



Science- 'Working Scientifically'

Skills Progression– June'19

'Skill Themes' developed from Association for Science Education (ASE)

	<b>Skill Theme 1 Scientific Attitudes</b>	<b>Skill Theme 2 Experimental skills and investigations</b>	<b>Skill Theme 3 Analysis and evaluation</b>	<b>Skill Theme 4 Measurement</b>
<b>End of Key Stage 1 (Year 2)</b>	1.1 Ask simple scientific questions showing curiosity about the world around them 1.2 Access simple research sources to find out more about a topic of choice	2.1 Observe closely, using simple equipment 2.2 Perform simple tests gathering and recording data to help answer questions	3.1 Use their observations and ideas to suggest answers 3.2 Make simple conclusions from data in tables, graphs and charts	4.1 Use a range of equipment to take measurements 4.2 Know why accurate measurements are important
<b>End of Lower Key Stage 2 (Year 4)</b>	1.3 Ask relevant questions 1.4 Suggest and use different types of scientific enquiries to find answers. 1.5 Access appropriate research sources to find out more about a topic of choice	2.3 Set up simple practical enquiries including comparative and fair tests 2.4 Make systematic and careful observations taking accurate measurements using a range of equipment, including thermometers and data loggers 2.5 Gathering, recording, classifying and presenting data in a variety of ways	3.3 Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables 3.4 Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions 3.5 Use results to draw simple conclusions 3.6 Make predictions for new values, 3.7 Suggest improvements and raise further questions	4.3 Make systematic and careful observations 4.4 Taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
<b>When we leave the school. Year 6</b>	1.6 Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary 1.6 Access a range of appropriate research sources to find out more about a topic of choice	2.6 Know why to take repeat readings when appropriate 2.7 Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	3.8 Use test results to make predictions 3.9 Suggest how to set up further comparative and fair tests 3.10 Report and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations 3.11 Identify scientific evidence that has been used to support or refute ideas or arguments	4.5 Solve problems involving the calculation and conversion of units of measure, 4.6 Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa. 4.7 Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate

**Key subject specific skills vocabulary** (Tier 3 vocab) to be embedded and revisited during the study of science in Little Melton: observe, equipment, identify, classify, group, record, data, compare, contrast, research, comparative test, fair test, systematic, labelled, conclusion, prediction, interpret, construct, variables, precision, evidence, refute quantitative, qualitative

**We believe these skills are important for life because:**

- We want children to have the scientific knowledge to understand much of the world around them and the practical skills to enable them to investigate and explore to find out more
- We want children to be curious scientists, interested in the world around them, with a desire to question, investigate and reason scientifically, making links between different parts of the knowledge they have gained.