

Subject Progression Grid for Science



Questioning and Planning

Year 1	Beginning to ask simple questions when they are unsure.
Year 2	Asks simple questions recognising they can be answered in different ways. Can answer most simple questions related to an area of study.
Year 3	Asks relevant questions to develop understanding. Can use a scientific enquiry to explain their answers.
Year 4	Asks 'why' questions to develop an understanding of cause and effect. Answers questions using more than one scientific enquiry. Can use scientific enquiries to explain their answers and are beginning to organise their responses.
Year 5	Asks challenging questions, e.g. significance and bias. Shows some purposeful selection about what information they wish to include in responses. Can show some organisation of information when responding to or asking questions.
Year 6	Can ask hypothetical questions. Can plan different types of scientific enquiry to answer questions. Can organise information purposefully when responding to or asking questions.

Subject Progression Grid for Science



Predicting

Year 1	Beginning to make simple predictions about what might happen.
Year 2	Make simple predictions based on scientific knowledge.
Year 3	Start to frame predictions using scientific language and learnt concepts.
Year 4	Frame predictions in scientific language & concepts.
Year 5	Frame predictions properly and draw on other evidence, including previous test results.
Year 6	Frame predictions properly, draw on other evidence, including previous test results, and use these predictions to set up further tests.

Subject Progression Grid for Science



Experimental Skills and Using Equipment

Year 1	Perform simple teacher-led tests using provided equipment.
Year 2	Perform simple teacher-led fair tests using provided equipment.
Year 3	Set up teacher-led simple practical enquiries, using comparative and fair tests.
Year 4	Set up simple practical enquiries, using comparative and fair tests.
Year 5	Set up experiments, recognising and controlling variables where necessary.
Year 6	Set up experiments, including repeat readings, recognising and controlling variables where necessary.

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Observing

Year 1	Make comments about what they can see.
Year 2	Observe closely, using simple equipment (e.g. magnifying glass).
Year 3	Make systematic observations, identifying differences and similarities in what they observe.
Year 4	Start to relate the changes they see to simple scientific ideas and processes.
Year 5	Make more complex links between the changes they see and the scientific content they have learnt.
Year 6	Make links between what they see and a range of scientific content (e.g. including content from all years).

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Identifying and Classifying

Year 1	Sort objects/pictures according to given criteria.
Year 2	Sort objects/pictures according to given criteria and noticing patterns and relationships.
Year 3	Beginning to identify similarities, differences and patterns or changes related to simple scientific ideas and processes.
Year 4	Identify similarities, differences and patterns or changes related to simple scientific ideas and processes.
Year 5	Identify similarities, differences and patterns and begin to draw their own conclusions from these findings.
Year 6	Draw conclusions from the similarities and differences discovered by their own investigations.

Subject Progression Grid for Science



Measuring

Year 1	Use comparative language around measurement but not formal measurement tools eg longer, shorter, faster.
Year 2	Use simple equipment to measure differences eg 30cm ruler, a stopwatch, weighing scales.
Year 3	Take accurate measurements using a range of equipment, including thermometers and data loggers eg measuring to the nearest mm/second/gram.
Year 4	Make systematic and careful observations and measurements using a range of equipment, including thermometers and data loggers eg measuring to the nearest mm/second/gram.
Year 5	Start to use increased precision and accuracy and make comments about this accuracy. Taking repeat readings when appropriate.
Year 6	Understand and explain why different levels of accuracy are appropriate (e.g. not measuring a ball throw in mm)

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Recording

Year 1	Draw pictures or complete simple charts.
Year 2	Draw diagrams and charts during the experiment process.
Year 3	Start to record observations using notes and tables, and including simple scientific language.
Year 4	Record observations using notes and tables, and including scientific language.
Year 5	Make clear records of observations and other aspects of the experiment process (e.g. labelled diagrams).
Year 6	Make clear records of observations with increasing complexity.

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Presenting

Year 1	Explain what they have seen or found, or draw a picture using age-appropriate scientific vocabulary.
Year 2	Explain their findings: verbally, through simple written explanations, simple charts and pictures/diagrams using age-appropriate vocabulary.
Year 3	Present findings orally and in writing, using tables and bar graphs, and more complex graphs (eg line graph, pie chart) through ICT results and conclusions.
Year 4	Gather, classify and present data in a variety of ways to help in answering questions eg. using tables and bar graphs, and more complex graphs (eg line graph, pie chart), through ICT slideshows, vlog writing, photos etc
Year 5	Explain their views on increasingly complex data and results using in the most appropriate way eg. scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
Year 6	Choose the most suitable method of presentation in oral and written forms such as displays and other presentations.

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Interpreting, Evaluating and Concluding

Year 1	Answer verbal questions about their prediction and results, e.g. Were they right?
Year 2	Use their observations and ideas to suggest answers to questions. Were they right? Why? Use age-appropriate vocabulary to answer these questions.
Year 3	Evaluate their predictions, use straightforward scientific evidence to answer questions, suggest improvements and raise further questions.
Year 4	Use scientific evidence and vocabulary to justify their interpretations. Start to identify patterns and relationships. Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.
Year 5	Include more detail in conclusions on casual relationships, data and observations based on scientific knowledge. Start to make reference to external evidence, e.g. from famous experiments in the past, or applying knowledge from other curriculum areas
Year 6	Make comments about degrees of trust in results, or about the methodology. Make reference to external evidence, e.g. from famous experiments in the past, or applying knowledge from other curriculum areas