



**Unit Title:** How do I/We affect the health of our planet?

Year Level: 5	KLA(s): Science SOSE Technology	Duration: 10 weeks
<b>Identify Curriculum</b>		
<b>Ways of Working</b>		<b>Knowledge &amp; Understanding</b>
<b>SCIENCE</b>		
Students are able to: <ul style="list-style-type: none"> <li>• pose and refine simple questions, and make predictions to be tested – ecological footprints</li> <li>• plan activities and investigations, identifying and using elements of a fair test</li> <li>• collect and organise data, information and evidence</li> <li>• evaluate information and evidence to support data gathered from activities and investigations</li> <li>• select and use tools, technologies and materials suited to the activities and investigations</li> <li>• draw conclusions that are supported by evidence, reproducible data and established scientific concepts</li> <li>• communicate scientific ideas, data and findings, using scientific terminology and formats appropriate to context and purpose</li> <li>• reflect on and identify different points of view and consider other people's values relating to science</li> <li>• reflect on learning to identify new understandings and future applications.</li> </ul>		Science as a Human Endeavour <ul style="list-style-type: none"> <li>▪ Science relates to student's own experiences and activities in the community                         <ul style="list-style-type: none"> <li>- Science can help to make natural, social and built environments sustainable and may influence persona human activities.</li> <li>- Cultures from around the world, including those of Aboriginal people, have contributed to scientific understanding</li> </ul> </li> </ul> Earth and Beyond <ul style="list-style-type: none"> <li>▪ Changes and patterns in different environments and space have scientific explanations.                         <ul style="list-style-type: none"> <li>- Changes to the surface of the earth or the atmosphere have identifiable causes, including human and natural activity.</li> </ul> </li> </ul>
<b>SOSE</b>		
Students are able to: <ul style="list-style-type: none"> <li>• pose and refine questions for investigations</li> <li>• plan investigations based on questions and inquiry models</li> <li>• collect and organise information and evidence</li> <li>• evaluate sources of information and evidence to determine different perspectives, and distinguish facts from opinions</li> <li>• draw and justify conclusions based on information and evidence</li> <li>• communicate descriptions, decisions and conclusions, using text types selected to match audience and purpose</li> <li>• share opinions, identify possibilities and propose actions to respond to findings</li> <li>• apply strategies to influence decisions or behaviours and to contribute to groups</li> <li>• reflect on and identify personal actions and those of others to clarify values associated with social justice, the democratic process, sustainability and peace</li> <li>• reflect on learning to identify new understandings and future applications.</li> </ul>		Place and Space <ul style="list-style-type: none"> <li>• Environments are defined and changed by interactions between people and places.                         <ul style="list-style-type: none"> <li>- Environments are defined by physical and human dimensions</li> <li>- Interactions between people and places affect the physical features of the land, biodiversity, water and atmosphere</li> <li>- Sustainability of local natural, social and built environments can be influenced by positive and negative attitudes and behaviours</li> </ul> </li> </ul>
<b>TECHNOLOGY</b>		

<p>Students are able to:</p> <ul style="list-style-type: none"> <li>• identify and analyse the purpose and context for design ideas</li> <li>• generate design ideas that match requirements</li> <li>• communicate the details of their designs using 2D or 3D visual representations</li> <li>• select resources, techniques and tools to make products</li> <li>• plan production procedures by identifying and sequencing steps</li> <li>• make products to match design ideas by manipulating and processing resources</li> <li>• identify and apply safe practices</li> <li>• evaluate products and processes to identify strengths, limitations, effectiveness and improvements</li> <li>• reflect on and identify the impacts of products and processes on people and their communities</li> <li>• reflect on learning to identify new understandings and future applications.</li> </ul>	<p>Technology as a Human Endeavour</p> <ul style="list-style-type: none"> <li>• Technology influences and impacts on people, their communities and environments. <ul style="list-style-type: none"> <li>- Different ideas for designs and products are developed to meet needs and wants of people, their communities and environments</li> <li>- Aspects of appropriateness influence product design and production decisions</li> <li>- The products and processes of technology can have positive or negative impacts</li> </ul> </li> </ul> <p>Information, Materials and Systems (resources)</p> <ul style="list-style-type: none"> <li>• The characteristics of resources are matched with tools and techniques to make products to meet design challenges. <ul style="list-style-type: none"> <li>- Resources have particular characteristics that make them more suitable for a specific purpose and context</li> <li>- Techniques and tools are selected to appropriately manipulate characteristics of resources to meet design ideas</li> </ul> </li> </ul>
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<p style="text-align: center;"><b>Context for Learning</b></p> <p>Our school is a highly awarded environmentally aware school and this unit allows students the opportunity to develop knowledge on the health of our planet and why our school takes the stance that it does.</p> <p>Know  What is Global Warming? What causes Global Warming? What is sustainability? Energy forms, Sources of energy we use? Who needs energy? How much energy do we use? How can we save energy? How much? What are Greenhouse Gases? How do Greenhouse Gases hurt our environment? What is Climate Change? What contributes to Climate Change? What happens / Consequences of Global Warming? Predict consequences</p> <p>Do  Research Global Warming, Sustainability – answer questions, discuss how we want our world to be, cause and effect of our lifestyle on the environment and why this would be so  Create a diagram about our reliance on electricity  Collect information on how we use energy resources.  Investigate different forms of alternate energy.  Describe through discussion the interaction of people and the earth's environment and the resulting Global Warming.</p>	<p style="text-align: center;"><b>School Priorities</b></p> <p>Earth Charter</p>
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Develop Assessments			Make Judgements	
Type of Assessment	What will be Assessed	When?	Purpose of assessment	Assessable elements
Paragraph	Paragraph about Global Warming and what people can do to be sustainable to help the environment – help influence their thinking on Global Warming.	End	To assess knowledge gained from unit.	Knowledge and understanding
Diagram	Create a diagram about our reliance on electricity – list the ways we use electricity over a day.	Middle	To assess knowledge gained from unit.	Reflecting
Test	Knowledge on alternate forms of energy	End	To assess knowledge gained from unit.	Knowledge and understanding

