St.Clement's CE Academy Scientific Enquiry Curriculum End points

Intent	To develop inquisitive children who are excited about investigating with curiosity, "How can scientific enquiry explain the world?" Exploring answers by gathering and analysing evidence.		
Pupils are enabled to:	Enquire, record and report, developing and evaluating explanations through experimental evidence		
EYFS By the end of Reception…	KS1 By the end of Year 2…	Lower KS2 By the end of year 4…	Upper KS2 By the end of year 6…
Children answer 'how' and 'why' questions about their experiences and in response to stories or events. They develop their own narratives and explanations by connecting ideas or events. Children know about similarities and differences in relation to places, objects, materials and living things. They make observations of animals and plants and explain why some things occur, and talk about changes.	Ask simple questions Observe closely, using simple equipment. Perform simple tests Use observations and ideas to suggest answers to questions. Gather and record data.	Ask relevant questions. Set up simple, practical enquiries and comparative and fair tests. Make accurate measurements using standard units, using a range of equipment. Gather, record, classify and present data in a variety of ways. Record findings using simple scientific language, drawings, labelled diagrams, 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	Plan enquiries, including recognising and controlling variables where necessary. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. Take measurements, using a range of scientific equipment, with increasing accuracy and precision. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models. Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions.
Working scientifically vocabulary:	As previous plus:	As previous plus:	As previous plus:
What…? How ….? Why …? Same, different, look closely, bigger and smaller, change, observe, watch, touch, feel, smell, listen, same, different, compare, ask questions, record, sort, group	Similar, difference, best and worst , plan, changes, biggest and smallest, compare, sorting, groupings, observe , change, slowly, quickly, describe, name, identify, label, record, measure, pattern, notice, cycle, predict, same, different, data, results, drawing, table, block graph, pictogram, Venn diagram, ask questions, test, investigate, explore, equipment, resources, magnifying glass, hand lens, ruler, tape	Gradually, identify, observe, recognise investigate, record, units, table, fair testing, evidence, research, length, observations prediction, similarities, differences , research, source, scientists, discovery, process, cycle, measurements, conclude evaluate, accurate, rank, plan, vary, keep the same/constant, bar graph ,table, tally, thermometer, data logger, stopwatch, timer, estimate, data, diagram,	Hypothesis, variables, constants, evaluate, plan, conclude, interpret, classify, categorise, database ,enquiry, control, repeat, support, refute ,degree of trust ,scatter graph, pattern, relationship, prediction, analyse , conclude, rank ,variable, key, relationship, line graph, independent variable, evidence, justify, argument, causal relationship, accuracy, precision, force meter

	measure, metre stick, pipette, syringe, spoon, answer questions, interpret results, scientific enquiry, pattern seeking, comparative testing, observing over time, classifying, researching using secondary sources	identification key, chart, similarity, findings, values, properties, characteristics, conclusion, explanation, reason, improve	