

Mathematics & Statistics @ Tarras School

<u>"Understand" ... Big Ideas</u>		Patterns and structures	Change and variation	Logic, reason, explain, justify	Knowledge systems	Human history
Common Practice Model.... Pedagogical Approaches						
Culturally Responsive & Sustaining	Critical Pedagogy	Communicating Pedagogies	Planned Interactive Learning	Thinking & Working Mathematically	Supporting Ākonga Maths Relationships	
Our Aims		Our Approach			Our Beliefs	
<p>We aim to instil a growth mindset in ākonga, bolster their confidence and cultivate dispositions for critical thinking in mathematics. We support ākonga to explain, justify, and reason like mathematicians and engage them in experiences to promote these skills.. We support and extend ākonga based on their needs so that all ākonga experience success in mathematics. Our curriculum is inclusive, relevant and tailored to accommodate all learners.</p>		<p>Our approach to mathematics involves providing a 'balanced maths diet' whereby ākonga are immersed in a daily routine encompassing warm-up exercises, explicit skill teaching, as well as rich tasks/problem solving. Kaiako provide support to enable and extend ākonga so learning progresses purposefully. Skills and concepts are spiralled and interwoven across each of the phases of learning. This ensures ākonga have opportunities for repeated practice and consolidating their understanding both procedurally and conceptually.</p>			<p>We believe all ākonga should experience success in mathematics. We believe in engaging with students by acknowledging and addressing their diverse needs and abilities. We believe that when ākonga graduate from Tarras School they will be confident mathematicians, have a deep conceptual and procedural understanding and have developed the mindset of a mathematician. These skills will enable them to apply their mathematical knowledge across various real-world contexts.</p>	
"Know" - Contexts for Learning						
Number Mātauranga tau	Algebra Taurangi	Measurement Inenga	Space Mokowā	Statistics Tauanga	Probability Tūponotanga	
How we go about it...						
<p>Expectations: Ākonga receive a balanced maths programme that includes the following key components : warm ups, explicit skill teaching and rich learning tasks. Kaiako collaborate to plan rich meaningful learning opportunities that meet the needs of all ākonga.</p>						
<p>Planning:</p> <p>Step 1: a yearly overview is developed collaboratively and it ensures that concepts and skills are spiralled across the year and tracked within each phase of learning.</p> <p>Step 2: Weekly programmes of learning are completed across both phases of learning. Progress outcomes are identified and learning engagements are matched accordingly.</p> <p>Yearly / Weekly Overview</p>						
<p>Key Components of a lesson: Warm ups, explicit teaching (whole class, small group depending on need), consolidation /rich tasks /problem solving - this part of the lesson could look different depending on the need of the learners.</p>						

Local Contexts: farming, school gardens, tennis court, rugby fields, cafe, shop, passing traffic, tourism, developments in the area.

Ākonga Interests: sports, the environment, skiing, music, farming.

"Do" – Skills or practices of a Mathematician

Te tūhura pūāhua Investigate situations	Te whakaata pūāhua Represent situations	Te tūhono pūāhua Connect situations	Te whakatauwhānui i ngā kitenga Generalise findings	Te whakamārama me te parahau i ngā kitenga Explain & justify findings
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How we go about it...

Where the "DO" fits...

We build ākonga skills and mathematical practices through our balanced approach to maths.

- Discussing, defending, explaining and justifying through daily warm ups.
- Connecting and representing situations, through explicit skill teaching.
- Investigating situations through rich learning tasks and problem solving.

All mathematical practices interact across our maths programme.

Assessment Beliefs:

We believe in an assessment for learning approach whereby all assessment informs next steps, including teacher practice.

Assessment can be completed in a variety of ways using different tools such as anecdotal notes, observations, exit slips, formative check ins, quizzes and pre assessment tasks.

We believe in using a combination of formative and summative assessments and that all forms of assessment inform our next steps for teaching and learning.

Assessment Expectations:

- PAT : Years 4, 5 & 6 : Term 1 and Term 4. Term 1 provides a baseline and areas of need and Term 4 measures growth and identifies next steps for the following year.
- JAM : Completed within the 1st term of starting school and then aged 6 & 7. To track progress and identify areas of need.
- Observation, anecdotal notes, formative check ins. A combination of formative and summative assessments.