



	Year 1 (KS1 skills)	Year 2 (KS1 skills)	Year 3 (Lower KS2 skills)	Year 4 (Lower KS2 skills)	Year 5 (Upper KS2 skills)	Year 6 (Upper KS2 skills)
Working Scientifically	To use the following practical scientific methods, processes and skills - adult support may be needed		To use the following practical scientific methods, processes and skills with increasing confidence.		To use the following practical scientific methods, processes and skills –	
Questioning, enquiring and planning.	Ask simple questions about the world around us.	Ask questions about the world around us.	Ask some relevant questions and use different types of scientific enquiries to answer them.	Ask relevant questions and use different types of scientific enquiries to answer them.	Begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
	Begin to recognise that they can be answered in different ways (different types of enquiry including - observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative tests, finding things out from secondary sources).	Recognise that they can be answered in different ways (different types of enquiry including - observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative tests, finding things out from secondary sources).	Begin to explore everyday phenomena and the relationships between living things and familiar environments. Begin to develop their ideas about functions, relationships and interactions. Begin to raise their own questions about the world around them. Begin to make some decisions about which types of enquiry will be the best way of answering questions including observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative and fair tests , finding things out using secondary sources.	Explore everyday phenomena and the relationships between living things and familiar environments. Begin to develop their ideas about functions, relationships and interactions. Raise their own questions about the world around them. Make some decisions about which types of enquiry will be the best way of answering questions including observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative and fair tests , finding things out using secondary sources.	Begin to explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. Begin to recognise some more abstract ideas and begin to recognise how these ideas help them to understand how the world operates. Begin to recognise scientific ideas change and develop over time. Begin to select the most appropriate ways to answer science questions using different types of scientific enquiry (eg: 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.)	Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. Begin to recognise more abstract ideas and begin to recognize how these ideas help them to understand how the world operates. Begin to recognise scientific ideas change and develop over time. Select the most appropriate ways to answer science questions using different types of scientific enquiry (eg: 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.)
	I can ask <u>some</u> simple questions about the world around us. I can begin to use <u>some</u> different types of enquiry to answer questions.	I can ask simple questions about the world around us. I can begin to use different types of enquiry to answer questions.	I can ask <u>some</u> relevant questions about the world around us. I can use <u>some</u> different types of scientific enquiry to answer questions. I am <u>beginning</u> to decide which type of enquiry is best to answer my question.	I can ask relevant questions about the world around us. I can use different types of scientific enquiry to answer questions. I am beginning to decide which type of enquiry is best to answer my question	I am beginning to explore ideas and ask my own questions about scientific phenomena. I am beginning to plan different types of scientific enquiry to answer questions. I am beginning to decide which variables to control.	I can explore ideas and ask my own questions about scientific phenomena. I can plan different types of scientific enquiry to answer questions. I can decide which variables to control.
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6



Progression in Working Scientifically.

