 **Holy Cross Catholic Primary School**

Science Working Scientifically Progression Statements – End of year expectations

**NOTE:** Our main science progression statements are on a separate document which can be found on our website.

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|  | **Plan**  **investigations, enquiries and answer questions** | **Select and use appropriate equipment** | **Gather, Record Data and Present Data** | **Use appropriate language, analyse results and draw conclusions** | **Present conclusions and raise further points for enquiry** |
| **Year**  **1** | • Ask simple questions and recognise they can be answered in different ways with a new object or subject | * Observe closely, using simple equipment * Confidently handle simple equipment such as magnifying glasses, sieves etc. * Perform simple tests using given equipment * Using equipment and   methods as suggested by an adult. | * Identify and classify * Classify using simple models (e.g. 2 circle Venn diagrams) based on one different characteristic. | * Use observations and ideas to suggest questions * Answer simple questions which have been given by a teacher | * Gather and record data to help in answering questions * Use raw data to answer simple questions e.g. Which day had more rainfall |
| **Year 2** | • Recognise that questions they – or others – ask can be answered in different ways. | * Observe closely, using simple equipment * Describe the effect of using the equipment e.g. describe a minibeast through a magnifying glass * Perform simple tests using equipment * Begin to suggest ideas for equipment to be used. | * Identify and classify * Classify using simple models (e.g. 2 circle Venn diagrams) based on one different characteristic. * Use more detailed models e.g. 3 circle Venn diagrams, Carroll diagrams etc. | * Use observations and ideas to suggest questions * Answer simple questions which have been given by a teacher * Suggest answers to questions of their own and those of classmates based on their own ideas and observations. | * Gather and record data to help in answering questions * Use raw data to answer more complex questions e.g. How much more rainfall was there on Monday than on Tuesday? |

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| **Year 3** | • Questions are relevant to the unit being studied and are answered using enquiries suggested by adults or others. | •  • | Set up simple practical enquiries, comparative and fair tests  Set up simple enquiries when given the correct equipment. | * Make systematic and   careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including  thermometers and data loggers   * Take measurements   over intervals, using measurements learned in Maths/Science | * Gather, record, classify and present data in a variety of ways to help in answering questions. * Suggest the best ways of gathering, recording and classifying data. | * Record findings using   simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.   * Use simple, scientific language, drawings and bar charts. | * Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. * Be able to orally discuss findings, using basic scientific language, independently, and provide written explanations with support. * Use results to draw simple conclusions and make predictions for new values. * Use scientific evidence to answer simple questions. (supported) |
| **Year 4** | • Suggest the type of Scientific Enquiry most suitable for answering  questions. \* | •  • | Set up simple practical enquiries, comparative and fair tests  Choose appropriate equipment from a selection of relevant and non-relevant equipment. | * Make systematic and   careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including  thermometers and data loggers   * Take more accurate measurements, and suggest a suitable timeframe for enquiries. | * Gather, record, classify and present data in a variety of ways to help in answering questions. * Record data with increasing accuracy. * Present data in a wider variety of ways and begin to notice patterns in data e.g. curves in line graphs and suggest possible reasons for this. | * Record findings using   simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.   * Use labelled diagrams, keys and tables. | * Report on findings from enquiries, including oral and written   explanations, displays or presentations of results and conclusions   * Be able to present results and conclusions of what they have found to a group or class, using more detailed scientific vocabulary. * be able to suggest improvements and raise further questions. * Use evidence to support findings (or evidence which contradicts their findings). (supported) |

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|  | **Plan**  **investigations, enquiries and answer questions** |  | **Gathering Evidence** | **Gather, Record Data and Present Data** | **Use appropriate language, analyse results and draw conclusions** | **Present conclusions and raise further points for**  **enquiry** |
| **Year 5** | • Plan different types of enquiry to answer questions, with support recognising variables. | •  • | Take measurements, using a range of scientific equipment, with increasing accuracy and precision.  Take measurements using a range of equipment, including confidently using data loggers. Begin to take repeat readings for the purpose of ‘fair test’ when necessary. | * Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar charts and line graphs. * Record more complex data, using more detailed scientific diagrams and labels, tables, bar and line graphs. * Using test results to make predictions to set up further comparative and fair tests. * Use others’ test results to set up further comparative and fair tests (based around the same hypothesis/question). | • Report and present findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations | • Identify scientific evidence that has been used to support ideas or arguments. |
| **Year 6** | • Recognise and control variables where necessary,  distinguishing between  ‘control’ | •  • | Take measurements, using a range of scientific equipment, with increasing accuracy and precision.  Identify when a repeat  reading is  appropriate/necessary | * Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar charts and line graphs. * Use classification keys and scatter graphs * Use their own test results to set up further comparative and fair tests (based around   an adapted hypothesis/question). | * Report and present findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations * Report and present on causal relationships. | * Identify scientific evidence that has been used to support or refute ideas or arguments. * Identify evidence that has been used to support **or refute** ideas or arguments. |