

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	Term overview	Semester 1				Semester 2			
	<p>Science Understanding CHEMISTRY</p> <ul style="list-style-type: none"> - structure of the atom - radiation - alpha, beta, gamma - chemical reactions and equations <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> - design questions that can be investigated using a range of inquiry skills. - consider safety and ethics when planning investigations - analysing trends in data and information - evaluating and communicating <p>Science as a Human Endeavour</p> <ul style="list-style-type: none"> - how the atomic model has been refined over time 	<p>Science Understanding PHYSICS</p> <ul style="list-style-type: none"> - energy transfers including: conduction, convection and radiation, electrical circuits and waves <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> - design questions that can be investigated using a range of inquiry skills. - consider safety and ethics when planning investigations - analysing trends in data and information - evaluating and communicating <p>Science as a Human Endeavour</p> <ul style="list-style-type: none"> - Investigating the people who developed radioactive understanding and the way we have used radiation over time 	<p>Science Understanding BIOLOGY</p> <ul style="list-style-type: none"> - Body systems and responses - Ecosystems, populations and interdependence <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> - design questions that can be investigated using a range of inquiry skills. - consider safety and ethics when planning investigations - analysing trends in data and information - evaluating and communicating <p>Science as a Human Endeavour</p> <ul style="list-style-type: none"> - how new ideas and technologies have developed our understanding of body systems and disease treatment - consider the impact of human activity on ecosystems 	<p>Science Understanding EARTH AND SPACE SCIENCES</p> <ul style="list-style-type: none"> - plate tectonics and sea-floor spreading - earthquake and volcanic activity <p>Science Inquiry Skills</p> <ul style="list-style-type: none"> - design questions that can be investigated using a range of inquiry skills. - consider safety and ethics when planning investigations - analysing trends in data and information - evaluating and communicating <p>Science as a Human Endeavour</p> <ul style="list-style-type: none"> - how the theory of plate tectonics has been refined over time 					
	General capabilities and Cross curriculum priorities								
Key to general capabilities and cross-curriculum priorities	<p> Literacy Numeracy ICT capability Critical and creative thinking Ethical behaviour Personal and social capability Intercultural understanding Aboriginal and Torres Strait Islander histories and cultures Asia and Australia's engagement with Asia Sustainability </p>								
Develop assessment	Assessment	Term 1		Term 2		Term 3		Term 4	
		Week	Assessment instrument	Week	Assessment instrument	Week	Assessment instrument	Week	Assessment instrument
		4	Chemical changes investigation	14	Ongoing continuous assessment	4	Body systems assessment	14	Earth & space assessment
10	Ongoing continuous assessment	17	Physics test	7	Ongoing continuous assessment	17	Ongoing continuous assessment		
Make judgments and use feedback	Moderation	Term 1		Term 2		Term 3		Term 4	
		Teachers moderate assessment task to ensure consistency of judgments.							