



### Progression in working scientifically for KSI and KS2

WS strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Questioning, enquiring and research	<ul style="list-style-type: none"><li>➤ Ask simple questions about the world around us.</li><li>➤ Begin to recognise that questions can be answered in different ways.</li><li>➤ Use simple secondary resources to find answers.</li></ul>	<ul style="list-style-type: none"><li>➤ Ask questions about the world around us.</li><li>➤ Recognise that they can be answered in different ways (changes over time, noticing patterns, grouping and classifying, comparative and fair tests, research).</li><li>➤ Find information using computers and books.</li></ul>	<ul style="list-style-type: none"><li>➤ Ask some relevant questions and use different types of scientific enquiries to answer them.</li><li>➤ Begin to make decisions about which types of enquiry will be the best way of answering questions (observing over time, noticing patterns, grouping and classifying, fair tests, secondary sources).</li><li>➤ Begin to decide when and how to use secondary sources and carry out own research.</li></ul>	<ul style="list-style-type: none"><li>➤ Ask increasingly relevant scientific questions and use different types of scientific enquiries to answer them.</li><li>➤ 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.</li><li>➤ Decide when and how research will help and carry out research on my own.</li></ul>	<ul style="list-style-type: none"><li>➤ Raise different kinds of questions about scientific phenomena.</li><li>➤ 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).</li><li>➤ Begin to recognise which secondary sources will be the most useful to research their ideas.</li></ul>	<ul style="list-style-type: none"><li>➤ Use their scientific experiences to explore ideas and raise questions.</li><li>➤ 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.)</li><li>➤ Recognise which secondary sources will be the most useful</li></ul>



### Progression in working scientifically for KSI and KS2

WS strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Investigating, recording and reporting findings, drawing conclusions	<ul style="list-style-type: none"> <li>➤ Carry out simple tests with support.</li> <li>➤ Begin to say what might happen in an investigation.</li> <li>➤ Begin to say what happened in an investigation.</li> <li>➤ Gather and record data with adult support.</li> <li>➤ Begin to record simple data.</li> <li>➤ Begin to talk about what they have found out and how they found it out.</li> <li>➤ Begin to say what happened in my investigation and whether I was surprised at the results or not.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Carry out simple tests.</li> <li>➤ Begin to make predictions and give a reason.</li> <li>➤ Say what happened in an investigation.</li> <li>➤ Gather and record data.</li> <li>➤ Record and communicate findings in a range of ways- use simple tables.</li> <li>➤ Talk about what they have found out and how they found it out.</li> <li>➤ Say what happened in my investigation and whether I was surprised at the results or not.</li> <li>➤ Begin to say what I would change in my investigation.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Set up some simple, practical enquiries, comparative and fair tests.</li> <li>➤ Begin to recognise when a fair test is necessary and help decide how to set it up.</li> <li>➤ Make predictions with reasons.</li> <li>➤ Gather, record and begin to classify data in a variety of ways.</li> <li>➤ Begin to record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.</li> <li>➤ Begin to use results to draw simple conclusions, make predictions, suggest improvements and raise further questions.</li> <li>➤ With help, I can look for changes, patterns, similarities and differences in data.</li> <li>➤ Begin to suggest how I could improve an investigation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Set up practical enquiries, comparative and fair tests.</li> <li>➤ Recognise when a fair test is necessary and decide how to set it up.</li> <li>➤ Make predictions drawing on previous experience and knowledge.</li> <li>➤ Gather, record and classify data in a variety of ways.</li> <li>➤ Record findings using simple scientific language, drawings, labelled diagrams, bar charts, keys and tables.</li> <li>➤ Record on findings using oral and written explanations, displays or presentations.</li> <li>➤ Use results to draw simple conclusions, make predictions, suggest improvements and raise further questions.</li> <li>➤ Spot patterns in results and look for changes, similarities and differences.</li> <li>➤ Say what has been found out linking cause and effect.</li> <li>➤ Suggests improvements to an investigation.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Set up comparative and fair tests and begin to decide which variables to control.</li> <li>➤ Make and explain predictions.</li> <li>➤ Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs.</li> <li>➤ Begin to report and present findings from enquiries using scientific language.</li> <li>➤ Begin to decide how to record data from a choice of familiar approaches.</li> <li>➤ Begin 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.</li> <li>➤ Begin to use evidence to justify ideas and conclusions.</li> <li>➤ Begin to use test results to make predictions and set up further comparative and fair tests</li> </ul>	<ul style="list-style-type: none"> <li>➤ Decide which variables to control and why.</li> <li>➤ Make and explain predictions using scientific language and begin to support with scientific evidence.</li> <li>➤ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar, line or scatter graphs.</li> <li>➤ Report and present findings from enquiries using detailed scientific language.</li> <li>➤ Decide how to record data from a choice of familiar approaches.</li> <li>➤ Choose the best way to present data.</li> <li>➤ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms.</li> <li>➤ Use evidence to justify ideas and conclusions.</li> <li>➤ Identify scientific evidence that has been used to support and refute ideas.</li> <li>➤ Use test results to make predictions and set up further tests</li> </ul>



