about the world around them and begin to identify how they can answer them.	Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions.	Report on and validate their findings, answer questions and justify their methods, opinions and conclusions, and use their results to suggest improvements to their methodology, separate facts from opinions, pose further questions and make predictions for what they might observe.
Knowledge	Question words include what, why, how, when, who and which.	Questions can help us find out about the world	Questions can help us find out about the world and can be answered in different ways.	Questions can help us find out about the world and can be answered using scientific enquiry.	The results are information, such as measurements or observations that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.	The results are information, such as measurements or observations that have been collected during an investigation. A conclusion is an explanation of what has been discovered, using correct, precise terminology



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						and collected evidence.
Unit	Autumn 1- Moon Zoom	Autumn 1- Magnificent Monarchs	Autumn 1- Gods and Mortals	Autumn 1- I am warrior	Autumn 1- Pharaohs	Autumn 1- Hola Mexico

Working Scientifically- Planning and Predicting						
Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NC aims	Performing simple tests		Setting up simple practical enquiries, comparative and fair tests		Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	
Skills	With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen.	Follow a set of instructions to perform a range of simple tests, making simple predictions for what might happen and suggesting ways to answer their questions	Set up and carry out some simple, comparative and fair tests, making predictions for what might happen.	Begin to independently plan, set up and carry out a range of comparative and fair tests, making predictions and following a method accurately.	Ask a wide range of relevant scientific questions that broaden their understanding of the world around them and identify how they can answer them. Plan and carry out a range of enquiries, including writing methods, identifying variables and making predictions based on prior knowledge and understanding	Ask and answer deeper and broader scientific questions about the local and wider world that build on and extend their own and others' experiences and knowledge. Plan and carry out a range of enquiries, including writing methods, identifying and controlling variables, deciding on equipment and data to collect and making predictions based on prior knowledge and understanding.



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Knowledge	Simple tests can be carried out by following a set of instructions.	Tests can be carried out by following a set of instructions. A prediction is a guess for what might happen in an investigation	Tests can be set up and carried out by following or planning a set of instructions. A prediction is a best guess for what might happen in an investigation based on some prior knowledge.	Scientific enquiries can be set up and carried out by following or planning a method. A prediction is a statement about what might happen in an investigation, based on some prior knowledge or understanding. A fair test is one in which only one variable is changed and all others remain constant.	Questions can help us find out about the world and can be answered using a range of scientific enquiries. A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding.	Questions can help us find out about the world and can be answered using a range of scientific enquiries, including fair tests, research and observation. A method is a set of clear instructions for how to carry out a scientific investigation, including what equipment to use and observations to make. A variable is something that can be changed during a fair test. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding
Unit	Autumn 2- Bright Lights, Big Cities	Autumn 2- Coastlines	Autumn 2- Rocks, Relics and Rumbles	Autumn 2- Misty Mountain, Winding River	Autumn 2- Sow, Grow and Farm	Autumn 2- Frozen Kingdoms

Working Scientifically- Observing and Measuring						
Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NC aims	Observing closely, using simple equipment		Making systematic and careful observations and, where		Taking measurements, using a range of scientific equipment,	



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			appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers		with increasing accuracy and precision, taking repeat readings when appropriate	
Skills	With support, use simple equipment to measure and make observations.	Use simple equipment to measure and make observations.	Take measurements in standard units, using a range of simple equipment. Make increasingly careful observations, identifying similarities, differences and changes, and making simple connections	Take accurate measurements in standard units, using a range of equipment. Begin to choose which observations to make and for how long and make systematic, careful observations and comparisons, identifying changes and connections.	Take increasingly accurate measurements, in standard units, using a range of chosen equipment. Within a group, decide which observations to make, when and for how long, and make systematic and careful observations, using them to make comparisons, identify changes, classify and make links between cause and effect.	Take accurate, precise and repeated measurements in standard units, using a range of chosen equipment. Independently decide which observations to make, when and for how long and make systematic and careful observations, using them to make comparisons, identify changes, classify and make links between cause and effect.
Knowledge	Simple equipment is used to take measurements and observations. Examples include metre sticks, measuring tapes, egg timers and hand lenses	Simple equipment is used to take measurements and observations. E.g. timers, hand lenses, metre sticks and trundle wheels.	Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Taking	Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C), and metre sticks, rulers or trundle wheels (millimetres, centimetres,	Specialised equipment is used to take measurements in standard units. Examples include data loggers plus sensors, such as light (lux), sound (dB) and temperature (°C); timers (seconds, minutes and hours); thermometers	



