Robins Lane Primary School

Science, working scientifically, end of year expectations

	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.	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.	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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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.