

Lanyon High School

Year 9 – Australian Curriculum: Science



Identify curriculum	Achievement standard	<p>By the end of Year 9, students explain chemical processes and natural radioactivity in terms of atoms and energy transfers and describe examples of important chemical reactions. They describe models of energy transfer and apply these to explain phenomena. They explain global features and events in terms of geological processes and timescales. They analyse how biological systems function and respond to external changes with reference to interdependencies, energy transfers and flows of matter. They describe social and technological factors that have influenced scientific developments and predict how future applications of science and technology may affect people's lives.</p> <p>Students design questions that can be investigated using a range of inquiry skills. They design methods that include the control and accurate measurement of variables and systematic collection of data and describe how they considered ethics and safety. They analyse trends in data, identify relationships between variables and reveal inconsistencies in results. They analyse their methods and the quality of their data, and explain specific actions to improve the quality of their evidence. They evaluate others' methods and explanations from a scientific perspective and use appropriate language and representations when communicating their findings and ideas to specific audiences.</p>			
Teaching and learning	Semester overview	Semester 1		Semester 2	
	<p>PHYSICS During this term students will explore and identify different ways in which heat energy is transferred between objects and determine how light and sound travel. They will then apply this understanding to explore and explain a variety of phenomena.</p> <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> - Design questions that can be investigated using a range of inquiry skills. - Analyse trends in data, identify relationships between variables and reveal inconsistencies in results. - Analyse their methods and the quality of their data, and explain specific actions to improve the quality of their evidence. 	<p>EARTH AND SPACE SCIENCES During this term students will explore and identify how the structure of the Earth has changed over the millenia. They will explain how global features have occurred through different major geological events and explore the timescales related to these events.</p> <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> - Design methods that include the control and accurate measurement of variables and systematic collection of data and describe how they considered ethics and safety. <p>Science as a Human Endeavour</p> <ul style="list-style-type: none"> - Describe social and technological factors that have influenced scientific developments and predict how future applications of science and technology may affect people's lives. 	<p>BIOLOGY During this term students will learn to describe and analyse how different biological systems function and respond to external changes. They will refer to how energy transfers between systems, how they are interdependent on each other and the flow of matter.</p> <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> - Design questions that can be investigated using a range of inquiry skills. - Analyse their methods and the quality of their data, and explain specific actions to improve the quality of their evidence. 	<p>CHEMISTRY This term students will explain different chemical processes and natural radioactivity using atoms and energy transfers. They will use this understanding to describe examples of important chemical reactions.</p> <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> - Design questions that can be investigated using a range of inquiry skills. - Design methods that include the control and accurate measurement of variables and systematic collection of data and describe how they considered ethics and safety. <p>Science as a Human Endeavour</p> <ul style="list-style-type: none"> - Evaluate others' methods and explanations from a scientific perspective and use appropriate language and representations when communicating their findings and ideas to specific audiences. 	
	General capabilities and Cross curriculum priorities				
Key to general capabilities and cross-curriculum priorities					
Develop assessment	Assessment	Semester 1		Semester 2	
		Week	Assessment instrument	Week	Assessment instrument
		5-7	Light and Sound Assessment	9	Body systems Assessment
		9	Energy Transfer Test	13	Chemical changes investigation
16-17	Earth and Space Assessment	16-17	Chemistry Test		
Make judgments and use feedback	Moderation	Semester 1		Semester 2	
		Teachers moderate assessment tasks to ensure consistency of judgments.			