

St Martin's Catholic Primary school

Scientific skills progression



	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Asking and answering questions	ELG 2 – “offer own ideas” “small group, class and one-to-one discussions, offering their own ideas”	Use everyday language or simple scientific language to ask or answer simple scientific questions.	Use simple scientific language to answer simple scientific questions and know that they can be answered in a variety of ways.	Use scientific language and terms to pose and answer questions about the world.	Begin to use simple scientific hypotheses to answer relevant questions about the world.	Use hypotheses more consistently to answer questions. Begin to suggest most appropriate line of enquiry to answer scientific questions.	Use hypotheses to support scientific enquiry independently. Explain the most appropriate line of enquiry to ask/answer scientific questions.
Making Predictions	ELG 2 – “Offer explanations of why things might happen”	Begin to make simple predictions in everyday language.	Make simple scientific predictions and begin to use correct scientific language.	Make predictions using correct scientific terms.	Independently make predictions using correct scientific vocabulary and explain reasoning.	Tailor predictions to specific investigations and base predictions on findings of previous enquiries.	Explain predictions using correct scientific vocabulary. Base predictions on previous investigations as well as a variety of secondary sources, books, video clips, research etc.
Observing	ELG 15 – “making observations and drawing pictures of animals and plants”	Make simple observations of living things, materials and processes.	Make observations of living things, materials, and processes and begin to offer explanations for their observations.	Decide what and how to observe to answer specific questions/conduct enquiries.	Observations are more independent and begin to follow a more systematic approach.	Observations are systematic and independent. Children use observation findings to plan and carry out further enquiries.	Children use complex and systematic observations to independently conduct enquiries. Children use observation as a basis for deciding the set up for future enquiries.
Measuring	ELG 12 – “recognise when one quantity is greater than, less than, or the same as the other quantity”	Make use of simple, non-standard measurements in practical work	Use simple practical equipment in a range of enquiries, begin to use some standard measurements	Take careful and accurate measurements using standard scientific units.	Begin to use a more complex range of standard unit measuring equipment	Use a range of standard unit scientific equipment independently with precision and accuracy. Begin to explain reasoning for selecting specific measuring methods.	Use a wide range of standard unit scientific equipment with confidence. Explain reasoning for selecting each piece of equipment. Check reliability of results through collaboration and research.

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Recording	ELG 15 – “make observations and drawing pictures of animals and plants”	Begin to make basic recordings of simple data.	Record simple scientific findings using qualitative and quantitative data.	Begin to link recording methods to mathematical knowledge including tables and charts.	Record findings in an increasing variety of ways including tables, charts, diagrams, writing frames, and explanations.	Choose most appropriate recording method to suit different enquiries.	Choose most appropriate recording and presentation method to suit range of enquiries and audiences (e.g. displays, presentations, written explanations etc.).
Drawing conclusions	ELG 1 – “Make comments about what they have heard” ELG 2 – “Offer explanations of why things might happen.”	Use everyday language to explain what they have found	Use simple scientific language to explain the results of an enquiry	Make a simple conclusion about the wider world based on a scientific enquiry	Give a more detailed conclusion and suggest areas for future enquiry	Use results of an enquiry to make statements about the wider world, give new predictions, and suggest future enquiries. Begin to recognise that scientific ideas change over time.	Give detailed conclusions that comment on the validity and applicability of results. Explain that scientific ideas change and develop over time.
Enquiry methods	ELG 15 – “Explore the natural world around them” “Know some similarities and differences between the natural world around them and contrasting environments” “Understand some important process and changes.”	Conduct simple tests individually or in a group, with support.	Follow simple steps for a fair test, with support, recognising when a test may be unfair.	Discuss enquiry methods and select most appropriate method collaboratively. Describe how to make a fair test.	Recognise when a fair test is necessary and begin to identify variables.	Explain an independent and dependent variable in a fair test and recognise the need for control variables.	Use independent, dependent and control variables with confidence. Use of a variety of fair and comparative tests to answer a range of questions. Comment on the validity of enquiries and suggest required improvements for the future.