

## Science Outline: Year 9

Term	Week	Unit of Work	Key Concepts	Class Tasks and Homework	Assessments
1	1 - 5	Living World - Responding, Maintaining, Surviving And Depending	<ul style="list-style-type: none"> <li>Multicellular organisms rely on coordinated and interdependent internal systems to respond to changes in their environment</li> </ul>	<ul style="list-style-type: none"> <li>Experiment: Dissection</li> <li>Research: Infectious and Non Infectious Diseases</li> </ul>	
	5 - 9	Chemical World - Atomic Theory	<ul style="list-style-type: none"> <li>Scientific understanding changes and is refined over time through a process of review by the scientific community</li> <li>Identify that all matter is made of atoms which are composed of protons, neutrons and electrons</li> <li>Investigate a range of types of important chemical reactions that occur in non-living systems and involve energy transfer</li> </ul>	<ul style="list-style-type: none"> <li>Activity: Periodic Table of Elements</li> <li>Activity: Drawing Atoms from Data</li> </ul>	Written Assessment
2	1 - 5	Earth & Space - Global Patterns (Plate Tectonics)	<ul style="list-style-type: none"> <li>The theory of plate tectonics explains global patterns of geological activity and continental movement</li> </ul>	<ul style="list-style-type: none"> <li>Activity: Plate Tectonic Jig Saw</li> </ul>	
	5 - 9	Physical World - Electricity	<ul style="list-style-type: none"> <li>Scientific understanding of current electricity has resulted in technological developments designed to improve the efficiency in generation and use of electricity</li> </ul>	<ul style="list-style-type: none"> <li>Experiment: Constructing Circuits</li> <li>Research: Technological Developments in Electricity Generation</li> </ul>	

3	1 - 5	Chemical World – Chemical Reactions	<ul style="list-style-type: none"> <li>• Chemical reaction involve rearranging atoms to form new substances; during a chemical reaction mass is not created or destroyed</li> </ul>	<ul style="list-style-type: none"> <li>• Experiment: Investigating Different Types of Chemical Reactions</li> <li>• Worksheet: Word Equations</li> </ul>	
	5 - 9	Physical World – Waves	<ul style="list-style-type: none"> <li>• Energy transfer through different mediums can be explained using wave and particle models</li> <li>• Energy conservation in a system can be explained by describing energy transfers and transformations</li> </ul>	<ul style="list-style-type: none"> <li>• Activity: Optics Kit Research:</li> <li>• Scattering and Dispersion of Light</li> </ul>	
4	1 - 5	Living World – Ecosystems	<ul style="list-style-type: none"> <li>• Conserving and maintaining the quality and sustainability of the environment requires scientific understanding of interactions within, the cycling of matter and the flow of energy through ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>• Research: Feeding Relationships in Australia Ecosystems</li> <li>• Activity: Constructing Food Chains and Food Webs</li> </ul>	Written Assessment
	5 - 9	Skills	<ul style="list-style-type: none"> <li>• Student research project involving a firsthand investigation</li> </ul>	<ul style="list-style-type: none"> <li>• Experiment: Fair Tests</li> <li>• Activity: Solving Scientific Problems</li> </ul>	Power Point Presentation