

The Australian Association of Mathematics Teachers Ltd. (AAMT) is committed to promoting and supporting excellence in mathematics teaching for all learners.

This document replaces the *2006 Standards for Excellence in Teaching Mathematics in Australian Schools*. It builds on that profession-led foundation while reflecting contemporary research, curriculum developments, and the changing contexts of Australian classrooms.

Towards Excellence in Teaching Mathematics sets out a shared professional vision of what excellent mathematics teaching looks like in Australian schools. It describes the knowledge, judgement, practices and professional commitments that characterise high-quality mathematics teaching. It is grounded in research, informed by the Australian Professional Standards for Teachers, and aligned with AAMT's position on pedagogy in mathematics.

This document is intended to:

- support career-long professional growth;
- guide reflection and professional dialogue;
- inform professional learning;
- strengthen collective understanding of effective mathematics teaching; and
- contribute to the ongoing professionalisation of mathematics education.

It is not intended for use in performance management processes.

Consistent with the position taken with previous versions, AAMT affirms that this document is developed by the profession, for the profession. The Board does not endorse its use, in whole or in part, as an appraisal or accountability instrument.

Excellence in mathematics teaching is dynamic and context-sensitive. It is shaped by deep knowledge of mathematics, informed professional judgement, purposeful pedagogy, and a commitment to equitable and inclusive learning. This document provides a framework to support that work - not standardise it.



Domain 1

Knowing Mathematics and Mathematics Learners

1.1 Understanding mathematics as a connected discipline

Excellent teachers of mathematics draw on deep, connected knowledge of both mathematics and the learners in front of them. They understand mathematics as a coherent and connected discipline in which concepts, representations, procedures, and ways of reasoning are interrelated and develop over time. This knowledge enables teachers to understand how ideas connect across strands and year levels, to identify the mathematical significance of students' thinking, and to respond purposefully in ways that deepen understanding as learning unfolds.

1.2 Knowing learners as mathematical thinkers

A rich understanding of learners is critical. Excellent teachers recognise that students bring diverse experiences, identities, dispositions, and relationships with mathematics to the classroom. They attend to what students already know, how they are making sense of ideas, and the confidence in which they engage with mathematical challenge. Excellent teachers observe patterns in students' reasoning, emerging understandings, and common misconceptions, and use these insights to inform decisions about teaching.

1.3 Professional knowledge and judgement in context

Professional knowledge is continually refined through engagement with research, curriculum, professional dialogue, and close attention to classroom practice. Excellent teachers exercise professional judgement to integrate multiple forms of evidence, including research insights, curriculum intentions, and students' responses, and to decide what matters most in a given moment, for particular learners, and for specific mathematical purposes.



Excellence in this domain is characterised by teachers who:

- understand mathematics deeply as a connected whole, beyond isolated topics or procedures;
- acknowledge the importance of students' numeracy capabilities across other disciplines;
- know how mathematical ideas develop over time within the broader continuum of mathematics learning;
- are capable, competent and confident users of mathematics appropriate to their teaching responsibilities;
- attend closely and respond to how students think, reason, and feel about mathematics;
- use professional judgement to interpret evidence from research and practice; and
- recognise diversity as a strength and a starting point for mathematical learning.

Domain 2

Teaching Mathematics Well

2.1 Teaching with clear mathematical purpose

Excellent teachers of mathematics design and enact learning experiences that foreground meaningful mathematics. Their teaching is intentional, responsive, and grounded in clear mathematical purpose. They make deliberate decisions about tasks, representations, explanations, and forms of interaction, always with an eye to how these choices shape students' opportunities to learn, reason, and engage with mathematical ideas.

