

## Science Skills & Vocabulary Progression Overview

BE THE BEST YOU CAN BE

### Science - Planning and investigating

Science - Planning and investigating							
<b>Skills</b>	<p>To show curiosity about objects, events and people.</p> <p>To question why things happen.</p> <p>To choose resources they need for their chosen activity.</p> <p>To engage in open ended activities.</p> <p>Take a risk, engage in new experiences and learn by trial and error.</p> <p>To find new ways of doing things.</p> <p>To test their ideas.</p>	<p>To ask simple questions to find out more information.</p> <p>To begin to recognise that questions can be answered in different ways</p> <p>To use simple secondary sources to find answers</p> <p>To perform simple tests with support.</p> <p>To begin to discuss my ideas about how to find things out.</p> <p>To begin to say what might happen in an investigation</p>	<p>To ask simple questions about the world around them.</p> <p>To recognise that questions can be answered in different ways (changes over time, noticing patterns, grouping and classifying, comparative and fair tests, research)</p> <p>To find information using computers and books</p> <p>To perform simple tests.</p> <p>To discuss my ideas about how to find things out.</p> <p>To say what might happen in an investigation</p>	<p>To use different ideas and suggest how to find something out.</p> <p>To begin to make decisions about which types of enquiry will be the best way of answering questions.</p> <p>To begin to decide when and how to use secondary sources and carry out their own research.</p> <p>To begin to set up some simple practical enquiries, comparative and fair tests.</p> <p>To begin to recognise when a fair test is necessary and help to decide how to set it up.</p> <p>To make predictions with reasons</p>	<p>To ask relevant scientific questions and use different types of scientific enquiries to answer them.</p> <p>To make some decisions about which types of enquiry will be the best way of answering questions.</p> <p>To decide when and how research will help and carry out research on their own.</p> <p>To set up practical enquiries, comparative and fair tests.</p> <p>To recognise when a fair test is necessary and help to decide how to set it up.</p> <p>To make predictions drawing on previous experience and knowledge.</p>	<p>To begin to select and plan the most appropriate ways to answer science questions using different types of scientific enquiry</p> <p>To set up comparative and fair tests and begin to decide which variables to control.</p> <p>To recognise which secondary sources will be the most useful to research their ideas.</p> <p>To recognise and control variables where necessary.</p> <p>To make and explain predictions.</p>	<p>To select and plan the most appropriate ways to answer science questions using different types of scientific enquiry.</p> <p>To set up comparative and fair tests and decide which variables to control and why.</p> <p>To separate fact from opinion when using secondary sources.</p> <p>To recognise and control variables where necessary</p> <p>To make and explain predictions using scientific language.</p>
<b>Key Vocabulary</b>	Question, answer, same, difference	Explore, investigation, test, describe, evidence, group, identify, observe	Prediction, classify, compare, fair test, identify, plan,	Enquiry, comparative, fair test, classification	Relevant questions, scientific enquiry	Variables, explain	Plan, controlled variables
<b>EYFS</b>							
<b>Year 1</b>							
<b>Year 2</b>							
<b>Year 3</b>							
<b>Year 4</b>							
<b>Year 5</b>							
<b>Year 6</b>							

