

## Mathematics and Statistics - Pāngarau

*Our students develop a positive mathematical identity and have confidence in their own understandings of mathematical concepts.*

### What our students learn

The students learn to think creatively, critically, strategically and logically to solve problems and model situations.

They learn to

- **calculate and estimate** using appropriate mental, written, or machine calculation methods in flexible ways and discern whether results are reasonable
- **generalise and represent** the patterns and relationships found in numbers, shapes, and measures
- **recognise and use the properties and symmetries** of shapes, describing position and movement
- **quantify** the attributes of objects, using appropriate units and instruments
- **predict and calculate** rates of change
- **identify problems** that can be explored by the use of appropriate data, exploring and using patterns and relationships in data, solving problems and communicating findings
- **interpret** statistical information

### How our teachers engage students in learning

Our teachers

- develop **caring and inclusive classroom communities** that are **focused on mathematical goals** to help develop students' mathematical identities and proficiencies
- deliver appropriate, **explicit mathematics instruction** and provide plenty of opportunities for students to acquire and practise mathematical skills. On most days teachers work **with small groups**, focusing on student needs and interests
- provide students with **opportunities to work both independently and collaboratively** to make sense of ideas
- plan mathematics learning experiences that enable students to **build on their existing proficiencies, interests, and experiences**
- understand that the **tasks and examples** they select influence how students come to view, develop, use, and make sense of mathematics
- support students in creating connections between different ways of **solving problems**, between mathematical representations and topics, and between mathematics and everyday experiences
- use a **range of assessment practices** to make students' thinking visible and to support students' learning
- facilitate **classroom dialogue** that is focused on mathematics argumentation
- shape **mathematical language** by modelling appropriate terms and communicating their meaning in ways that students understand
- carefully select tools and representations to provide **support for students' thinking**
- develop and use **sound knowledge** as a basis for initiating learning and responding to the mathematical needs of all their students