Working Scientifically Progression Map

	EYFS	KS1	LKS2 (Y3 and 4)	UKS2 (Y5 and 6)
Asking Questions and Carrying Out Fair and Comparative Tests	**With support, children:** • are encouraged to be curious about how things behave • ask questions about things they can test • talk about their ideas for testing how things behave	**Asking simple questions and recognising that they can be answered in different ways. Performing simple tests.** **Children can**: • explore the world around them, leading them to ask some simple scientific questions about how and why things happen. • begin to recognise ways in which they might answer scientific questions • ask people questions and use simple secondary sources to find answers • carry out simple practical tests, using simple equipment • experience different types of scientific enquiries, including practical activities • talk about the aim of scientific tests they are working on	**Asking relevant questions and using different types of scientific enquiries to answer them. Setting up simple practical enquiries, comparative and fair tests.** **Children can:** • 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 • 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	**Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Using test results to make predictions to set up further comparative and fair tests.** **Children can:** • 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 the most appropriate type of scientific enquiry they might use to answer questions • explore and talk about their ideas, raising different kinds of scientific questions • ask their own questions about scientific phenomena; e 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 recognising 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.

Working Scientifically Progression Map

	EYFS	KS1	LKS2 (Y3 and 4)	UKS2 (Y5 and 6)
Observing and Measuring Changes	**With support, Children** • are encouraged to be curious about things that change • ask questions about things that are changing • talk about their ideas for finding out how things change	**Observing closely, using simple equipment.** **Children can**: • observe the natural and humanly constructed world around them • observe changes over time • use simple measurements and equipment; • make careful observations, sometimes using equipment to help them observe carefully	**Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment .** **Children can:** • make systematic and careful observations • observe changes over time • use a range of equipment • ask their own questions about what they observe • where appropriate, take accurate measurements using standard units using a range of equipment.	**Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** **Children can:** • 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 • make careful and focused observations • know the importance of taking repeat readings and take repeat readings where appropriate

Working Scientifically Progression Map

	EYFS	KS1 (Y1 and 2)	LKS2 (Y3 and 4)	UKS2 (Y5 and 6)
Identifying, Classifying, Recording and Presenting Data	**With support, children** • are curious about similarities & differences • ask questions about similarities & differences • talk about their ideas for sorting or matching things	**Gathering and recording data to help in answering questions.** **Children can:** • use simple features to compare objects, materials and living things • decide how to sort and classify objects into simple groups with some help • record and communicate findings in a range of ways with support • sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables	**Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.** **Children can:** • 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 spelling knowledge • record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables.	**Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.** **Children can:** • 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

Working Scientifically Progression Map

	EYFS	KS1 (Y1 and 2)	LKS2 (Y3 and 4)	UKS2 (Y5 and 6)
Drawing Conclusions, Noticing Patterns and Presenting Findings	**With support, children:** • be encouraged to be curious about how things behave. • ask questions about things they can test. • talk about their ideas for testing how things behave	**Using their observations and ideas to suggest answers to questions.** **Children can:** • notice links between cause and effect with support • begin to notice patterns and relationships with support • begin to draw simple conclusions • identify and discuss differences between their results • use simple and scientific language • read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1 • talk about their findings to a variety of audiences in a variety of ways.	**Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.** **Children can:** • draw simple conclusions from their results; • make predictions • suggest improvements to investigations; • raise further questions which could be investigated • first talk about, and then go on to write about, what they have found out • report and present their results and conclusions to others in written and oral forms with increasing confidence • make links between their own science results and other scientific evidence • identify similarities, differences, patterns and changes relating to simple scientific ideas and processes • use straightforward scientific evidence to answer questions or support their findings	**Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.** **Children can:** • notice patterns • draw conclusions based in their data and observations • use their scientific knowledge and understanding to explain their findings • read, spell and pronounce scientific vocabulary correctly; e identify patterns that might be found in the natural environment • look for different causal relationships in their data • discuss the degree of trust they can have in a set of results • independently report and present their conclusions to others in oral and written forms.