



Bonneygrove and Millbrook Primary Federation

Progression of Skills

Science

Scientific Skills	EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Questioning		Ask simple questions with adult guidance to find out about the world around us based on observations (e.g. "What is this?", "Why is it like that?")	Ask simple scientific questions and begin to suggest ways to answer them.	Ask relevant scientific questions and begin to recognise they can be answered through enquiry that can be investigated. Ideas are shared on how to find the answer to scientific questions using different types of enquiries (observing changes over time, noticing patterns, grouping/classifying, comparative tests, fair tests and using secondary sources).	Ask relevant questions and identify the type of enquiry needed (e.g. observing over time, fair tests.) Can turn existing scientific ideas into existing questions that can be investigated and start to plan different types of scientific enquiries, including recognising and controlling	Can form scientific questions for enquiry based scientific ideas/concepts and recognise which can be investigated and those which are theoretical. Plan different types of enquiries to answer questions, including the identification and control of variable.	Can explore scientific ideas/concepts and form clear enquiry questions about scientific phenomena, recognising which can be investigated and those which are theoretical. Select and plan the most appropriate types of enquiries to answer questions, including identifying and controlling variables, where necessary.

					variables with teacher guidance.		
Planning Investigations		With support, suggest what to do to find things out.	Suggest simple steps or ideas for tests.	Set up simple practical enquiries, including comparative and fair tests with support.	Plan fair tests, identifying what to change, measure, and keep the same.	Plan different types of scientific enquiries identifying variables and controls independently.	Independently plan investigations, selecting appropriate methods, controlling variable and considering reliability.
Observing & Measuring	Explore collections of materials with similar and/or different properties. Talk about the differences between materials and changes they notice.	Observe closely using senses; use simple tools (e.g. magnifiers).	Observe carefully using simple equipment and begin to measure (e.g. length, weight).	Make systematic observations; use standard units (cm, g, seconds).	Take accurate measurements using a range of equipment (thermometers, data loggers, rulers).	Take precise and repeat measurements; choose appropriate units and tools.	Take highly accurate, repeat measurements; consider precision, calibration, and limitations of equipment.
Recording Data & Results	Begin to recognise change over time.	Record findings using drawings, labels, or simple charts with support.	Record data in simple tables, pictograms, or tally charts.	Record findings using labelled diagrams, tables, and simple bar charts.	Record data in tables, bar charts, and begin using line graphs.	Record data using tables, scatter graphs, bar and line graphs with increasing accuracy.	Present data using a wide range of graphs (line, scatter), diagrams, and scientific conventions independently.

Using Equipment		Use simple equipment safely with guidance.	Use simple equipment correctly (e.g. rulers, timers).	Use a wider range of equipment accurately and safely.	Select appropriate equipment for investigations with some independence.	Choose appropriate equipment independently and explain choices.	Select and use a wide range of equipment precisely, explaining choices and limitations.
Identifying and classifying	Recognise that some environments are different to the one in which they live.	Identify and group objects based on simple observable features.	Use simple criteria to sort and classify; begin using basic keys.	Group and classify using observable characteristics; use simple classification keys.	Use classification keys and grouping systematically.	Develop more complex classification systems; recognise patterns in classification.	Create and use classification keys independently; justify grouping based on scientific reasoning.
Interpreting Results & Drawing Conclusions		Begin to talk about what has been observed; describe simple patterns.	Use observations and ideas to suggest answers to questions.	Use results to draw simple conclusions and identify basic patterns.	Identify patterns and relationships; use evidence to support ideas.	Use data to support or refute predictions; identify relationships and trends	Draw detailed conclusions, explain causal relationships, and link findings to scientific knowledge.
Evaluating & Improving		Say what happened in an investigation.	Suggest simple improvements or next steps.	Identify differences, suggest reasons, and recognise simple errors.	Suggest improvements and raise further questions.	Evaluate methods, identify variables affecting results, and suggest justified improvements.	Evaluate reliability of data, identify anomalies, discuss accuracy/precision, and suggest detailed improvements.

Scientific Language & Communication		Begin to use simple scientific vocabulary to describe observations.	Use basic scientific vocabulary to describe what happened.	Use appropriate scientific language to describe methods and findings.	Use increasingly accurate scientific terminology in explanations.	Use precise scientific language to explain results and ideas clearly.	Communicate scientific ideas clearly and concisely using complex vocabulary, written explanations and evidence-based arguments.
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