



THE MATHEMATICAL
ASSOCIATION OF VICTORIA

MAV25
CONFERENCE

4 & 5 DEC 2025

THRIVING IN MATHEMATICS



62nd Annual Conference

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Your MAV membership is
an essential part of a
successful career.
Renew or join today.

WELCOME TO MAV25



Welcome to MAV25: Thriving in mathematics

It is my great pleasure to welcome you to MAV25, where we come together as a vibrant community of educators, leaders, researchers, and advocates, united by a shared passion for mathematics and learning.

This year, our theme, *Thriving in Mathematics*, invites us to look beyond the numbers and explore what it truly means to flourish in our classrooms, careers, and communities. Through the lenses of teaching and learning, leadership, curriculum, innovation, and the broader societal context, we aim to celebrate our successes, confront our challenges, and shape a bold, inclusive future for mathematics education.

We are especially excited to feature two keynote panels that speak directly to the heart of our work:

- Thursday's panel, *Leading Change in Mathematics*, brings stories of impact, frameworks for leadership, and narratives of transformation—shining a light on those driving meaningful change.
- Friday's panel, *How Are We Thriving?*, offers a research-based perspective, challenging myths, highlighting success through data, and reframing the narrative of mathematics education in Australia and beyond.

MAV25 is more than a conference – it's a space for connection, curiosity, and collaboration. Over the coming days, we encourage you to engage deeply, share generously, and reflect openly. Your voice is an essential part of this conversation.

Thank you for being here. Together, let's explore how we can continue to thrive in mathematics – as individuals, as educators, and as a community.

- Ann Downton, Conference Convenor

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SCHEDULE

Thursday 4 December 2025

8am - 9am	Registration
9am - 9.15am	Opening and welcome
9.15am - 10.15am	Keynote presentations
10.15am - 11am	Morning tea
11am - 12pm	Session A
12.10pm - 1.10pm	Session B
1.10pm - 2pm	Lunch
2pm - 3pm	Afternoon keynote and Session C
3.10pm - 4.10pm	Topic discussion session
4.10pm	Networking drinks and nibbles
5pm	End of day 1
5.30pm	Conference dinner

Friday 5 December 2025

8am - 9am	Registration
9am - 9.15am	Opening and welcome
9.15am - 10.15am	Keynote presentations
10.15am - 11am	Morning tea
11am - 12pm	Session E
12.10pm - 1.10pm	Session F
1.10pm - 2pm	Lunch
2pm - 3pm	Session G
3.10pm - 4.10pm	Afternoon keynote
4.10pm	Conclusion of conference

Stay connected



IMPORTANT INFORMATION

DATE AND TIME

The MAV25 Annual Conference will be held on Thursday 4 and Friday 5 December 2025. Registration opens at 8am each day in the Union Building, located near the exhibition hall.

Each day will feature four keynote presentations starting at 9.15am.

On Thursday, sessions will run from 11am to 4:10pm. The afternoon keynote panel will begin at 2pm and run concurrently with other sessions, followed by topic discussion groups. The day will conclude with networking drinks from 4.10pm to 5pm.

On Friday, sessions will run from 11am to 3pm, followed by the afternoon keynote panel at 3.10pm. The conference will conclude at 4.10pm.

REGISTRATION

Registrations are now open and will close on Friday 21 November 2025. To register for this year's conference, you will need to register for each day of the conference online.

[Register here for Thursday](#)

[Register here for Friday](#)

SESSION SELECTION

When registration payment is received an email will be sent with a link to selection sessions. There will be a link for Thursday and for Friday sessions.

CATERING

Beverage on arrival, morning tea, daily lunch and Thursday networking drinks will be provided in the exhibition hall, Union Building.

PROGRAM

All speakers and sessions were confirmed and correct at the time of release. MAV reserves the right to amend the program details as required.

CANCELLATION POLICY

Participants who cancel their booking on or prior to the advertised closing date will receive a full refund less the cancellation fee of \$35. All cancellations must be in writing and include any documentation already sent out. No refunds are available after the advertised closing date as costs will

have been incurred, and catering booked. (Except in the case of illness, a 50% refund is available subject to supply of a medical certificate.

The certificate and application for refund must be supplied in writing to MAV within 24 hours after the event.)

For information regarding the conference including presenters, sponsorship and exhibition contact:
Jacqui Diamond, Conference Manager
jdiamond@mav.vic.edu.au.

PARKING

Note: parking costs are not included in your conference registration fee.

CellOPark Pay-As-You-Go (PAYG) is an easy alternative to parking meters which allows you to pay via an app, phone or online - only pay for the time you park.

Pay-by-Plate parking meters are a ticketless system using your vehicle registration - pay hourly or daily.

For all information regarding parking at La Trobe University, Bundoora visit www.latrobe.edu.au/transport-central/car-parking/melbourne-parking.

PRIVACY POLICY

We gather this information solely to manage your membership of the MAV and the services that we provide you. We will not collect information that does not pertain to this. To serve the purpose of the Association - valuing mathematics in society - and to improve the service we provide the MAV may use collected information for evaluation and research purposes. All collected information will be protected against loss and unauthorised use or disclosure. MAV will not disclose individual information to third parties without seeking express permission first. You will always be able to request access to the information the MAV holds about you.

MAV may use collected information for evaluation and research purposes. All collected information will be protected against loss and unauthorised use or disclosure.

CONFERENCE APP

We are thrilled to unveil our events app, designed to enhance your conference experience like never before! This all-in-one tool is your gateway to a seamless and engaging event. Here is what you can look forward to:

FULL PROGRAM ACCESS

Browse the complete event program, ensuring you never miss a session, workshop, or keynote.

AGENDA AT A GLANCE

Quickly check out the agenda to see what is happening next and plan your day with ease.

FAVORITE YOUR SESSIONS

Personalise your schedule by favouriting sessions you do not want to miss. Get reminders and updates so you are always in the right place at the right time.

NETWORK WITH FELLOW DELEGATES

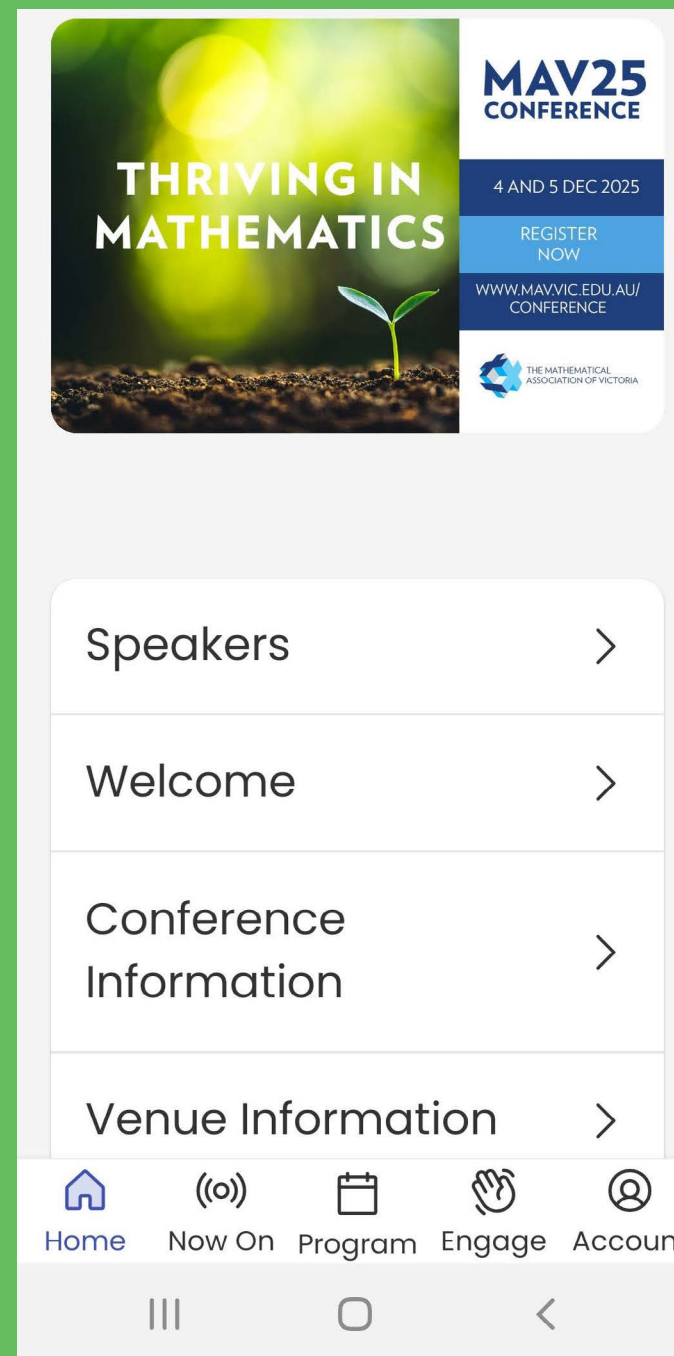
Connect with other attendees, exchange contact information, and build valuable professional relationships.

SPEAKERS AT A GLANCE

Get to know our esteemed speakers, read their bios, and find out when and where they are presenting.

GETTING TO THE VENUE

Access detailed information on the venue, including maps, transportation options, and tips for getting around.



DOWNLOAD BEFORE THE CONFERENCE

Our events app puts everything you need right at your fingertips, making it easier than ever to stay informed, connected, and engaged. Do not miss this essential tool.

App information will be emailed to registrants closer to the event.

FOR NEWCOMERS



Following the fantastic response to the 2024 newcomers' morning tea, we are excited to bring it back. The MAV Annual Conference Committee warmly invites all newcomers to the MAV Annual Conference to join us for a morning tea on either Thursday or Friday.

Come meet the conference committee, engage in informal discussions about your current mathematical education experiences, and receive support for your first MAV Annual Conference. Remember to select 'yes' if you wish to attend the newcomers' morning tea when completing your session selections. Once registration payment is received, a link to session selections will be emailed to you.

ACCOMMODATION



Quest Preston is offering MAV25 delegates a discounted rate for accommodation. If you need a place to stay while attending the conference, this is a good option. Please note that MAV does not receive any kickbacks for this offer.

Quest Preston offers modern serviced apartments, including studios, 1- and 2-bedroom options as well as accessible accommodation. Take advantage of the guest laundry, on-site gym, and Wi-Fi internet access. This 12% offer off best available rate offer is valid for the conference dates and rooms subject to availability.

La Trobe University is a 10-minute drive from Quest Preston, or you can jump on the nearby #86 tram. Discounted carparking at hotel of \$10 per night (normally \$19)

To book:

- Visit www.questapartments.com.au/properties/vic/preston/quest-preston
- Enter Promo Code: MAV25CONF (case sensitive)
- Select your dates in December
- Select your room type
- Proceed with reservation

CONFERENCE DINNER



The MAV Annual Conference Dinner returns for MAV25 on Thursday 4 December 2025, offering a relaxed and enjoyable evening of good food, great company, and mathematical fun.

Held at The Odeon, La Trobe University, the evening begins with a cash bar from 5.30 pm, followed by dinner from 6pm. This separately ticketed event promises to be a great opportunity to mingle with fellow attendees and make new connections. Attendees will enjoy five short rounds of mathematical trivia/games interspersed throughout the night.

It's a fantastic opportunity to unwind after the first day of the conference, connect with fellow attendees, and enjoy a friendly, social atmosphere.

Tickets are \$50 for MAV members and \$62.50 for non-members, (Drinks available for purchase, card only) Registrations close Wednesday 28 November, tickets are limited.

Be sure to update your MAV profile with any dietary requirements – we can't wait to see you there!

BOOK YOUR SPOT

Booking are essential: visit www.mav.vic.edu.au/Events/Professional-Learning-Events

TOPIC DISCUSSION GROUP SESSIONS



Following the success of last year, the MAV Annual Conference Committee has again scheduled special discussion group sessions on Thursday 4 December 2025, during session D (3.10pm to 4.10pm). These sessions will be followed by the MAV25 annual conference networking drinks.

Join an engaging discussion group where you will have the opportunity to share knowledge, experiences, and resources on a specific topic (see list below).

Participants will be encouraged to actively contribute and collaborate, fostering a supportive environment and build valuable professional networks. Each group will be facilitated to ensure productive discussion, with a clear focus and guiding questions provided to steer the conversation.

These discussion groups promise to be a dynamic and enriching, offering a unique opportunity to connect with peers and enhance your professional community.

The discussion groups will cover nine topics: each tailored to specific levels.

- Curriculum – Implementation of VC 2.0
- Mathematical modelling
- Building teaching networks, inclusive of transition.
- Evidence informed pedagogical practices.
- VCE and VM Teaching, Learning and Assessment 2025
- Effective assessment practices
- Leadership – mathematics and numeracy
- Mathematical wellbeing – supporting students and teachers.
- Culturally Responsive Mathematics Teaching

BUILD ME UP FOR VCE TEACHERS

BUILDING CONFIDENCE IN TEACHING VCE MATHEMATICS

A hybrid professional learning program that equips teachers to step into VCE Mathematics with confidence. There are two Build Me Up streams available in 2026:

- General Mathematics Units 1–4
 - Mathematical Methods Units 1–4
- (Pathways for Specialist Mathematics and Foundation Mathematics are planned for 2027.)

**2026 INTAKE - REGISTRATIONS OPEN
LIMITED PLACES. SECURE YOUR SPOT.**
www.mav.vic.edu.au/Events



WHAT'S INCLUDED

- 2 x full-day, in-person workshops (metro and regional): how key concepts, skills and processes are structured and sequenced from Unit 1 to Unit 4.
- 6 x 1.5 hour live online topic sessions: targeted deep dives — do the maths together and unpack approaches that work.
- 2 x 1.5 hour Q&A forums: connect with experienced VCE educators for timely advice and peer support.
- Bonus value: complimentary access to Build Me Up (Years 7–10) — all 14 modules to refresh prerequisite content and pedagogy (valued at \$990).

DEVELOPED AND DELIVERED BY MAV

Developed and facilitated by expert VCE educators and curriculum leaders, led by Dr David Leigh-Lancaster and Jessica Mount, with practical resources you can use tomorrow — designed to improve teacher efficacy and student outcomes.

IS THIS COURSE FOR YOU?

Yes, if you are a teacher new to VCE, returning after a break, or keen to strengthen content knowledge and pedagogy for senior secondary maths.

FORMAT AND ACCESS

Hybrid delivery for state-wide access, with metropolitan and regional workshop options, plus live online learning.

COST

\$1600 for MAV members, \$2000 for non-MAV members. The cost covers all workshops, online sessions, Q&A forums and Build Me Up Years 7–10 access.

