Science Life Skills – 7 - 10 - Scope and Sequence

Semester 1

This Scope and Sequence is to be used to guide planning within the classroom. Students needs and interests are to be taken into consideration when planning and implementing content. From Kindergarten to Year 10, students with disability may engage with:

- *syllabus outcomes and content from their age-appropriate stage with adjustments to teaching, learning and/or assessment activities; or*
- *selected syllabus outcomes and content from their age-appropriate stage relevant to their learning needs; or*
- *syllabus outcomes from an earlier stage, using age-appropriate content; or*
- *selected Years 7–10 Life Skills outcomes and content from one or more syllabuses (for students in Years 7–10).*

Term 1 – Living World

Stage	Life Skills Outcomes (ODD)	Stage Related Outcomes (ODD)	Content Focus (ODD)	Life Skills Outcomes (EVEN)	Stage Related Outcomes (EVEN)	Content Focus (EVEN)
Stage 4	**SCLS-17LW** Recognises features of living and non-living things	**SC4-14LW** Relates the structure and function of living things to their classification, survival and reproduction	**Structure and Function - Key Content Focus** • *There are differences within and between living things.* • *Living and non-living things* Explore ways that Aboriginal and Torres Strait Islander Peoples classify plants or animals • *Features of living things* • *Changes in living things*	**SCLS-19LW** Explores ways in which science and technology have improved human health	**SC4-14LW** Relates the structure and function of living things to their classification, survival and reproduction	**Human Body - Key Inquiry Content** • *Scientific and technological developments have affected the functioning of the human body.*
	SCLS-18LW Identifies structures of living things and their functions	**SC4-14LW** Relates the structure and function of living things to their classification, survival and reproduction			**SC5-14LW** Analyses interactions between components and processes within biological systems	
	Skills	**SCLS-3VA** Demonstrates a willingness to engage with science-related issues relevant to their lives		**Skills**	**SCLS-4WS** Asks questions that can be tested and makes predictions **SCLS-9WS** Uses a variety of strategies to communicate information about an investigation **SCLS-1VA** Recognises the role of science in personal, social and global issues relating to everyday life	
Stage 5	**SCLS-17LW** Recognises features of living and non-living things	**SC5-14LW** Analyses interactions between components and processes within biological systems	**Structure and Function – Key Content Focus** • *Living things have structures that carry out specialised functions.* • *Plants* • *Animals*	**SCLS-20LW** Explores the interactions of living things with each other and the environment	**SC4-15LW** Explains how new biological evidence changes people's understanding of the world	**Environment - Key Inquiry Content** • *Living things depend on each other and on the environment.* • *Human activity can affect how an ecosystem functions.*
	SCLS-18LW Identifies structures of living things and their functions	**SC5-14LW** Analyses interactions between components and processes within biological systems		**SCLS-21LW** Investigates the effect of science and technology on the environment	**SC5-15LW** Explains how biological understanding has advanced through scientific discoveries, technological developments and the needs of society	
	Skills	**SCLS-3VA** Demonstrates a willingness to engage with science-related issues relevant to their lives		**Skills**	**SCLS-1VA** Recognises the role of science in personal, social and global issues relating to everyday life	

Term 2 – Earth and Space

Stage	Life Skills Outcomes (ODD)	Stage Related Outcomes (ODD)	Content Focus (ODD)	Life Skills Outcomes (EVEN)	Stage Related Outcomes (EVEN)	Content Focus (EVEN)
Stage 4	**SCLS-13ES** Identifies features of the Earth	**SC4-12ES** Describes the dynamic nature of models, theories and laws in developing scientific understanding of the Earth and solar system	**Earth and Solar System – Key Content Focus** • *Features of the Earth* • *Changes to the features of the Earth*	**SCLS-15ES** Identifies that the Earth is the source of resources used in everyday life	**SC4-13ES** Explains how advances in scientific understanding of processes that occur within and on the Earth, influence the choices people make about resource use and management	**Earth's Resources – Key Content Focus** • *The Earth is the source of all the resources needed in everyday life.*
	SCLS-14ES Explores features of the solar system, including the	**SC4-12ES** Describes the dynamic nature of models, theories and laws in developing scientific		**SCLS-16ES** Investigates some practices used in the effective	**SC4-13ES** Explains how advances in scientific understanding of processes	