## Science - Observing, classifying, measuring and pattern seeking

<p><b>Skills</b></p>	<p>To make observations of animals and plants and explain why some things occur, and talk about changes.</p> <p>To look closely at similarities, differences, and patterns.</p> <p>To talk about the features of the immediate environment and how environments might vary from one another</p> <p>To closely observe what animals, people and vehicles do.</p> <p>To use senses to explore the world around them.</p> <p>To handle equipment and tools effectively.</p>	<p>To make observations using appropriate senses and simple equipment with support</p> <p>Observe changes over time.</p> <p>To make simple comparisons.</p> <p>To use simple measurements and equipment with support</p> <p>To begin to use non-standard measures and read cm, m, and l with support</p> <p>To begin to use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.</p>	<p>To observe closely, using simple equipment.</p> <p>To use observations and ideas to suggest answers to questions.</p> <p>To observe changes over time and, with guidance, begin to notice patterns and relationships.</p> <p>To say what I am looking for and what I am measuring.</p> <p>To use simple measurements and equipment with increasing independence</p> <p>To begin to progress from non-standard units, reading mm, cm, m, ml, l</p> <p>To use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.</p>	<p>To begin to make systematic and careful observations with support.</p> <p>To use a range of equipment to take accurate measurements, including thermometers</p> <p>To begin to see patterns in my results.</p> <p>To help to make decisions about what observations to make and the type of simple equipment that might be used.</p> <p>To begin to take accurate measurements using standard measures and read m, cm, mm, kg, g, l, ml and °C</p> <p>To begin to talk about criteria for grouping, sorting and classifying and use simple keys.</p>	<p>To make systematic and careful observations and, where appropriate</p> <p>To look for naturally occurring patterns and relationships and decide what data to collect to identify them.</p> <p>To 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>To see a pattern in my results.</p> <p>To take accurate measurements using standard measures and read m, cm, mm, kg, g, l, ml and °C</p> <p>To talk about criteria for grouping, sorting and classifying and use simple keys.</p>	<p>To begin to 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>To choose the most appropriate equipment and explain how to use it accurately.</p> <p>To begin to interpret data and find patterns.</p> <p>To make a set of observations and begin to say what the interval and range are.</p> <p>To begin to take accurate and precise measurements using standards measures including N, g, kg, mm, cm, mins, seconds, cm<sup>2</sup>, V, km/h, m per sec, m/ sec</p> <p>To begin to use and develop keys and other information records to identify, classify and describe living things and materials.</p>	<p>To identify patterns that might be found in the natural environment.</p> <p>To 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>To interpret data and find patterns.</p> <p>To make a set of observations and say what the interval and range are.</p> <p>To make accurate and precise measurements using standard measures including N, g, kg, mm, cm, mins, seconds, cm<sup>2</sup>, V, km/h, m per sec, m/ sec</p> <p>To use and develop keys and other information records to identify, classify and describe living things and materials.</p>
<p><b>Key Vocabulary</b></p>	<p>Look closely, sort, magnifying glass, egg timer, non-fiction book</p>	<p>Describe, identify, observe, magnifying glass, ruler</p>	<p>Classify, compare, standard measure, ruler, metre stick</p>	<p>Classification, careful observations, similarities, differences, changes, temperature, thermometer</p>	<p>Pattern, properties, criteria, data logger, calibrate, scale, accurate</p>	<p>Key, classify, Newton meter, Newtons</p>	<p>Accurate and precise, classification, variation, protractor</p>
<p><b>EYFS</b></p>							
<p><b>Year 1</b></p>							
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<p><b>Year 4</b></p>							
<p><b>Year 5</b></p>							
<p><b>Year 6</b></p>							

