REGIONAL MATHEMATICS CONFERENCES

TRANSFORMING MATHEMATICS EDUCATION: STRATEGIES FOR EMPOWERMENT, ENGAGEMENT, AND EXCELLENCE

IMMERSIVE SESSIONS, INSPIRING CONTENT

- Connecting the Victorian Teaching and Learning Model to the teaching and learning of mathematics.
- Adapting to the Victorian Curriculum 2.0: Comprehensive guidance on the effective planning and assessment of mathematical modelling and statistical investigations.
- Challenging and supporting students in mathematics: effective use of manipulatives, representations, tasks, and resources.
- Explicit instruction, teaching and learning: understanding theory and pedagogies.
- Empowering students to develop their own problem-solving strategies: effective teaching techniques.
- Building student independence and motivation: fostering active learning and metacognitive skills.

WHERE AND WHEN

28 February 2025: Greater Shepparton Secondary College *(Primary, Secondary, VCE)*

14 March 2025: Ballarat Tech Centre *(Primary, Secondary, VCE)*

20 June 2025: Clifton Springs Primary School, Barwon *(Primary, Secondary)*

5 September 2025: Colac Secondary College *(Primary, Secondary)*

Learn more about the 2025 regional mathematics conferences at: www.mav.vic.edu.au/conferences/regional

Registrations are essential.
Members $200, non members $250

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THE MATHEMATICAL ASSOCIATION OF VICTORIA

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Transforming mathematics education

This conference focuses on transforming mathematics education through a comprehensive exploration of teaching strategies and pedagogies designed to engage and empower students. Participants will learn to connect the Victorian Teaching and Learning Model (VTLM 2.0) to effective maths instruction, whilst aligning to the Victorian Mathematics Curriculum. Sessions will explore the design, planning, and assessment of mathematical modelling and statistical investigations, responding to changes in the curriculum by integrating real-world problem-solving and critical thinking. Teachers will also gain insights into the effective use of manipulatives, visual representations, and differentiated tasks to support diverse learners and foster deeper understanding. The conference will cover the role of Explicit Instruction in breaking down complex skills and the importance of building student independence through active learning and metacognitive strategies. A key focus will be on empowering students to develop their own problem-solving strategies, encouraging critical thinking and reflection. **By the end of the conference, educators will be equipped with innovative tools and techniques to foster a learning environment that promotes independence, motivation, and deeper engagement in mathematics.**

<table>
<tr><td>8.30am</td><td colspan="4">Registration</td></tr>
<tr><td>9.15am - 10am

Keynote session A</td><td colspan="4">Connecting teaching and learning models and curriculum in the mathematics classroom

This session delves into the elements of learning and teaching within the Victorian Teaching and Learning Model 2.0, viewed through a mathematical lens. Participants will explore how to harness the VTLM principles alongside the Victorian Mathematics Curriculum to design lessons that are both standards-aligned and student-centred. The workshop offers practical strategies for integrating the curriculum's key proficiency strands – Understanding, Fluency, Problem Solving, and Reasoning – into everyday teaching, equipping educators to deliver engaging and impactful mathematics lessons.</td></tr>
<tr><td rowspan="2">10am - 11am

Session B</td><td>The Huddle

Play On: Sporty and playful learning activities to help students master their maths.

Sport can be the ultimate hook and student leveler, but not just in PE. This workshop introduces teachers to some of The Huddle's innovative and free sport-themed Maths and STEM resources for students working from Levels 3 – 7. Experience firsthand how sport and play can strengthen student engagement in the mathematics classroom. Teachers will leave this session with a new arsenal of resources and ideas that are guaranteed to get students kicking their maths goals.</td><td>Code for Schools

In this workshop teachers will engage in a hands-on digitech experience encorporating coding (which is now in the maths curriculum!). Code for Schools is a non-profit organisation empowering schools and students across Australia with free, expert-designed digitech teaching resources.</td><td rowspan="2">ACHPER

In partnership with MAV, ACHPER will deliver this workshop, showcasing the Active Schools initiative, which is grounded in a multifaceted framework that promotes physical activity through a whole-school approach. This comprehensive system is designed to empower schools to effectively encourage and sustain physical activity among students.</td><td>Texas Instruments

Join us as we engage in problems that challenge conventional thinking, inspire innovative solutions and encourage reflection. The puzzles, brain teasers and mathematical conundrums selected for this session provide fertile ground for growing students' problem solving skills and strategies.</td></tr>
<tr><td>CAS - Casio ClassPad

Explore the powerful features of the Casio ClassPad in this hands-on workshop. Discover practical strategies and classroom applications to support effective teaching of mathematics at various levels.</td></tr>
</table>