<h2>Observing, measuring and pattern seeking.</h2>		<p>Observe closely, using simple equipment.</p> <p>Use observations and ideas to suggest answers to questions.</p> <p>To observe changes over time, with guidance, begin to notice patterns and relationships.</p>	<p>Begin to make systematic and careful observations and, where appropriate take accurate measurements using standard units, using a range of equipment (eg: data loggers and thermometers.)</p> <p>Begin to look for naturally occurring patterns and relationships; decide what data to collect to identify them.</p> <p>Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used</p>	<p>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment eg: data loggers and thermometers.</p> <p>Begin to look for naturally occurring patterns and relationships; decide what data to collect to identify them.</p> <p>Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.</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 identify patterns that might be found in the natural environment.</p> <p>Begin to make own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them.</p> <p>Choose the most appropriate equipment and explain how to use it accurately.</p>	<p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</p> <p>Identify patterns that might be found in the natural environment.</p> <p>Make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them.</p> <p>Choose the most appropriate equipment and explain how to use it accurately</p>
		<p>To say what I am looking for and what I am measuring.</p> <p>To know how to use simple equipment safely.</p> <p>Use simple measurements and equipment with increasing independence.</p> <p>Begin to progress from non-standard units to reading: l, ml, °C mm, cm,</p>	<p>Learn to use some new equipment appropriately (eg: data loggers).</p> <p>Begin to see a pattern in my results.</p> <p>Begin to choose from a selection of equipment.</p> <p>Begin to observe and measure accurately using standard unit including time in minutes and seconds</p>	<p>Learn to use new equipment appropriately (eg data loggers).</p> <p>See patterns in my results.</p> <p>Choose appropriately from a selection of equipment.</p> <p>Observe and measure accurately using standard units including time in minutes and seconds.</p>	<p>Begin to interpret data and find patterns.</p> <p>Select equipment on my own.</p> <p>Make a set of observations and say what the interval and range are.</p> <p>Begin to take accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm²V, km/h, m per sec, m/ sec.</p> <p>Use Graphs eg: pie, line</p>	<p>Interpret data and find patterns.</p> <p>Select equipment on my own.</p> <p>Make a set of observations and say what the interval and range are.</p> <p>Take accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm²V, km/h, m per sec, m/ sec</p> <p>Use Graphs eg: pie, line, bar (Yr 6)</p>
		<p>I can observe changes over time.</p> <p>I can say what I am looking for and what I am measuring.</p> <p>I can measure with non-standard units and begin to use simple standard units eg: ml, °C, mm, cm etc</p> <p>I can use simple equipment.</p> <p>I am beginning to notice patterns.</p>	<p>I can make systematic and careful observations.</p> <p>I can decide what to observe and how long to collect observations.</p> <p>I can take accurate measurements using standard units eg: mm, cm, m, ml l, °C, seconds, minutes,</p> <p>I can decide which equipment to use and can use new equipment eg: data loggers.</p> <p>I can look for patterns and relationships.</p>	<p>I can make systematic and careful observations.</p> <p>I can decide what to observe and how long to collect observations.</p> <p>I can take accurate measurements using standard units eg. mm, cm, m, ml, l, °C, seconds, minutes,</p> <p>I can decide which equipment to use and can use new equipment eg. data loggers.</p> <p>I can look for patterns and relationships.</p>	<p>I can make accurate and precise measurements.</p> <p>I can decide what to observe, how long to observe for and whether to repeat them.</p> <p>I can take accurate and precise measurements using standard units N, g, kg, mm, cm, mins, seconds, cm²V, km/h, m per sec, m/ sec.</p> <p>I can select equipment on my own and can explain how to use it accurately.</p>	<p>I can make accurate and precise measurements.</p> <p>I can decide what to observe, how long to observe for and whether to repeat them.</p> <p>I can take accurate and precise measurements using standard units N, g, kg, mm, cm, mins, seconds, cm²V, km/h, m per sec, m/ sec.</p> <p>I can select equipment on my own and can explain how to use it accurately</p>



Progression in Working Scientifically.

	Year 1 (KS1 skills)	Year 2 (KS1 skills)	Year 3 (Lower KS2 skills)	Year 4 (Lower KS2 skills)	Year 5 (Upper KS2 skills)	Year 6 (Upper KS2 skills)
Investigating	Perform simple tests with support .	Perform simple tests	Set up some simple practical enquiries, comparative and fair tests.		Begin to use test results to make predictions to set up further comparative and fair tests	Use test results to make predictions to set up further comparative and fair tests.
	To begin to discuss my ideas about how to find things out. To begin to say what happened in an investigation.	To discuss my ideas about how to find things out. To say what happened in my investigation.	Begin to recognise when a simple fair test is necessary and help to decide how to set it up. Begin to think of more than one variable factor.	Recognise when a simple fair test is necessary and help to decide how to set it up. Able to identify more than one variable factor.	Begin to recognise when and how to set up comparative and fair tests; explain which variables need to be controlled and why. Begin to suggest improvements to a method and give reasons. Begin to decide when it is appropriate to do a fair test.	Recognise when and how to set up comparative and fair tests; explain which variables need to be controlled and why Suggest improvements to a method; giving appropriate reasons. Decide when it is appropriate to do a fair test.
	I can begin to perform simple tests. I can begin to discuss my ideas. I can begin to say what happened in an investigation.	I can perform simple tests. I can discuss my ideas. I can say what happened in an investigation	I can set up some simple practical enquiries, including comparative and fair tests. I am beginning to decide which variables to keep the same and which to change.	I can set up simple practical enquiries, including comparative and fair tests. I can decide which variables to keep the same and which to change.	I can sometimes set up a range of comparative and fair tests. I am beginning to explain which variables need to be controlled and why. I am beginning to suggest improvements to a test, giving reasons.	I can set up a range of comparative and fair tests. I can explain which variables need to be controlled and why. I can suggest improvements to my test, giving reasons.