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			repeat readings can increase the accuracy of the measurement. An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features.	metres). An observation involves looking closely at objects, materials and living things. Observations can be made regularly to identify changes over time.	(°C), and measuring tapes (millimetres, centimetres, metres). An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time.	
Unit	Spring 1- African Safari	Spring 1- Land Ahoy!	Spring 1- Natural disasters	Spring 1- Road Trip to USA	Spring 1- Amazing Australia	Spring 1- Darwin's Delights
Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Recording Data</b>						
NC aims	• Identifying and classifying		Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions		Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	
Skills	Observe objects, materials, living things and changes over time, sorting and grouping them based on their features.	Observe objects, materials, living things and changes over time, sorting and grouping them based on their features and explaining their reasoning.	Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy.	Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs).	Gather and record data and results of increasing complexity, selecting from a range of methods (scientific diagrams, labels, classification keys, tables, graphs and models).	Choose an appropriate approach to recording accurate results, including scientific diagrams, labels, timelines, classification keys, tables, models and graphs (bar, line and scatter), linking to mathematical knowledge.
Knowledge	Objects, materials and living things	Objects, materials and living things	Data can be recorded and displayed in	Data can be recorded and displayed in	Data can be recorded and displayed in	Data can be recorded and displayed in



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	can be looked at and compared.	can be looked at, compared and grouped according to their features.	different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions.	different ways, including tables, charts, graphs, keys and labelled diagrams.	different ways, including tables, bar and line charts, classification keys and labelled diagrams.	different ways, including tables, bar and line charts, scatter graphs, classification keys and labelled diagrams.
Unit	Spring 2- Enchanted Woodlands	Spring 2- The Secret Garden	Spring 2- Mighty Metals	Spring 2- Burps, Bottoms and Bile	Spring 2- Stargazers	Spring 2- Blood Heart
<b>Working Scientifically- Interpreting and communicating results</b>						
Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NC aims	Using their observations and ideas to suggest answers to questions		Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and table. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions		Using test results to make predictions to set up further comparative and fair tests	
Skills	With support, gather and record simple data in a range of ways (data tables, diagrams, Venn diagrams)	Use a range of methods (tables, charts, diagrams and Venn diagrams) to gather and record simple data with some accuracy.	Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy. Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements.	Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs). Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps,	Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions.	Report on and validate their findings, answer questions and justify their methods, opinions and conclusions, and use their results to suggest improvements to their methodology, separate facts from opinions, pose further questions and make predictions for what they might observe.



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				improvements and further questions.		
Knowledge	Data can be recorded and displayed in different ways, including tables, pictograms and drawings.	Data can be recorded and displayed in different ways, including tables, charts, pictograms and drawings.	Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions. Results are information that has been discovered as part of an investigation. A conclusion is the answer to a question that uses the evidence collected.	Data can be recorded and displayed in different ways, including tables, charts graphs, keys and labelled diagrams. Results are information, such as data or observations, that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected.	The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.	The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered, using correct, precise terminology and collected evidence.
Unit	Summer 1- School days	Summer 1- Movers and shakers	Summer 1- Through the ages	Summer 1- Traders and Raiders	Summer 1- Fallen Fields	Summer 1- A child's war
<b>Working Scientifically- Explaining and evaluating</b>						
Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NC aims	Gathering and recording data to help in answering questions.		Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identifying differences, similarities or changes related to simple scientific ideas and processes Using straightforward scientific evidence to answer questions or to support their findings		Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	
Skills	Talk about what they have done and say, with help, what they think they	Begin to notice patterns and relationships in their data and explain what they	Use suitable vocabulary to talk or write about what they have done, what the purpose was	Use scientific vocabulary to report and answer questions about their findings based on	Use relevant scientific vocabulary to report on their findings, answer questions and justify their	Report on and validate their findings, answer questions and justify their methods, opinions and



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	<p>have found out. Observe the local environment throughout the year and ask and answer questions about living things and seasonal change</p>	<p>have done and found out using simple scientific language.</p>	<p>and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements. Make increasingly careful observations, identifying similarities, differences and changes, and making simple connections.</p>	<p>evidence collected, draw simple conclusions and identify next steps, improvements and further questions. Begin to choose which observations to make and for how long and make systematic, careful observations and comparisons, identifying changes and connections.</p>	<p>conclusions based on evidence collected, identify improvements, further questions and predictions.</p>	<p>conclusions, and use their results to suggest improvements to their methodology, separate facts from opinions, pose further questions and make predictions for what they might observe.</p>
Knowledge	<p>The results are information that has been found out from an investigation. The local environment is a habitat for living things and can change during the seasons.</p>	<p>The results are information that has been found out from an investigation and can be used to answer a question.</p>	<p>Results are information that has been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected. An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features.</p>	<p>Results are information, such as data or observations, that has been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected. An observation involves looking closely at objects, materials and living things. Observations can be made regularly to identify changes over time.</p>	<p>The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected.</p>	<p>The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered, using correct, precise terminology and collected evidence.</p>
Unit	<p>Summer 2- Paws, Claws and Whiskers</p>	<p>Summer 2- Wriggle and Crawl</p>	<p>Summer 2- Predators</p>	<p>Summer 2- Blue Abyss</p>	<p>Summer 2- Scream Machine</p>	<p>Summer 2- I'm a Year 6 ... Get me out of here!</p>



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