

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/s:	Science	Learning Area:	STEM
Teacher/s:	Adam King and Ben Hobbs	Learning Period:	Semester One, 2024

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 Yindymarra 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:

Students spend time becoming familiar with the science laboratory, including safe working practices and correct use of scientific equipment. A strong emphasis is placed on developing practical skills that enable them to conduct meaningful experiments following the scientific method. Techniques to separate pure substances from mixtures allow students to use various scientific equipment and skills in real world contexts. Systems used to classify and categorise living things highlight the huge variation between species. Relationships between living and non-living parts of ecosystems are explained in an attempt to increase students' understanding of the complex interdependency of all parts of various environments across the globe. Scientific report writing skills are introduced and practised to enable students communicate their understandings and findings during experiments.

Unit learning outcomes:

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

- Identifies the factors that can influence development of and lead to changes in scientific knowledge.
- Plans and conducts safe, reproducible investigations to test relationships and aspects of scientific models.
- Uses equipment to generate and record data with precision.
- Uses particle theory to explain the physical properties of substances and develops processes that separate mixtures.
- Explains the role of science communication in shaping viewpoints, policies and regulations.
- Selects and uses language and text features appropriately for their purpose and audience when communicating their ideas and findings.
- Explains how biological diversity is ordered and organised.
- Selects and constructs appropriate representations to organise data and information.
- Processes data and information and analyses it to describe patterns, trends and relationships.
- Represents flows of matter and energy in ecosystems and predicts the effects of environmental changes.
- Explains how scientific responses are developed and can impact society.

Assessment:

Task	Approximate Due Date
- Class work	Ongoing
- Formative Assessment	Ongoing
- Introduction to Science Test	Week 6
- Separating Mixtures Scientific Report	Week 10
- Separation Techniques Test	Week 11
- Classification Test	Week 16
- Adaptation Scientific Report	Week 19
- Ecology Test	Week 20

Learning Experiences

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

Incursions/Excursions - TBA

Competitions - Big Science Competition