REGISTER NOW



KEYNOTES: THURSDAY

PRESENTERS

DR SCOTT CAMERON AND DR CARMEL MESITI

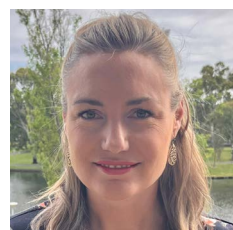
NAVIGATING THE CRITICAL AND EFFECTIVE USE OF GENERATIVE AI IN MATHEMATICS EDUCATION



Scott is a lecturer in mathematics education and clinical practice coordinator in the Master of Teaching (Secondary) program at the University of Melbourne. He oversees the professional development of pre-service teachers during their placement experiences. He teaches mathematics education subjects and is dedicated to enhancing pre-service teachers' pedagogical content knowledge to prepare them for effective classroom practice. Dr Cameron's PhD research investigated senior secondary students' use of computer algebra systems, exploring their attitudes, usage patterns, and influencing factors. Using a longitudinal mixed methods case study, his work provides valuable insights for integrating technology into mathematics teaching. Building on this foundation, he now examines the impact of emerging technologies, including mathematics analysis software and AI, on mathematics teaching and learning, reflecting his commitment to innovation in mathematics education.



Carmel is a senior lecturer in mathematics education and course coordinator for the Master of Teaching (Primary) program at the University of Melbourne. With a career spanning primary, secondary, and tertiary education, she is a passionate educator and researcher focused on advancing mathematics teaching and learning. Dr Mesiti has served as a research fellow on the ARC funded projects and led The International Classroom Lexicon Project, collaborating with research teams worldwide. Carmel's work explores mathematics teaching through video-based research, pedagogical language, and instructional approaches across cultures. Co-leader of the ICCR and research co-lead of MSTEG, she examines classroom practices and emerging methodologies, including generative AI for education. A former secondary mathematics teacher and head of mathematics, Dr Mesiti conducts professional development workshops, sharing insights from her extensive experience.



DR CHELSEA CUTTING

SPATIALISING THE CURRICULUM: SETTING THE FOUNDATIONS FOR REASONING ABOUT NUMBER IN THE EARLY YEARS AND BEYOND

Chelsea is a Senior Lecturer in Mathematics Education at the University of South Australia. With over a decade of experience, she coordinates early childhood and primary mathematics education programs, focusing on developing innovative, play-based pedagogies. Her research focuses on spatial reasoning and its role in young children's mathematical development, particularly in understanding early fraction concepts. Dr Cutting has contributed to national STEM education initiatives and has been recognized with an Australian Award for University Teaching Citation for Outstanding Contributions to Student Learning. Her work emphasises the importance of intuitive, context-rich learning environments that promote authentic engagement with mathematical ideas. Through her teaching and research, Dr Cutting advocates for educational practices that empower educators to foster deep, meaningful learning experiences in mathematics education.



DR AYLIE DAVIDSON

INFORMED AND IMPACTFUL PLANNING

Aylie is an experienced mathematics educator having worked in teaching and leadership roles, initial teacher education, and project leadership for the Department of Education Victoria. Aylie's research examines ways to help teachers work together to plan mathematics learning sequences and experiences that involve a range of task types and pedagogies. Her other research interests include mathematical reasoning; middle school leadership; supporting diverse learners; and student engagement. Aylie enjoys working with and learning from teachers and school leaders to make learning relevant, practical, and sustainable. Aylie currently works as a lecturer in mathematics education at Deakin University and is the Editor of *Prime Number*.



PROFESSOR JODIE HUNTER

CULTURALLY SUSTAINING MATHEMATICS TEACHING: A STRENGTHS-BASED APPROACH

Jodie is an educator and researcher in mathematics education and Pacific education. Previously, she was a Research Fellow and Lecturer at the University of Plymouth, United Kingdom, and a primary school teacher in New Zealand. Professor Hunter is currently a Rutherford Discovery Fellow and has been a Leverhulme Visiting Professor and a Fulbright Scholar. She has won a number of prestigious research awards including the British Society in Research in Learning Mathematics Janet Duffin award, the New Zealand Association of Research in Education research group award and the Mathematics Education Research Group of Australasia practical implications award. Her research interests and expertise include mathematics education for equity and social justice, early algebra, teacher education, Pacific education, and culturally sustaining pedagogy.

KEYNOTE PANEL: THURSDAY AFTERNOON

PANEL MEMBERS

PANEL DISCUSSION: LEADING CHANGE IN MATHEMATICS: CONTEXTUAL STORIES OF IMPACT, FRAMEWORKS, AND TRANSFORMATION



SARAH ASOME

Sarah Asume is the Principal at Bentleigh West Primary School in Victoria. She has been instrumental in leading the change at BWPS but also supported many colleagues Nationwide and overseas to implement evidence-based literacy and numeracy instruction.

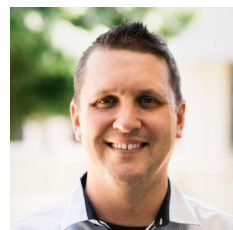
In 2015, Sarah was awarded Outstanding Primary Teacher in the Victorian Education Excellence Awards. In 2023, BWPS won the Victorian Education Excellence Award (VEEA) for Outstanding Inclusive Education. BWPS were a case study school in the recent Grattan Maths Guarantee Report and guide for Principals. The school maintains exceptional maths results through their instructional model of explicit instruction.



KATE COPPING

Kate is a lecturer in mathematics education and clinical practice coordinator in the Master of Teaching (Primary) program at the University of Melbourne. She teaches mathematics education in primary

and early childhood/primary programs, building preservice teachers' pedagogical content knowledge and oversees the professional development of pre-service teachers during placements. Kate has extensive teaching experience in Australia and the US. She has served as vice president of MAV, contributed to NAPLAN development, and was part of the RiMEA11 editorial team, supporting mathematics education research. Kate's PhD explores how primary mathematics leadership is conceptualised, experienced, and enacted in schools, positioning these leaders as key middle leaders. Her work informs school policy and decisionmaking, with a focus on teacher professional learning, assessment, and strategies to enhance student engagement and understanding in mathematics.



EAMON LIGHT

Eamon Light is a dedicated mathematics educator with 19 years of experience across primary schools and universities. He supports both preservice and inservice teachers to build confidence and competence

in teaching mathematics. Eamon believes that critical, creative and independent thinking should be nurtured from an early age. He champions strong classroom culture and the development of positive mathematical dispositions as foundations for meaningful learning, using real-world contexts to make mathematics relevant and accessible.

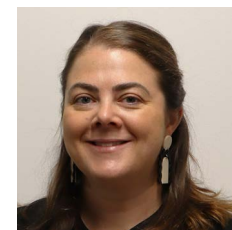
Eamon prioritises thoughtful pedagogy, teacher agency and mathematical reasoning to help students not only understand concepts but also develop curiosity and engagement. Eamon continually explores and refines innovative strategies, equipping educators with practical tools to navigate the evolving landscape of mathematics education.



PATTY METE

Patrick 'Patty' Mete is a mathematics teacher, mathematics curriculum and learning specialist, and mathematician. He taught Year 5 to university mathematics at Haileybury and The Knox School, and as a teaching

associate at Monash University. Patty completed his Honours in Mathematics in probability theory, optimisation and stochastics. Moving into teaching, Patty has developed a love for teaching upper-primary and lower-secondary school mathematics; the ability to catch students earlier in their mathematics learning, build a love of learning mathematics, and support the development of successful mathematics students and teachers at these pivotal year levels has been fulfilling for Patty. Patty's goals in mathematics education are to engage and challenge students through the creative application of mathematics and to develop and lead a culture and curriculum of informed mathematics learning.



TARA RICHARDSON

Tara is the Mathematics Domain Leader at Greater Shepparton Secondary College. She has led her team through extensive professional learning over the past five years to co-design and implement a comprehensive

mathematics curriculum from the ground up. A key feature of this curriculum is the use of the Concrete-Representational-Abstract (CRA) approach, particularly in the teaching of linear algebra. Tara is committed to building teacher expertise and fostering deep mathematical understanding, ensuring all students experience success through consistent, evidence-informed practice.



DR SOPHIE SPECJAL (MODERATOR)

Dr Sophie Specjal has a passion for understanding the most effective ways that communication, language, and learning come together. Sophie has over 20 years of experience as a

teacher, leader, researcher, and global consultant. Sophie is the host of the *Talking Teaching* podcast, for the Faculty of Education at the University of Melbourne, where she shares lively and informative conversations with extraordinary people across the globe on topics such as teaching and learning, educational research, and innovation.

Sophie is a lecturer and coordinator at the University of Melbourne and the founding director of Language of Learning, a consultancy that provides instructional leadership, dialogic teacher and student talk, high impact teaching, student voice, and coaching services to schools, organizations, and individuals. She has strong ongoing collaborations with K-12 schools, Big Ideas Learning and National Geographic Learning in the USA, and the AFL, where she supports coaching staff on effective communication and feedback. Sophie completed her PhD in Education at the University of Melbourne in 2022, under the supervision of Professor John Hattie and Associate Professor. Jon Quach, focusing on the power of communication, language, and learning through teacher and student voice to create deep level understandings.

KEYNOTES: FRIDAY

PRESENTERS



DR BAN HENG CHOY
PROFESSOR

THRIVING IN MATHEMATICS TEACHING: THE ROLE OF PRODUCTIVE TEACHER NOTICING

Ban is an Associate Professor in Mathematics Education and the Assistant Dean for Partnerships (Teacher Education & Undergraduate Programmes) at the National Institute of Education, Nanyang Technological University, Singapore. A recipient of the NIE Overseas Graduate Scholarship, Dr. Choy received his PhD from the University of Auckland, New Zealand, in 2015. His area of research lies in developing and enhancing mathematics teaching expertise by improving teachers' abilities to notice critical mathematical and instructional details during planning, enactment, and review of lessons. He also serves as one of the co-Heads for meriSTEM@NIE, a Multi-centric Education, Research, and Industry STEM centre in NIE.



ASSOCIATE PROFESSOR SARAH HOPKINS

CHILDREN'S USE OF DERIVED-FACT STRATEGIES FOR ADDITION AND SUBTRACTION WITHIN 20

Sarah is an Associate Professor of Mathematics Education at Monash University. Her research is advancing the interdisciplinary field of Mathematical Cognition, a field that combines knowledge and methods from cognitive psychology and mathematics education. Focusing on children's strategy development, she has led six projects to investigate children's persistent use of counting strategies for basic arithmetic. Project findings have resulted in the invention of the Keyboard, a tool that makes use of children's ability to enumerate small quantities using visual-spatial perception rather than counting. She is currently leading an ARC Discovery Project to examine how the Keyboard can be used in classrooms to enhance mathematics learning in lower primary school and alter the long-term achievement trajectories for children who find learning mathematics difficult.



JANE HUBBARD

ORCHESTRATING LEARNING CONDITIONS TO SUPPORT THRIVING PROBLEM-SOLVERS IN MATHEMATICS

Jane is a mathematics educator who has recently commenced a role as a lecturer at Deakin University, following the completion of her PhD in 2024. Her research investigated the experiences of Year 2 students as they engaged in problem-solving approaches to mathematics through sequences of challenging tasks. Her findings revealed that when given the opportunity, students can significantly improve their mathematical competence by learning through problem-solving approaches and enjoy the experience of being challenged. Jane's thesis emphasised the importance of holistically evaluating student progress and incorporating this knowledge into teacher assessment practices. Jane has over 20 years' experience in primary education and 15 years in leading school wide improvement in mathematics. As often as possible, she likes to get into classrooms to work alongside teachers and help them to develop stronger mathematical knowledge for teaching.



DR KRISTEN TRIPET

STUDENTS THRIVING MATHEMATICALLY - WHAT DOES IT LOOK LIKE?

Kristen leads the national mathematics program, reSolve Mathematics, at the Australian Academy of Science. With a background as a mathematics teacher educator, she works with both pre-service and in-service teachers to deepen their understanding of mathematics and enhance their teaching practice. Her particular interests include mathematical thinking and problem-solving, students' conceptual understanding of mathematical ideas, and the design of rich tasks that promote both thinking and understanding.

Kristen's contributions to mathematics education are widely recognised both nationally and internationally. She plays an active role in national and international reference groups and expert advisory panels and is a sought-after speaker in the field. Her work has contributed to improving teaching practice and student learning outcomes across diverse educational contexts.

KEYNOTE PANEL: FRIDAY AFTERNOON

HOW ARE WE THRIVING? UNPACKING DATA, DEBUNKING MYTHS, AND REFRAMING THE NARRATIVE IN MATHEMATICS EDUCATION

Moderator: Dr Sophie Specjal (see biography on page 13.)



LISA DE BORTOLI

Lisa De Bortoli is a senior research fellow in the assessment development, implementation and reporting research division at the Australian Council for Educational Research (ACER), where she has worked since 1995. She has extensive experience in managing and leading international educational assessment projects and is currently the national project manager for the OECD Programme for International Student Assessment (PISA) in Australia.



DR CHRIS MATTHEWS

Professor Chris Matthews is from the Quandamooka people of Minjerribah (Stradbroke Island) in Queensland Australia. Chris received a PhD in applied mathematics from Griffith University and was a Senior Lecturer in applied mathematics at the Griffith School of Environment, Griffith University. Over the last ten years, Chris developed a deeper interest in mathematics education for Aboriginal and Torres Strait Islander learners and exploring the connections between mathematics and Aboriginal and Torres Strait Islander knowledges. Chris is currently the Chair of the Aboriginal and Torres Strait Islander Mathematics Alliance (ATSIMA) that aims to transform mathematics education for Aboriginal and Torres Strait Islander learners. Chris is also the Associate Dean (Indigenous Leadership and Engagement) in the Science Faculty at University Technology of Sydney (UTS). As part of this role, Chris will be leading a team of academics to transform the Science curriculum to meet the Indigenous Graduate Attribute and develop a Community of Indigenous STEM professionals at UTS.



EMERITUS PROFESSOR DIANNE SIEMON

Dianne is an Emeritus Professor at RMIT University. She was involved in pre-service mathematics education for well over 30 years and remains actively involved in the professional development of practicing teachers, particularly in relation to the development of the 'big ideas' in Number and the use of rich assessment tasks to inform teaching. Di has directed a number of large-scale research projects, most recently, the Reframing Mathematical Futures II project that developed validated assessment tools for algebraic, geometrical and statistical reasoning in the middle years and evidenced-based, targeted teaching advice to help identify and scaffold students' learning. Di is a past president and life member of both AAMT and MAV.



EMERITUS PROFESSOR PETER SULLIVAN

Peter Sullivan is an Emeritus Professor of Education at Monash University. He was author of the *Shape of the Australian Mathematics Curriculum*, and the Australian Education Review publication, *Teaching mathematics: Using research-informed strategies*, that has now been downloaded over 260,000 times from the ACER website.

For nearly 30 years Peter has been researching the power of open-ended mathematics tasks, ways of structuring lessons around those tasks, processes for effectively differentiating learning opportunities and the importance of building sequences of learning.



TOM MAHONEY

Tom Mahoney is a numeracy specialist, teacher and educator of secondary mathematics students from Melbourne, currently completing a PhD in educational philosophy part time through Deakin University. His research explores the influence of dominant educational ideologies on teacher subjectivity and agency.

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cambridge.edu.au/diagnostictool

MAV MEMBERSHIP

The Mathematical Association of Victoria (MAV) promotes the importance of mathematics to society. MAV has over 1600 members from all sectors of education including individuals, schools, universities. We provide membership benefits to a growing network of over 16,000 mathematics educators and reach over 60,000 educators, students and parents across metropolitan and regional Victoria via our events each year. MAV is the peak professional body for mathematics educators in Victoria.