11am - 11.30am	Morning tea		
	Primary stream		**Secondary stream**
11.30am - 12.30pm Session C	**Designing, planning, and assessing mathematical modelling tasks: adapting to vhanges in the Victorian Curriculum 2.0** This workshop introduces the updated Victorian Curriculum 2.0, highlighting its increased focus on mathematical modelling as a vital tool for developing students' problem-solving, critical thinking, and real-world application skills. Participants will learn what mathematical modelling entails, its purpose, and its educational value. The workshop will provide strategies for designing engaging, curriculum-aligned modelling tasks, along with practical tips for effectively launching and facilitating these tasks to promote collaborative problem-solving. Emphasis will be placed on encouraging student exploration, questioning, and iterative thinking to deepen their mathematical understanding. Additionally, the session will cover methods for assessing both the process and solution, focusing on students' reasoning, approach, and application of key concepts.	**Designing, planning, and assessing statistical investigations: adapting to changes in the Victorian Curriculum 2.0** This workshop provides an overview of updates in the Victorian Curriculum 2.0, with a focus on the enhanced emphasis on statistical literacy and investigation. Participants will examine the importance of statistical investigations in helping students critically engage with data in real-world contexts, from formulating questions to collecting, analysing, and interpreting results. The session will cover practical tips for managing statistical investigations, incorporating both collaborative and independent inquiry. Teachers will learn strategies to highlight connections between statistics and other mathematical areas (number, probability, and algebra) creating a cohesive learning experience. The workshop will emphasise encouraging students to ask questions, make predictions, and draw evidence-based conclusions. Participants will explore tools for data collection and analysis, including technology and software options, and discuss assessment strategies that evaluate both the investigative process and students' reasoning and interpretation of findings.	**Challenging and supporting students in mathematics: effective use of manipulatives, representations, tasks, and resources** This workshop will focus on the effective use of manipulatives and representations to enhance maths learning by bridging concrete and abstract thinking. Participants will explore research-based benefits of using these tools to build foundational skills and deepen understanding. The session will offer guidance on selecting manipulatives for various maths topics and techniques for employing models and visual tools - such as number lines, bar models, and area models - to clarify concepts. Teachers will learn how to encourage students to create their own representations to demonstrate understanding and develop problem-solving skills. The workshop will cover the characteristics of tasks that promote critical thinking, problem-solving, and collaboration, along with strategies for designing tasks that provide differentiated levels of challenge and support, ensuring accessible content for all learners. Tips for balancing open-ended exploration with structured focus will be provided to enhance engagement and learning outcomes.

12.30pm - 1.30pm	Lunch	
	Primary stream	**Secondary stream**
1.20pm - 2.20pm Session D	**Explicit teaching in the mathematics classroom** This workshop explores the power of explicit teaching as a highly effective approach to enhancing students' mathematical understanding. Participants will delve into the seven essential components of explicit learning, grounded in mathematics education research, and discover practical strategies to design and deliver meaningful instruction. The workshop will address key questions such as: what is explicit teaching and how can it transform mathematics learning? Through interactive activities, attendees will learn how to structure lessons, use intuitive strategies, and facilitate rich mathematical discourse to make concepts clear, engaging, and accessible for all learners.	**Empowering students to develop their own problem-solving strategies: effective teaching techniques** This workshop will focus on empowering students to develop their own problem-solving strategies, fostering independence and critical thinking in mathematics. Participants will learn how to create a supportive classroom environment where students feel confident to explore, make mistakes, and learn from them. The session will cover techniques for guiding students through the problem-solving process without providing direct answers, encouraging exploration of multiple strategies, and using real-world contexts to make problems more relevant. Teachers will also explore how to scaffold problem-solving skills, differentiate tasks for diverse learners, and incorporate technology to support exploration. Additionally, the workshop will emphasise the importance of reflection, both for students to evaluate their problem-solving processes and for teachers to assess the development of problem-solving skills over time. By the end of the session, educators will be equipped with practical strategies to foster a reflective, problem-solving mindset in their students and promote deeper mathematical understanding.
2.30pm - 3.30pm	**Building student independence and motivation: fostering active learning and metacognitive skills** This workshop focuses on building student independence and motivation through active learning and metacognitive skills. Participants will explore strategies to foster student autonomy, such as encouraging self-directed learning, and providing opportunities for student choice and goal-setting. The session will highlight the importance of active learning, including collaborative problem-solving and real-world applications, as well as teaching metacognitive strategies to help students reflect on their thinking and improve their learning. Emphasising the development of a growth mindset, the workshop will explore how to provide constructive feedback, create a supportive classroom culture, and integrate technology to enhance independence. Teachers will also learn how to differentiate instruction to meet diverse learning needs and assess student progress through self-reflection. By the end of the workshop, educators will be equipped with practical tools to empower students to take ownership of their learning and become more engaged, motivated, and self-reflective.	

VCE stream

8.30am	Registration			
9am - 12pm (morning tea from 10.40am - 11.20am)	**Foundation** Meet the Examiners session Exam and Panel	**General** Meet the Examiners session Exam 1 (90 minutes) Exam 2 (90 minutes)	**Methods** Meet the Examiners session Exam 1 (90 minutes) Exam 2 (90 minutes)	**Specialist** Meet the Examiners session Exam 1 (90 minutes) Exam 2 (90 minutes)
12pm - 1pm	Calculators - Texas Instruments		Calculators - Casio	
1pm - 2pm	Lunch			
2pm - 3pm	SAC session	SAC session	SAC session	SAC session

Registration information

WHERE AND WHEN

Date	Location	Streams
28 February 2025	Greater Shepparton Secondary College, 31-71 Hawdon St, Shepparton	Primary, Secondary, VCE
14 March 2025	Ballarat Tech Centre 136 Albert St Ballarat	Primary, Secondary, VCE
20 June 2025	Clifton Springs Primary School 70-118 Jetty Rd Clifton Springs	Primary, Secondary
5 September 2025	Colac Secondary College 173 Queen St, Colac	Primary, Secondary

REGISTRATIONS ARE ESSENTIAL. BOOK YOUR PLACE AT WWW.MAV.VIC.EDU.AU/EVENTS

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