







## COLPAI Science Skills Progression

Our vision for Science education is that children become scientifically literate citizens who question and understand the world around them, through developing:

- deep knowledge and experiences;
- their scientific enquiry skills; and
- an enjoyment of exploring, discovering and creating meaningful connections with the world

	Asking Questions 	Setting up Tests 	Observing and Measuring 	Recording Data 	Interpreting and communicating results 	Evaluating 
<b>EYFS</b>	<ul style="list-style-type: none"> <li>• Understand 'why' questions. Use talk to work out problems and organise thinking and activities.</li> <li>• Ask questions to find out more, check what has been and ask questions to clarify.</li> <li>• Learn new vocabulary.</li> <li>• Use new vocabulary in different contexts.</li> <li>• Articulate ideas and thoughts in well-formed sentences.</li> <li>• Describe events in some detail.</li> </ul>	<ul style="list-style-type: none"> <li>• Use their senses in hands-on exploration of natural materials. Find ways to solve problems / find new ways to do things / test their ideas.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore how things work. Explore and talk about how different forces feel.</li> <li>• Talk about the difference between materials and changes they notice.</li> <li>• Make observations of animals and plants</li> <li>• Explore the natural world around them and make observations.</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to make sense of their own life-story and family's history.</li> <li>• Choose the resources they need for their chosen activities. Handle equipment and tools effectively.</li> </ul>	<ul style="list-style-type: none"> <li>• Create simple representations of events, people and objects. Use talk to help work out problems and organise thinking and activities.</li> <li>• Explain how things work and why they might happen.</li> <li>• Use new vocabulary in different contexts.</li> </ul>	<ul style="list-style-type: none"> <li>• Make healthy choices about food, drink, activity and tooth brushing.</li> <li>• Begin to understand the need to respect and care for the natural environment and all living things.</li> <li>• Talk about the different factors that support their overall health and wellbeing.</li> <li>• Manage their own basic hygiene and personal needs</li> <li>• Answer how and why questions about their experiences.</li> </ul>
<b>Year 1</b>	<ul style="list-style-type: none"> <li>• Ask simple questions and recognise that they can be answered in different ways.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform simple tests.</li> </ul>	<ul style="list-style-type: none"> <li>• Observing closely using simple equipment.</li> <li>• Identifying and classifying.</li> </ul>	<ul style="list-style-type: none"> <li>• Gather and record data to help in answering questions.</li> </ul>	<ul style="list-style-type: none"> <li>• Use appropriate scientific language to communicate ideas.</li> </ul>	<ul style="list-style-type: none"> <li>• Use observations and ideas to suggest answers to questions.</li> </ul>
<b>Year 2</b>	<ul style="list-style-type: none"> <li>• Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the NC</li> </ul>	<ul style="list-style-type: none"> <li>• Compare simple comparative tests</li> </ul>	<ul style="list-style-type: none"> <li>• Use simple equipment to observe closely including changes over time</li> <li>• Identify, group and classify</li> </ul>	<ul style="list-style-type: none"> <li>• Gather and record data to help in answering questions including from secondary sources of information</li> </ul>	<ul style="list-style-type: none"> <li>• Communicate their ideas, what they do and what they find out in a variety of ways</li> </ul>	<ul style="list-style-type: none"> <li>• Use their observations and ideas to suggest answers to questions noticing similarities, differences and patterns</li> </ul>
<b>Year 3</b>	<ul style="list-style-type: none"> <li>• Ask different types of questions and use different types of scientific enquiries to answer them</li> </ul>	<ul style="list-style-type: none"> <li>• Set up simple practical enquiries, comparative and fair tests.</li> </ul>	<ul style="list-style-type: none"> <li>• Make systematic and careful observations and, where appropriate, take accurate measurements using standard units and a range of equipment, including thermometers and data loggers.</li> </ul>	<ul style="list-style-type: none"> <li>• Gather, record, classify and present data in a variety of ways to help answer questions.</li> <li>• Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</li> </ul>	<ul style="list-style-type: none"> <li>• Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> <li>• Identify differences, similarities or changes related to simple scientific ideas and processes</li> </ul>	<ul style="list-style-type: none"> <li>• Using results to draw simple conclusions, make predictions for new values, suggest improvements, and raise further questions.</li> <li>• Using straight forward scientific evidence to answer questions or to support their findings.</li> </ul>

<p><b>Year 4</b></p>	<ul style="list-style-type: none"> <li>Ask relevant questions and use different types of scientific enquiries to answer them</li> </ul>	<ul style="list-style-type: none"> <li>Set up simple practical enquiries, comparative and fair tests</li> </ul>	<ul style="list-style-type: none"> <li>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> </ul>	<ul style="list-style-type: none"> <li>Gather, record, classify and present data in a variety of ways to help in answering questions*</li> <li>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</li> </ul>	<ul style="list-style-type: none"> <li>Report on findings from, including oral and written explanations, displays or presentations of results and conclusions</li> <li>Identify differences, similarities or changes related to simple scientific ideas and processes</li> </ul>	<ul style="list-style-type: none"> <li>Use results to draw simple conclusions, make predictions and new values, suggest improvements and raise further questions</li> <li>Use straightforward scientific evidence to answer questions or to support his/her findings</li> </ul>
<p><b>Year 5</b></p>	<ul style="list-style-type: none"> <li>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas.</li> </ul>	<ul style="list-style-type: none"> <li>Take measurements, using a range of scientific equipment, with increasing accuracy and precision.</li> </ul>	<ul style="list-style-type: none"> <li>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</li> </ul>	<ul style="list-style-type: none"> <li>Report and present findings from enquiries, including conclusions and causal relationships in oral and written forms such as displays and other presentations.</li> </ul>	<ul style="list-style-type: none"> <li>Explain degree of trust in results.</li> <li>Identify and evaluate scientific evidence that has been used to support or refute ideas or arguments</li> </ul>
<p><b>Year 6</b></p>	<ul style="list-style-type: none"> <li>Plan different types of scientific enquiries to answer their own or others questions, including recognising and controlling variables where necessary</li> </ul>	<ul style="list-style-type: none"> <li>Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas.</li> </ul>	<ul style="list-style-type: none"> <li>Take measurements, using scientific equipment, with increasing accuracy and precision, taking repeat findings when appropriate</li> </ul>	<ul style="list-style-type: none"> <li>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graph</li> </ul>	<ul style="list-style-type: none"> <li>Report and present findings from enquiries including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</li> </ul>	<ul style="list-style-type: none"> <li>Use test result to make predictions to set up further comparative and fair tests</li> <li>Identify scientific evidence that has been used to support or refute ideas or arguments</li> </ul>