	Year 1 (KS1 skills)	Year 2 (KS1 skills)	Year 3 (Lower KS2 skills)	Year 4 (Lower KS2 skills)	Year 5 (Upper KS2 skills)	Year 6 (Upper KS2 skills)
Recording and reporting findings.	Gather and record data, with adult support , to help in answering questions.	Gather and record data to help in answering questions.	Gather, record, and begin to classify and present data in a variety of ways to help in answering questions.		Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.
	<p>Begin to record simple data.</p> <p>Begin to record and communicate their findings in a range of ways.</p> <p>Show my results in a simple table provided.</p>	<p>Record simple data.</p> <p>Record and communicate their findings in a range of ways.</p> <p>Show results in a table provided.</p>	<p>Begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p>Begin to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Begin to use notes, simple tables and standard units and help to decide how to record and analyse their data.</p> <p>Begin to record results in tables and bar charts.</p>	<p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Use notes, simple tables and standard units and help to decide how to record and analyse their data.</p> <p>Record results in tables and bar charts.</p>	<p>Begin to report and present findings from enquiries.</p> <p>Begin to decide how to record data from a choice of familiar approaches.</p> <p>Begin to choose how best to present data.</p>	<p>Report and present findings from enquiries.</p> <p>Decide how to record data from a choice of familiar approaches.</p> <p>Choose how best to present data.</p>
	<p>I can begin to collect simple data.</p> <p>I can begin to record data in a table provided.</p>	<p>I can collect simple data.</p> <p>I can record data in a table provided.</p> <p>I can communicate my findings in a variety of ways.</p>	<p>I am beginning to collect data in a variety of ways, including labelled diagrams, bar charts and tables.</p> <p>I am beginning to help decide how to record data.</p> <p>I am beginning to communicate findings using simple scientific language.</p>	<p>I can collect data in a variety of ways, including labelled diagrams, bar charts and tables.</p> <p>I can decide how to record data.</p> <p>I can communicate findings using simple scientific language</p>	<p>I am beginning to record data and results of increasing complexity using – scientific diagrams and labels, classification keys, tables, bar graphs, line graphs</p> <p>I am beginning to choose how best to present data.</p> <p>I am beginning to communicate findings using detailed scientific language.</p>	<p>I can record data and results of increasing complexity using – scientific diagrams and labels classification keys, tables, bar graphs line graphs.</p> <p>I can choose how best to present data.</p> <p>I can communicate findings using detailed scientific language.</p>



Progression in Working Scientifically.

	Year 1 (KS1 skills)	Year 2 (KS1 skills)	Year 3 (Lower KS2 skills)	Year 4 (Lower KS2 skills)	Year 5 (Upper KS2 skills)	Year 6 (Upper KS2 skills)
Identifying, grouping and classifying	Identify and classify with some support .	Identify and classify. Observe and identify, compare and describe.	Identify differences, similarities or changes related to simple scientific ideas and processes.		Begin to use and develop keys and other information records to identify, classify and describe living things and materials.	Use and develop keys and other information records to identify, classify and describe living things and materials.
	To begin to observe and identify, compare and describe. To begin to use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.	Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them	Begin to identify differences, similarities or changes related to simple scientific ideas and processes. Begin to talk about criteria for grouping, sorting and classifying and use simple keys. Begin to compare and group according to behaviour or properties, based on testing.	Talk about criteria for grouping, sorting and classifying and use simple keys. Compare and group according to behaviour or properties, based on testing		
	I can begin to identify a variety of objects, materials and living things. I can begin to compare, sort and group a range of objects, materials and living things.	I can identify a variety of objects, materials and living things. I can compare, sort and group a range of objects, materials and living things	I am beginning to talk about and identify differences and similarities in the properties or behaviour of living things, materials and other scientific phenomena. I am beginning to identify simple changes related to simple scientific phenomena. I am beginning to discuss criteria for grouping and sorting and can classify using simple keys.	I can talk about and identify differences and similarities in the properties or behaviour of living things, materials and other scientific phenomena. I can identify simple changes related to simple scientific phenomena. I can discuss criteria for grouping and sorting and can classify using simple keys.		



Progression in Working Scientifically.