### Progression in working scientifically for KS1 and KS2

WS strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Observing, measuring and pattern seeking	<ul style="list-style-type: none"> <li>➤ Talk about what that can see.</li> <li>➤ Use simple equipment with support.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Observe closely using simple equipment.</li> <li>➤ Observe changes over time with guidance and begin to notice patterns and relationships.</li> <li>➤ Know how to use simple equipment safely.</li> <li>➤ Use simple measurements and equipment (hand lenses, egg timers etc.).</li> <li>➤ Begin to progress from non-standard units to mm, cm, m, l etc</li> </ul>	<ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ Learn to use some new equipment- e.g. data loggers.</li> <li>➤ Begin to measure accurately using standard units including time in minutes and seconds.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Make systematic and careful observations and where appropriate, take accurate measurements using standard units using a range of equipment- e.g. thermometers, data loggers.</li> <li>➤ Help make decisions about what observations to make, how long to make them for and the type of equipment that might be used.</li> <li>➤ Choose from a selection of equipment.</li> <li>➤ Measure accurately using standard units including time in minutes and seconds.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</li> <li>➤ Begin to make their own decisions about what observations to make, how long to make them for and whether to repeat them.</li> <li>➤ Choose the most appropriate equipment and use it correctly.</li> <li>➤ Begin to take precise measurements - N, g, kg, ml, l, mm, cm, m, minutes, seconds.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</li> <li>➤ Make their own decisions about what observations to make, how long to make them for and whether to repeat them.</li> <li>➤ Choose equipment and explain how to use it accurately.</li> <li>➤ Take accurate and precise measurements - N, g, kg, ml, l, mm, cm, m, minutes, seconds.</li> </ul>



### Progression in working scientifically for KS1 and KS2

WS strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Identifying, grouping and classifying	<ul style="list-style-type: none"> <li>➤ Identify and classify with some support.</li> <li>➤ Begin to observe and identify, compare and describe.</li> <li>➤ With support, decide how to group objects and materials.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Identify and classify.</li> <li>➤ Observe and identify, compare and describe.</li> <li>➤ Decide how to sort and group objects, materials and living things</li> </ul>	<ul style="list-style-type: none"> <li>➤ Begin to identify differences, similarities, or changes related to simple scientific ideas or processes.</li> <li>➤ Begin to talk about criteria for grouping, sorting and classifying.</li> <li>➤ Begin to compare and group according to behaviour or properties.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Identify similarities, differences or changes related to simple scientific ideas or processes.</li> <li>➤ Talk about criteria for grouping, sorting and classifying and use simple keys.</li> <li>➤ Compare and group according to behaviour or properties.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Begin to use and develop keys and other information records to identify, classify and describe living things and materials.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Use and develop keys and other information records to identify, classify and describe living things and materials.</li> </ul>
Understanding of science	<ul style="list-style-type: none"> <li>➤ Begin to talk about how science helps us in our daily lives (eg: torches and lights help us see when it is dark).</li> <li>➤ Begin to understand science can sometimes be dangerous.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Talk about how science helps us in our daily lives (eg: torches and lights help us see when it is dark).</li> <li>➤ Begin to understand science can sometimes be dangerous.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Begin to know which things in science have made our lives better (eg: electricity).</li> <li>➤ Begin to understand risk in science.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Know which things in science have made our lives better (eg: electricity).</li> <li>➤ Understand there is some risk in science.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Begin to talk about how scientific ideas have changed over time.</li> <li>➤ Begin to explain the positive and negative effects of scientific development.</li> <li>➤ Begin to see how science is useful in everyday life (eg: medicine).</li> <li>➤ Begin to say which parts of our lives rely on science.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Talk about how scientific ideas have changed over time.</li> <li>➤ Explain the positive and negative effects of scientific development.</li> <li>➤ See how science is useful in everyday life (eg: medicine).</li> <li>➤ Say which parts of our lives rely on science.</li> </ul>



### Progression in working scientifically for KSI and KS2

WS strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Scientific vocabulary	<ul style="list-style-type: none"><li>➤ Use some simple scientific language.</li><li>➤ Begin to use some science words.</li><li>➤ With support, use comparative language.</li></ul>	<ul style="list-style-type: none"><li>➤ Use simple scientific language and some science words.</li><li>➤ Use comparative language – bigger, faster etc.</li></ul>	<ul style="list-style-type: none"><li>➤ Begin to use some scientific language to talk and, later, write about what they have found out.</li><li>➤ Begin to use relevant scientific language.</li><li>➤ Begin to use comparative and superlative language.</li></ul>	<ul style="list-style-type: none"><li>➤ Use some scientific language to talk and, later, write about what they have found out.</li><li>➤ Use relevant scientific language.</li><li>➤ Use comparative and superlative language.</li></ul>	<ul style="list-style-type: none"><li>➤ Begin to read, spell and pronounce scientific vocabulary correctly.</li><li>➤ Begin to use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.</li><li>➤ Begin to confidently use a range of scientific vocabulary.</li><li>➤ Begin to use conventions such as trend, rogue result, support prediction and -er word generalisation.</li><li>➤ Begin to use scientific ideas when describing simple processes.</li><li>➤ Begin to use the correct science vocabulary.</li></ul>	<ul style="list-style-type: none"><li>➤ Read, spell and pronounce scientific vocabulary correctly.</li><li>➤ Use relevant scientific language, and illustrations to discuss, communicate and justify scientific ideas.</li><li>➤ Confidently use a range of scientific vocabulary.</li><li>➤ Use conventions such as trend, rogue result, support prediction and -er word generalisation.</li><li>➤ Use scientific ideas when describing simple processes and can use the correct science vocabulary.</li></ul>