

## SCIENCE PLAN: ELECTRICITY

<p><b>Strand:</b></p> <ul style="list-style-type: none"> <li>- Physical World</li> <li>- Relationship to Technology</li> </ul>	<p><b>Context:</b> ELECTRICAL CIRCUITS  <b>Assessment Objectives:</b> 3.1; 3.2; 3.3.</p> <ul style="list-style-type: none"> <li>- Investigate and describe about some commonly experienced physical phenomena to develop their understanding of those phenomena.</li> <li>- Explore and identify trends and relationships associated with easily observable physical phenomena.</li> </ul>	<p><b>Links with other curriculum areas:</b>          Technology Language          Maths Health English</p>	<p><b>Level: 3</b></p>
<p><b>Specific Objectives:</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>- Identify, draw and label a torch circuit and explain how it works.</li> <li>- Draw a diagram of a simple circuit. They can describe how it series and parallel circuits and additional batteries affect the brightness of the bulbs.</li> <li>- Name some conductors and insulators. Describe how and where they are used in daily life.</li> <li>- Design and build a circuit for a model, game, or puzzle to give as a present to a younger child.</li> </ul>	<p><b>Learning Experiences:</b> (Suggest Rotating Learning Centres)</p> <ul style="list-style-type: none"> <li>- What is inside a Torch? (Link to Ministry of Education Learning Media – Making Better Sense of the Physical World - page 67) &amp; (Link to MacMillan – Making Things Level 1– page 39)</li> <li>- Circuit Symbols. (Link to Ministry of Education Learning Media – Making Better Sense of the Physical World - pages 68-71)</li> <li>- Make the Bulb go (Link to Projects and Fun Experiments – Build Your own Flashlight)</li> <li>- Switching on to Simple Circuits go (Link to Projects and Fun Experiments – Make a Switch)</li> <li>- The Fuse has gone again! (Link to Ministry of Education Learning Media – Making Better Sense of the Physical World – page 72)</li> <li>- Light Up (Link to Ministry of Education Learning Media – Making Better Sense of the Physical World - page 73)</li> <li>- Electricity Timer (Link to Ministry of Education Learning Media – Making Better Sense of the Physical World – page 79)</li> <li>- Making a Battery (Link to Ministry of Education Learning Media – Making Better Sense of the Physical World – page 74)</li> <li>- Will all Materials let Electricity Pass through Them? (Link to MacMillan – Making Things Work Level 2 – page 55 )</li> </ul> <p><b>Investigation:</b></p> <ul style="list-style-type: none"> <li>- More Power, More Light? (Link to Ministry of Education Learning Media – Making Better Sense of the Physical World – page 75)</li> </ul>		
<p><b>Science Skills &amp; Attitudes:</b></p> <p>Students should be able to:</p> <p>Focussing &amp; Planning - Ask questions of themselves, their group, and resource people and identify questions suitable for scientific investigation.</p> <p>Information Gathering - Use appropriate instruments to enhance observation or to introduce quantification</p> <ul style="list-style-type: none"> <li>- Record observations and measurements</li> <li>- Use information sources purposefully, asking coherent, directed questions of people and media sources.</li> </ul> <p>Processing &amp; Interpreting - Identify trends and relationships in recorded observations and measurements by making links within organised data.</p> <p>Reporting - Present what they did and what they found out in their investigations in ways and forms appropriate to their peer group.</p>			
<p><b>Assessment Activity:</b> (Select from the options)</p> <ul style="list-style-type: none"> <li>- Draw a diagram representing the inside of a torch, label the main parts of the circuit and explain how the circuit works.</li> <li>- Create a safety poster outlining where conductors and insulators are used in the home or another context.</li> <li>- Complete a question and answer circuit board and share it with a young friend.</li> </ul>		<p><b>Resources:</b></p> <ul style="list-style-type: none"> <li>- Making Better Sense of the Physical World (1999); Ministry of Education, Learning Media, Wellington</li> <li>- MacMillan Science; Making things – Teachers Resource Book, Level 1</li> <li>- MacMillan Science; Making things work – Teachers Resource Book, Level 2</li> </ul>	