

## Nature of Science (New Zealand Curriculum, 2007)

	Understanding about Science	Investigating in Science	Communicating in Science	Participating and contributing
<b>Exemplar Matrices Links</b>	Thinking in Scientific Ways (Matrix C)	Investigating in Science (Matrix B)	Developing and Communicating Scientific Understanding (Matrix D)	Developing Interest and relating Scientific Learning to the Wider World (Matrix A)
<b>Achievement Aims</b>	<ul style="list-style-type: none"> <li>Learn about science as a knowledge system: the features of scientific knowledge and the processes by which it is developed; and learn about the ways in which the work of scientists interacts with society.</li> </ul>	<ul style="list-style-type: none"> <li>Carry out science investigations using a variety of approaches: classifying and identifying, pattern seeking, exploring, investigating models, fair testing, making things, or developing systems.</li> </ul>	<ul style="list-style-type: none"> <li>Develop knowledge of the vocabulary, numeric and symbol systems, and conventions of science and use this knowledge to communicate about their own and others' ideas.</li> </ul>	<ul style="list-style-type: none"> <li>Bring a scientific perspective to decisions and actions as appropriate.</li> </ul>
<b>Achievement Objectives Level 1 &amp; 2</b>	<ul style="list-style-type: none"> <li>Appreciate that scientists ask questions about our world that lead to investigations and that open-mindedness is important because there may be more than one explanation.</li> </ul>	<ul style="list-style-type: none"> <li>Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.</li> </ul>	<ul style="list-style-type: none"> <li>Build their language and develop their understandings of the many ways the natural world can be represented.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and act on issues and questions that link their science learning to their daily living.</li> </ul>
<b>Achievement Objectives Level 3 &amp; 4</b>	<ul style="list-style-type: none"> <li>Appreciate that science is a way of explaining the world and that science knowledge changes over time.</li> <li>Identify ways in which scientists work together and provide evidence to support their ideas.</li> </ul>	<ul style="list-style-type: none"> <li>Build on prior experiences, working together to share and examine their own and others' knowledge.</li> <li>Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to use a range of scientific symbols, conventions, and vocabulary.</li> <li>Engage with a range of science texts and begin to question the purposes for which these texts are constructed.</li> </ul>	<ul style="list-style-type: none"> <li>Use their growing science knowledge when considering issues of concern to them.</li> <li>Explore various aspects of an issue and make decisions about possible actions</li> </ul>
<b>This could be...</b>	<ul style="list-style-type: none"> <li>Being open-minded</li> <li>Asking questions</li> <li>Making observations</li> <li>Scientists discuss their ideas with others</li> <li>Subject knowledge durable and may be developed over time</li> <li>Explanations may involve creative insights</li> <li>Being aware of other cultures</li> <li>Science knowledge is one way of explaining our world</li> <li>Scientists work together and need to provide evidence to support their ideas</li> <li>Being prepared to re-evaluate your own ideas</li> </ul>	<ul style="list-style-type: none"> <li>Use a variety of investigative approaches (classifying and identifying, pattern seeking, exploring, investigating models, fair testing, making things)</li> <li>Developing explanations based on evidence</li> <li>Being curious</li> <li>Learning different investigative methods</li> <li>Asking questions</li> <li>Discussing their ideas with others</li> <li>Being open-minded</li> <li>Thinking critically about their own and others ideas</li> <li>Use evidence to support their ideas</li> </ul>	<ul style="list-style-type: none"> <li>Using scientific language</li> <li>Build their scientific vocabulary</li> <li>Scientists predictions are based upon their existing science knowledge</li> <li>Science explanations must withstand peer review before being accepted</li> <li>Sharing explanations of experiences and observations</li> <li>Using scientific language (including symbols) when explaining an idea</li> <li>Begin to question the accuracy of texts they are using</li> <li>Have experience of a range of text types, including web resources</li> </ul>	<ul style="list-style-type: none"> <li>Discussing issues of concern to them</li> <li>Science investigations are influenced by their communities</li> <li>Exploring ways of taking informed action</li> <li>Science interacts with other cultures, globally</li> <li>Being aware of the needs of others</li> <li>Use their science knowledge when considering issues of concern to them</li> <li>Be open-minded when exploring aspects of an issue</li> <li>Make decisions based upon evidence</li> </ul>