MAV works with teachers and school leaders to enhance student outcomes in mathematics and numeracy, better preparing students for their personal, professional and civic lives. Our role is to support educators in developing and delivering curriculum and programs that challenge our students to become the future of mathematical creativity and innovation.

We develop educator skills in implementation of evidence-based and cutting edge teaching and learning approaches. We work directly with students to increase their engagement in mathematics through games days, our Maths Talent Quest, STEM days, mathematics camps, VCE revision support, and other activities.

We are educational experts and leaders, supporting the future of mathematics education from early childhood to Year 12.

To stay up-to-date, subscribe to the **MATRIX** e-newsletter at www.mav.vic.edu.au.



There is a member category for you:

- Individual member (teachers, academics, student teachers and those with an interest mathematics education)
- Institutional member (primary and secondary schools and early childhood centres)
- Associate member (industry partners or resource providers)

Visit the MAV website for more information, including member benefits, www.mav.vic.edu.au.

HOW I CAN I GET INVOLVED WITH MAV?

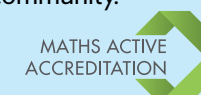
MAV depends on its members for success. Extend your professional learning and get involved in MAV's activities:

- present at MAV's annual conference
- join our online community
- write for MAV's journals
- join committees
- develop resources
- pilot mathematics initiatives
- develop a PD event at your school or venue
- judge the MTQ awards, or
- organise a Maths Games Day for your region.

MATHS ACTIVE ACCREDITATION FOR YOUR SCHOOL

MAV's Mathematics Active Schools initiative is a way to recognise and support schools who demonstrate excellence in learning and teaching practices in mathematics.

- Publicise your schools Maths Active Schools certification and demonstrate to your school community that mathematics is enjoyable and highly valued.
- Receive regular activities and information from MAV to promote maths to your school community.
- Be invited to participate in special Maths Active School events.



SESSION SUMMARY: THURSDAY

THURSDAY 4 DECEMBER 2025

SUB-THEMES

CONTEMPORARY CHALLENGES AND SUCCESSES	PEDAGOGY AND CURRICULUM	INNOVATION AND INSPIRATION	LEADERSHIP AND AGENCY	MULTIPLE SUB-THEMES
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Code	Keynote 9.15am - 10.15am		Session A 11am - 12pm	Session B 12.10pm-1.10pm		Keynote and Session C 2pm-3pm	Topic discussions 3.10pm-4.10pm	
1	Spatialising the curriculum: setting the foundations for reasoning about number in the early years and beyond (F-Y6) <i>Chelsea Cutting</i>	MORNING TEA 10.15am-10.50am	Exploring multimodal mathematical thinking: one spiral at a time (F-Y2) <i>Laurinda Lomas, Chelsea Cutting</i>	CANCELLED Designing and experiencing maths in action: from planning to play (Early childhood) <i>Montana Slavik</i>	LUNCH 1.10pm - 2pm	Leading change in mathematics: contextual stories of impact, frameworks, and transformation (F-Y12) <i>Various panellists</i>	Curriculum: Implementation of VC 2.0 (F – 6)	DRINKS 4.10pm - 5pm
2	FULL Informed and impactful planning (F-Y12) <i>Aylie Davidson</i>		Creating inclusive maths classrooms for students with special needs. (F-Y2) <i>Sumati Randhawa and Min Magee</i>	Maths investigations in the age of explicit teaching (F-Y2) <i>Abigail Henderson</i>		Checking for understanding: making thinking visible (F-Y6) <i>Anita Green</i>	Curriculum: Implementation of VC 2.0 (7 – 10)	
3	Culturally sustaining mathematics teaching: A strengths based approach (F-Y12) <i>Jodie Hunter</i>		Identifying mathematical funds of knowledge and developing culturally responsive tasks (F-Y6) <i>Jodie Hunter</i>	Successes, challenges and learnings: developing a junior school's mathematics practice. (Early childhood to Y6) <i>Brent Brickhill, Michael Stephens</i>		From telling to teaching: rethinking questioning in mathematics classrooms (F-Y6) <i>Alana Bandholz, Carly Millichap</i>	FULL Mathematical modelling (Primary)	
4	Guide on the side or sage on the screen? navigating the critical and effective use of generative AI in mathematics education (F-Y12) <i>Scott Cameron, Carmel Mesiti</i>		Explicit improvement agendas in mathematics: actionable, measurable, and impactful strategies (F-Y6) <i>Carly Millichap, Alana Bandholz</i>	When, where and why is fluency critical: The instructional hierarchy (F-Y6) <i>Ange Rogers</i>		FULL Engage every learner: making mathematics visual, visible and explicit (F-Y6) <i>Catherine Epstein-Rodgers</i>	FULL Mathematical modelling (Secondary)	

JOIN US FOR NETWORKING DRINKS:
4.10PM-5PM

SESSION SUMMARY: THURSDAY (cont.)

THURSDAY 4 DECEMBER 2025

SUB-THEMES

CONTEMPORARY CHALLENGES AND SUCCESSES	PEDAGOGY AND CURRICULUM	INNOVATION AND INSPIRATION	LEADERSHIP AND AGENCY	MULTIPLE SUB-THEMES
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Code	Session A 11am - 12pm	Session B 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Keynote and Session C 2pm-3pm	Topic discussions 3.10pm-4.10pm
5	FULL From passive to powerful: interactive explicit teaching in practice (F-Y6) <i>Stephanie Nitschke</i> Supported by The Victorian Department of Education	FULL Finding the balance: rich problem solving and explicit instruction (F-Y6) <i>Elizabeth Dewar, Maree Croft</i>		Anticipating learning: planning for student success (F-Y6) <i>Brendan Hodge, Chris Terlich</i>	Building teaching networks between primary and secondary schools
6	Making learning stick: practical strategies for retention (Primary) (F-Y6) <i>Patrick Kennedy</i> Supported by The Victorian Department of Education	Strategies to enable and extend all mathematics learners (F-Y6) <i>Ellen Corovic, Di Liddell</i>		Explore, discover, understand: Cuisenaire rods in the primary classroom (F-Y6) <i>Antonio Sterich</i>	Evidence-informed pedagogical practices (Primary)
7	FULL Counters: you can count on them and much more! (Y3-Y6) <i>Paul Swan, John West</i>	Transforming mathematical games: I want to be a real game! (F-Y6) <i>Toby Russo, James Russo</i>		Thriving through inquiry: project-based and integrated primary mathematics experiences (Y3-Y6) <i>Kate Eastcott, Nick Kirby</i>	FULL Evidence-informed pedagogical practices (Secondary)
8	Myths, metaphors and legends concerning mathematics teaching and learning (F-Y10) <i>Dianne Siemon</i>	Little moments, big insights: collecting data that matters (F-Y6) <i>Jen Perrett</i>		FULL Teaching decimal fractions through a systematic understanding place value. (Y5-Y8) <i>Heather McMaster</i>	VCE teaching, learning and assessment (Foundation)
9	Mastering checks for understanding: tools to boost student learning (F-Y8) <i>Jessica Kurzman</i>	CANCELLED Making data visible: supporting student thriving in mathematics (F-Y6) <i>Jacinta Browning</i>		Unmasking the maths: Exploring mathematical modelling resources for Years 3-10 (Y3-Y10) <i>John West, Celia Coffa</i>	VCE teaching, learning and assessment (General)

JOIN US FOR NETWORKING DRINKS:
4.10PM-5PM

SESSION SUMMARY: THURSDAY (cont.)

THURSDAY 4 DECEMBER 2025

SUB-THEMES

CONTEMPORARY CHALLENGES AND SUCCESSES	PEDAGOGY AND CURRICULUM	INNOVATION AND INSPIRATION	LEADERSHIP AND AGENCY	MULTIPLE SUB-THEMES
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Code	Session A 11am - 12pm	Session B 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session C 2pm-3pm	Session D 3.10pm-4.10pm
10	Mental maths engagement, hands-on card activity or online app - <i>Número!</i> (F-Y10) <i>Julie Richards</i>	Sharing outside the box: creative maths summaries that engage (Y3-Y6) <i>Elizabeth Irwin, Emma Bird</i>		Non-binary pedagogy: beyond explicit vs. inquiry (Y5-Y12) <i>Em Thompson</i>	VCE teaching, learning and assessment (Methods)
11	FULL Making GenAI work for you: crafting effective prompts (F-Y12) <i>Scott Cameron, Carmel Mesiti</i>	Connect before content (F-Y10) <i>Narelle Anne Morris</i>		Exploring the practical implementation of explicit-teaching strategies in maths classrooms (Y7-Y10) <i>Lindy Sharkey, Julian Lumb</i>	VCE teaching, learning and assessment (Specialist)
12	Planning considerations when selecting mathematics tasks to optimise student learning in mathematics (Y3-Y8) <i>Aylie Davidson</i>	Harnessing the power of AI in the maths classroom (F-Y10) <i>Sonny Moshinsky</i>		Toolkit for teachers new to mathematics (Y7-Y10) <i>Vincent Lam</i>	VM teaching, learning and assessment
13	Confidence, curiosity and creativity in the mathematics classroom with Maths Mate! (Y7-Y8) <i>Joanna Tutos</i>	Leading mathematics (F-Y10) <i>Leonie Anstey, David Leigh-Lancaster</i>		FULL Differentiating with impact: open-ended tasks for Years 7 - 10 (Y7-Y10) <i>Shiny Sood</i>	Effective assessment practices (F-6)
14	CANCELLED News flash....maths teaching holy grail discovered in a Tupperware box (Y3-Y10) <i>Paul Howard</i>	FULL Same task, different paths: multi-tiered maths task for inclusive classrooms (Y7-Y10) <i>Milton Bai, Gloria Yi</i>		On your L-plates - using the TI-Nspire graphing calculator (Y7-Y10) <i>Mark Ljubic, Daniel Gralow</i>	Effective assessment practices (7-10)
15	CANCELLED Teaching probability to Year 7 and 8 students (Y7-Y8) <i>Malamati Papasimeon</i>	Confident classrooms - empowering teachers in mathematics (F-Y6) <i>Nicole Boyd, Anita Green</i>		Numeracy across the curriculum - supporting graphing in secondary schools (Y7-Y12) <i>Lauren Jackson, Tyler Locker</i>	Leadership – mathematics and numeracy (Primary)

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SESSION SUMMARY: THURSDAY (cont.)

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SUB-THEMES

CONTEMPORARY CHALLENGES AND SUCCESSES	PEDAGOGY AND CURRICULUM	INNOVATION AND INSPIRATION	LEADERSHIP AND AGENCY	MULTIPLE SUB-THEMES
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Code	Session A 11am - 12pm	Session B 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session C 2pm-3pm	Session D 3.10pm-4.10pm
16	Implementing the VTLM 2.0 and Victorian Lesson Plans (F-Y10) <i>Michelle Winch, Steph Murphy, Lucinda Edselius</i> Supported by The Victorian Department of Education	Using evidence informed leadership in mathematics (Y3-Y12) <i>Michael Rosenbrock</i>		FULL New TI - CAS tools for networks in VCE General Maths (Y9-Y12) <i>Michael Llewellyn, Ben Chenoweth</i>	Leadership – mathematics and numeracy (Secondary)
17	CANCELLED Would the real Pythagoras please stand up? (Y7-Y8) <i>Jo Clyne, Bridget Headlam</i>	FULL Why don't they remember it?! (Y3-Y12) <i>Antje Leigh-Lancaster</i>		Unlocking mathematical thinking: building methods readiness using CAS Technology (Y9-Y12) <i>Jotishma Singh, Shelley Pendlebury</i>	Mathematical wellbeing – supporting students and teachers (Primary)
18	A classroom approach for higher achieving students Years 7 and 8 (Y7-Y8) <i>Ian Bull</i>	CANCELLED Creative geometric explorations with Mathomat (Y5-Y10) <i>John Lawton, Chris Tisdell</i>		Implementing pseudocode and algorithms in Python on computer and CAS (Y9-Y12) <i>Enzo Vozzo</i>	FULL Mathematical wellbeing – supporting students and teachers (Secondary)
19	Three of my favourite mathematical modelling tasks for Years 5-8 (Y5-Y8) <i>Jill Brown</i>	Knowing your students through developmental rubrics (Y5-Y10) <i>Lianna Beeching, Amanda Fan</i>		Activities to understand the mathematics behind the algorithms of AI (Y9-Y12) <i>Georgia Gouros</i>	Culturally responsive mathematics teaching
20	FULL Bringing joy to the mathematics classroom: Puzzles, problems and tricks of the trade (Y7-Y10) <i>Mike Ristovsky, Taylor Pervan</i>	Thriving through visual reasoning: using number lines in linear algebra (Y5-Y10) <i>Lorna McClory, Kyle Hayes</i>		Bringing VCE maths to life: hands-on, cross-curricular learning in action (Y9-Y12) <i>Jiahong Gong</i>	

SESSION SUMMARY: THURSDAY (cont.)

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Code	Session A 11am - 12pm	Session B 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session C 2pm-3pm
21	Our journey back into explicit instruction and application (Y7-Y10) <i>Jennifer Wagner, Sudha Rao, Daniel O'Kane</i>	Empowering mathematics classrooms through AI-enhanced hybrid learning (Y5-Y10) <i>Laila Sarraf</i>		Leveraging AI to generate contextual data for General Maths (Y10-Y12) <i>Fatima Farooqui</i>
22	Mathematical modelling using images and technology (Y7-Y10) <i>Kevin McMenamin</i>	Tasks designed to bridge Year 9 extension students to VCE (Y7-Y10) <i>Jiqing Sun, Sanjeev Meston</i>		FULL Designing investigations for VCE Methods and Specialist (Y11-Y12) <i>James Mott, Greta Gomes</i>
23	Monte Carlo in classrooms: engaging probability lessons with Python Simulations (Y7-Y12) <i>Robin Wang</i>	FULL Retrieval practice and its role in an explicit instruction classroom (Y5-Y12) <i>Zoe Tamplin, James Dann</i>		FULL Connecting and consolidating learning so students don't quickly forget (Y7-Y12) <i>Ellie Drayton</i> Supported by The Victorian Department of Education
24	Mission impossible: creating mathematical escape rooms (Y7-Y12) <i>Peter Fox</i>	Learn the spark method: assessment that drives learning (Y7-Y12) <i>Muhammed Omer</i>		Explicit teaching using the Victorian Lesson Plans (F-Y6) <i>Emily Glen</i> Supported by The Victorian Department of Education

SESSION SUMMARY: THURSDAY (cont.)