## Science - Recording and reporting findings

<p><b>Skills</b></p>	<p>To talk about why things happen and how things work.</p> <p>To explain why some things occur</p> <p><b>Characteristics of effective learning</b></p> <p>Being willing to have a go</p> <p>Enjoy achieving what they set out to do</p> <p>Choosing ways to do things</p>	<p>To gather and record data with some adult support, to help in answering questions.</p> <p>To begin to record and communicate their findings in a range of ways; oral, pictorial and written</p> <p>To show my results in a simple table.</p>	<p>To gather and record data to help in answering questions.</p> <p>To record and communicate their findings in a range of ways, oral, pictorial and written.</p> <p>To show my results in a table.</p>	<p>To gather, record, and begin to classify and present data in a variety of ways to help in answering questions.</p> <p>To begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p>To begin to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>To begin to help decide how to record and analyse their data.</p>	<p>To gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>To record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p>To report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>To begin to help decide how to record and analyse their data.</p>	<p>To begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.</p> <p>To begin to decide how to record data from a choice of familiar approaches.</p> <p>To begin to choose how best to present data.</p> <p>To begin to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results.</p>	<p>To record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.</p> <p>To decide how to record data from a choice of familiar approaches.</p> <p>To choose how best to present data.</p> <p>To report and present findings from enquiries including conclusions, causal relationships and explanations of and degree of trust in results.</p>
<p><b>Key Vocabulary</b></p>	<p>Drawings, labels, captions, pictogram, explain</p>	<p>Observational drawing, description, table</p>	<p>Tally chart, bar graph, Venn diagram, data, results</p>	<p>Carroll diagram, key, record, gather</p>	<p>line graph, classify, conclusion, accurate</p>	<p>scatter graph, appropriate, interpret, systematic</p>	<p>pie chart, presentation, quantitative measures</p>
<p><b>EYFS</b></p>							
<p><b>Year 1</b></p>							
<p><b>Year 2</b></p>							
<p><b>Year 3</b></p>							
<p><b>Year 4</b></p>							
<p><b>Year 5</b></p>							
<p><b>Year 6</b></p>							

## Science - Conclusions

Skills	To ask how and why questions about their experiences.	To begin to say what happened in my investigation.  To begin to say whether I was surprised at the results or not.  To begin to say what I would change about my investigation.	To say what happened in my investigation.  To say whether I was surprised at the results or not.  To say what I would change about my investigation.	To begin to look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.  To begin to identify new questions arising from the data, make new predictions and find ways of improving what they have already done.  To begin to say what I found out, linking cause and effect.	To look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.  To identify new questions arising from the data, make new predictions and find ways of improving what they have already done.  To say what I found out, linking cause and effect.	To begin to identify scientific evidence that has been used to support or refute ideas or arguments.  To begin to use test results to make predictions to set up further comparatives and fair tests.  To begin to use results to identify when further tests and observations are needed.	To identify scientific evidence that has been used to support or refute ideas or arguments.  To use test results to make predictions to set up further comparatives and fair tests.  To use results to identify when further tests and observations are needed.
Key Vocabulary	How, why	Describe, prediction	Compare, contrast	Evidence, conclusion	Construct, interpret	Further tests, explanations, patterns	Degree of trust, causal relationship
EYFS							
Year 1							
Year 2							
Year 3							
Year 4							
Year 5							
Year 6							

## Science - Vocabulary and understanding

<b>Skills</b>	To use everyday language to talk about their experiences.	To use some simple scientific language  To use comparative language with support.  To begin to talk about how science helps us in our daily lives e.g. torches and lights help us see when it is dark.	To use simple scientific language and some science words.  To use comparative language – bigger, faster etc  To talk about how science helps us in our daily lives e.g. torches and lights help us see when it is dark.  To begin to understand science can sometimes be dangerous.	To begin to use some scientific language to talk and, later, write about what they have found out.  To begin to use relevant scientific language.  Begin to use comparative and superlative language.  To begin to know which things in science have made our lives better.  To begin to understand risk in science.	To use some scientific language to talk and, later, write about what they have found out.  To use relevant scientific language.  To use comparative and superlative language  To know which things in science have made our lives better.  To understand there is some risk in science.	To begin to use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.  To begin to talk about how scientific ideas have changed over time.  To begin to explain the positive and negative effects of scientific development.  To begin to see how science is useful in everyday life.  To begin to say which parts of our lives rely on science.	To use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.  To talk about how scientific ideas have changed over time.  To explain the positive and negative effects of scientific development.  To see how science is useful in everyday life.  To say which parts of our lives, rely on science.
<b>Key Vocabulary</b>	Everyday language	Science, dangers	Scientific language, examples of comparative language	Risk, examples of superlative language	Comparative and superlative language, scientific report	Positive and negative effects	Scientific development, justify
<b>EYFS</b>							
<b>Year 1</b>							
<b>Year 2</b>							
<b>Year 3</b>							
<b>Year 4</b>							
<b>Year 5</b>							
<b>Year 6</b>							