Science (strand: Working Scientifically) Essential Skills and Knowledge and EYFS to Y6



Aspect	EYFS	KS1		Lower KS2		Upper KS2	
	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Asking and answering questions	l can ask scientific questions about my local environment	Use everyday language to use simple scientific words to ask or answer a scientific question.	Suggest ideas, ask simple questions and know that they can be answered/investigated in different ways.	Use ideas to pose questions, independently.	Suggest relevant questions and know that they could be answered in a variety of ways, including using secondary sources such as ICT. Answer questions using straight forward scientific evidence.	Raise different types of scientific questions, and hypotheses.	Pose/select the most appropriate line of enquiry to investigate scientific questions.
Investigating		Follow instructions to complete a simple test individually or in a group.	Do things in the correct order when performing a simple test and begin to recognise when something is unfair.	Discuss enquiry methods and describe a fair test. Know how to make a prediction with a reason.	Make decisions about different enquiries, including recognising when a fair test is necessary.	Plan a range of science enquiries including comparative and fair tests.	Select and plan the most suitable line of enquiry, explaining which variables need to be controlled and why, in a variety of comparative and fair tests.
Observing	I can observe the natural world and comment on what I have seen.	Observe objects, materials and living things and describe what they use.	Observe something closely and describe changes over time.	Make decisions about what to observe during an investigation.	Make systematic and careful observations.	Plan and carry out comparative and fair tests.	Make their own decisions about which observations to make, using test results and observations to make predictions or set up further comparative or fair tests.
Equipment and measuring	I can explore different scientific equipment and create my own experiments.	Use simple non- standard measurements in a practical task.	Use simple equipment, such as hand lenses or timers to take measurements, make observations.	Take accurate measurements using standard units.	Take accurate measurements using standard units and a range of equipment including thermometers and data loggers.	Take measurements using a range of scientific equipment with increasing accuracy and precision.	
Identifying and classifying	I can sort into two groups according to different physical features.	Sort and group objects, materials and living things, with help according to simple observational features.	Decide, with help, how to group materials, living things and objects, noticing changes over time and beginning to see patterns.	Talk about criteria for grouping, sorting and categorising, beginning to see patterns and relationships. Know how to identify differences, similarities and changes related to an enquiry.	Identify similarities/ differences/ changes when talking about scientific processes. Use and begin to create simple keys.	Use and develop simple keys to identify, classify and describe living things and materials.	Identify and explain patterns seen in the natural environment.
Recording and reporting on findings	I can verbally share what I have observed.	Talk about findings and explain what they have found out.	Gather data, record and talk about their findings , in a range of ways using simple scientific vocabulary.	Record their findings using scientific language and present in note form, writing frames,	Choose appropriate ways to record and present information, findings and conclusions for different audiences	Record data and results of increasing complexity using scientific diagrams, labels, classification keys,	Choose the most effective approach to record and report results, linking to

				diagrams, tables and charts.		tables, bar and line graphs and models.	mathematical knowledge.
Analysing data		Use every day or simple scientific language to ask and/or answer a question.	Identify simple patterns and/or relationships using simple comparative language.	Gather, record and use data in a variety of ways to answer a simple question.	Identify, with help, changes, patterns, similarities and differences in data to help form conclusions. Use scientific evidence to support their findings.	Use relevant scientific language and diagrams to discuss, communicate and justify my scientific ideas.	Identify and explain casual relationships in data and identify evidence that supports or refutes their findings, selecting fact from opinion.
Drawing conclusions	Through my own observations, I can share what I have seen.	Explain, with help, what they think they have found out.	Use simple scientific language to explain what they have found out.	Draw, with help, a simple conclusion based on evidence from an enquiry or observation.	Use recorded data to make predictions.	Use a simple communication to justify their conclusions or a hypothesis. Begin to recognise how scientific ideas change over time. Read spell and pronounce scientific vocabulary accurately.	Discuss how scientific ideas develop over time. Read spell and pronounce scientific vocabulary accurately