

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:	Mathematics	Learning Area:	STEM
Teachers:	Liang Chen, Will Roberts, Angela Cleland, Ashleigh Hansen and Benjamin Hobbs	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 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 will learn about how data can be collected and analysed using visual displays. They will interpret these visual representations and explore measures of central tendency (mean, median, mode) and range. They extend this further by analysing data sets to describe and compare distributions. Students will develop their understanding of probability by examining sample space, calculating probabilities and learning about the differences between theoretical and experimental probabilities. Students will investigate angles in parallel lines and shapes, with an introduction to learning geometric reasoning skills. They will develop algorithms for classification of 2D shapes and look at the importance of representing 3D shapes as nets. Students will apply their algebra skills within the Measurement topic by substituting into formulas to calculate area of 2D shapes and volume of 3D solids. They will be introduced to circles by learning the key

parts of a circle and their relationship.

Unit learning outcomes:

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

- Uses coordinates to describe transformations of points in the plane
- Plans and conducts statistical investigations involving discrete and continuous numerical data, using appropriate displays
- Interprets data in terms of the shape of distribution and summary statistics, identifying possible outliers
- Lists sample spaces for single step experiments, assigns probabilities to outcomes and predicts relative frequencies for related events
- Conducts repeated single-step chance experiments and runs simulations using digital tools, giving reasons for differences between predicted and observed results
- Applies knowledge of angle relationships and the sum of angles in a triangle to solve problems, giving reasons
- Classifies polygons according to their features and creates algorithm designed to sort and classify shapes
- Represents objects two-dimensionally in different ways, describing the usefulness of these representations
- Uses formulas for the areas of triangles and parallelograms and the volumes of rectangular and triangular prisms to solve problems
- Describes the relationships between the radius, diameter and circumference of a circle

Assessment:

Task	Approximate Due Date
- Class work	Ongoing
- Mathspace - Online learning platform	Ongoing
- Formative Assessment	Ongoing
- Survey and Analysis	Week 3
- Probability Task	Week 7
- Geometry Test	Week 12
- Classifying Shapes in-class Task	Week 13
- Visualising Solids Test	Week 14
- Measurement Task	Week 17

Learning Experiences

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

Competitions - Australian Mathematics Competition