THURSDAY 4 DECEMBER 2025

SUB-THEMES

CONTEMPORARY CHALLENGES AND SUCCESSES	PEDAGOGY AND CURRICULUM	INNOVATION AND INSPIRATION	LEADERSHIP AND AGENCY	MULTIPLE SUB-THEMES
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Code	Session A 11am - 12pm	Session B 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session C 2pm-3pm
25	Using modelling and big ideas for teaching linear relationships. (Y7-Y12) <i>Shaska Martin, Mark Stacey</i>	Open ended assessment in mathematics (Y9-Y12) <i>Geoffrey Menon</i>		
26	Wowee! AI tools for modern maths teachers (Y9-Y12) <i>Lee McCullagh</i>	Sequences and even more sequences (Y9-Y12) <i>Brett Stephenson, Leilani Stephenson</i>		
27	Unlock VCE Mathematical Methods exam 2 (2025) success with CAS (Y9-Y12) <i>Sanjeev Meston</i>	Finance in focus: visualising concepts with CAS calculators (Y9-Y12) <i>Shelley Pendlebury, Thomas Laverack</i>		
28	CANCELLED Using exponential modelling investigation through diverse worldviews (Y9-Y12) <i>Peter Beissmann, Angel Wong</i>	One schools approach to teaching unit 3/4 Foundation Maths (Y11-Y12) <i>Tom Robinson</i>		
29	Supporting students in Mathematical Methods: learning from past examinations (Y11-Y12) <i>Allason McNamara, Cathy Devlyn</i>	Matrices by Maffsguru and Nelson VicMaths (Y11-Y12) <i>Robert Yen, Darren Smyth</i>		
30	2025 Specialist Mathematics: pen and paper versus CAS? (Y11-Y12) <i>Peideng Nie</i>	Thriving in a CAS exam (Methods and Specialist) with a Casio Classpad (Y11-Y12) <i>Alastair Lupton</i>		

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SESSION SUMMARY: THURSDAY (cont.)

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CONTEMPORARY CHALLENGES AND SUCCESSES	PEDAGOGY AND CURRICULUM	INNOVATION AND INSPIRATION	LEADERSHIP AND AGENCY	MULTIPLE SUB-THEMES
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Code	Session A 11am - 12pm	Session B 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session C 2pm-3pm
31	CANCELLED Supporting students to make the transition from senior secondary to undergraduate study (Y11-Y12) <i>Rosie Mackay, Liz Cahir, David Leigh-Lancaster</i>	VCE VM: Numeracy that matters: making sense of the real-world (Y11-Y12) <i>Dilan Abeyaratne</i>		
32	Innovative approaches to mathematical induction in Specialist Mathematics (Y11-Y12) <i>Narcisa Corcaci, Tran Trinh</i>	Surprising occurrences of e and programming using TI-Nspire (Y11-Y12) <i>Raymond Rozen, Shane Dempsey</i>		

SESSION SUMMARY: FRIDAY

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CONTEMPORARY CHALLENGES AND SUCCESSES	PEDAGOGY AND CURRICULUM	INNOVATION AND INSPIRATION	LEADERSHIP AND AGENCY	MULTIPLE SUB-THEMES
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Code	Keynote 9.15am - 10.15am		Session E 11am - 12pm	Session F 12.10pm-1.10pm		Session G 2pm-3pm	Keynote panel 3.10pm-4.10pm
1	Orchestrating learning conditions to support thriving problem-solvers in mathematics (F-Y6) <i>Jane Hubbard</i>	MORNING TEA 10.15am- 10.50am	Beyond differentiation: targeted scaffolding and extension in primary mathematics (F-Y6) <i>Stephanie Nitschke</i> Supported by The Victorian Department of Education	Building conceptual understanding in EDI using hands-on mathematics teaching strategies (F-Y2) <i>Silvin Brown</i>	LUNCH 1.10pm - 2pm	Words count: elevating understanding through vocabulary mastery (F-Y6) <i>Renee Ladner</i>	FULL How are we thriving? unpacking data, debunking myths, and reframing the narrative in mathematics education (F to Year 12) <i>Various panellists</i>
2	Children's use of derived-fact strategies for addition and subtraction within 20 (F-Y6) <i>Sarah Hopkins</i>		The power of number lines (F-Y4) <i>Sheila Griffin</i>	Number fact fluency: building confident flexible thinkers. (F-Y6) <i>Tina Richardson</i>		Supported application using the Victorian Lesson Plans (F-Y6) <i>Emily Glen</i> Supported by The Victorian Department of Education	
3	Students thriving mathematically – what does it look like? (F-Y12) <i>Kristen Tripet</i>		Sorting it out: maximising mathematical connections through card sorting tasks (F-Y6) <i>Jane Hubbard</i>	Bringing proficiencies to life (F-Y6) <i>Chris Short, Daphne Parker</i>		Igniting growth in mathematics: a practical pathway with thinking classrooms (F-Y6) <i>Sylvia Holroyd</i>	
4	Thriving in mathematics teaching: the role of productive teacher noticing (F-Y12) <i>Ban Heng Choy</i>		CANCELLED Thriving in mathematics: fading lesson techniques (F-Y6) <i>Lidia Cummins</i>	CANCELLED Activating prior knowledge: a launchpad for deeper mathematical thinking (F-Y6) <i>Elise Copsey</i>		SmartLab: an Australian diagnostic and learning platform for mathematics (F-Y10) <i>David Lewis</i>	

SESSION SUMMARY: FRIDAY (cont.)

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SUB-THEMES

CONTEMPORARY CHALLENGES AND SUCCESSES	PEDAGOGY AND CURRICULUM	INNOVATION AND INSPIRATION	LEADERSHIP AND AGENCY	MULTIPLE SUB-THEMES
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Code	Session E 11am - 12pm	Session F 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session G 2pm-3pm
5	Developing conceptual understanding and procedural fluency through engaging warm-up activities (F-Y6) <i>Jodie Hunter</i>	Reframing practice: building number sense through a number lens (F-Y6) <i>Ben Dixon, Peta Overbury</i>		CANCELLED Personal maths - that you never knew you had! (Y5-Y10) <i>Paul Bowyer</i>
6	Strengthening primary mathematics through agency, goal setting, and proficiencies (F-Y6) <i>Jessica Morgan, Georgia Schumann, Michelle Freeman</i>	Writing CAS instructions (Y9-Y12) <i>Neale Woods</i>		CANCELLED Empowering mathematics through teacher inquiry: insights from ISV (F-Y12) <i>David Burton</i>
7	Explicitly connecting known strategies to flexible mental strategies (Y3-Y6) <i>Katherin Cartwright</i>	CANCELLED Bringing data to life (Y3-Y4) <i>Naomi Fitzgerald</i>		Supporting diverse learners to thrive in mathematics. (F-Y12) <i>Julie Andrews</i>
8	Building a cohort of collaborative learners. (Y3-Y6) <i>Nerida McCredie</i>	Level up: explicitly teaching mathematics through games (F-Y8) <i>Jessica Kurzman, Renee Ladner</i>		Explicit teaching and problem solving, using the instructional hierarchy (F-Y8) <i>Sean Alston, Zahra Harvey</i>
9	Productive or destructive struggle? Facilitating challenge with purpose (Y3-Y8) <i>Eamon Light</i>	10 Minutes that matter - refining the art of daily review (F-Y8) <i>Brooke Brennan</i>		How to achieve evidence-based mathematical success for students with disabilities. (F-Y8) <i>Cameron Peverett, Kerry Marriner</i>
10	Ensuring your explicit teaching is effective and engaging (F-Y8) <i>Michael Minas</i>	Embedding Aboriginal perspectives meaningfully in teaching. (F-Y8) <i>Kris Westcott</i>		Guided practice - using worked examples from novice to expert (F-Y8) <i>Sacha Giurietto</i>

SESSION SUMMARY: FRIDAY (cont.)

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SUB-THEMES

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Code	Session E 11am - 12pm	Session F 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session G 2pm-3pm
11	Daily review in action: practical strategies from the classroom (F-Y8) <i>Emily Keeling, Sharyn Livy, Theresa Martin</i>	Managing cognitive load while teaching the richness of mathematical thinking (F-Y10) <i>Peter Sullivan</i>		CANCELLED Thriving mathematically: Using TPACK, fluency, identity with teachers and students (Y3-Y8) <i>Jacqueline Benson</i>
12	Using AI critically to improve the quality of mathematics teaching (Y5-Y8) <i>Max Stephens, Sebastian Sardina</i>	Working together: using GenAI as a critical friend (F-Y12) <i>Carmel Mesiti, Scott Cameron</i>		Preparing future teachers to teach for numeracy across the curriculum (Y3-Y8) <i>Kathy O'Sullivan</i>
13	Think, code, move: exploring mathematics through robotics (Y5-Y8) <i>Alex Lim Tze Ming</i>	Numeracy vs mathematics: why does it matter? (F-Y12) <i>Justine Sakurai</i>		Students need personalised-competency based learning (PCBL) to thrive in maths (Y3-Y10) <i>Janine Mowat, Liam Jones</i>
14	CANCELLED Maths Hub: advancing numeracy through family and community engagement (F-Y10) <i>Joshua Salter</i>	CANCELLED Our language, our strength: reflections from the biannual ATSIMA conference (F-Y12) <i>Kerryn Sandford, Jennifer Bowden</i>		The learning science of AERO: some associations with STEM teaching (Y3-Y10) <i>Fabio D'Agostin, Michael Lawrence</i>
15	Visual instructional plans: a technique for breaking down complex procedures (F-Y12) <i>Brad Nguyen</i>	Navigating the ideological in contemporary mathematics education. (F-Y12) <i>Tom Mahoney</i>		Relationships, relevance, and rigour: designing for depth in maths (Y5-Y10) <i>Dominika Kapustka</i>
16	CANCELLED Retrieval practice implementation (F-Y12) <i>Emma Moore</i>	Thriving through meaningful assessment: making every question count (F-Y10) <i>Crystal Afitu, Lee Gianfriddo</i>		Maths300 Beyond Year 10 (Y9-Y12) <i>Damian Howison</i>

SESSION SUMMARY: FRIDAY (cont.)

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SUB-THEMES

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Code	Session E 11am - 12pm	Session F 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session G 2pm-3pm
17	What exactly is the evidence for explicit teaching? (F-Y12) <i>Liam McMahon</i>	Weapons of maths instruction: using a deck of cards (Y3-Y10) <i>Andrew Lorimer-Derham</i>		Embedding computational thinking: differentiation dimensions for low-floor, high-ceiling mathematical tasks (Y5-Y10) <i>Danijela Draskovic, Max Stephens</i>
18	Developing 21st-century skills through everyday mathematics lessons (Y3-Y10) <i>Ban Heng Choy</i>	Making secondary maths accessible to all using the CRA approach (Y5-Y10) <i>Tara Richardson, Jiahong Gong</i>		Rethinking problem solving: empowering mathematical reasoning through thinking routines (Y5-Y10) <i>Mark Grasso</i>
19	Practical AI applications - teach more, stress less (Y3-Y12) <i>Adrian Lam</i>	Striving, thriving, and parallel-lining: geometry without circles (Y5-Y12) <i>Chris Tisdell</i>		How to create animations for mathematics classrooms using GeoGebra (Y5-Y12) <i>Tran Trinh, Narcisa Corcaci</i>
20	Modelling and problem solving to deepen and extend student's knowledge (Y5-Y10) <i>Ben Dennis</i>	CANCELLED Maths - more than a textbook (Y5-Y8) <i>Jacinta Blencowe</i>		Explicit teaching strategies for the development of number facts (F-Y4) <i>Leonie Anstey</i>
21	Spaced practice: boosting retention through strategic questioning (Y5-Y10) <i>Craig Blake, Alex Bunt</i>	Ways of working mathematically for middle years students. (Y5-Y8) <i>Bernadette Mercieca</i>		Leading evidence-based teaching through numeracy meetings (F-Y10) <i>Gloria Yi, Milton Bai</i>
22	The mathematics of infinity (Y7-Y12) <i>Kaye Stacey</i>	Thriving with AI: supporting mathematical thinking (Y7-Y10) <i>Shirly Griffith</i>		Engaged or just compliant? Rethinking student participation in maths (Y7-Y10) <i>Penne Grant</i>

SESSION SUMMARY: FRIDAY (cont.)

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Code	Session E 11am - 12pm	Session F 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session G 2pm-3pm
23	Creating thinking classrooms with middle school investigations (Y7-Y10) <i>Angel Wong, Peter Beissmann</i>	10 problems your textbook forgot (Y7-Y10) <i>David Treeby, Gareth Ainsworth</i>		BODMAS and the transition from primary school numeracy to VCE (Y7-Y10) <i>Stephen Paatsch</i>
24	Beyond the maths classroom: building a numeracy-rich school culture (Y7-Y10) <i>Samantha Hellessey</i>	Thriving is a special thing: stories of special numbers (Y7-Y10) <i>Brian Lannen</i>		Maximising explicit teaching in diverse classrooms (Y7-Y10) <i>Yvonne Reilly, Emmie Keung</i>
25	The importance of teaching from first principles for struggling students (Y7-Y12) <i>Olis Kinnear</i>	Victoria and the new maths curriculum: lessons from across Australia (Y7-Y10) <i>Alex de Lacy</i>		Helping students thrive in mathematics through interleaving and retrieval practice (Y7-Y10) <i>Suzanne Ditchfield</i>
26	Game, set, maths! (Y7-Y12) <i>Peter Fox</i>	Unpacking the maths in superannuation using a spreadsheet (Y7-Y12) <i>Tracey West</i>		Teaching for mathematical wellbeing in secondary maths classrooms.(Y7-Y12) <i>Colin Shnier</i>
27	CANCELLED Three ways with exponentials (Y7-Y12) <i>David Leigh-Lancaster</i>	Leaving, learning, loving again: confessions of a washed-up maths teacher (Y7-Y12) <i>David Innes</i>		Programming the Rover using Python via the TI-Nspire CAS calculator (Y9-Y10) <i>Steve De Domenico</i>
28	Teaching computational thinking in mathematics (Y9-Y10) <i>Catherine Newington</i>	Differentiate or scaffold and extend? (Y7-Y12) <i>Ellie Drayton</i> Supported by The Victorian Department of Education		Get in shape: the transformation workout! (Y9-Y12) <i>Christopher Ireson, Leonard Bedier</i>

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Code	Session E 11am - 12pm	Session F 12.10pm-1.10pm	LUNCH 1.10pm - 2pm	Session G 2pm-3pm
29	VCE VM: developing assessments from the numeracy around us (Y9-Y12) <i>Tamara Zerafa, Amy Casati</i>	Financial literacy: free courses and games to develop students financial life skills (Y7-Y12) <i>Damian Nicholson</i>		Preparing for the Foundation Mathematics investigation SAC: our journey and resources (Y9-Y12) <i>Lizzy Barker, Troy Boote</i>
30	Thriving in a CAS exam (General) with a Casio Classpad (Y11-Y12) <i>Alastair Lupton</i>	10 ways to make textbook style questions funner (Y7-Y12) <i>Troy Boote, Lizzy Barker</i>		CANCELLED An introduction to Pseudo coding in VCE (Y9-Y12) <i>Toan Huynh</i>
31	VCAA insights: VCE Mathematics school-based assessment (Y11-Y12) <i>Michael MacNeill</i>	Networks by Maffs Guru and Nelson VicMaths (Y11-Y12) <i>Darren Smyth, Robert Yen</i>		Applications of trigonometric functions in astronomy (Y11-Y12) <i>Stephen Broderick</i>
32	CANCELLED Inspiring ethical thinking: TI-Nspire, PageRank, and mathematical modelling (Y11-Y12) <i>J Kishore</i>			Fluency with meaning: embedding mathematical fluency into daily instruction (F-Y6) <i>Patrick Kennedy</i> Supported by The Victorian Department of Education



SESSION DETAILS THURSDAY 4 DECEMBER 2025

KEYNOTES: Thursday, 9.15am-10.15am

KT01 SPATIALISING THE CURRICULUM: SETTING THE FOUNDATIONS FOR REASONING ABOUT NUMBER IN THE EARLY YEARS AND BEYOND

Subthemes: Pedagogy and curriculum; Innovation and inspiration

**Chelsea Cutting, University of South Australia
(F to Year 6)**

Children across the primary years are introduced to a broad range of rational number concepts, including whole numbers, fractions, place value, and operations. While these ideas are explored in concrete and symbolic contexts, a deep understanding of number and quantity is supported by spatial reasoning. Spatial reasoning refers to our ability to visualise objects or environments, navigate space, and predict how objects or spaces might look when moved, rotated or transformed.

