

Working Scientifically- Skills progression (Text in red is taken from the National Curriculum)

	Plan		Do			Review	
	Key questions and predict	Plan review	Set up enquiry	Observe and measure	Sort and record	Interpret and report	Evaluate
KS1 Develop close observations	Ask simple questions. Begin to predict.	Recognise that questions can be answered in different ways.	Perform simple tests.	Observe using simple equipment.	Identify and classify. Gather and record data to help answer questions.	Communicate what they found using simple scientific language.	Remind pupils of original questions. Use their observations and ideas to suggest answers to questions.
Support for progression	Provide question stems. Ask pupils to explain their predictions.	Provide opportunities for setting up different investigations.	Ask pupils to make decisions in the setting up of investigations.	Provide access to a range of equipment. Discuss how to make increasingly accurate measurements.	Ask children to create their own tables and charts.	Support children to identify key findings, noting patterns and relationships.	Ask children to use their own observations to make new predictions.
Lower KS2 Develop systematic approach	Ask relevant questions. Make predictions using previous experiences.	Use different types of scientific enquires to answer questions.	Set up simple practical enquires, comparative and fair test.	Make systematic and careful observations and where appropriate take accurate measurements.	Gather, record, classify and present data in a variety of ways to help answer questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	Report on findings from enquires using oral and written explanations, present results and conclusions. Identify differences, similarities or changes related to simple scientific ideas.	Use results to draw simple conclusions, make predictions for new values suggest improvements and raise further questions. Use straight forward scientific language to answer the key question.
Support for progression	Challenge children to ask a range of questions.	Provide a structure for group planning.	Ask pupils to identify variables.	Ask pupils to take repeated readings.	Ask pupils to create own tables, charts and with support graphs.	Ask pupils to identify patterns.	Ask pupils to explain conclusions in terms of scientific concepts.
Upper KS2 Develop independence	Ask testable questions. Base predictions on scientific understanding.	Plan different types of scientific enquires.	Recognise and control variables where necessary.	Take measurements using a range of scientific equipment with increasing accuracy and precision. Take repeated readings when appropriate.	Record data and results using scientific diagrams and labels, classification keys, tables and graphs.	Report and present findings from enquiries including conclusions, causal relationships and explanations in various oral and written forms such as displays and other presentations.	Use test results to make predictions to set up further comparative and fair tests. Identify scientific evidence that has been used to support or refute ideas or arguments.
Support for progression	Ask pupils to sort questions raised.	Ask pupils to plan independently.	Ask pupils to explain which are key variables.	Ask pupils to explain the need for repeat readings.	Ask pupils to select how data is analysed.	Ask pupils to identify and suggest reasons for qualifying results.	Ask pupils to evaluate their own and others results.

