



SCIENCE 'WORKING SCIENTIFICALLY' SKILLS PROGRESSION

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Pucklechurch learners can...						
Questioning	With teacher support, ask simple questions: How? What will happen if...? Why?	Begin to ask their own questions and understand that not all questions can be answered through investigation.	Consider different questions to investigate.	Consider different questions to investigate and evaluate the potential of each.	Ask and answer specific, focussed questions.	Recognise and address variables within a question.	Control variables within a question.
Predicting	Make a (not necessarily plausible) prediction as to what might happen during an investigation.	Make increasingly plausible predictions as to what might happen during an investigation.	Justify predictions using the word 'because'.	Link predictions to existing scientific knowledge and/or past experiences and encounters.	Make predictions using scientific vocabulary.	Use observations and data from an investigation to make further predictions for future comparative tests.	Substantiate predictions with additional material e.g. by sketching a line graph to show expected patterns in results.
Investigating	Work as a class/group with an adult to perform simple practical tests and comparisons.	Make observations over time; compare and group using simple physical properties.	Perform simple tests with increasing independence.	Perform fair tests.	Perform comparative tests.	Use an increasingly wide range and of increasingly complex science equipment, e.g. ray boxes, microscopes, levers, pulleys, gears, within investigations.	
Measuring	Use non-standard measurements, e.g. long, short, fast, slow, loud, quiet, bright, dull.	Measure and begin to record, for example, lengths and heights, mass/weight, capacity and volume, time (hours, minutes, seconds).	Use standard units to measure, for example, length/height (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml), using rulers, scales, thermometers and measuring vessels.	Use increasingly specialised equipment to take measurements, e.g. data loggers, measuring cylinders.	Read specialised measuring equipment with increasing accuracy, e.g. using decimals.	Collate multiple data sets to enable comparisons and further analysis.	Calculate averages and discard unreliable data.
Recording	Produce whole-class tables, charts or graphs using manipulatives (e.g. sticky-notes, bean bags, counters).	Populate pre-drawn tables, charts or graphs with data.	Draw simple pictograms, tally charts, block diagrams and/or tables to record and represent data; produce food chains.	Draw labelled tables and bar charts to record and represent data, and use keys.	Present discrete and continuous data appropriately, including basic line graphs.	Plot multiple data sets on one table, chart or graph, including line graphs, in order to make comparisons.	Record and represent data confidently and accurately on a range of charts and graphs, including scattergraphs and pie charts.
Explaining	Orally describe what happened during an investigation.	Use annotated drawings to describe what happened during an investigation.	Begin to notice patterns and relationships when answering questions.	Discuss the findings of an investigation in a basic written account and suggest improvements.	Explain basic causal relationships in written explanations and identify similarities and differences between comparative tests.	Explain more detailed causal relationships in written explanations, referring back to predictions in order to consider future tests.	Write detailed explanations which draw clear conclusions, make excellent use of scientific vocabulary and refer to specific findings.