2.2 Using assessment to advance learning

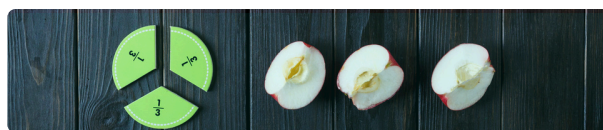
Assessment is an integral part of mathematics teaching and learning. Excellent teachers use a range of assessment strategies to make students' mathematical thinking visible, gather evidence of understanding, and monitor progress, drawing on formal and informal approaches that allow students to demonstrate reasoning, fluency, and understanding in multiple forms. They interpret this evidence using the curriculum and professional judgement to decide what comes next, adjusting tasks, explanations, and levels of challenge to advance learning. Well-crafted, constructive feedback is central to this process, supporting students to reflect on their thinking, recognise progress, and understand how to improve. Practice and consolidation are used strategically in response to assessment evidence to strengthen understanding, fluency, and confidence, rather than as ends in themselves.

2.3 Designing learning for challenge, accessibility and sense-making

Excellent teachers use assessment to guide planning and teaching. Mathematics teaching involves more than selecting activities or following sequences; it is centred on understanding and planning for how students encounter, make sense of and work with mathematical ideas. They create, choose and adapt tasks to provide appropriate challenge, invite multiple ways of thinking, and support all students to engage productively. They use clear explanations, materials, representations, models, and language to make mathematical structure visible, and they connect procedural work with underlying concepts and reasoning.

2.4 Orchestrating mathematical dialogue and productive challenge

Classrooms led by excellent teachers of mathematics are characterised by purposeful mathematical dialogue. Students are encouraged to explain, justify, question, and build on one another's ideas. Teachers listen carefully, probe thinking with strategic questioning, and use students' contributions to advance learning. Mistakes are valued and treated as opportunities for sense-making, and appropriate struggle is supported through thoughtful scaffolding rather than avoided or removed.



Excellence in this domain is characterised by teachers who:

- design learning experiences with clear mathematical purpose;
- select and use tasks that promote reasoning, understanding, and productive challenge;
- communicate mathematics effectively and use representations to support sense-making;
- orchestrate dialogue that values and builds on students' mathematical thinking;
- integrate assessment, feedback, practice, and consolidation to advance learning.

Domain 3

Being a Teacher of Mathematics

3.1 Professional identity and collective responsibility

Excellent teachers of mathematics see themselves as active members of a professional community with shared responsibility for the quality of mathematics education within and across their classrooms. They are reflective practitioners who continually examine the impact of their teaching, seek out new learning, and refine their own practice over time. Professional growth is understood as ongoing, collaborative, and inseparable from everyday classroom work.

3.2 Building inclusive and positive mathematics cultures

Excellent teachers contribute to positive and inclusive mathematics cultures within their classrooms, schools, and wider communities. They challenge deficit narratives and stereotypes about who can succeed in mathematics, and they actively work to ensure mathematics is experienced as meaningful, worthwhile, and accessible to all learners. They communicate with families and colleagues in ways that highlight the value of mathematics and support shared understanding of mathematical learning and progress.

3.3 Advocacy, leadership and professional contribution

Professional engagement is underpinned by respect for professional judgement. Excellent teachers collaborate with colleagues to share insights, test ideas, and learn from practice in ways that extend beyond their own classroom. They engage critically with research, curriculum developments, and professional learning opportunities, using these to inform their decisions. Where appropriate, they contribute to leadership in mathematics education by supporting others, advocating for high-quality practice, and strengthening collective expertise beyond their own practice within their school and professional community.



Excellence in this domain is characterised by teachers who:

- reflect on practice and seek evidence to inform improvement;
- engage in ongoing professional learning to develop their mathematics teaching;
- collaborate with colleagues to strengthen mathematics practice;
- contribute to inclusive, positive cultures around mathematics; and
- advocate for equitable and high-quality mathematics education.

Acknowledgements

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AAMT acknowledges the Traditional Custodians of the lands on which we live, work and learn, and we pay our respects to their Elders past, present, and emerging. We recognise the enduring knowledge, wisdom, and practices of Aboriginal and Torres Strait Islander peoples, including their rich traditions of mathematical understanding. Their contributions to learning and education continue to inform us as we strive for excellence in mathematics education for all Australians.

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Media Enquiries

Members of the media are invited to contact us for further information, interviews, or commentary on this document or related topics in mathematics education.

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Towards Excellence in Teaching Mathematics

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