

# Progression across Year 3 and 4

	<b>Working towards</b>	<b>Secure</b> <i>(End of Year 4 expectation)</i>	<b>Beyond</b>
<b>Scientific enquiry</b> (asking and answering questions)	<ul style="list-style-type: none"> <li><b>Questioning</b> Simple questions (not always related to the scientific enquiry).</li> <li><b>Curiosity</b> Demonstrated through questions.</li> <li><b>Ideas</b> Recognises simple ideas. Not always organised, relevant or scientifically informed.</li> </ul>	<ul style="list-style-type: none"> <li><b>Questioning</b> Ask relevant questions to find out more about a scientific enquiry. Identify new questions.</li> <li><b>Scientific enquiry</b> Use and set up different types of scientific enquiry to answer questions.</li> <li><b>Independence</b> Begin to take charge of enquiries, make personal decisions about the most appropriate enquiry.</li> <li><b>Secondary resources</b> Recognise when and how to use, to support answers.</li> </ul>	<ul style="list-style-type: none"> <li><b>Questioning</b> Use scientific vocabulary within questioning and when answering questions.</li> <li><b>Scientific enquiry</b> Confidently identify a range of enquiries to solve questions, make decisions about appropriateness.</li> <li><b>Reasoning</b> Demonstrate a clear awareness of scientific concepts. Justify answers through reasoning and comparisons.</li> </ul>
<b>Variable identification and understanding (planning)</b>	<ul style="list-style-type: none"> <li><b>Variables</b> Begin to understand what a variable is.  Recognise that some variables change and others stay the same.</li> </ul>	<ul style="list-style-type: none"> <li><b>Understanding variables</b> Identify variables, understand why variable control is necessary and how this has an effect on the enquiry.</li> <li><b>Controlling variables</b> Recognise which variables need to stay the same and which need to change and explain why (what impact will it have on the enquiry?)</li> </ul>	<ul style="list-style-type: none"> <li><b>Variables</b> Understand how variables effect an enquiry, apply this to a range of enquiries.</li> <li><b>Controlling variables</b> Recognise and begin to explain the impact of changing variables.</li> <li><b>Explain</b> what other factors impact an enquiry.</li> </ul>
<b>Predictions</b>	<ul style="list-style-type: none"> <li><b>Simple predictions</b> Use observations. Say what they think will happen next.</li> <li><b>Reasoning</b> Begin to provide a very basic reason using because.</li> </ul>	<ul style="list-style-type: none"> <li><b>Predictions</b> Recognise patterns, similarities and differences to make predictions for new values. Identify new questions.</li> <li><b>Reasoning</b> Begin to use what they already know to support reasoning. Begin to suggest improvements and raise questions.</li> </ul>	<ul style="list-style-type: none"> <li><b>Informed predictions</b> Use results and conclusions to predict for new contexts and investigations.</li> <li><b>Reasoning</b> Use a secure understanding of scientific concepts justify and provide reasoning for predictions.</li> </ul>
<b>Observations and measurements</b>	<ul style="list-style-type: none"> <li><b>Simple observations</b> <i>I can see... I can hear...</i></li> <li><b>Basic measurements</b> Take measurements to the nearest whole number when using a range of equipment.</li> </ul>	<ul style="list-style-type: none"> <li><b>Observations</b> Make systematic, careful observations using scientific vocabulary. Begin to develop individual decisions. With support, look for patterns, changes.</li> <li><b>Accurate measurements</b> Use standard units using a range of equipment, including thermometers and data loggers. Begin to recognise the most appropriate measuring device.</li> </ul>	<ul style="list-style-type: none"> <li><b>Explaining observations</b> Use technical, scientific vocabulary to explain observations.</li> <li><b>Accurate measures</b> Use a range of equipment, recognising which is most appropriate. Make comparisons between observations and measurements.</li> </ul>
<b>Recording</b>	<ul style="list-style-type: none"> <li><b>Recording</b> Basic vocabulary and labelled pictures. Verbal or written recording methods.</li> </ul>	<ul style="list-style-type: none"> <li><b>Recording</b> Begin to select the most appropriate way to record e.g. drawings, labelled diagrams, keys, bar charts, and tables. Use a range with scientific vocabulary to support.</li> </ul>	<ul style="list-style-type: none"> <li><b>Recording with variation, confidence and accuracy</b> Take charge of recording by choosing the most appropriate method for an investigation. Justify why this method is the most appropriate.</li> </ul>
<b>Classifying and presenting</b>	<ul style="list-style-type: none"> <li><b>Comparing</b> Use simple features to compare and classify into groups, notice patterns and relationships between variables.</li> <li><b>Sharing findings</b> Simple methods and scientific language to share findings e.g. verbally, simple sentences, pictures.</li> </ul>	<ul style="list-style-type: none"> <li><b>Classification and presenting</b> Begin to decide a range of appropriate ways to classify and present data, verbal and written.</li> <li><b>Comparing</b> Make comparisons, recognise differences/similarities. Begin to explain reasoning behind classifying.</li> </ul>	<ul style="list-style-type: none"> <li><b>Independence</b> Recognise and use confidently the most appropriate way to classify and present data, use recordings to support.</li> </ul>
<b>Conclusions</b>	<ul style="list-style-type: none"> <li><b>Verbal or written</b> Simple statements about what has happened in an enquiry.</li> <li><b>Observation support</b> <i>The water stayed hot for longest therefore the material is a good insulator.</i></li> </ul>	<ul style="list-style-type: none"> <li><b>Explain</b> Explain findings using results tables, diagrams to support their explanation. Consider why results occurred using correct terminology and evidence.</li> <li><b>Vocabulary</b> Make comparisons between variables using 'er' vocabulary e.g. <i>The tighter the string the higher the pitch.</i></li> </ul>	<ul style="list-style-type: none"> <li><b>Prior knowledge</b> Use prior knowledge/ experience to provide evidence to support reasoning.</li> <li><b>Explain</b> using technical, scientific vocabulary and diagrams. Relate and generalise findings to other enquiries.</li> </ul>