



Science progression Disciplinary Knowledge

Breadth of study			
Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • How plants and how they live and reproduce • Animals and how they move • Light and shadows • Magnets and forces • Rocks 	<ul style="list-style-type: none"> • Classify living things • Digestion in humans • Sound and pitch • Electrical sources • States of matter 	<ul style="list-style-type: none"> • Life cycles and reproduction patterns of plants and animals • Changes that happen to the human body • Gravity and friction • Reversible and irreversible changes • Earth and space 	<ul style="list-style-type: none"> • Classifying animals • How the human body works and how to stay healthy • How light behaves • Electrical circuits • Evolution and inheritance
Knowledge of methods that scientists use to answer questions			
Acquire the necessary skills to ask questions and investigate by carrying out fair and comparative tests.			
PLAN			
LKS2		UKS2	
<p>National Curriculum Ask relevant questions and using different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests.</p>		<p>National Curriculum Plan different types of scientific enquiries to answer questions, including recognizing and controlling variables where necessary. Use test results to make predictions to set up further comparative and fair tests.</p>	
<ul style="list-style-type: none"> • Start to raise their own relevant questions about the world around them in response to a range of scientific experiences; • 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"> • With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences; • With increasing independence, make their own decisions about 	

<ul style="list-style-type: none"> • Recognise when a fair test is necessary; • Help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used; • Set up and carry out simple comparative and fair tests. 	<p>the most appropriate type of scientific enquiry they might use to answer questions;</p> <ul style="list-style-type: none"> • Explore and talk about their ideas, raising different kinds of scientific questions; • Ask their own questions about scientific phenomena; • Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions; • 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; • Plan, set up and carry out comparative and fair tests to answer questions, including recognizing and controlling variables where necessary; • Use their test results to identify when further tests and observations may be needed; • Use test results to make predictions for further tests.
Knowledge of apparatus and techniques, including measures	
Observe and measure changes	
DO	
LKS2	UKS2
<p>National Curriculum Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p>	<p>National Curriculum Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p>
<ul style="list-style-type: none"> • Make systematic and careful observations; • Observe changes over time; • Use a range of equipment, including thermometers and data loggers; • Ask their own questions about what they observe; 	<ul style="list-style-type: none"> • Choose the most appropriate equipment to make measurements and explain how to use it accurately; • Take measurements using a range of scientific equipment with increasing accuracy and precision; • Take repeat readings when appropriate; • Understand why we take an average in repeat readings.

<ul style="list-style-type: none"> • Where appropriate, take accurate measurements using standard units using a range of equipment. • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. • Choose the most appropriate equipment to make measurements and explain how to use it accurately; • Take measurements using a range of scientific equipment with increasing accuracy and precision; • Take repeat readings when appropriate; • Understand why we take an average in repeat readings. 	
Knowledge of analysis	
Identifying, classifying and recording data and results	
RECORD	
LKS2	UKS2
<p>National Curriculum Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p>	<p>National Curriculum Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p>
<ul style="list-style-type: none"> • Gather, record, classify and present data in a variety of ways to help in answering questions. • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. • Talk about criteria for grouping, sorting and classifying; • Group and classify things; • Collect data from their own observations and measurements; • Present data in a variety of ways to help in answering questions; • Use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and 	<ul style="list-style-type: none"> • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. • Independently group, classify and describe living things and materials; • Use and develop keys and other information records to identify, classify and describe living things and materials; • Decide how to record data from a choice of familiar approaches; • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar graphs and line graphs.

<ul style="list-style-type: none"> • spelling knowledge; • Record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables. 	
Knowledge of how scientists use evidence to develop explanations	
Drawing conclusions, noticing patterns and presenting findings	
REVIEW	
LKS2	UKS2
<p>National Curriculum Identifying differences, similarities or changes related to simple scientific ideas and processes. Using straightforward scientific evidence to answer questions or to support their findings.</p>	<p>National Curriculum Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>
<ul style="list-style-type: none"> • Make links between their own science results and other scientific evidence; • Use straightforward scientific evidence to answer questions or support their findings; • Identify similarities, differences, patterns and changes relating to simple scientific ideas and processes; • 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 primary and secondary sources evidence to justify ideas; • Identify evidence that refutes or supports their ideas; • Recognise where secondary sources will be most useful to research ideas and begin to separate opinion from fact; • Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas; • Talk about how scientific ideas have developed over time.