These skills are often associated with measurement and geometry; however, they are not separate from reasoning about number and quantity – rather, they are embedded in many of the concrete experiences through which children experience. When children build, compare, partition, or move objects, they use spatial reasoning to make sense of quantity and number relationships. This presentation highlights how a spatial reasoning lens in teaching mathematics can offer a powerful foundation for developing rational number knowledge. By ‘spatialising the mathematics curriculum’, we can support children in the early and middle primary years to reason with complex numerical concepts in meaningful, connected ways.

Key takeaways:

1. An understanding of spatial reasoning and its importance in developing rational number knowledge.
2. An understanding of the interconnectedness between rational number concepts in the early years of primary schooling.
3. Clear examples and ideas for developing a spatialised approach to teaching number.

FULL KT02 INFORMED AND IMPACTFUL PLANNING

Subthemes: Pedagogy and curriculum; Leadership and agency

**Aylie Davidson, Deakin University
(F to Year 12)**

Mathematics planning is messy business and can be overwhelming, especially when designing learning sequences. However, the decisions teachers make when planning have the power to directly impact student engagement and learning in mathematics. So, the question arises, ‘What should teachers focus on when planning mathematics that will make a difference to student learning?’

In this keynote, Aylie will share insights from her research and work with in-service teachers about effective planning in mathematics. In particular, Aylie will offer a set of guiding principles intended to be used alongside a Mathematics Planning Model (MPM) to support teachers to stay maths-focused while navigating the complexities of planning. The guiding principles and MPM can be adapted and applied to various school contexts to enhance teachers’ regular planning routines.

Key takeaways:

1. The MPM and 6 guiding principles work together to navigate the complexities of mathematics planning.
2. Learning sequences that are developed collaboratively, where teachers share their knowledge and ideas, has been shown to positively impact student learning and build teacher capacity.
3. Coherent and connected learning sequences help students to develop relational understanding, see the bigger picture, and remember!

KEYNOTES: Thursday, 9.15am-10.15am (cont.)

KT03 CULTURALLY SUSTAINING MATHEMATICS TEACHING: A STRENGTHS BASED APPROACH

Subthemes: Contemporary challenges and successes; Pedagogy and curriculum; Innovation and inspiration

**Jodie Hunter, Massey University
(F to Year 12)**

Internationally and within Australia, diverse groups of people including indigenous, migrant, and other minority communities are under-represented in mathematics with an accompanying 'gap story' in relation to achievement within school systems. A subsequent outcome is a lack of awareness of the rich mathematics and strengths that students from these communities bring to mathematics classrooms.

In this presentation, I draw on data collected as part of a larger professional learning and development project *Developing Mathematical Inquiry Communities* which focuses on culturally sustaining pedagogy and ambitious mathematics teaching to develop equity for diverse students in mathematics classrooms. The findings highlight how teachers can develop equitable outcomes by drawing on strength-based approaches. I argue that a shift to understanding and honouring different knowledge systems and ways of being provides opportunities for students to learn mathematics in ways that support mathematical achievement as well as the development of strong mathematical dispositions and identities.

Key takeaways:

1. Teachers can develop equitable outcomes by drawing on strength-based approaches.
2. Honouring and understanding different knowledge systems provides opportunities to support mathematical achievement as well as the development of strong mathematical dispositions and identities.

KT04 GUIDE ON THE SIDE OR SAGE ON THE SCREEN? NAVIGATING THE CRITICAL AND EFFECTIVE USE OF GENERATIVE AI IN MATHEMATICS EDUCATION

Subthemes: Innovation and inspiration; Pedagogy and curriculum; Contemporary challenges and successes;

**Scott Cameron and Carmel Mesiti, University of Melbourne
(F to Year 12)**

As GenAI tools become increasingly accessible, mathematics educators are faced with critical questions: What role should GenAI play in teaching and learning? How knowledgeable and pedagogically reliable is GenAI? And most importantly, how can teachers critically and effectively use GenAI without compromising their personal expertise and desire to support the deep mathematical reasoning and conceptual development of their students?

This keynote positions GenAI as a 'guide on the side' - a tool that supports, rather than replaces, teachers. From lesson planning to differentiation and resource creation, GenAI can be a powerful ally when used with intention and discernment. Teachers will be invited to reflect on their pedagogical values, critically evaluate AI-generated content, and consider when, how, and why to use these tools. Participants will leave equipped to use GenAI and empowered to shape it into a tool that amplifies their judgment, deepens student learning, and aligns with their educational purpose.

Key takeaways:

1. Teachers remain the experts.
2. Critical evaluation is essential.
3. Effective use is intentional use.

SESSION A: Thursday, 11am-12pm

A01 EXPLORING MULTIMODAL MATHEMATICAL THINKING: ONE SPIRAL AT A TIME

Subtheme: Innovation and inspiration

**Laurinda Lomas, Macquarie University, Chelsea Cutting, University of South Australia
(F to Year 2)**

This practical workshop offers an inspiring opportunity to explore how young children naturally represent, communicate, and explore mathematical concepts. Through the playful lens of a spiral, participants will investigate innovative ways to intentionally foster mathematical multimodal learning opportunities. Together we will examine connections between the spiral and the big ideas of geometry, spatial reasoning, and measurement, and how these ideas can be expressed through gesture, sensory play, and picture books. The discussion and workshoping of the big ideas are informed by current research on typical ways children engage with, theorise about and communicate these underpinning mathematical concepts and processes. The hands-on activities are grounded in current research on children's mathematical engagement, aligning with the Reggio Emilia approach and intentions of the Australian Curriculum: Mathematics.

Key takeaways:

1. Inspirational and innovative approaches to exploring geometric concepts with young children.
2. Awareness of how 'bundles' of representations like gesture, drawings, manipulation of materials, as well as spoken and written utterances provide insight into children's mathematical development.
3. Deeper understanding of how to embed mathematical proficiencies.

A02 CREATING INCLUSIVE MATHS CLASSROOMS FOR STUDENTS WITH SPECIAL NEEDS.

Subtheme: Contemporary challenges and successes

**Sumati Randhawa, Min Magee, Bulleen Heights School
(F to Year 2)**

In this session, educators will learn practical, evidence-based strategies to create inclusive mathematics classrooms that support the diverse needs of all students, particularly those with Autism Spectrum Disorder (ASD).

Participants will explore how to use tools such as video modelling to reinforce routines and make abstract mathematical concepts more concrete through visual and auditory support.

A key focus will be on the use of clear mathematical language, supported by the Maths Core Board a visual communication tool that enables students to access and express mathematical thinking more independently and confidently. Educators will learn how to integrate this tool into daily routines to enhance student engagement and participation.

Additionally, participants will develop skills in differentiating instruction, setting up structured learning environments, and establishing predictable routines that promote confidence and success. Educators will leave the session with practical, ready-to-use strategies and resources to foster inclusive, supportive, and strengths-based maths classrooms for learners.

Key takeaways:

1. Learn to use tools like video modelling and the Maths Core Board to support students with Autism Spectrum Disorder (ASD) in understanding and expressing mathematical concepts.
2. Develop strategies to build structured, predictable, and engaging maths routines.
3. Gain practical skills to differentiate instruction and foster inclusive, strengths-based learning.

A03 IDENTIFYING MATHEMATICAL FUNDS OF KNOWLEDGE AND DEVELOPING CULTURALLY RESPONSIVE TASKS

Subtheme: Contemporary challenges and successes

**Jodie Hunter, Massey University
(F to Year 6)**

Mathematics is part of everyday life outside of school as well as being integrated into all cultures. It is important for students to see themselves as coming from a mathematically rich cultural background. Using our work with diverse students from New Zealand classrooms, we will explore how tasks can be developed which integrate mathematical strands with cultural contexts. A key aspect of this work was positioning children and their families to use photography and storytelling to identify mathematics in the home and community. Using photographs and stories shared by the children, we will explore mathematical ideas which could be drawn out and

SESSION A: Thursday, 11am-12pm (cont.)

develop contextual tasks from these. We will work together to examine ways in which you could make connections with the home and community background of your students and develop culturally responsive tasks which draw on the backgrounds of the students that you teach.

Key takeaways:

1. It is important for students to see themselves as coming from a mathematically rich cultural background.
2. Photography and storytelling can be used to help children and families identify mathematics in their home and community settings.
3. Culturally responsive tasks connect to the background of students that you teach in authentic ways.

A04 EXPLICIT IMPROVEMENT AGENDAS IN MATHEMATICS: ACTIONABLE, MEASURABLE, AND IMPACTFUL STRATEGIES

Subtheme: Contemporary challenges and successes

Carly Millichap and Alana Bandholz, Brisbane Catholic Education Office
(F to Year 6)

This presentation delves into the intricacies of developing an explicit improvement agenda (EIA) in mathematics that effectively enhances student outcomes and moves schools toward their identified goals. By leveraging the work of Guskey and drawing on the idea of improvement sprints (Breakspear), the session will offer a structured framework to make school EIAs in mathematics actionable, measurable, and impactful. Practical examples from the Brisbane Catholic Education experience will be shared to illustrate the application of these strategies, including our observations of highly effective practices.

The presentation is directly aligned with the conference theme *Thriving in Mathematics*. It emphasises the privileging of evidence-based practices within strong processes to work towards successful outcomes. The focus on incremental measures reassures school leadership teams that the work they are undertaking in their EIA is moving them toward a desired goal.

Key takeaways:

1. Understanding EIA: We will share the complexities of developing an explicit improvement agenda in mathematics.

2. Practical framework: We will offer a structured framework for making the EIA actionable, measurable, and impactful.

3. Real-world examples: Practical examples and guidance from our work with BCE schools

FULL A05 FROM PASSIVE TO POWERFUL: INTERACTIVE EXPLICIT TEACHING IN PRACTICE

Subtheme: Pedagogy and curriculum

Stephanie Nitschke, Victorian Mathematics Ambassador, Nazareth School Grovedale
(F to Year 6)

Explicit teaching is often misunderstood as a passive, teacher directed approach. In reality, it is a highly structured and purposeful method that actively engages students in the learning process. When delivered effectively, it builds clarity, confidence and independence in mathematics. But how do we ensure it is interactive rather than rigid or one dimensional?

This workshop explores what meaningful explicit teaching looks like in action, beyond the traditional 'chalk and talk'. We will examine practical strategies that promote student thinking, discussion and participation throughout each phase of the explicit teaching model.

From effective questioning to worked examples and checking for understanding, participants will explore how small shifts can lead to big improvements in engagement and outcomes. Key to this approach is teacher intellectual preparation, which means knowing not just what to teach, but how to anticipate, adapt and respond to student needs in real time.

Key takeaways:

1. Explicit teaching is not passive!
2. Effective questioning.
3. Checking for understanding.

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A06 MAKING LEARNING STICK: PRACTICAL STRATEGIES FOR RETENTION (PRIMARY)

Subtheme: Pedagogy and curriculum

Patrick Kennedy, Our Lady Star of the Sea
(F to Year 6)

How do we ensure students retain what they've learned long after the lesson ends? In this practical session, we'll explore how to help primary students consolidate mathematical understanding through evidence-informed strategies such as activation of prior knowledge, interleaving, spaced practice, and daily review.

Drawing on classroom experience and current cognitive science, this presentation will unpack what effective review looks like in a primary setting and how it can be embedded meaningfully and consistently. We'll look at how to design short, purposeful daily reviews that spark retrieval, strengthen connections, and make learning stick, without overwhelming teachers or students.

Attendees will walk away with a toolbox of independent and whole-class review strategies, tips for adapting spacing and interleaving to suit younger learners, and a fresh lens on what 'sticky' maths teaching can look like in their own classrooms.

Key takeaways:

1. Retrieval practice.
2. Whole class review strategies.

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FULL A07 COUNTERS: YOU CAN COUNT ON THEM AND MUCH MORE!

Subtheme: Pedagogy and curriculum

Paul Swan, Swan Educational, John West
(Year 3 to Year 6)

The words Concrete Representational Abstract are often used to describe a pedagogical approach to teaching mathematics. In this session John and Paul, but not Ringo, will share some ideas for using counters (different types) to explicitly teach certain concepts while allowing for differentiation. Participants will be given a handful of counters to:

- use in playing targeted games
- develop a better understanding of the modelling process
- stimulate discussion and build the language of mathematics.

Participants will be provided with booklet of ideas ready to try in their classroom.

Key takeaways:

1. Learn how different types of counters may be used in the teaching of mathematics.
2. Leave with a better understanding of CRA and how it may be used to support differentiation.
3. Learn how to use simple manipulatives to stimulate thinking.

A08 MYTHS, METAPHORS AND LEGENDS CONCERNING MATHEMATICS TEACHING AND LEARNING

Subtheme: Contemporary challenges and successes

Dianne Siemon, RMIT University
(F to Year 10)

Years of research and practice have built up a picture of what works (and what doesn't work) in the teaching and learning of mathematics. This is a very significant, constantly evolving body of work contributed to by scholars all over the world and enriched by the experience of highly effective practitioners. It paints a diverse, complex picture of classroom practices, but the single most important conclusion that can be drawn from this huge body of work is that there is no one, 'best way' to teach and learn mathematics. This presentation will consider some of the myths and legends in this field to make a case for a balanced mix of approaches to the teaching and learning of mathematics to ensure all students thrive mathematically.

Key takeaways:

1. Teaching mathematics is complex, dynamic enterprise that involves multiple practices, flexibility, and careful planning.
2. Learning mathematics involves more than changes to long-term memory. It involves the acquisition of a range of cognitive and metacognitive processes to support the application of what is known and to work collaboratively with others.

SESSION A: Thursday, 11am-12pm (cont.)

A09 MASTERING CHECKS FOR UNDERSTANDING: TOOLS TO BOOST STUDENT LEARNING

Subtheme: Pedagogy and curriculum

Jessica Kurzman, St. Patrick's Primary School, Kilmore (F to Year 8)

Checking for understanding is a valuable strategy that helps teachers make informed decisions about whether to move on or revisit key concepts during a lesson, using techniques such as cold calling and mini whiteboard responses. This hands-on, engaging session will equip teachers with a toolbox of practical, effective strategies suitable for any classroom, year level, or topic. Aligned with VTLM 2.0 and the MACS Vision for Instruction, the session also includes guidance on how to intentionally plan for these checks to ensure they are purposeful and targeted. Teachers will leave with a bank of versatile strategies they can use immediately, helping them confidently monitor student learning and adjust their teaching to better support all learners.

