

# Lanyon High School

## Year 7 – Australian Curriculum: Science



Identify curriculum	Achievement standard	By the end of Year 7 students explain how biological diversity is ordered and organised. They represent flows of matter and energy in ecosystems and predict the effects of environmental changes. They model cycles in the Earth-sun-moon system and explain the effects of these cycles on Earth phenomena. They represent and explain the effects of forces acting on objects. They use particle theory to explain the physical properties of substances and develop processes that separate mixtures. Students identify the factors that can influence development of and lead to changes in scientific knowledge. They explain how scientific responses are developed and can impact society. They explain the role of science communication in shaping viewpoints, policies and regulations. Students plan and conduct safe, reproducible investigations to test relationships and aspects of scientific models. They identify potential ethical issues and intercultural considerations required for field locations or use of secondary data. They use equipment to generate and record data with precision. They select and construct appropriate representations to organise data and information. They process data and information and analyse it to describe patterns, trends and relationships. They identify possible sources of error in methods and identify unanswered questions in conclusions and claims. They identify evidence to support their conclusions and construct arguments to support or dispute claims. They select and use language and text features appropriately for their purpose and audience when communicating their ideas and findings.							
Teaching and learning	Term Overview	Semester 1				Semester 2			
	<p><b>CHEMISTRY</b> During this term students investigate a range of physical separation techniques such as filtration, evaporation, decantation, and distillation. Students use particle theory to describe differences between pure substances and mixtures and apply this understanding to physical separation techniques. Students will also use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance</p> <p><b>Science Inquiry Skills</b> They select and use language and text features appropriately for their purpose and audience when communicating their ideas and findings.</p> <p>They identify potential ethical issues and intercultural considerations required for field locations or use of secondary data.</p> <p>Students plan and conduct safe, reproducible investigations to test relationships and aspects of scientific models.</p>	<p><b>BIOLOGY</b> During this term students investigate biological classification and focus on the interaction between organisms. Students will use models to represent the flow of matter and energy in an ecosystem.</p> <p><b>Science Inquiry Skills</b> Identifies possible sources of error in methods and identifies unanswered questions in conclusions and claims</p> <p>They select and construct appropriate representations to organise data and information.</p> <p>They use equipment to generate and record data with precision.</p>	<p><b>EARTH AND SPACE</b> During this term students learn about the interrelationship of the Sun, Earth, and the Moon. They explore seasons on Earth, phases of the moon, and tides. Students will simulate and analyse impact craters and learn to differentiate between renewable and non-renewable resources available on Earth.</p> <p><b>Science Inquiry Skills</b> They process data and information and analyse it to describe patterns, trends and relationships.</p> <p><b>Science as a Human Endeavour</b> Students identify the factors that can influence development of and lead to changes in scientific knowledge.</p> <p>They explain the role of science communication in shaping viewpoints, policies and regulations.</p> <p>Students investigate how cultural perspectives and world views influence the development of scientific knowledge</p>	<p><b>PHYSICS</b> During this term students investigate forces, and how they can change the motion of an object. Students consider the impact of friction on moving objects and appreciate the role of forces in their everyday lives. Students will also demonstrate their understanding of simple machines with the construction and testing of various models.</p> <p><b>Science Inquiry Skills</b> They identify evidence to support their conclusions and construct arguments to support or dispute claims.</p> <p><b>Science as a Human Endeavour</b> They explain how scientific responses are developed and can impact society.</p>					
	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	Week	Assessment instrument	Week	Assessment instrument
		5-6	Chemistry test	12-14	Ecology assessment	4-5	Indigenous calendar presentation	13-15	Physics practical assessment
		8-10	Separation methods practical assessment	15-17	Biology test	7-8	Earth and space test	17-18	Physics test

**Make judgments and use feedback**

**Moderation**

Teachers moderate assessment tasks to ensure consistency of judgments.