Royston St John Baptist CE Primary – Scientific Enquiry Progression Document

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically	Explore the natural world around them. Describe what they see, hear, and feel whilst outside. Talk about what they see, using a wide vocabulary. Explore collections of materials with similar and /or different properties. Use all their senses in hands-on exploration of natural materials.	Ask simple questions. Observe closely. Perform simple tests to explore a question or idea suggested to them, with support. Gather and record data using a given table.	Ask simple questions and recognises that simple questions can be answered in different ways. Observe closely using simple equipment. Identify things to measure or observe that are relevant to the question or ideas they are investigating using a simple test (in a group or independently). Record data in a wider range of given ways. Use their data and results to answer questions. Use observations and ideas to suggest answers to questions.	Ask relevant questions and use different types of scientific enquiry to answer them. Make systematic and careful observations during a fair test. Plan and carry out a simple fair test relevant to the question or ideas they are investigating. Take and record accurate measurements using standard units (e.g. to a whole cm). Gather and record data into simple formats (e.g. tables and bar charts). Use simple scientific language to present findings. Record and report findings from enquiries in labelled drawings and diagrams. Draw simple conclusions using my own results. Begin to recognise when a test is not fair and suggest improvements. Identify differences and similarities.	Ask relevant questions and use different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Know which are control, dependent and independent variables in a fair test. Identify one or more control variable from those provided when conducting a fair test. Make observations and take increasingly accurate measurements using standard units (e.g. to a decimal point). Use a range of equipment, including thermometers and data loggers. Gather, record, classify, and present date in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Identify differences, similarities, or changes related to simple scientific ideas and processes. Use straightforward scientific evidence to answer questions or to support their findings.	Ask relevant questions and use different types of scientific enquiries to answer them. Identify one or more control variables in investigations when conducting a fair test. Identify which type of measurements should be taken. Take accurate and appropriate measurements using specific, provided equipment. Record data and results (e.g. using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs). Use test results to make predictions. Report and present findings from enquiries with a given format.	Ask relevant questions and use different types of scientific enquiries to answer them. Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Recognise which type of practical enquiry is most appropriate to the question or idea being investigated, before planning and carrying out the enquiry. Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Identify when to take repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, casual 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 or refute ideas or arguments.
	explore, describe, see, hear, smell, touch, taste.	properties, magnifying glass, question, answer, observe/observation, test, explore, gather, record, label, data, identify, classify, equipment, measure, table, diagram, pictogram		fair test, comparative, accurate, standard units, thermometer, data logger, gather, record, classify, present, data, tables, bar graph, classification keys, presentation, explain, conclusion, prediction, differences, similarities, theory, dependent variable, independent variable, results		control variables, classify, comparative, enquiry, casual relationship, patterns, precise, measurements, opinion, fact, communicate, hypothesis, line graph, scatter graph, repeat readings, secondary information, justify, outlier, anomaly	