Key takeaways:

1. Discover a range of practical checks for understanding that work effectively in any classroom.
2. Explore strategies to intentionally design checks for understanding that align with your lesson objectives.
3. Gain insight into how checks for understanding support the goals of VTLM 2.0 and the MACS Vision for Instruction.

A10 MENTAL MATHS ENGAGEMENT, HANDS-ON CARD ACTIVITY OR ONLINE APP: NUMERO!

This is a commercial presentation

Subtheme: Contemporary challenges and successes

Julie Richards, Numero (F to Year 10)

Numero, physical and online card game, suitable for all years of education. It can significantly aid development of fluency, problem-solving and reasoning. Ideal for introducing and reinforcing simple and complex maths concepts and providing practical application of abstract notions of mixed numerals and indices, making lessons relevant. Differentiation offered by Numero is second-to-none.

Numero, created in 1993, trialled by Dr Paul Swan at ECU Bunbury, played by thousands of students in hundreds of Foundation to year 10 classes, is still continuing to perform. Numero answers the engagement challenge facing schools today, proving maths can be fun, interactive and hands-on or digital.

Numero will be introduced, showing participants how to develop students on a progressive journey, improving their understanding and fluency of number. They will also be shown how Numero can be used with cards and/or with the digital app, enabling the tool of their choice for the desired outcome.

Key takeaways:

1. Solve the engagement challenge for students to improve their mental maths.
2. Support teachers with a mental maths program that will grow with their students.
3. See success through students wanting to play Numero, resulting in improved outcomes.

Remember:

Delegates do not need to bring anything to this session - everything is provided.

FULL A11 MAKING GENAI WORK FOR YOU: CRAFTING EFFECTIVE PROMPTS

Subtheme: Innovation and inspiration

Scott Cameron and Carmel Mesiti, University of Melbourne (F to Year 12)

Generative AI tools, such as ChatGPT, have the potential to support the work of mathematics teachers; however, their effectiveness depends on the quality of the prompts used. This practical workshop explores how mathematics teachers at both primary and secondary levels can design effective prompts that leverage GenAI as a tool to support planning and the development of resources and professional knowledge. Participants will analyse examples of high- and low-quality prompts, co-develop prompts for their own teaching contexts, and leave with strategies to integrate GenAI into their professional practice in purposeful ways.

Key takeaways:

1. Develop strategies to use GenAI purposefully and effectively.
2. Understand the features of an effective prompt.
3. Develop prompts using a research informed framework.

A12 PLANNING CONSIDERATIONS WHEN SELECTING MATHEMATICS TASKS TO OPTIMISE STUDENT LEARNING IN MATHEMATICS

Subtheme: Pedagogy and curriculum

Aylie Davidson, Deakin University (Year 3 to Year 8)

A critical aspect of planning is selecting tasks we will use to teach. Purposeful task selection is important because '...it is through tasks, more than in any other way, that opportunities to learn [mathematics] are made available to the students' (Anthony & Walshaw, 2009, p. 96). Using fractions as a context, participants will use the Task Analysis Guide (Smith & Stein, 1998) to examine a range of task types that each offer different opportunities for students learning. Participants will also discuss key planning considerations including: identifying a clear mathematical and pedagogical focus, the role of explicit teaching, building relational understanding, formative assessment, and appropriate supports for managing the mathematical, cognitive, and relational aspects of the task.

Key takeaways:

1. Identifying a clear mathematical and pedagogical focus is critical when planning tasks.
2. The Task Analysis Guide is a useful tool to discern high quality tasks.
3. Ensure there are a range of task types within any learning sequence to build relational understanding.

Remember:

Bring along pen and paper.

A13 CONFIDENCE, CURIOSITY AND CREATIVITY IN THE MATHEMATICS CLASSROOM WITH MATHS MATE!

This is a commercial presentation

Subtheme: Pedagogy and curriculum

Joanna Tutos, The Educational Advantage (Year 7 to Year 8)

As the Maths Mate Program celebrates 30 years of empowering millions of students, we reflect on our commitment to nurturing confidence, fluency and a love of mathematics. In this session, we explore the Year 7 and 8 Maths Mate Textbooks, crafted by our team of expert educators to inspire curiosity and creativity. Featuring games, puzzles and rich, hands-on activities, these resources aim to move learners beyond screens into collaborative, engaging exploration. Join us as we share practical strategies to create vibrant, student-centered learning environments—and continue building generations of confident, curious, and creative mathematical thinkers who truly thrive in mathematics. Join the party, with give-aways and special offers for the Maths Mate resources.

Key takeaways:

1. Curiosity: Maths Mate Textbooks are bringing maths to life through intentional fun.
2. Confidence: To thrive in the age of Artificial Intelligence, students need to be equipped to solve novel problems.
3. Creativity: Adding hundreds of starters, rich activities, games and puzzles to stimulate students' creative and critical thinking skills

Remember:

Bring along pen and paper.

SESSION A: Thursday, 11am-12pm (cont.)

CANCELLED A14 NEWS FLASH...MATH'S TEACHING HOLY GRAIL DISCOVERED IN A TUPPERWARE BOX

Subtheme: Pedagogy and curriculum

**Paul Howard, St Ignatius College
(Year 3 to Year 10)**

Join Paul as he unveils his 'Holy Grail' — a handpicked collection of open-ended tasks from the original Maths300 activities, first launched as part of a groundbreaking Victorian program in the 1980s.

From the famous Tupperware boxes, Paul has chosen his favourites to share, demonstrating how these activities spark reasoning, creativity, and deep problem-solving in the classroom. In this interactive session, delegates will take on the role of students, experiencing first-hand the joy and challenge these tasks bring.

Participants will also receive a copy of the featured Maths300 activities to take straight back to their classrooms.

Key takeaways:

1. Collection of hand-picked open-ended tasks
2. Positive mindset towards applying the Victorian Curriculum proficiencies.

CANCELLED A15 TEACHING PROBABILITY TO YEAR 7 AND 8 STUDENTS

Subtheme: Pedagogy and curriculum

**Malamati Papisimeon, Instructive
(Year 7 to Year 8)**

In this session, you will explore effective strategies for teaching probability in Years 7 and 8. A strong foundation at this stage is critical for students' success in the senior years, where more complex concepts are introduced. We will examine common misconceptions that often emerge in the early years and discuss how these can lead to misunderstandings later on. Drawing on contemporary educational research and data from thousands of students, this session will provide practical, evidence-based approaches to teaching probability with clarity and impact.

Key takeaways:

1. Misconceptions in probability.
2. Key concepts that you need to teach in probability.
3. Questions and ways to teach probability that do not create misconceptions.

A16 IMPLEMENTING THE VTLM 2.0 AND VICTORIAN LESSON PLANS

Subtheme: Pedagogy and curriculum

**Michelle Winch, Steph Murphy, and Lucinda Edselius,
Curriculum and Teaching Practice Division
(Foundation to Year 10)**

Join us for an engaging workshop exploring the Victorian Teaching and Learning Model 2.0, and how this can be supported with 900 newly developed Victorian Mathematics Lesson Plans from Foundation through to Level 10.

In alignment with the Mathematics Position Statement, this session will delve into the 'what', 'where', 'how' and 'why' of a sequence of learning. Together we will unpack the elements of learning through the lens of cognitive science, explore the different teaching strategies and practices embedded within VTLM 2.0, and share practical advice on how to implement Victorian Lesson Plans in 2026 from an experienced classroom teacher.

Prepare for a jam-packed session that will be valuable for teachers and school leaders alike! Please note that whilst the stories of practice in this session are focussed within the secondary school context, information will also be relevant for primary and specialist settings.

Key takeaways:

1. Clear understanding of the Victorian Teaching and Learning Model (VTLM) 2.0.
2. Guidance on teacher preparation to use high-quality curriculum resources.
3. Alignment of curriculum, instruction, and assessment through VLPs.

Supported by



CANCELLED A17 WOULD THE REAL PYTHAGORAS PLEASE STAND UP?

This is a commercial presentation by a not for profit museum

Subtheme: Innovation and inspiration

**Jo Clyne and Bridget Headlam, Hellenic Museum
(Year 7 to Year 8)**

Every maths student has heard of Pythagoras, but there are few who know the true stories behind this enigmatic and charismatic ancient Greek figure. Was he the true originator of the Pythagoras theorem? What was his perspective on the role of mathematics in everyday life? What was really behind his alleged phobia of beans?

Join Jo and Bridget from the Hellenic Museum's education team as they showcase some innovative and Victorian Curriculum for Mathematics 2.0-aligned approaches for contextualising mathematical knowledge and skills.

Key takeaways:

1. Providing historical context to, and enlivening some of the concepts covered in the Victorian Curriculum for Mathematics 2.0 (Level 8: Measurement).
2. Demonstration of hands on activities designed to help students understand Pythagorean concepts.
3. Learn more about ancient Greece and its influence on modern day mathematics.

A18 A CLASSROOM APPROACH FOR HIGHER ACHIEVING STUDENTS YEARS 7 AND 8

This is a commercial presentation

Subtheme: Innovation and inspiration

**Ian Bull
(Year 7 to Year 8)**

According to the Australian Government Department of Education, 'high-achieving students receive insufficient STEM support with the percentage of high-performing maths students among Australian 15-year-olds declining from 20% in 2003 to 10% in 2018' (Jan 2024).

Every student deserves the opportunity to engage with mathematical content and challenges appropriate to their ability, including those that are high achieving who are often overlooked.

As educators, we can identify these students in our classes and encourage them to take on the challenge of completing tasks that require higher-order thinking.

Suitable material and approaches that can be used for high achieving students in Years 7 and 8, will be presented in this session and participants will be able to experience working through some tasks.

Key takeaways:

1. Catering for high achieving students in the classroom
2. Using maths extension materials
3. Locating maths extension materials

Remember:

Participants need to bring a pen with a calculator being accessed via mobile phones when needed.

A19 THREE OF MY FAVOURITE MATHEMATICAL MODELLING TASKS: YEARS 5-8

Subtheme: Contemporary challenges and successes

Jill Brown, Deakin University

(Year 5 to Year 8)

This workshop will focus on the implementation of Mathematical Modelling as expected by the Victorian Curriculum Mathematics v2.0. We will discuss: What modelling is, and how to implement it via a focus on tasks suitable for students in Years 5-8. Possible student approaches will be shared as will key ideas for teachers to consider.

If you have tasks you are willing to share with others, please email Jill before the workshop, so she can print them for sharing. Jill.Brown@deakin.edu.au.

Key takeaways:

1. Three classroom ready mathematical modelling tasks.
2. Increased understanding of mathematical modelling.
3. Key ideas related to successful implementation of mathematical modelling.

SESSION A: Thursday, 11am-12pm (cont.)

FULL A20 BRINGING JOY TO THE MATHEMATICS CLASSROOM: PUZZLES, PROBLEMS AND TRICKS OF THE TRADE

Subtheme: Pedagogy and curriculum

Mike Ristovsky and Taylor Pervan, Christ Church Grammar School, WA (Year 7 to Year 10)

Capturing students' attention in the mathematics classroom isn't always easy, but carefully designed hands-on activities can spark curiosity, conversation, and joy. In this session, I'll share six of my favourite activities, gathered over more than 30 years of teaching secondary students. Each activity positions learners as decision-makers, engaging them in reasoning, problem-solving, and communicating their mathematical thinking.

Participants will experience the activities first-hand at a comfortable, accessible pace, ensuring everyone can join in. Practical resources will also be provided, so you can take these ready-to-use activities straight into your classroom on Monday morning.

Key takeaways:

1. A set of 6 problems/puzzles with solutions that can be used in a variety of class settings.
2. Strategies and approaches that will allow for student engagement in mathematics at a variety of levels.

Remember:

Bring a pen/pencil, calculator (any type) but most importantly an inquisitive mind!

A21 OUR JOURNEY BACK INTO EXPLICIT INSTRUCTION AND APPLICATION

This is a commercial presentation

Subtheme: Pedagogy and curriculum

Jennifer Wagner and Sudha Rao, Emmanuel College, Daniel O'Kane, Mathspace (Year 7 to Year 10)

The mathematics department of Emmanuel College Melbourne decided to change their pedagogical approach, after several years of mastery-based learning and individualised differentiation practice, to one of explicit instruction and application.

Jen and Sudha will take you through their new approach, as well as how they're using Mathspace print and digital textbooks for explicit teaching. In addition to other resources that are provided to Catholic schools by the Melbourne Archdiocese of Catholic Schools, such as the materials from OCHRE Education.

Key takeaways

1. Learn why Jen and Sudha moved back to an explicit teaching focus at Emmanuel College.
2. Observe examples of explicit instruction and application work in the mathematics classroom.
3. Find out why Emmanuel College chose to booklist Mathspace textbooks as of 2024 for maths classes (Years 7 to 10 inclusive).

A22 MATHEMATICAL MODELLING USING IMAGES AND TECHNOLOGY

Subtheme: Innovation and inspiration

Kevin McMenamin, Mentone Grammar (Year 7 to Year 10)

This hands on session will use images to explore mathematical modelling. Part of the session will brainstorm questions that would scaffold and develop the modelling process linked to a chosen image. These questions would form the basis of the modelling task. Part of the session would be dedicated to using the device to explore the brainstormed questions to see how they apply to the image and to give the opportunity to make amendments where necessary. The aim is to have a modelling task ready to go.

The session is designed for middle school levels and the featured device is the ClassPad.

Key takeaways:

1. Confidence to develop problem solving and modelling tasks.
2. An understanding of the importance of technology in developing explorative skills.

Remember:

The presentation will showcase the Casio Classpad. Delegates can provide their own and there will be some available for use in the session.

A23 MONTE CARLO IN CLASSROOMS: ENGAGING PROBABILITY LESSONS WITH PYTHON SIMULATIONS

Subtheme: Innovation and inspiration

Robin Wang, Centre for Higher Education Studies (Year 7 to Year 12)

Probability is one of the most conceptually rich yet challenging topics to teach. Many students feel uncertain — not just about the answers, but about how to approach the problem. This is why it's essential to make probability engaging, interactive, and accessible.

In this session, I will demonstrate how Monte Carlo simulation can bring probability to life through Python. By running repeated random experiments, students can observe patterns, estimate probabilities, and uncover insights — all without needing to master advanced techniques beforehand. These simulations offer more than just compelling visuals; they open the door to computational thinking, allowing students to model problems, interpret results, and refine their understanding through code.

Beyond the presented examples, this talk will introduce a wide range of tasks and ideas to help students think probabilistically, computationally, and creatively, leaving you with adaptable simulations, practical classroom strategies, and a fresh perspective on making randomness both rigorous and rewarding.

Key takeaways:

1. Teachers will learn how to use Monte Carlo simulations in Python to make probability more engaging, interactive and computationally meaningful for students. This approach empowers students to explore probability and randomness beyond the traditional classroom setup.