	Year 1 (KS1 skills)	Year 2 (KS1 skills)	Year 3 (Lower KS2 skills)	Year 4 (Lower KS2 skills)	Year 5 (Upper KS2 skills)	Year 6 (Upper KS2 skills)
Research	To begin to use simple secondary sources to find answers.	Use simple secondary sources to find answers.	Recognise when and how to use secondary sources.		Select most useful secondary sources to use.	
	To begin to find information to help me from books and computers with help.	Can find information to help me from books and computers with help.	Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.		Begin to recognise which secondary sources will be most useful to research their ideas.	Recognise which secondary sources will be most useful to research their ideas.
	I can begin to find information to help me from books, computers and other familiar sources.	I can find information to help me from books, computers and other familiar sources.	I can begin to decide when research will help in my enquiry. I am beginning to carry out simple research on my own	I can begin to decide when research will help in my enquiry. I can carry out simple research on my own.	I am beginning to recognise which secondary source will be most useful to my research. I can begin to carry out research independently.	I can recognise which secondary source will be most useful to my research. I can carry out research independently.
Understanding	Can begin to talk about how science helps us in our daily lives eg. torches and lights help us see when it is dark.		Begin to know which things in science have made our lives better.	Know which things in science have made our lives better.	Beginning to talk about how scientific ideas have changed over time.	Can talk about how scientific ideas have changed over time.
	Am beginning to understand science can sometimes be dangerous.		Begin to understand risk in science.	Can understand there is some risk in science.	Beginning to explain the positive and negative effects of scientific development. Beginning to see how science is useful in everyday life. Beginning to say which parts of our lives rely on science.	Can explain the positive and negative effects of scientific development. Can see how science is useful in everyday life. Can identify which parts of our lives rely on science.
	I can say how science helps us in our daily lives. I can say how science can be dangerous eg: electricity can give you a shock.		I am beginning to know which things in science have made our lives better eg: computers in schools, hospitals etc. I can begin to understand risk in science.	I know some things in science which have made our lives better eg computers in schools, hospitals etc. I understand there is some risk in science.	I am beginning to see how science is useful in lots of different ways. I am beginning to say which parts of our lives rely on science. I am beginning to explain the positive and negative effects of scientific developments.	I can see how science is useful in lots of different ways. I can say which parts of our lives rely on science. I can explain the positive and negative effects of scientific developments
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6



<h2>Conclusions.</h2>	<p>Begin to talk about what they have found out and how they found it out.</p>	<p>Talk about what they have found out and how they found it out.</p>	<p>Beginning to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p>	<p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p>	<p>Beginning 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 such as displays and other presentations.</p>	<p>Report and present 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.</p>
	<p>Begin to say what happened in my investigation.</p> <p>To begin to say whether I was surprised at the results or not.</p> <p>Begin to say what I would change about my investigation.</p>	<p>To say what happened in my investigation.</p> <p>To say whether I was surprised at the results or not.</p> <p>To say what I would change about my investigation.</p>	<p>Am beginning to use straightforward scientific evidence to answer questions or to support their findings.</p> <p>With help, begin to look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</p> <p>With support, begin to identify new questions arising from the data, make new predictions and find ways of improving what they have already done.</p> <p>Begin to see a pattern in results.</p> <p>Begin to say what I found out, linking cause and effect.</p> <p>Begin to say how I could make it better.</p> <p>Begin to answer questions from what I have found out.</p>	<p>Use straightforward scientific evidence to answer questions or to support their findings.</p> <p>With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.</p> <p>With support, identify new questions arising from the data, make new predictions and find ways of improving what they have already done.</p> <p>See a pattern in results.</p> <p>Say what I found out, linking cause and effect.</p> <p>Say how I could make it better.</p> <p>Answer questions from what I have found out.</p>	<p>Begin to identify scientific evidence that has been used to support/refute ideas or arguments.</p> <p>Begin to draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain findings.</p> <p>Begin to use test results to make predictions to set up further comparatives and fair tests.</p> <p>Begin to look for different causal relationships in data; identify evidence that refutes/supports ideas</p> <p>Use results to identify when further tests and observations are needed.</p> <p>Begin to separate opinion from fact.</p> <p>Begin to draw conclusions and identify scientific evidence.</p> <p>Use simple models.</p> <p>Know which evidence proves a scientific point.</p>	<p>Identify scientific evidence that has been used to support/refute ideas or arguments.</p> <p>Draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain findings.</p> <p>Use test results to make predictions to set up further comparatives and fair tests.</p> <p>Look for different causal relationships in their data; identify evidence that refutes/supports their ideas.</p> <p>Use their results to identify when further tests and observations are needed.</p> <p>Separate opinion from fact.</p> <p>Draw conclusions and identify scientific evidence.</p> <p>Use simple models.</p> <p>Know which evidence proves a scientific point.</p>
	<p>I can begin to talk about what I have found out.</p> <p>I can begin to explain how I carried out my enquiry.</p>	<p>I can talk about what I have found out.</p> <p>I can explain how I carried out my enquiry.</p>	<p>I am beginning to draw simple conclusions based on the results of my enquiry.</p> <p>I am beginning to answer my questions using the results of my enquiry.</p> <p>I am beginning to use my findings to make new predictions, suggest improvements and think of new questions.</p> <p>I am beginning sometimes to</p>	<p>I can draw simple conclusions based on the results of my enquiry.</p> <p>I can answer my questions using the results of my enquiry.</p> <p>I can use my findings to make new predictions, suggest improvements and think of new questions.</p> <p>I can begin to think of cause and effect in my explanations.</p>	<p>I am beginning to draw scientific, causal conclusions using the results of an enquiry to justify my ideas.</p> <p>I am beginning to explain my conclusion using scientific knowledge and understanding.</p> <p>I am beginning to distinguish opinion and facts.</p> <p>I am beginning to use my findings to make predictions and set up further enquiries.</p> <p>I can begin to use abstract models to</p>	<p>I can draw scientific, causal conclusions using the results of an enquiry to justify my ideas.</p> <p>I can explain my conclusion using scientific knowledge and understanding.</p> <p>I can distinguish opinion and facts.</p> <p>I can use my findings to make predictions and set up further enquiries.</p> <p>I can begin to use abstract models to explain my ideas.</p>