## Sequence of Learning

Learning Experiences & Teaching Strategies		Adjustments for needs of learners	Resources
<p><b>Animation</b></p> <p>Explain to students that they are going to make an animation (in small groups) using modelling clay, plasticine and other material, along with cameras – to be presented as an animation on the computer software Movie Maker on an environmental issue/event of their choice.</p> <p>Introduce the topic of animations/cartoons</p> <ul style="list-style-type: none"> <li>• Questions/Wonderings (KWL)</li> <li>• Brief history of animations and how they were created and are now created</li> <li>• Introduce animation process</li> <li>• Watch part of Chicken Run – observe/discuss the process and materials used.</li> <li>• Demonstration of whole class animation – flower growing</li> <li>• About animations – guidelines</li> </ul> <p><b>Page in Student Booklet.</b> Script plan – draw only</p> <p><b>Task 1 in Student Booklet.</b> Script Plan</p>	<p><b>Global Warming</b></p> <p>BEFORE watching Cool Aid</p> <ul style="list-style-type: none"> <li>• KWL sheet – Global Warming</li> <li>• Introduce the topic global warming</li> <li>• Identify the meaning of the words global and warming</li> <li>• KWL Carbon cycle? / Greenhouse gases? / What's the problem? / Who is causing this problem? / What can we do about it?</li> </ul>	<p>1:1 support Peer buddy</p>	<p><b>Animations:</b> Camera Tripod Computers and Moviemaker Programme Various collage materials including cardboard and plasticine.</p> <p><b>Global Warming:</b> Video – Greenhouse Gases Support Materials – books Book: Weather or Not... It's a Climate for Change by Caren Trafford and David Wilsher. Cool Aid Booklet Cook Aid Video</p>
<p><b>Task 2 in Student Booklet.</b> Script Writing</p>	<p>WHILE watching Cool Aid VIDEO</p> <ul style="list-style-type: none"> <li>• Activity 8 - How much do I know?</li> <li>• Activity 9 – How do I use electricity during the day?</li> <li>• Activity 10 – Looking for ways to help.</li> </ul>		
<p><b>Task 3 in Student Booklet.</b> Scene creation</p>	<p>AFTER watching Cool Aid</p> <ul style="list-style-type: none"> <li>• Activity 11 – Calculate our Greenhouse emissions.</li> <li>• Activity 12 – Going on a Carbon diet.</li> <li>• Activity 13 – Explore other energies and suggestions for helping our planet.</li> <li>• Activity 14 – Understanding Kyoto</li> </ul>		
<p><b>Task 4 in Student Booklet.</b> Production of Animation</p>	<p>Focus lesson on note taking. Question sheet and fill in to answer in note form. Continue to use this sheet to collect notes on Global Warming from a whole class discussion.</p>		
<p><b>Task 4 in Student Booklet.</b> Production of Animation</p>	<p>Write a paragraph on Global Warming answering What it is? How it is caused? Who is causing it and What can be done to fix/prevent further damage/</p>		
<p><b>Task 4 in Student Booklet.</b> Use gathered data from research, from student's task booklet to create final product for their presentation.</p>			

<b>Task 5 in Student Booklet</b> EDITING Use gathered data from research, from student's task booklet to create final product for their presentation.		
<b>Task 5 in Student Booklet</b> EDITING Reflecting on presentation (PMI).		
<b>Task 6 in Student Booklet</b>		
<b>Use Feedback</b>		
Ways to monitor learning and assessment		