



Explicit Maths Links Across the Science Curriculum

Parish Church of England Primary School

Progression in Communicating and Recording within Science (Explicit Maths Links):

Increasing Independence Year on Year

Y1	Y2	Y3	Y4	Y5	Y6
<p>Present their findings in a variety of ways using templates where necessary.</p> <p><u>Progression Examples:</u> Talk and discuss, write/describe, draw pictures, make/construct tables, charts and displays.</p>	<p>Record and communicate their findings in a range of ways with increasing independence.</p> <p><u>Progression Examples:</u> Talk/discuss; write/describe; draw pictures; take photographs; make/construct a variety of tables and charts [including simple, bar charts] often produced as a group.</p>	<p>Recording and present findings using simple scientific language and vocabulary.</p> <p>Record, classify and present data in a variety of ways to help in answering questions.</p> <p><u>Progression Examples:</u> Oral and written explanations, notes drawings annotated, pictorial representations, labelled diagrams, simple tables, bar charts [using ranges and intervals chosen for them].</p>	<p>Recording and present findings using simple scientific language and vocabulary.</p> <p>Begin to select the most useful ways to record, classify and present data from a range of choices.</p> <p><u>Progression Examples:</u> Oral and written explanations, notes drawings annotated, pictorial representations, labelled diagrams, tables, bar charts [using ranges and intervals agreed through discussion].</p>	<p>Record data and results of increasing complexity.</p> <p>Report findings from enquiries using discussion, drawings, oral and written explanations of results and conclusions.</p> <p><u>Progression Examples:</u> Using tables, bar and line graphs and models.</p>	<p>Make decisions on the most appropriate format to present Scientific data and record data and results of increasing complexity using scientific diagrams and labels.</p> <p>Report findings from enquiries using discussion, annotated drawings, oral and written explanations of results, explanations involving causal relationships, and conclusions.</p> <p><u>Progression Examples:</u> Using Scientific diagrams and labels, recognised symbols, classification keys, tables, bar and line graphs and models.</p>
<p><u>Specific Curriculum Examples:</u> <u>Plants</u> (Tally charts). <u>Weather and Seasons</u> (Pictogram and use of a table template). <u>Animal World</u> (Venn diagram).</p>	<p><u>Specific Curriculum Examples:</u> <u>Living Thing and Their Habitats</u> (Venn diagram). <u>Materials and Their Uses</u> (Collaborative table drawing). <u>Animals and their Needs</u> (Collaborative table drawing). <u>How Plants Grow</u> (Collaborative line graph).</p>	<p><u>Specific Curriculum Examples:</u> <u>Forces and Magnets</u> (Table drawing and Venn diagram with growing independence). <u>Animals and Humans</u> (Developing labelled diagrams). <u>Lights and Shadows</u> (Table drawing with growing independence). <u>The Structure and Function of Plants</u> (Labelled diagrams and table drawing with growing independence. Drawing bar chart creation with support). <u>Rocks</u> (Comparison table drawing).</p>	<p><u>Specific Curriculum Examples:</u> <u>Classification of Living Things</u> (Independent labelled diagrams). <u>States of Matter</u> (Drawing bar charts with increased independence). <u>Sound</u> (Drawing of tables and bar chart with growing independence). <u>Digestive System</u> (Independent Table drawing). <u>Electricity</u> (Carroll diagram with support).</p>	<p><u>Specific Curriculum Examples:</u> <u>Properties and Changing Materials</u> (Independent table drawing and bar chart creation). <u>Earth and Space</u> (Independent table drawing. Line graph creation with some support). <u>Life Cycles and Reproduction</u> (Line graph creation with growing independence). <u>Forces and Movement</u> (Independent bar chart creation).</p>	<p><u>Specific Curriculum Examples:</u> <u>Light and Seeing Things</u> (Independent table drawing and annotated diagrams). <u>The Human Body: Systems</u> (Table drawing and pie chart creation. Identifying relationships between sets of data). <u>Evolution and Inheritance</u> (Independent use of a Carroll Diagram alongside classification keys). <u>Electricity</u> (Independently drawing a line graph).</p>