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<table>
<tr><td></td><td>Earth's position and movement</td><td>understanding of the Earth and solar system</td><td></td><td>management of the Earth's resources</td><td>that occur within and on the Earth, influence the choices people make about resource use and management</td><td></td></tr>
<tr><td></td><td>Skills</td><td colspan="3">SCLS-2VA Recognises that using the processes of Working Scientifically increases their understanding of the world</td><td>Skills</td><td colspan="2">SCLS-6WS Participates in an investigation by following a sequence
SCLS-9WS Uses a variety of strategies to communicate information about an investigation</td></tr>
<tr><td rowspan="4">Stage 5</td><td>SCLS-13ES Identifies features of the Earth</td><td>SC5-12ES Describes changing ideas about the structure of the Earth and the universe to illustrate how models, theories and laws are refined over time by the scientific community</td><td rowspan="2">Earth and Solar System – Key Content Focus
• Solar system
Explore how Aboriginal and Torres Strait Islander Peoples use the night sky to make decisions about everyday activities, eg food gathering and ceremonies
• Earth's movement in space
Explore a seasonal calendar used by Aboriginal and Torres Strait Islander Peoples</td><td>SCLS-15ES Identifies that the Earth is the source of resources used in everyday life</td><td>SC5-13ES Explains how scientific knowledge about global patterns of geological activity and interactions involving global systems can be used to inform decisions related to contemporary issues</td><td rowspan="2">Earth's Resources – Key Content Focus
• Human activity has an impact on the effective management of the Earth's resources
Recognise ways that Aboriginal and Torres Strait Islander Peoples sustain the value of the land, eg through the selective use of resources</td></tr>
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<tr><td>Assessment</td><td colspan="6">Assessment for Learning: Enables teachers to use information about students' knowledge, understanding and skills to inform their teaching.
Assessment as Learning: Involves students in the learning process where they monitor their own progress, ask questions and practices skills.
Assessment of Learning: Assists teachers to use evidence of student learning to assess student achievement against learning goals and standards.</td></tr>
<tr><td>Resources</td><td colspan="6">Syllabus Documents: https://www.educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/science
Primary Connections: https://primaryconnections.org.au/
STEM: http://www.stem-nsw.com.au/
ASTA (sample lessons): http://scienceweb.asta.edu.au/
Science Bob Experiments: https://sciencebob.com/</td></tr>
</table>

Science Life Skills – 7 - 10 - Scope and Sequence

Semester 2

This Scope and Sequence is to be used to guide planning within the classroom. Students needs and interests are to be taken into consideration when planning and implementing content. From Kindergarten to Year 10, students with disability may engage with:

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	Term 3 – Material World					
Stage	**Life Skills Outcomes (ODD)**	**Stage Related Outcomes (ODD)**	**Content Focus (ODD)**	**Life Skills Outcomes (EVEN)**	**Stage Related Outcomes (EVEN)**	**Content Focus (EVEN)**
Stage 4	**SCLS-22CW** Recognises the properties of common substances	**SC4-16CW** Describes the observed properties and behaviour of matter, using scientific models and theories about the motion and arrangement of particles **SC4-17CW** Explains how scientific understanding of, and discoveries about the properties of elements, compounds and mixtures relate to their uses in everyday life	**Properties of Substances – Key Inquiry Content** • *Solids, liquids and gases have different properties.*	**SCLS-24CW** Investigates a variety of chemical changes	-	**Chemical Change – Key Inquiry Content** • *When a chemical change occurs, new substances may be formed* • *Reactions of acids*
	SCLS-23CW Explores how common chemicals affect everyday life	**SC4-16CW** Describes the observed properties and behaviour of matter, using scientific models and theories about the motion and arrangement of particles **SC4-17CW** Explains how scientific understanding of, and discoveries about the properties of elements, compounds and mixtures relate to their uses in everyday life				
	Skills	**SCLS-4WS** Asks questions that can be tested and makes predictions **SCLS-5WS** Participates in planning to investigate questions or problems **SCLS-6WS** Participates in an investigation by following a sequence		**Skills**	**SCLS-4WS** Asks questions that can be tested and makes predictions **SCLS-5WS** Participates in planning to investigate questions or problems **SCLS-6WS** Participates in an investigation by following a sequence **SCLS-7WS** Collects, records and interprets data and information	
Stage 5	**SCLS-22CW** Recognises the properties of common substances	**SC5-16CW** Explains how models, theories and laws about matter have been refined as new scientific evidence becomes available	**Properties of Substances – Key Inquiry Content** • *Mixtures can be separated using a range of techniques.* • *Common chemicals have different uses.*	**SCLS-24CW** Investigates a variety of chemical changes	**SC5-17CW** Discusses the importance of chemical reactions in the production of a range of substances, and the influence of society on the development of new materials	**Chemical Change – Key Inquiry Content** • *When a chemical change occurs, new substances may be formed* • *Combustion*
	SCLS-23CW Explores how common chemicals affect everyday life	**SC5-16CW** Explains how models, theories and laws about matter have been refined as new scientific evidence becomes available				

