

Mathematics & Statistics Refreshed Curriculum

Years 0–8 PLD

Day 2

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Organising for learning

Flexible, adaptive approaches to teaching benefit all learners. Teachers with high expectations for their students provide opportunity for them to work individually and collaboratively to make sense of, add to, and evaluate their own and others' ideas. Every student contributes to the learning in the group.

At all phases of learning, groups should be flexible and designed around the purpose of learning. Groups change to suit students' strengths and needs, confidence with concepts, responses to teaching, interests, motivations, and social connections.



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Grouping configurations include:

Small groups (or pairs), facilitated by the teacher and composed of students who have a shared purpose for learning or who will benefit from further teaching.

Teacher- or self-selected small groups e.g., for practice with adding fractions, after these have already been introduced in class, to give students a chance to get more help, check their understanding, or extend their learning.

Whole-class or larger groups with a shared learning purpose.

Individual for independent thinking or working time, and fluency practice.

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Explicit Teaching of Maths for Acceleration and Extension

Term 2 2025

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Term 2 –Critical messaging

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Explicit teaching and the maths learning area in the NZC

- The revised Maths and statistics learning area and Pāngarau wāhanga ako for years 0-8 has a strong emphasis on explicit teaching and teaching to the year level.
- It also caters for children who need extension, without simply moving them onto the next 'level' within classroom teaching.

It is important to remember:

- Explicit teaching is not exclusive to whole-class teaching.
- While there will be a whole-class, explicitly taught element to each daily maths lesson, teachers should also work with groups, to enable or extend their learning.
- This also utilises effective explicit teaching pedagogies.

Explicit teaching of maths for acceleration and extension

Term 2, 2025

Explicit teaching and the maths learning area in the NZC

The revised Maths and statistics learning area and Pāngarau wāhanga ako for Years 0 to 8 has a strong emphasis on explicit teaching and teaching to the year level.

This approach caters for children who need extension, it provides space /time for students to explore mathematical concepts in more depth, without just simply moving them on the next 'level' within classroom teaching. Teachers are the best judge of what students need extending in and when students need access to the concepts at a deeper level or are ready to move ahead.

It is important to remember that the practice of explicit teaching is not exclusive to whole-class teaching. Whilst there will be a whole-class, explicitly taught element to each daily maths lesson, the teacher can also work with groups, to enable or extend their learning and this also utilises effective explicit teaching pedagogies.

Meeting the needs of all learners within the daily maths lesson

Based on evidence (*Accelerating Learning in Oral Language, Reading, Writing and Mathematics, University of Canterbury, 2024*) the Ministry is encouraging all maths teachers and kaiako to focus on extending and deepening their learner's maths knowledge within the year level, to give ākonga more experience and time to develop conceptual and procedural knowledge about and between maths concepts and capability across all the processes of maths. This will support students with both their competency and creativity when dealing with maths.

Teachers should continue to develop rich extension tasks that motivate students

to deepen their understanding of maths and statistics, by reinforcing what they've already learned and allowing them to apply their knowledge to new situations.

Teachers can also provide options for students around the actions students take (e.g. greater decision making/agency, use of tools or representations), and the product students create to show their findings (e.g. written or visual, verbal, digital). Another opportunity for extension is working with students to improve their communication and reasoning skills through explaining their thinking and problem-solving methods.

Using enablers and extenders, and ensuing proficiency across all strands of maths

Key to the planning for all learners is to consider the enablers that help build foundational understanding by providing a range of entry points into the knowledge or concept, for example when finding areas of shapes, learners who need support might find the area of regular shapes using a tables square as an enabling resource, those who need extension will use their knowledge of multiplication tables to find the area of more complex, irregular shapes.

This ensures that all students can participate; extenders challenge advanced learners and encourage critical thinking and exploration. Extenders could include adding complexity to problems and applying learned concepts to new problems.

Teachers should also notice whether students are developing proficiency across all strands and plan accordingly. Some students we think of as highly able may have greater understanding in some strands but not in others; teachers should notice this and plan for these learners to develop key understanding of all strands of maths.

Maths resources and planning to extend the more able

The Ministry-provided maths PLD also discusses extension work in the rich task activities each of the four days of the PLD. The PLD is available to all teachers and school leaders of Years 0 to 8.

The Ministry will also be providing detailed guidance for teachers shortly, along with information about research in accelerating learning and example lessons and activities specifically for accelerating and extending learning in maths.

The Ministry-funded resources that have been provided to schools all have extension options for children who might need it, and in some cases breaking children into smaller learning groups can be an effective strategy where some students might work on this extension material. The Ministry will provide more guidance on exactly how this is structured and where this can be found in each resource.

What we have heard from secondary maths specialists

Feedback from secondary teachers has also highlighted that children who have this deeper level of maths understanding also do better when it comes to more complicated maths concepts, and at NCEA levels, as their richer understanding gives them a better foundation to grasp new and challenging maths ideas. They say that students who have simply been moved up through maths levels quickly often lack this depth and only achieve moderate results.

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