

Science Curriculum

Working scientifically skills progression



EYFS

In the EYFS, the characteristics of effective learning from the Statutory Framework for the Early Years Stage are the foundations on which the working scientifically skills build in Key Stage 1. While children are playing and exploring, teachers should be modelling, encouraging and supporting them to do the following:

- show curiosity and ask questions
- make observations using the senses and simple equipment
- make direct comparisons
- use equipment to measure
- record their observations by drawing, taking photographs, using sorting rings and, in Reception, on simple tick sheets
- use their observations to help them to answer their questions
- talk about what they are doing and have found out
- identify, sort and group

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Asking and answering questions</b>	Use everyday language/begin 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 including simple secondary sources, such as books and	Use ideas to pose questions, independently, about the world around them.	Suggest relevant questions and know that they could be answered in a variety of ways, including using secondary sources such as ICT. Answer questions	Raise different types of scientific questions, and hypotheses.	Pose/select the most appropriate line of enquiry to investigate scientific questions.

## ST WERBURGH'S CATHOLIC PRIMARY SCHOOL

		video clips.		using straight forward scientific evidence.		
<b>Making predictions</b>	Begin to say what might happen in an investigation.	Begin to make predictions.	Make predictions and begin to give a reason.	Make predictions and give a reason using simple scientific vocabulary.	Make predictions and give a reason using scientific vocabulary.	Make predictions and give a reason using scientific vocabulary. Base predictions on findings from previous investigations.
<b>Making observations</b>	Observe objects, materials and living things and describe what they see.	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, making systematic and careful observations.	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.
<b>Equipment and measurements</b>	Use simple, nonstandard equipment and measurements in a practical task.	Use simple equipment, such as hand lenses or egg timers to take measurements, make observations and carry out simple tests.	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.	Choose the most appropriate equipment in order to take measurements in order to take measurements, explaining how to use it accurately. Decide how long to take measurements for, checking results with additional readings.
<b>Identifying and classifying</b>	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.	Identify similarities/differences /changes when talking about scientific processes.	Use and develop keys to identify, classify and describe living things and materials.	Identify and explain patterns seen in the natural environment.

## ST WERBURGH'S CATHOLIC PRIMARY SCHOOL

<b>Engaging in practical enquiry (investigating)</b>	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.	Make decisions about different enquiries, including recognising when a fair test is necessary and begin to identify variables.	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.
<b>Recording and reporting findings</b>	Begin to record simple data. Talk about their 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, diagrams, tables and charts.	Choose appropriate ways to record and present information, findings and conclusions for different audiences (e.g. displays, oral or written explanations).	Record data and results of increasing complexity using scientific diagrams, labels, classification keys, tables, bar and line graphs and models.	Choose the most effective approach to record and report results, linking to mathematical knowledge.
<b>Drawing conclusions</b>	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, pose new questions and suggest improvements for further enquiries.	Use a simple mode of communication to justify their conclusions on a hypothesis. Begin to recognise how scientific ideas change over time.	Identify validity of conclusion and required improvement methodology. Discuss how scientific ideas develop over time.
<b>Analysing data Evaluating and raising further questions and predictions</b>	Use everyday or simple scientific language to ask and/or answer a question on given data.	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 illustrations to discuss, communicate and justify their scientific ideas.	Identify and explain causal relationships in data and identify evidence that supports or refutes their findings, selecting fact from opinion.