

SCIENCE PROGRESSION IN INVESTIGATION SKILLS							
AREA OF LEARNING	RECEPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<b>QUESTIONING</b>	Demonstrate curiosity about the world around them	Ask simple questions stimulated by their exploration of their world	Ask simple questions about their experiences and observations of objects, living things or events and with help use these observations to suggest ways to discover an answer or solve a problem, recognising that some can be answered in a variety of ways	Within a group suggest relevant questions that can be explored/investigated further using different types of science enquiry	Ask relevant questions that can be answered by the appropriate scientific enquiry, research or experiment/test	Refine a scientific question so that it can be investigated/tested, choosing an appropriate type of science enquiry to provide the best evidence	Recognise scientific questions to which they do not yet have definitive answers using a range of scientific enquiries to explore possible answers
<b>OBSERVING AND MEASURING</b>	Use senses and simple measuring equipment to explore the world around them	Make measurements using non-standard units of measure  Observe objects, living things, events and the world around them closely, using their senses and simple equipment	Make measurements using non-standard and standard units of measure  Use equipment, provided for observation and measuring, correctly  Observe closely	Take simple accurate measurements and/or careful observations using whole number standard units relevant to questions or ideas under investigation  Use a range of equipment for measuring and observing, including thermometers and data loggers	Take accurate measurements using more complex standard units and parts of units  Choose from a range provided, appropriate equipment for measuring and observing including thermometers and data loggers  Make systematic and careful observations of objects, living things and events	Take measurements using a range of scientific equipment with increasing accuracy and precision identifying the ranges and intervals used  With help recognise that some measurements and observations may need to be repeated	Decide whether it is appropriate to repeat observations or measurements and explain how this impacts on data collection  Choose and use correctly appropriate equipment to support observation and data collection with increasing accuracy
<b>PLANNING AND PERFORMING TESTS</b>	Respond to prompts to say what happened to objects, living things or events	Perform simple tests to explore a question or idea suggested to them, with support	Identify things to measure or observe that are relevant to the questions or ideas they are investigating using a simple test  Suggest a practical way of how to find things out, or collect data to answer a question or idea they are investigating	Plan and carry out simple practical enquires, comparative and fair tests relevant to the questions or ideas they are investigating, with support	Plan and carry out simple practical enquires, comparative and fair tests relevant to the questions or ideas they are investigating  Identify one or more control variables from those provided when conducting a fair test	Plan enquiries deciding when it is appropriate to carry out a fair test or another type of practical enquiry from a range suggested  Identify one or more control variables in investigations when conducting a fair test	Recognise significant variables in investigations selecting the most suitable to investigate controlling variables where appropriate  Recognise which type of practical enquiry is most appropriate to the question or idea being investigated, before planning and carrying out the enquiry
<b>IDENTIFYING AND CLASSIFYING</b>	Sort/match objects, living things and events in their own way	Recognise basic features, similarities and differences of objects or living things  Sort and group objects or living things in different ways	Make comparison between basic features or components of objects, living things or events to support identification and/or classification  Sort and group objects, living things or events on the basis of their observations and explain why	Identify and group objects, living things, processes or events by linking them to the characteristics of known objects, living things, processes or events	Identify differences, similarities or changes related to simple scientific ideas or processes and more complex groups of objects, living things and events	Classify objects, living things and events creating and using simple tables, keys or data bases with support	Use tables, keys and data bases to classify or identify specific objects, living things or events by their characteristics  Begin to identify some positives and some limitations of specific forms of classification
<b>USING EVIDENCE FOR CONCLUSIONS</b>	Talk about what they have found out or what they think might happen based on their own experiences and with support or prompting	Use their ideas to suggest answers to questions  Say what has changed when observing objects, living things or events	Use their observations and ideas to suggest answers to questions and to make predictions  Respond to suggestions to identify some evidence needed to answer a question	Use straightforward scientific evidence to answer questions and make predictions  Say whether what happened was what they expected, acknowledging any unexpected outcomes	Use straightforward scientific evidence to support their findings, make further predictions and explain their findings  Identify scientific evidence they have used in drawing conclusions	Recognise when scientific evidence is for or against an argument  Recognise when scientific evidence supports an idea or not and use this to support predictions	Identify scientific evidence that has been used to support or refute ideas or arguments  Recognise scientific questions that do not yet have definitive answers

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<b>GATHERING AND RECORDING DATA</b>	Talk to an adult about what has been found/found out	Present evidence they have collected in simple templates provided for them to help in answering questions  Draw or photograph evidence and label with support	Gather and record data in appropriate ways with increasing independence to help in answering questions	Gather and present evidence and data using simple scientific language and vocabulary as writing, drawing, labelled diagrams, display, through ICT, keys, bar charts or tables (using ranges and intervals chosen for them) to help in answering questions	Gather and present simple scientific data in a variety of ways as Year 3 including tables and bar charts where intervals and ranges agreed through discussion, to help in answering questions	Select appropriate ways of gathering and presenting scientific data from models, writing, drawing, display, through ICT, tables or graphs (choosing appropriate ranges and intervals)  Use correct scientific symbols where appropriate in recording	Decide on the most appropriate formats to present sets of scientific data such as using line graphs for continuous variables  Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
<b>USING RESULTS</b>	With help, suggest what may happen next or might change	Respond to suggestions to connect what has been observed with possible further actions or observations	Use understanding of what has been observed or own experience to predict outcomes of further actions or observations	Use results of enquiries to consider whether they meet predictions and explain why  With help use results, observations or own experience to prompt new questions and predictions for a further test	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Use test results to draw conclusions, recognising that the test may need improvements to improve reliability  Use test results to prompt new questions and make predictions for setting up further tests	Use test results to make predictions for setting up further comparative and fair tests  Compare their results with others and give reasons why they may be different
<b>REPORTING ON AND PRESENTING FINDINGS</b>	Talk to an adult about what has been found/found out	Present findings in simple templates provided for them or orally  Draw or photograph evidence and label with support	Report on and record findings as drawings, photographs, labelled diagrams, orally, as displays, or in simple prepared tables or charts	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions with support/as a group  Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables with support/as a group	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions  Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables	Present findings in written form, displays and other presentations including orally, explaining results and conclusions drawn from results  Identify causal relationships in reporting outcomes where appropriate	Report and present findings from enquiries, including conclusions, causal relationships and explanations of results in oral and written form such as displays and other presentations