

**Our children are receptive, inquisitive learners who, through our Gospel values, have a unique sense of the world.**

**Working Scientifically – Upper KS2**

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| NC Objective  Pupils should be taught to:   | Year 5 *Working Scientifically*  | Year 6 *Working Scientifically*  |
| Skills  | Knowledge  | Skills  | Knowledge  |
| Planning different types of scientific enquires to answer questions, including recognising and controlling variables where necessary  | * To be able to observe changes over a period.

•noticing patterns •grouping and classify things •carry out simple comparative tests •find things out using secondary sources of information  | To know that to discover different results you need to use a variety of different enquiries  | * To be able to observe and explains changes over a period

• patterns •grouping and classify things •carry out simple comparative tests •find things out using secondary sources of information * To be able to choose the most effective source or combination of sources to good effect.
 | To know that to discover different results you need to use a variety of different enquiries.    |

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| Identifying Scientific evidence that has been used to support or refute ideas and arguments    | * To be able to use primary and secondary sources of information.
 |  To know that evidence can be gathered from a wide range of sources including first-hand experience, primary and secondary resources  | * To be able to use primary and secondary sources of information.
* To be able to select the most appropriate sources of primary and secondary resources.
 | To know that evidence can be gathered from a wide range of sources including first-hand experience, primary and secondary resources  |
| Taking measurements using a range of scientific equipment, with increased accuracy and precision, taking repeat readings where necessary     | * Decide what observations to make, how often and what equipment to use
* Decide what measurements to take, how long to make them for and whether to repeat them
* Decide what sorting or classification criteria to use

Recognise when a simple fair test is necessary • With help, decide what variables to change and measure  | To know that there are a variety of different methods to record your findings.   To know that it may be necessary to repeat the process to verify results.  | * To be able to plan an effective investigation.
* To be able to reflect on the results collected from an investigation and explain if another method would have been more appropriate.
* To make informed choices to decide which variables to
* change and measure
 | To understand that it may be necessary to try more than one method to determine which is the most effective.  |

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| Using test results to make predictions to set up further comparative and fair tests  | * To be able to predict what will happen when they compare results.
 | To know that you can make predictions based on comparative results.  | * To be able to predict what will happen when they compare results and to create fair tests.
 | To know that you can use predictions to inform results in both fair and comparative tests.  |
| Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs.  | * To be able to read and interpret results presented in a variety of different formats.
 | To know that results can be read and interpreted in a variety of different ways e.g., scientific diagrams and labels, classification keys, tables, and bar and line graphs.  | * To be able to collect and interpret results presented in a variety of different formats.
* To be able to choose the most appropriate format for the specific task.
 | To know that results can be collected and represented in a variety of different ways e.g. scientific diagrams and labels, classification keys, tables, and bar and line graphs.  |
| Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations and degree of trust in results, in oral and written forms such as displays and other presentations.  | * To be able to read and interpret finding from enquiries.
 | To know that there are a variety of different ways of reporting and presenting findings from enquiries.  | * To be able to report and present findings from enquiries in the most appropriate form.
 | To know that there are a variety of different ways of reporting and presenting findings from enquiries. |
| Pupils should read, spell, and pronounce scientific vocabulary correctly    |