

TOTLEY ALL SAINTS CE PRIMARY SCHOOL

Science Progression of Skills – Working Scientifically



	Strand	FS2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working scientifically	Asking questions & planning enquiries	• Draw on own experiences and what has been read in class to ask relevant questions	 Ask simple questions about the world 	Ask simple questions about the world	• Ask relevant questions	 Ask relevant questions Use different types of scientific enquiry to answer them 	 Plan enquiries to answer questions Recognise and name different variables 	 Plan enquiries to answer questions Identify and control variables
	Observing & measuring	• Make observations e.g. of animals and plants	Observe carefully using simple equipment	Observe carefully using simple equipment	• Observe and measure accurately using a range of equipment, e.g. thermometers	• Observe and measure accurately using a range of equipment, e.g data loggers	• Observe and measure using a range of scientific equipment, with increasing accuracy and precision	 Measure precisely and accurately using a range of scientific equipment Take repeat readings
	Recording & presenting data	 Draw pictures of animals and plants Recognise some important processes and changes in the natural world e.g. the seasons, changing states of matter. 	 Present data using labelled diagrams and simple tables Identify and make groups 	 Present data using labelled diagrams, pictograms, block diagrams, tally charts, tables Identify and classify groups 	• Record, classify and present data using keys, drawings, labelled diagrams, bar charts and tables	• Record, classify and present data using keys, drawings, labelled diagrams, bar charts and tables	• Record data and results using diagrams, labels, tables, bar and line graphs	 Record data and results using scientific diagrams and labels Choose the most appropriate method of recording, e.g. classification keys, tables, scatter graphs, bar, line graphs
	Performing tests & making predictions	• Know some similarities and differences in the natural world around them and contrasting environments	• Carry out simple tests	Carry out simple tests	• Make predictions to help set up fair tests with support	• Make predictions to help set up fair tests that compare ideas	• Make predictions from results and use in further fair & comparative tests	• Make predictions from results to set up further comparative and fair tests



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	Reporting, & communicating data	• Express own ideas from observations using recently introduced vocabulary with support and modelling	• Collect data to answer questions	Collect data to answer questions	 Begin to report findings in different ways Use oral and written forms to present ideas 	 Report findings using displays and presentations Use oral and written forms to present ideas 	 Report and present findings with simple explanations Use oral and written forms to present ideas 	 Report and present findings including how results might not be true Explain causal relationships Use oral and written forms to present ideas
	Analysing findings & drawing conclusions	Offer explanations for why things might happen	• Suggest answers to questions	Answer questions in different ways	Use these to draw simple conclusions and suggest improvements	 Identify differences, similarities and changes Use straight- forward scientific evidence to support findings 	• Identify simple scientific evidence that has been used to support ideas or arguments	Identify scientific evidence that has been used to support or disprove ideas or arguments
Associated maths skills	Statistics & Measures	• Understand numbers 1 to 10 and compare quantities and measures e.g. length	 Recognise e.g. the tallest/ shortest, heaviest/lightest, before/after Measure in cm length and height Measure mass capacity volume with simple scales Recognise hours minutes seconds 	 Tally chart Bar charts Tables Block diagrams Pictograms (2, 5,10) Metric measures – cm, m, g, kg, ml Measure simple temperatures 	 Tally charts Bar charts Pictograms Two-way tables Metric measures including mm, cm, m, kg, g Read scales with support Analogue and digital time in 5- minute intervals 	 Tally charts Bar charts Pictograms Two-way tables Line graphs Metric measures including mm, cm, m, km, kg, g Read scales Analogue and digital time 24-hour clock 	 Tally charts Bar charts Pictograms 2 way tables Line graphs Metric measures including m, cm, mm, kg, g, l, ml Read scales Analogue and digital time 24-hour clock 	 Tally charts Bar charts Pictograms 2 way tables Line graphs Dual bar charts Pie charts including % Mean averages Read scales Metric measures calculate & convert Analogue and digital time 24-hour clock