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	Term 4 – Physical World				
Stage	**Life Skills Outcomes (ODD)**	**Stage Related Outcomes (ODD)**	**Content Focus (ODD)**	**Life Skills Outcomes (EVEN)**	**Stage Related Outcomes (EVEN)**	**Content Focus (EVEN)**
Stage 4	**SCLS-10PW** Explores a range of forces in everyday situations	**SC4-10PW** Describes the action of unbalanced forces in everyday situations	**Forces - Key Content Focus** • *Forces* • *Electrostatic forces* • *Gravitational forces*	**SCLS-11PW** Identifies various forms and sources of energy and their uses	**SC4-11PW** Discusses how scientific understanding and technological developments have contributed to finding solutions to problems involving energy transfers and transformations	**Energy - Key Content Focus** • *Responsible use of energy is important for individuals and society.*
				SCLS-12PW Investigates ways to use energy responsibly	**SC4-11PW** Discusses how scientific understanding and technological developments have contributed to finding solutions to problems involving energy transfers and transformations	
	Skills	**SCLS-7WS** Collects, records and interprets data and information **SCLS-8WS** Recognises strategies to solve identified problems		**Skills**	**SCLS-7WS** Collects, records and interprets data and information **SCLS9WS** Uses a variety of strategies to communicate information about an investigation	
Stage 5	**SCLS-10PW** Explores a range of forces in everyday situations	**SC5-10PW** Applies models, theories and laws to explain situations involving energy, force and motion	**Forces - Key Content Focus** • *Forces* • *Frictional force* • *Magnetic forces*	**SCLS-11PW** Identifies various forms and sources of energy and their uses	**SC5-11PW** Explains how scientific understanding about energy conservation, transfers and transformations is applied in systems	**Energy - Key Content Focus** • *There are different forms of energy, which may be transferred and transformed for different purposes.*
				SCLS-12PW Investigates ways to use energy responsibly	**SC5-11PW** Explains how scientific understanding about energy conservation, transfers and transformations is applied in systems	
	Skills	**SCLS-7WS** Collects, records and interprets data and information **SCLS-8WS** Recognises strategies to solve identified problems		**Skills**	**SCLS-7WS** Collects, records and interprets data and information **SCLS9WS** Uses a variety of strategies to communicate information about an investigation	
Assessment	**Assessment for Learning:** Enables teachers to use information about students' knowledge, understanding and skills to inform their teaching. **Assessment as Learning:** Involves students in the learning process where they monitor their own progress, ask questions and practices skills. **Assessment of Learning:** Assists teachers to use evidence of student learning to assess student achievement against learning goals and standards.					
Resources	**Syllabus Documents:** https://www.educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/science **Primary Connections:** https://primaryconnections.org.au/ **STEM:** http://www.stem-nsw.com.au/ **ASTA (sample lessons):** http://scienceweb.asta.edu.au/ **Science Bob Experiments:** https://sciencebob.com/					