

WORKING SCIENTIFICALLY PROGRESSION

Yr	QUESTIONS	TESTING IDEAS	TAKING MEASUREMENTS	PRESENTING RESULTS & MAKING CONCLUSIONS
6	Carry out research to find answers when investigating a scientific principle or theory.	Know what type of investigation is needed. Set up a fair test or enquiry based investigation. Know the variables and justify which has been isolated. Make accurate predictions based on information.	Use all measurements (within Y6 maths) including capacity, mass, ratio and proportion.	Present information related to scientific enquiries in a range of ways (IT). Use a range of written methods to report findings. Be evaluative when explaining findings. Set out clear explanations about why something has happened and the possible impact of it. Begin to support conclusions with evidence. Use new scientific vocabulary when recording their work.
5	Keep a record of new scientific words & meanings needed to understand answers to their questions.	Set up an investigation when it is appropriate. Set up a fair test when needed. Set up an enquiry based investigation. Know what the variables are and isolate each one. Make predictions based on information; create new investigations which take into account previous learning.	Use all measurements (within Y5 maths) including capacity and mass. Use range of scientific instruments to take measurements (e.g. newtons).	Record and present data in a range of ways. Use diagrams to support writing. Be evaluative when explaining findings. Be clear about what has been found out and make links with other learning, where appropriate. Give an example when supporting a scientific theory. Relate causal relationships.
4	Ask questions such as <i>'Why are steam and ice the same thing?'</i>	Carry out tests; set up a fair test with more than one variable; explain why it is fair. Use bar charts and other Y4 tables to record findings. Give plausible reasons for their predictions; amend them according to findings if necessary.	Measure carefully (within Y4 maths) and add to scientific learning. Use a data-logger.	Use research to find things out. Gather and record information using a chart, matrix or tally. Group information according to common factors. Present findings using written explanations and diagrams, when needed. Write up findings using a plan-do-review process. Make sense of findings / draw conclusions which help them understand more. Be prepared to change ideas as a result of what they have found out.
3	Ask questions such as <i>'Why do shadows change during the day?'</i>	Make observations. Test to find out; set up a fair test with different variables. Explain why a test is fair and what they have found out. Use bar charts and other Y3 tables to record findings. Amend predictions according to findings.	Measure carefully (within Y3 maths) and add to scientific learning. Use a thermometer and understand there are two main scales used.	Use research to find things out. Gather and record information according to common factors. Know how to use a key to help understand information in a chart. Present findings using written explanations and diagrams, when needed. Make sense of findings / draw conclusions which help them understand more. Be prepared to change ideas as a result of what they have found out.
2	Ask questions such as <i>'Why do some animals have underground habitats?'</i>	Know how to set up a fair test. Use microscopes (e.g. to look at plants / mini-beasts).	Use equipment such as thermometers and rain gauges to help make observations. Use measures (within Y2 maths) to help find out more about the investigation.	Draw conclusions from fair tests and explain what has been found out. Classify / group things according to given criteria.
1	Ask questions such as <i>'Why are flowers different colours?'</i>	Set up a test, know if it has been successful and say what has been learned.	Measure (using Y1 maths) to help find out more about an investigation.	Explain what has been learned from an investigation. Draw conclusions from the answers.
FS	Ask questions to clarify their understanding.	Use all their senses in hands-on exploration of natural materials. Explore how things work. Ask questions to find out more. Use talk to work out problems and organise thinking and activities.	Explore the natural world around them, making observations and drawing pictures of animals and plants.	Know some similarities and differences between the world around them and contrasting environments, drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them (e.g. seasons, melting, freezing)