Progression in Working Scientifically.

			think of cause and effect in my explanations.		explain my ideas.	
	Year 1 (KS1 skills)	Year 2 (KS1 skills)	Year 3 (Lower KS2 skills)	Year 4 (Lower KS2 skills)	Year 5 (Upper KS2 skills)	Year 6 (Upper KS2 skills)
Vocabulary	Use some simple scientific language	Use simple scientific language and some science words.	Begin to use some scientific language to talk and, later, write about what they have found out.	Use some scientific language to talk and, later, write about what they have found out.	Beginning to use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.	Use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.
	Begin to use some science words. Use comparative language with support .	Use comparative language – bigger, faster etc.	Begin to use relevant scientific language. Begin to use comparative and superlative language.	Use relevant scientific language. Use comparative and superlative language.	Begin to read, spell and pronounce scientific vocabulary correctly. 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. Begin to use the correct science vocabulary.	Read, spell and pronounce scientific vocabulary correctly . 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. Use correct science vocabulary.
	I can begin to use simple scientific language. I can begin to describe what I see eg: something is long. I can begin to compare eg: something is longer or shorter.	I can use simple scientific language. I can describe what I see. I can compare eg something is longer or shorter.	I am beginning to use some scientific language in my work. I am beginning to describe my observations and my findings. I am beginning to use comparative and superlative descriptions eg longer / shorter than, longest / shortest.	I can use some scientific language in my work. I can describe my observations and my findings. I can use comparative and superlative descriptions eg: longer / shorter than, longest / shortest. I can begin to describe cause and effect.	I am beginning to read, spell and pronounce scientific vocabulary correctly. I am beginning to confidently use the correct scientific language when appropriate. I am beginning to explain my ideas with scientific reasons. I am beginning to use scientific conventions eg trends, rogue result, support prediction.	I can read, spell and pronounce scientific vocabulary correctly. I can confidently use the correct scientific language when appropriate. I can explain my ideas with scientific reasons. I can confidently use the correct scientific language when appropriate. I can explain my ideas with scientific reasons. I can use scientific conventions eg trends, rogue result, support prediction.
Year 7: for information.	<ul style="list-style-type: none"> ▪ Can interpret data from a variety of formats and recognise inconsistencies. ▪ Can give explanations for differences in repeated results. 					



Little Eaton
Primary School.

Progression in Working Scientifically.

- Can draw valid conclusions that use more than one piece of supporting evidence.