A24 MISSION IMPOSSIBLE – CREATING MATHEMATICAL ESCAPE ROOMS

This is a commercial presentation

Subtheme: Innovation and inspiration

Peter Fox, Texas Instruments Australia (Year 7 to Year 12)

Are you ready to unlock student engagement? In this hands-on workshop, mathematics is your key to freedom. You'll experience an immersive problem solving adventure

just like your students would, solving puzzles that require mathematical reasoning, collaboration and creative thinking in order to escape. Come prepared to solve, create and escape!

Key takeaways:

1. Revision can be fun, challenging and interactive.
2. Spaced retrieval and novelty help students remember.
3. It's time to get creative - you too can build your own escape room.

Remember:

Bring a phone / laptop as you will be required to access the internet or you will never escape!

A25 USING MODELLING AND BIG IDEAS FOR TEACHING LINEAR RELATIONSHIPS.

Subtheme: Innovation and inspiration

Shaska Martin and Mark Stacey, Montmorency Secondary College (Year 7 to Year 12)

The understanding and application of linear relationships to problem-solve persists as a struggle for students throughout years 8-12. We used a Big Ideas framework to clarify the conceptual understanding required for students to analyse linear relationships in a range of problem-solving contexts across years 7-10.

We examined the curriculum descriptors related to linear relationships and mapped these to our Big Ideas. We analysed NAPLAN data to identify areas where our students performed above/below expectations, then mapped these to our Big Ideas, to prioritise and guide our teaching improvements.

We then developed a backwards-by-design differentiated learning sequence that provided multiple entry points for students. This sequence, based on VTLM 2.0, focused on bivariate data modelling to engage students in the learning and develop their understanding of real-world applications. The integration of multiple representations and technology, together with the Big Ideas, supported students to engage with, and thrive, in this unit.

SESSION A: Thursday, 11am-12pm (cont.)

Key takeaways:

1. Backwards-by-design supports differentiation and the building of conceptual understanding from years 8-10.
2. Teaching to the Big Ideas scaffolds conceptual understanding required to apply, analyse, and interpret linear relationships in a range of problem-solving contexts.
3. Modelling engages students in the development of linear equations to model bivariate relationships.

A26 WOWEE! AI TOOLS FOR MODERN MATHS TEACHERS

Subtheme: Innovation and inspiration

Lee McCullagh, Bendigo Senior Secondary College (Year 9 to Year 12)

In this session, participants will be introduced to a range of innovative AI tools that are transforming both the class planning and classroom experience. Whether you're completely new to AI or already experimenting, this session will showcase tools that are easy to use, classroom-ready, and aligned with the needs of modern educators. A core focus of the presentation will look at real world examples, as well as discussing potential pitfalls, and sharing strategies for integrating AI into your teaching without losing the human touch. After this session, you will walk away with fresh ideas, practical resources, and the confidence to explore AI in your own classroom. It's all about saving time, increasing engagement, and embracing the future of Maths in education.

Key takeaways:

1. Explore practical and useful AI tools that assist and enhance planning and classroom delivery.
2. Understand the strengths and limits of AI through real examples.
3. Discover a number of tools that you will be able to use straight away.

Remember:

Ideally, bring computers to practice some of your newly learned skills.

A27 UNLOCK VCE MATHEMATICAL METHODS EXAM 2 (2025) SUCCESS WITH CAS

Subtheme: Innovation and inspiration

Sanjeev Meston, Strathcona Girls Grammar (Year 9 to Year 12)

Empower and equip your students to thrive in the VCE Mathematical Methods Exam 2 (2025) by proficiently using the CAS technology. This session will provide insights into practical and efficient CAS workflows specifically designed to tackle the demands of the exam, empowering students to become confident problem solvers.

In alignment with the MAV25 theme of 'Thriving in Mathematics,' we will explore how strategic CAS integration can foster a positive disposition towards mathematical tools and cultivate the independent application of mathematical concepts essential for future studies and real-world engagement. This session will help unlock advanced functionalities that streamline solutions and deepen understanding.

Participants (Teachers) will gain actionable strategies for incorporating CAS to create productive challenges, deliver high-quality learning experiences, and ultimately enable students to experience true engagement and enjoyment in mastering mathematical methods. You will walk away with techniques to elevate your teaching and your students' performance in Exam 2.

Key takeaways:

1. Strategies for empowering and equipping students to thrive in VCE Mathematical Methods Exam 2 (2025) through proficient CAS use.
2. Insights into practical and efficient CAS workflows tailored for the specific demands of the exam.
3. Understanding how strategic CAS integration aligns with the MAV25 theme of 'Thriving in Mathematics'.

Remember:

A handheld TI Nspire CX-II or Teacher software on the Laptop. Attendees will be provided with the solution set on TI Nspire and a PowerPoint. Additionally previous year CAS solutions to Exam 2 will also be made available.

CANCELLED A28 USING EXPONENTIAL MODELLING INVESTIGATION THROUGH DIVERSE WORLDVIEWS

Subtheme: Pedagogy and curriculum

Peter Beissmann, Bayside Christian College, Angel Wong, St Andrew's Christian College (Year 9 to Year 12)

This presentation explores exponential modelling to address big questions like population growth and magnetic field changes, integrating diverse worldviews. Designed as a low-entry, high-ceiling task, it engages Year 9 students using CAS technology, fostering accessible yet deep mathematical exploration. The task is adaptable for VCE Mathematical Methods investigations, encouraging students to form conjectures about real-world issues and their philosophical implications. Through practical applications, students develop critical thinking and connect mathematical models to global challenges, enhancing their understanding of exponential functions and their societal relevance. The presentation highlights strategies to make complex modelling inclusive, rigorous, and relevant across secondary education levels.

Key takeaways:

1. Accessible Modelling: A low-entry, high-ceiling task using CAS technology enables students at different level to participate
2. Mathematical Investigation: Modifiable for VCE Methods, encouraging conjectures linking math to worldviews.
3. Real-World Impact: Connects exponential models to global issues, and comparing of worldviews, enhancing critical thinking.

Remember:

A TI CAS calculator will be used for the presentation but a CASIO can be used to follow along.

A29 SUPPORTING STUDENTS IN MATHEMATICAL METHODS: LEARNING FROM PAST EXAMINATIONS

Subtheme: Pedagogy and curriculum

Allason McNamara, Trinity Grammar School, Cathy Devlyn, Melbourne Grammar School (Year 11 to Year 12)

Allason and Cathy will facilitate a session designed to help teachers reflect on common challenges students face in Mathematical Methods examinations.

Drawing on patterns observed in previous exams, they will highlight frequent errors and misconceptions they have observe and ask delegates to share their insights. They will provide strategies to support students' understanding and exam readiness. The session will include opportunities to discuss how these insights can be applied in the classroom to strengthen teaching and learning approaches for the 2026 cohort.

Key takeaways:

1. Teachers will gain insights into common errors and misconceptions students encounter in Mathematical Methods.
2. Practical advice and strategies will be shared to support effective student learning and exam preparation.
3. The session will assist teachers in planning for 2026 with a focus on addressing known areas of difficulty.

Remember:

Please bring copies of recent Mathematical Methods examinations for reference.

A30 2025 SPECIALIST MATHEMATICS - PEN AND PAPER VERSUS CAS?

Subtheme: Pedagogy and curriculum

Peideng Nie, Austin Education (Year 11 to Year 12)

This session will demonstrate practical approaches to tackling Specialist Mathematics exam questions, with a focus on comparing the use of the TI-Nspire and Casio ClassPad calculators. The presenter will compare and contrast how each device can be used for different assessment items and guide participants in evaluating the effectiveness of these

SESSION A: Thursday, 11am-12pm (cont.)

approaches in relation to the three outcomes of the VCE Mathematics Study Design (2023–2027).

Key takeaways:

1. The attendees will exchange and share ideas and further develop new networking opportunities.
2. The presenter will provide sample solutions to the questions discussed.
3. Participants will discuss approaches to solving problems, and take away ideas to inform resource development for their own cohorts.

Remember:

- Please bring along a copy of the recent Specialist Maths exam
2. The presenter will provide handouts for you.

CANCELLED A31 SUPPORTING STUDENTS TO MAKE THE TRANSITION FROM SENIOR SECONDARY TO UNDERGRADUATE STUDY

This is a commercial presentation

Subtheme: Contemporary challenges and successes

Rosie Mackay and Liz Cahir, Monash University, David Leigh-Lancaster, Leigh-Lancaster Consulting (Year 11 to Year 12)

Each year, Monash University enrolls around 20 000 new Australian and international students into various undergraduate courses across its faculties. Many of these have General Mathematics, Mathematical Methods, or similar mathematics subjects from other jurisdictions and countries as prerequisites.

To support these students from a diverse global cohort in their preparation for their undergraduate courses, Monash has developed two mathematics programs and resources:

- Monash Learn HQ Mathematics Revision (available to anyone)
- Monash Mathematics Skills Analysis (for students enrolled at Monash)

In this session we will look at each of these programs, their structure and nature, and how they were developed. Participants will also have the opportunity to try out some of the Learn HQ Mathematics self-access resources.

These resources may be of interest to teachers of VCE Mathematics, and students undertaking review and consolidation work for their VCE Mathematics studies.

Key takeaways:

1. Familiarity with the publicly available, free revision resources on Learn HQ.
2. Identify the complexities in assumed knowledge and prerequisites for students transitioning to tertiary studies requiring mathematics.

A32 INNOVATIVE APPROACHES TO MATHEMATICAL INDUCTION IN SPECIALIST MATHEMATICS

Subtheme: Pedagogy and curriculum

Narcisa Corcaci and Tran Trinh, Suzanne Cory High School (Year 11 to Year 12)

Are we providing our students with the best opportunities to learn and apply mathematical induction as a proof technique? Are we encouraging them to make independent decisions and choose the most appropriate method for completing a proof? Are we challenging them to discover or construct new identities that can be proved using mathematical induction?

In this workshop, we will explore how both numerical and algebraic identities can be proved using mathematical induction, and, in some cases, through alternative proof methods. We will also examine how class discussions can be structured to support the creation of new identities. These identities will span a range of mathematical topics, including algebra, complex numbers, vectors, and calculus.

This session is intended for teachers who are looking to expand their instructional strategies, rather than those seeking an introduction to mathematical induction. The content covered aligns with the study design for Specialist Mathematics Units 1–4.

Key takeaways:

1. Suggesting strategies teachers can use to teach mathematical induction successfully.
2. Providing contexts and resources that will enhance students' understanding of mathematical induction.

Remember:

A pen will be needed for this session.

2026 VCE CONFERENCES



Head into 2026 VCE mathematics feeling prepared, unpack the 2025 exams, gather teaching strategies and insights. If you are a VCE mathematics teacher - you won't find a better event.

UNMISSABLE CONTENT

- Learn from experienced teachers across all VCE mathematics subjects.
- Sessions devoted to SACs starters for all VCE mathematics subjects.
- Sessions on analysing last year's exams and the areas where students struggled most.
- Hear from TI-Nspire and Casio experts.
- Complimentary year long access to our learning management system with all resources, slides and recorded sessions from the event.

LOCATIONS AROUND VICTORIA

The conferences will be held in Term 1 2026. Join us at the location closest to you:

- Melbourne (RMIT University, city campus), 13 February 2026.
- Bendigo, 13 March 2026.
- Moe, 27 March 2026.

REGISTER NOW: WWW.MAVVIC.EDU.AU

General, Methods, Specialist, Foundation, VM Numeracy and CAS.

'The day covered everything I needed to know - it gave me exam insights that I couldn't get anywhere else.'
- 2025 participant

SESSION B: Thursday, 12.10pm-1.10pm

CANCELLED B01 DESIGNING AND EXPERIENCING MATHS IN ACTION: FROM PLANNING TO PLAY

Subtheme: Pedagogy and curriculum

Montana Slavik
(Early childhood)

This hands-on workshop supports early childhood teachers in strengthening their curriculum and intentional decision-making for mathematics experiences in the classroom. The session begins with a reflective overview of my experience developing an in-house model for explicitly teaching mathematical concepts in a kindergarten setting. Drawing on the Early Years Learning Framework and AERO learning trajectories, I will share planning insights and learning outcomes observed across a cohort of children. In the second half of the session, participants will engage in practical, peer-to-peer collaboration. Using real classroom examples and curated materials, educators will design a mini maths experience aligned with developmental concepts, then present their ideas for feedback and inspiration. The workshop encourages deep thinking about concept formation, intentional teaching, and how mathematics can be embedded meaningfully in everyday play and routines. Participants will leave with practical strategies to enrich their programs and foster confident mathematical thinking in young children.

Key takeaways:

1. Intentional Maths Integration: Learn how to embed mathematical concepts into everyday routines through intentional planning.
2. Classroom-Ready Strategies: Gain practical, real-world examples of maths programming drawn from a kindergarten context.
3. Collaborative Experience Design: Engage in hands-on, peer-led planning to co-create and share mini maths experiences for immediate implementation in classrooms.

B02 MATHS INVESTIGATIONS IN THE AGE OF EXPLICIT TEACHING

Subtheme: Pedagogy and curriculum

Abigail Henderson, Deakin University
(F to Year 2)

A common criticism of teaching mathematics through inquiry-based pedagogies is that there is no evidence of explicit teaching occurring. However, teachers who successfully teach mathematics through inquiry-based pedagogies recognise their lessons are quite explicit - it just manifests through carefully planned questions rather than telling. The use of questioning to elucidate understanding, and planning which allows for those questions to arise will result in explicit teaching. In this workshop we will engage with the concept of inquiry as explicit teaching, we will look at opportunities to ensure our students experience investigative mathematics, and we will examine the planning which leads to targeted questioning. Participants will have the opportunity to examine specific investigation-based maths lessons with a focus on Foundation to Year 2. The techniques utilised will be transferable to middle and upper Primary and will be the focus of workshop discussion.

Key takeaways:

1. Learn how to craft and use purposeful questions to guide student thinking, uncover understanding.
2. Explore how to design and structure mathematics lessons that embed rich investigations, while ensuring clarity and learning intention.

B03 SUCCESSES, CHALLENGES AND LEARNINGS: DEVELOPING A JUNIOR SCHOOL'S MATHEMATICS PRACTICE

Subtheme: Pedagogy and curriculum

Brent Brickhill, Michael Stephens, Brighton Grammar School
(Early childhood to Year 6)

Brighton Grammar's Junior School incorporates 3- and 4-year-old early learning along with primary schooling from Foundation to Year 6.

The school embarked on a change journey commencing in 2020 to improve teaching and learning Mathematics for all learners. It prioritises the Science of Learning with explicit direct instruction underlying a whole school approach.

The presentation will outline some of the systems, processes and documentation our numeracy leaders have put in place to ensure that all learners are engaged in evidence informed teaching and learning practices. We will share some of the changes that lead to success, challenges we've overcome and the learnings we continue to build upon.

The presentation will focus on:

- planning and lesson structures
- ELC to Year 6 curriculum and assessment
- explicit direct instruction
- proficiencies focus with an emphasis on enhanced fluency
- retrieval practice through review and reteach

Key takeaways:

1. Methods to enhance fluency in early learning centres and primary schools
2. Ways to incorporate explicit instruction and mastery in mathematics.
3. Strategies for increasing student learning through retrieval practice.

