

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:	Kurt Halbauer, Adam King and Cheryl Walker	Learning Period:	Semester One, 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 Yindjamarra 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 Year 8 Science, students explore the systems and substances that shape the physical and living world. The semester begins with the Particle Theory of Matter, where students develop an understanding that all substances are composed of tiny particles whose arrangement and movement differ in solids, liquids and gases. Through practical investigations, they examine how changes in temperature and pressure influence particle behaviour. Students then investigate physical and chemical changes, distinguishing between changes of state or form and reactions that produce new substances. Experimental work supports their ability to identify evidence of chemical reactions and explain changes using particle models.

Students also study the structure of matter through elements, mixtures and compounds, exploring atomic structure and

the roles of protons, neutrons and electrons. They examine how atoms combine to form compounds with distinct properties. The unit then transitions to the study of cells as the fundamental units of life, with students using microscopes to observe cell structures and understand how cells form tissues, organs and body systems. Key human body systems—including the circulatory, respiratory, digestive and nervous systems—are investigated to understand how they interact to maintain life. Throughout the semester, emphasis is placed on practical inquiry, accurate scientific representation and connecting scientific concepts to real-world contexts.

Unit learning outcomes:

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

- Explains the role of specialised cell structures and organelles in cellular function and analyses the relationship between structure and function at organ and body system levels.
- Classifies and represents different types of matter and distinguishes between physical and chemical change.
- Analyses how different factors influence development of and lead to changes in scientific knowledge.
- Plans and conducts safe, reproducible investigations to test relationships and explore models.
- Constructs evidence-based arguments to support conclusions and evaluate claims.
- Analyses data and information to describe patterns, trends and relationships and identify anomalies.
- Selects and uses language and text features appropriately for their purpose when communicating their ideas, findings and arguments to specific audiences.

Assessment:

Task	Approximate Due Date
- Class Work	Ongoing
- Formative Assessment	Ongoing
- Particle Theory Test	Week 5
- Exothermic Reactions Scientific Report	Week 8
- Elements, Mixtures and Compounds Test	Week 10
- Cells Test	Week 15
- Body Systems Assignment	Week 18

Learning Experiences

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

Incursions/Excursions - TBA

Competitions - Big Science Competition, 4-15 May