



Sedgeberrow CE First School – Working Scientifically Progression

At Sedgeberrow C of E First School, we aim to spark children's natural curiosity about the world and provide them with the substantive and disciplinary knowledge in order to explain what is happening, predict how things will behave and analyse cause and effect.

There are 7 scientific enquiry skills that need to be modelled and taught. These are the skills that enable our children to progress in to becoming scientists whilst at Sedgeberrow C of E First School.

These skills are:

- Asking questions
- Making predictions
- Setting up tests
- Observing and measuring
- Recording data
- Interpreting and communicating results
- Evaluation.

Please note, these are different to the 5 scientific enquiry types. The above are the disciplinary knowledge that should be modelled and taught to our pupils in order for them to become scientists.



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	Working Scientifically Disciplinary Knowledge
Year 1:	• Talk about what they see, touch, smell, hear or taste • Use simple equipment to help make observations • Perform a simple test and tell other people about what they have done • Identify and classify what they observe • Think of some questions to ask • Answer some scientific questions and give simple reasons for their answers • Explain what they have found out • Show their work using pictures, labels and captions • Record their findings using standard units • Put some information in a chart or table
Year 2:	• Use <see, touch, smell, hear or taste> to help them answer questions • Use some scientific words to describe what they have seen and measured • Compare several things • Carry out simple fair tests • Explain why it might not be fair to compare two things • Say whether things happened as they expected • Suggest how to find things out • Use prompts to find things out • Organise things into groups • Find simple patterns (or associations) • Identify animals and plants by a specific criteria e.g. lay eggs or not; have feathers or not • Use text, diagrams, pictures, charts and tables to record their observations • Measure using simple equipment • Explain and summarise what they have found out and use their measurements to say whether it helps to answer their questions



Year 3:	• Use different ideas and suggest how to find things out • Make and record a prediction before testing • Plan a fair test and explain why it was fair • Set up a simple fair test to make comparisons • Explain what why they need to collect information to answer questions • Measure using different equipment and units of measure • Record their observations in different ways (diagrams, charts etc.) • Describe what they have found using scientific languages • Make accurate measurements using standard units • conclude what they have found out and use their measurements to say whether their prediction was accurate (making justifications) • Use a range of equipment (including a data logger) in a simple test
Year 4:	• Set up a simple fair test to make comparisons • Plan a fair test and isolate variables, explaining why it was fair and which variables have been isolated • Suggest improvements and predictions • Decide which information needs to be collected and decide which is the best way for collecting it • Use their findings to draw simple conclusions • Take measurements using different equipment and units of measure and record what they have found in a range of ways • Make accurate measurements using standard units • Explain their findings in different ways (display, presentation, writing) • Find any patterns in their evidence or measurements • Make a prediction based on something they have found out • Evaluate what they have found using scientific language, drawings, labelled diagrams, bar charts and tables • Use straightforward scientific evidence to answer questions or to support their findings • Identify differences, similarities or changes related to simple scientific ideas or processes



Year 5:

- Plan and carry out a scientific enquiry to answer questions, including recognising and controlling variables where necessary
- Make a prediction with reasons
- Use test results to make predictions to set up comparative fair tests
- Present a report of their findings through writing, display and presentation
- Take measurements using a range of scientific equipment with increasing accuracy and precision
- Take repeat readings when appropriate
- Record more complex data and results, using scientific diagrams, labels, classification keys, tables, scatter graphs, bar and line graphs
- Use a graph to answer scientific questions

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