Progression in Equipment and Measuring within Science (Explicit Maths Links):
Increasing Independence Year on Year:

Y1	Y2	Y3	Y4	Y5	Y6
<p>Observe closely using non-standard units (such as lolly sticks, cubes and handfuls) simple equipment (such as egg timers) and their senses.</p>	<p>Observe more accurately by measuring non-standard and standard units.</p> <p>Use their senses, simple measurements and equipment to gather data with increasing independence.</p> <p>Gather data to help in answering questions.</p>	<p>Collect data from observations and measurements using simple tables and standard units.</p> <p>Make simple accurate measurements using whole number standard units, using a range of equipment.</p> <p>Gathering data in a variety of ways to help in answering questions.</p>	<p>Make more of the decisions about what observations to make how long to make them for and the type of equipment that might be used.</p> <p>Learn how to use new equipment and accurately measure temperature using a thermometer.</p> <p>Make accurate measurements using standard and more complex units using a range of equipment.</p>	<p>Record data and results of increasing complexity, following safety guidelines.</p> <p>Make their own decisions about what observations to make or measurements to use and how long to make them for.</p> <p>Decide how to record data from a choice of familiar approaches.</p> <p>Choose the most appropriate equipment to make measurements.</p>	<p>Record data and results of increasing complexity, following and suggesting safety guidelines.</p> <p>Recognise that data might be unreliable and describe how to make it more reliable.</p> <p>Make their own decisions about what measurements to take and identify the ranges and intervals used.</p> <p>Take measurements, using a range of equipment, with increasing accuracy and precision.</p> <p>Choose the most appropriate equipment to support observation, make measurements and collect data.</p>
<p>Specific Curriculum Examples:</p> <p><u>Human Senses</u> (Simple experiments with senses).</p> <p><u>Plants</u> (Observe plant growth accurately by measuring using non-standard units [such as lolly sticks and cubes]).</p> <p><u>Weather and Seasons</u> (Observe rainfall using non-standard units [such as lolly sticks] and ordering).</p>	<p>Specific Curriculum Examples:</p> <p><u>Materials and their Uses</u> (Absorbency test using simple measurements and equipment).</p> <p><u>Animals and their Needs</u> (Gathering data from exercise using senses).</p> <p><u>How Plants Grow</u> (Observe plant growth accurately by measuring standard units [cm]).</p>	<p>Specific Curriculum Examples:</p> <p><u>Forces and Magnets</u> (Collect data from measurements using standard units of meters and cm).</p> <p><u>Animals and Humans</u> (Gathering data in a muscle investigation).</p> <p><u>Lights and Shadows</u> (In a shadow investigation, make simple accurate measurements using whole number standard units, using a range of equipment).</p> <p><u>The Structure and Function of Plants</u> (Observe plant growth accurately by measuring standard units [cm] using a tape measure).</p>	<p>Specific Curriculum Examples:</p> <p><u>States of Matter</u> (Learn how to use new equipment and accurately measure temperature using a thermometer to measure standard units).</p> <p><u>Sound</u> (Measuring sound using a decibel metre).</p> <p><u>Electricity</u> (Make more of the decisions about what observations to make how long to make them for and the type of equipment that might be used).</p>	<p>Specific Curriculum Examples:</p> <p><u>Properties and Changing Materials</u> (Record data and results of increasing complexity involving temperature).</p> <p><u>Life Cycles and Reproduction</u> (Decide how to record data from a choice of familiar approaches).</p> <p><u>Forces and Movement</u> (Measuring using a Newton Metre and choosing the most appropriate equipment to make measurements).</p>	<p>Specific Curriculum Examples:</p> <p><u>Light and Seeing Things</u> (Independently recording data).</p> <p><u>Using Things: Further Classification</u> (Independently choose the most appropriate equipment to support observation).</p> <p><u>Electricity</u> (Take measurements, using a range of equipment, with increasing accuracy and precision).</p>

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