

Shirley Smith High School Vision and Values

Grow with us.

At Shirley Smith High School, teaching and learning is authentic, rigorous, and designed to maximise student agency. We align deep disciplinary knowledge and excellent pedagogical practice to ensure our learners are empowered to find their purpose, fulfil their potential, and shape their own futures.

Students at Shirley Smith High School are:

Curious

brave and open minded inquirers with a desire to know and understand

Connected

inclusive young people connected to each other, connected to their community and connected to Country

Learners

creative empowered learners with boundless potential for their futures and the future of our planet

Subject Details

Subject:	Science	Learning Area:	STEM
Teachers:	Adam Douglas, Kurt Halbauer and Cheryl Walker	Learning Period:	Semester Two, 2026

Engagement in Learning

In order to facilitate active engagement in their learning, students are expected to:

- Arrive prepared for their lessons, equipped with a fully charged chromebook, a notebook, a pen or pencil, and any other subject-specific materials that may be necessary.
- Independently make an effort to retrieve and complete any missed assignments or coursework due to absences or extracurricular activities during their own time.
- Embrace the principles of the school's Yindyamarra wellbeing framework by treading lightly. This involves taking moments to pause, authentically connecting with others, engaging in deep listening, thoughtful reflection, and considering the impact of their actions on others.

Learning and Assessment Policies

Please see the school website for policies regarding the submission of late work, extension requests for assessment tasks, and plagiarism and academic integrity.

Description of Learning

Unit overview:

In Semester Two students explore how scientific models help explain the natural world across the disciplines of physics, Earth and environmental science, and biology. They investigate the behaviour of light, sound and electricity, using wave, particle and energy models to explain everyday phenomena and modern technologies. Students also examine Earth as an interconnected system by exploring the carbon cycle, climate processes and the role of human activity in shaping global systems, while considering both contemporary scientific approaches and First Nations knowledge. The unit concludes with an investigation of sexual and asexual reproduction, where students explore how reproductive strategies influence genetic variation, adaptation and species survival.

Throughout the unit, students strengthen their scientific inquiry and communication skills by planning investigations, constructing and interpreting scientific representations, analysing patterns in data, and evaluating the validity of evidence and conclusions. They develop practical skills through experimental investigations and circuit construction, while also undertaking research to synthesise information from a range of sources. Across all topics, students learn to communicate scientific ideas using accurate terminology, logical reasoning and evidence-based explanations that are appropriate for a range of audiences.

Unit learning outcomes:

By the end of this unit, students will demonstrate a level of achievement for the following standards:

- Analyses energy conservation in simple systems and applies wave and particle models to describe energy transfer
- Explains how interactions within and between Earth's spheres affect the carbon cycle
- Describes how the processes of sexual and asexual reproduction enable survival of the species
- Selects and constructs appropriate representations to organise, process and summarise data and information
- Analyses and connects data and information to identify and explain patterns, trends, relationships and anomalies
- Analyses the impact of assumptions and sources of error in methods and evaluates the validity of conclusions and claims
- Constructs logical arguments based on evidence to support conclusions and evaluate claims
- Selects and uses content, language and text features effectively to achieve their purpose when communicating their ideas, findings and arguments to specific audiences

Assessment:

Task	Approximate Due Date
- Class Work	Ongoing
- Formative Assessment	Ongoing
- Scientific Report	Week 5
- Light and Sound Test	Week 6
- Electricity Test	Week 10
- Global Systems Research Assignment	Week 14
- Global Systems Test	Week 16
- Reproduction Class Task	Week 17

Learning Experiences

Throughout the unit, students may have the opportunity to engage in the following learning experiences:

Incursions/Excursions - TBA