

Skills Progression - Working Scientifically

Enquiry Skills	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Asking questions/ Research	Ask simple questions and recognise that they can be answered in different ways.	Ask simple questions and recognise that they can be answered in different ways.	Ask relevant questions and using different types of scientific enquiries to answer them	Ask relevant questions and using different types of scientific enquiries to answer them	Raise scientific questions and make hypotheses	Raise scientific questions and make hypotheses
Planning and Performing Tests	Perform simple tests	Perform simple comparative tests	Set up simple practical enquiries, comparative and fair tests	Set up simple practical enquiries, comparative and fair tests Begin to think about independent and control variables	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Make predictions based on previous results
Observing and Measuring	Use simple equipment to observe closely Use observations and ideas to suggest answers to questions e.g. observe change over time using senses	Use simple equipment e.g. sand timers, hand lens to observe closely Use observations and ideas to suggest answers to questions e.g. select equipment to measure plant growth and measure over time	Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate

Recording and Presenting information	Gather and record data to help in answering questions e.g use drawings, diagrams and models	Gather and record data to help in answering questions e.g. use diagrams, simple graphs and tables	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables 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 Gather, record, classify and present data in a variety of ways to help in answering questions	Record data and results of increasing complexity, include in abstract contexts Use scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	Record data and results of increasing complexity, include in abstract contexts Use scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
Analysis and Evaluation	Give simple description of what they found out. How? Why?	Give simple description and explanation of what they found out. Evaluate the accuracy and effectiveness of observations	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions e.g evaluate the effectiveness of the test.	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions e.g evaluate the effectiveness of the test, begin to make links with evidence from range of sources.	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Use test results to make predictions to set up further comparative and fair tests e.g. identify reliability of data and evidence	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Use test results to make predictions to set up further comparative and fair tests e.g. identify reliability of data and evidence, consider causal relationships
Identifying and classifying	Identify and classify e.g. Compare and contrast familiar	Identify and classify e.g. living, non-living, never alive. Identify	Identify differences, similarities or changes related to simple	Identify differences, similarities or changes related to simple	Identify scientific evidence that has been used to support	Identify scientific evidence that has been used to support

	plants, animals, materials, objects	similarities and differences.	scientific ideas and processes	scientific ideas and processes	or refute ideas or arguments Explore how scientific evidence and ideas have developed over time	or refute ideas or arguments
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