Blacko Primary School

Science Progression Map

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Planning and predicting	Ask teachers or adults within school about the things they observe Ask questions about world around them.	Ask questions about world around them that can be answered in different ways Suggest what might happen and how to test ideas	With help, raise some ideas and questions to investigate. Raise questions based on what they have observed Think about how to collect evidence Suggest what might happen . Think about and discuss whether comparison is fair or unfair	Respond to suggestions, with help put forward ideas about testing. Make predictions With help, consider what constitutes a fair test With help, plan and carry out a fair test	Recognise why it is important to collect data to answer questions Suggest questions that can be tested Put forward ideas about testing and make predictions Begin to design own tests identifying and managing variables With help, consider what constitutes a fair test	Recognise that scientific ideas are based on evidence and creative thinking Make predictions based on scientific knowledge Suggest methods of testing including a fair test Suggest how to collect evidence Select suitable equipment	Make predictions based on scientific knowledge and understanding Plan different kinds of scientific enquiry to answer questions including recognising and controlling variables where necessary. Suggest methods for testing including fair testing Ensure data collected is appropriate and sufficient

Investigating and observing	Make observations about the things they see around them Make simple comparisons between object or living things Conduct guided investigations through play	Make observations using appropriate senses Observe closely using simple equipment (e.g. hand lenses, egg timers) Use non-standard measures Make simple comparisons and groupings Perform simple test to investigate the answer	Make observations and comparisons using simple equipment following simple instructions. Use first-hand experience and, with help, simple information sources to answer questions Research the answers to questions using books, computers or tablets Use rulers/tape measures to take measurements in cm	Make observations and comparisons with increased independence Set up simple practical enquiries, comparative tests and fair tests . Measure length, volume of liquid and time in standard measures using simple equipment. Use first-hand experience and simple information sources to answer questions	Set up simple practical enquiries and begin to make decisions about which equipment is appropriate for investigations Make relevant observations and comparisons Make measurements of temperature, time weight, length and volume with increasing accuracy. Using a range of equipment including thermometers, rulers, stopwatches, measuring jugs/ cylinders and data loggers Begin to think about why measurements may need repeating to check accuracy With help, carry out a fair test recognising and explaining why it is fair Identify criteria for classification , use and create simple keys	Carry out a fair test explaining why it is fair Understand why observations need to be repeated Select information from provided sources Take measurements using a range of scientific equipment (including force metres and thermometers) with increasing accuracy and precision, taking repeated measurements where appropriate	Carry out fair test identifying key factors to be considered (identifying and controlling variables) Make a variety of relevant observations and measurements using simple apparatus correctly Decide when observations and measurements need to be checked by repeating to give more reliable data Select information from a range of sources

Recording, analysing and evaluating	Explore the world around me making observations and drawing pictures of plants and animals Make suggestions about how things work based on my observations Use basic observations to help answer questions with help from the teacher	Communicate findings in simple ways- pictorial and 1 or two sentences . Make oral contributions which can add to group or class discussion Collect evidence to try to answer a question. Gather and record data/ observations using given tables or sorting charts	Record findings in simple tables, tally charts and graphs (as covered in year 2 maths curriculum) Say what has happened and whether if it was what you expected. Use observation and ideas to answer questions using simple sentences to describe the answer Draw basic conclusions with simple reasoning Record findings using labelled diagrams	Communicate findings in a variety of ways Say whether what happened was expected With help, identify simple patterns and suggest explanations Record findings using simple scientific language, drawings, labelled diagrams , bar charts and tables Report on findings both orally to the class and in written explanations of results and conclusions Use results to draw conclusions	Explain what the evidence shows in a scientific way and whether it supports predictions Suggest improvement to their work Record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables Comment on findings of other investigations compared to own and how they support or contradict Draw conclusions with clear evidence, suggest improvements and raise further questions for possible further investigation	Communicate findings in a variety of ways Identify simple trends and patterns. Offer explanations for these trends and patterns Communicate findings in tables bar charts and line graphs making appropriate use of ICT Draw conclusions and communicate them with appropriate scientific language Suggest improvements to their giving reasons Use test results to make predictions and set up further comparative and fair tests Report findings from enquiries including conclusions, causal relationships and	Communicate findings in tables, bar charts and line graphs while making appropriate use of ICT Identify trends and data in results that do not fit the expected pattern. Provide explanation for differences in observations and measurements Draw conclusions and communicate them in appropriate scientific language Record data and result of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line charts (in line with year 6 maths curriculum) Make practical suggestions how their investigative

						explanation of and degree of trust in results	work could be improved Based on results suggest further questions that could be investigated making predictions where relevant. Identify causal relationships in investigations Begin to research evidence to support or refute ideas/ arguments and begin to separate opinion from fact