| Working Scientifically Coverage<br>Year 5 | | | | | | |
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| Topic: | Planning different types of scientific enquiries, controlling variables where necessary | Reporting and presenting findings from enquiries | Recording data and results using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs | Take measurements using a range of scientific equipment with accuracy and precision | Using test results to make predictions and set up further comparative and fair tests | Identify scientific evidence that has been used to support or refute ideas and arguments |
| The Earth and beyond | | X | X | X | X | X |
| Get sorted | X | X | X | | | X |
| Everyday materials | X | X | | X | X | X |
| Feel the force | X | X | X | X | X | X |
| Circle of life | | X | | | | X |
| Reproduction in plants and animals | | X | X | | | X |
| Marvellous mixtures | X | X | | | X | |
| Materials: all change! | X | X | | | X | |
| Our changing world | X | | X | | | X |

| Working Scientifically Statement | Guidance |
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| Planning different types of scientific enquiries, controlling variables where necessary | Select and plan the most appropriate methods to answer questions including:<br>• observing changes over different periods of time<br>• noticing patterns<br>• grouping and classifying things<br>• carrying out fair tests<br>• finding things out using a wide range of secondary sources of information.<br>Explain why they have selected the particular enquiry type.<br>Identify and control appropriate variables when planning for a range of enquiry types. Recognise when variables cannot be controlled. |
| Reporting and presenting findings from enquiries | • Use scientific language to communicate findings from a range of enquiries in written, oral and multimedia presentations.<br>• Describe patterns between data collected.<br>• Describe causal relationships between data collected.<br>• Draw valid conclusions from data collected.<br>• Construct explanations of results.<br>• Explain the reliability of results with reference to previous enquiries and difference or anomalies between data. |
| Recording data and results using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs | • Independently construct and use a range of ways to record and sort data: keys (with four or more items); tables; scatter graphs; bar and line graphs; frequency charts.<br>• Draw scientifically accurate diagrams and use scientific vocabulary to label these when recording results. |
| Take measurements using a range of scientific equipment with accuracy and precision | • Independently use a range of appropriate scientific equipment to make accurate and precise measurement and collect data.<br>• Recognise when repeated readings are required for accuracy and reliability.<br>• Select appropriate ranges and intervals for data collection.<br>• Extract relevant data from range of secondary sources to help answer questions. |
| Using test results to make predictions and set up further comparative and fair tests | • Use the results from a range of enquiries to pose further questions to investigate.<br>• Identify when further tests and observations are needed to answer questions. |
| Identify scientific evidence that has been used to support or refute ideas and arguments | • Differentiate between fact and opinion.<br>• Identify the scientific evidence that has been used to answer a question.<br>• Use scientific evidence to support or refute ideas. |