B04 WHEN, WHERE AND WHY IS FLUENCY CRITICAL: THE INSTRUCTIONAL HIERARCHY

Subtheme: Pedagogy and curriculum

Ange Rogers, Numeracy Teachers Academy
(F to Year 6)

The Instructional Hierarchy was proposed in research by Haring, Lovitt, Eaton, & Hansen in 1978. They explained that skill mastery progresses through four stages of learning. These are: acquisition, fluency, generalisation and adaptation. Within each stage the learner's needs change, and so should our pedagogical approach to instruction. This session will explore the Fluency stage, where the goal of instruction is to increase the ease with which the student can accurately respond and execute skills. Participants will be provided with research highlighting the importance of helping our students to develop fluency, and develop an understanding of practical steps they can take in their school to ensure fluency is part of every learning sequence. Participants will walk away with a clear understanding of how to assess fluency, and how to ensure students are confident in not only their basic facts, but also other key areas of the number curriculum.

Key takeaways:

1. What is fluency and why is it critical to develop
2. How can the Instructional Hierarchy (Haring, Eaton et al., 1978) support teachers to make informed decisions related to fluency.

FULL B05 FINDING THE BALANCE: RICH PROBLEM SOLVING AND EXPLICIT INSTRUCTION

Subtheme: Contemporary challenges and successes

Elizabeth Dewar, Love Maths, Maree Croft, Reel Maths
(F to Year 6)

This session addresses a current challenge in primary mathematics education: establishing an effective balance between explicit instruction and rich, open-ended problem solving. Educators often feel they must choose between direct teaching and student-led inquiry; however, current research and the VTLM 2.0 support an integrated approach that can combine both.

Rich tasks are often treated as optional or inconsistently used, while explicit instruction is sometimes seen as rigid or incompatible with deep learning. This session challenges that divide by showing how to design tasks that start with student thinking yet include the clarity, structure, and support of explicit instruction.

Using primary classroom examples, participants will explore how to plan, sequence, and scaffold rich tasks to boost engagement and effective teaching. The session will highlight using a rich task as a starting point to develop clear learning intentions, incorporate explicit instruction and modelling, and structure support to maximise learning outcomes.

Key takeaways:

1. Strategies to design a learning sequence that starts with a rich problem solving task.
2. Strategies to implement a learning sequence over a week of lessons, incorporating both explicit instruction and problem solving.
3. Strategies to guide students through a rich task with structured support, ensuring clear and purposeful teaching.

SESSION B: Thursday, 12.10pm-1.10pm (cont.)

B06 STRATEGIES TO ENABLE AND EXTEND ALL MATHEMATICS LEARNERS

Subtheme: Pedagogy and curriculum

Ellen Corovic, Di Liddell, The Mathematical Association of Victoria (F to Year 6)

How can we organise the teaching and learning of mathematics to ensure all learners are supported, stretched, and successful? This session explores practical, evidence-based strategies for enabling and extending students within the class environment. Grounded in the Victorian Teaching and Learning Model (VTLM), we will unpack what enabling learning looks like in practice, and how to differentiate effectively to ensure every student can access rich mathematical thinking. Participants will explore the stages of the instructional hierarchy, considering when and how to implement enabling and extending strategies that align with learners' needs. Through classroom examples, discussion, and reflection, this session will support educators in developing inclusive, responsive mathematics classrooms where all students can thrive.

Key takeaways:

1. Practical strategies to extend and challenge all students.
2. Understand what enabling learning looks like and how it supports access to rich tasks for all learners.
3. Using the Instructional Hierarchy to guide planning.

B07 TRANSFORMING MATHEMATICAL GAMES: 'I WANT TO BE A REAL GAME!'

Subtheme: Pedagogy and curriculum

Toby Russo, Wirrigirri Primary School, James Russo, Monash University (F to Year 6)

Reimagine the potential of mathematical games in your classroom! In this interactive workshop, we explore how small but impactful modifications can deepen mathematical thinking. Learn to transform 'Pinocchio games' - games that want to be real - into authentic games that foster strategy and choice. Discover how the 'Time Machine' mechanism encourages students to reflect on past decisions and anticipate future outcomes, creating meaningful connections to mathematical concepts. Dive into non-replacement mechanisms, like using cards instead of dice, to

shift probabilities and enhance strategic decision-making. With practical examples such as Closest to X and Reverse Landgrab, you'll leave with fresh, classroom-ready games and hands-on ideas to energise your teaching and engage students.

Key takeaways:

1. Learn how to transform classroom games to foster genuine strategy, choice, and deeper mathematical thinking.
2. Explore how 'Time Machine' mechanisms can prompt students to reflect on past moves and plan ahead.
3. Discover how simple design changes, like using cards instead of dice, can shift probabilities and enhance strategy.

B08 LITTLE MOMENTS, BIG INSIGHTS: COLLECTING DATA THAT MATTERS

Subtheme: Pedagogy and curriculum

Jen Perrett, Kardinia International College (F to Year 6)

Assessment and data to inform practice. Understanding how students think is key to effective mathematics teaching. This interactive workshop introduces primary educators to three distinct mathematical tasks, each designed to uncover different aspects of student understanding and reasoning.

Participants will engage with each task, exploring practical ways to collect and interpret data from student responses. The variety of tasks ensures that diverse learners and multiple mathematical concepts are represented, enabling teachers to identify patterns, misconceptions, and individual learning needs.

Through hands-on analysis of real student work samples linked to these tasks, educators will practice making informed instructional decisions that promote targeted support and challenge. The session demonstrates how formative assessment can be seamlessly integrated into daily teaching routines, enhancing student confidence and engagement.

By valuing diverse problem-solving approaches and highlighting student thinking, this workshop equips teachers with adaptable strategies to foster growth, curiosity, and success for all learners.

Key takeaways:

1. Learn practical methods to gather and interpret evidence of student thinking.
2. Develop skills to identify learning trends and tailor instruction accordingly.
3. Explore strategies to build positive attitudes towards mathematics through responsive teaching.

CANCELLED B09 MAKING DATA VISIBLE: SUPPORTING STUDENT THRIVING IN MATHEMATICS

This is a commercial presentation

Subtheme: Pedagogy and curriculum

Jacinta Browning, Essential Assessment (F to Year 6)

Support teachers to confidently use VC2.0-aligned Mathematics data to inform purposeful planning and impactful instruction.

Key takeaways:

1. Understand how Essential Assessment data supports MTSS and helps meet student needs.
2. Build confidence in interpreting data sets and applying insights to deliver responsive, curriculum-aligned instruction.
3. Leverage end-of-year data to support smooth transitions, effective handovers, and set students up for success.

B10 SHARING OUTSIDE THE BOX: CREATIVE MATHS SUMMARIES THAT ENGAGE

Subtheme: Pedagogy and curriculum

Elizabeth Irwin and Emma Bird, HILL (High Impact Leading and Learning) Group Consulting (Year 3 to Year 6)

This workshop invites educators to reimagine the 'share time' or summary phase of a maths lesson as a purposeful and engaging opportunity for student reflection, formative assessment, and making connections. Aligned with the Australian Curriculum v9, this workshop introduces creative, low-prep strategies that make student thinking visible in playful and meaningful ways.

This session equips teachers with adaptable and practical tools to foster positive attitudes, support individual sense-making, promote student voice and build confident and thriving mathematical identities. When students are invited to share their thinking and understanding creatively and critically, they engage more deeply—and mathematics becomes something they can truly own and enjoy.

Key takeaways:

1. Discover creative and practical strategies to make student thinking visible during the Maths lesson's closure phase.
2. Be empowered to use summary time as a tool for formative assessment and student voice.
3. Support diverse learners to thrive, build confidence, deepen understanding, and engage meaningfully with mathematics.

B11 CONNECT BEFORE CONTENT

Subtheme: Pedagogy and curriculum

Narelle Anne Morris, MorrisMaths/FisherONE Online Education (F to Year 10)

To truly thrive in mathematics, students need to feel connected—to their teacher, to the learning environment, and to the subject itself. This presentation offers practical, classroom-tested strategies for building those connections from day one, without sacrificing curriculum coverage. Drawing on my experience as Dean of Numeracy across P-10, I will share specific examples of how early relational teaching, strategic planning, and playful engagement can transform student attitudes and outcomes in maths.

Participants will receive access to adaptable resources and a website of tools and will be invited to share their own experiences. The session will focus on how to embed connection and enjoyment into maths lessons, especially for students who have previously struggled.

This presentation supports the sub-theme Pedagogy and Curriculum, showing how connection-first teaching helps students build confidence and competence in maths.

SESSION B: Thursday, 12.10pm-1.10pm (cont.)

Key takeaways:

1. Practical ways to build connection and enjoyment from the start.
2. How to plan strategically without feeling pressured to 'cover everything'.
3. Early intervention strategies.
4. Best use of support staff and resources.
5. Ideas for involving parents and carers.
6. How to help middle school students achieve at least a C standard.

B12 HARNESSING THE POWER OF AI IN THE MATHS CLASSROOM

This is a commercial presentation

Subtheme: Innovation and inspiration

Sonny Moshinsky, Tutores
(F to Year 10)

AI is opening new doors for mathematics educators — from saving time on planning to supporting more responsive, differentiated teaching. This session explores practical, classroom-ready ways to use AI to identify student needs, generate curriculum-aligned content, and engage learners at the right level. We'll draw on real examples from Australian schools to show how AI can reduce teacher workload while enhancing instructional impact. Rather than replacing expertise, AI becomes a partner in helping every student — and every teacher — thrive in mathematics.

Key takeaways:

1. Discover how AI can help diagnose learning gaps and personalise support.
2. Explore real use cases of AI-driven lesson planning and resource generation.
3. Learn how to implement AI in a way that enhances, not overwhelms, your teaching.

Remember:

No software or devices required. We will demonstrate AI tools in action, but no downloads are needed to benefit from the session. All examples will be accessible via browser-based tools and aligned to Australian curriculum standards. Suitable for teachers with any level of tech confidence.

B13 LEADING MATHEMATICS

This is a commercial presentation

Subtheme: Leadership and agency

Leonie Anstey, The Mathematical Association of Victoria, David Leigh-Lancaster, Leigh-Lancaster Consulting
(F to Year 10)

Join this workshop to explore the Leading Mathematics program offered by the Victorian Academy of Teaching and Leadership, open to all school sectors (government, Catholic and independent). Learn how it empowers your team to build knowledge, skills, and leadership in mathematics to benefit your school community.

Aligned with Victorian Curriculum Mathematics 2.0 and the Teaching and Learning Model 2.0, the program incorporates contemporary research and best practices. Discover how your team can use evidence, observations, and trial improvement strategies tailored to your school's context.

Hear about the successes from the 2025 program and consider how it can support your school community in 2026.

Key takeaways:

1. Strengthen your team's leadership and mathematics knowledge to enhance teaching and learning.
2. Use evidence and research to refine and trial goals tailored to your school context.
3. Develop sustainable, long-term strategies for lasting improvement in mathematics education.

FULL B14 SAME TASK, DIFFERENT PATHS: MULTI-TIERED MATHS TASK FOR INCLUSIVE CLASSROOMS

Subtheme: Pedagogy and curriculum

Milton Bai, Kensington Community High School, Gloria Yi, St Albans Secondary College

(Year 7 to Year 10)

This session introduces a practical approach to inclusive maths tasks using the Multi-Tiered System of Support (MTSS). It showcases how an authentic maths task can offer Tier 1, 2, and 3 entry points so all students can engage and succeed.

The approach draws on the Victorian Disability Inclusion model and incorporates ideas from the Berry Street Education Model (BSEM), Universal Design for Learning (UDL), and the High Impact Teaching Strategies (HITS).

Suitable for Years 7–10 and VCE VM Numeracy, this session is especially relevant for settings where engagement and differentiation are priorities. Participants will explore and discuss an example maths task, consider adaptations for their own contexts, and develop practical strategies to embed tiered supports into their own maths programs, thereby improving learning outcomes for diverse groups of students.

Key takeaways:

1. Introduction to an innovative teaching approach.
2. Discussions and resources of the approach and examples.
3. Opportunities to create programs for your school.

B15 CONFIDENT CLASSROOMS - EMPOWERING TEACHERS IN MATHEMATICS

Subtheme: Innovation and inspiration

Nicole Boyd, Berwick Fields Primary School, Anita Green, Monash University/Coral Park Primary School
(F to Year 6)

Many teachers feel a sense of anxiety when it comes to teaching mathematics, often due to negative past experiences, limited professional learning, or lack of confidence in content knowledge. Our session is designed to help educators shift from feeling hesitant to feeling empowered in their mathematics teaching. Through hands-on activities, rich discussions, and real classroom examples, participants will explore strategies that build both their own confidence and their students' engagement and understanding. The session will unpack data and evidence connected to math's anxiety and teacher confidence and provide effective approaches that can be used across a range of year levels. Participants will leave with a toolkit of adaptable teaching strategies, planning resources, and confidence-building routines to take straight into their classrooms. This session will empower all educators, regardless of experience, providing them with a strengthened sense of confidence to teach real world mathematics.

Key takeaways:

1. Identify and address the causes of mathematics teaching anxiety among educators.
2. Offer evidence-based, adaptable strategies to enhance teacher confidence and student engagement.
3. Provide practical resources and routines to support effective mathematics instruction across all year levels.

Remember:

Paper and pen, or device - purely for note taking.

B16 USING EVIDENCE INFORMED LEADERSHIP IN MATHEMATICS

Subtheme: Leadership and agency

Michael Rosenbrock, Evidence Informed Education
(Year 3 to Year 12)

This session will unpack how taking an evidence informed approach to leading mathematics can support teachers and leaders to thrive. Participants will explore a model for being evidence-informed that draws together research, practice and context. Connections to system priorities such as the Victorian Teaching and Learning Model as well as Flourishing Learners will be unpacked. Michael will share examples from his own experience of drawing on evidence to build student metacognition in mathematics. Key success factors will be explored including: surfacing values and goals, divergent-convergent thinking, understanding core components, avoiding lethal mutations, making thoughtful adaptations, and elevating good practice. The Evidence for Learning Mathematics resources will be briefly unpacked and used as a catalyst for participants to reflect on practice in their context. The session will conclude with a focus on planning for action, with participants having time to make plans for putting their take-aways from this session into practice.

Key takeaways:

1. What an effective and nuanced approach to being evidence-informed could look like.
2. How approaches such as metacognition can be translated into practice in mathematics.
3. How to draw on trusted resources to reflect upon and elevate mathematics practice in their context.

SESSION B: Thursday, 12.10pm-1.10pm (cont.)

FULL B17 WHY DON'T THEY REMEMBER IT?!

Subtheme: Pedagogy and curriculum

**Antje Leigh-Lancaster, Leigh-Lancaster Consulting
(Year 3 to Year 12)**

No doubt many of us have had moments where we're surprised by what our students haven't remembered.

In this interactive workshop, we will explore some practical classroom strategies and approaches that research has shown to be effective in facilitating learning, retention and retrieval, these include:

- getting the most from retrieval practice (desirable difficulties)
- understanding the importance of providing and removing scaffolds (maintaining engagement)
- benefit of deliberately making an error and then correcting it (derring effect)
- using interleaved practice to support appropriate strategy identification (when to use what)

You will have opportunities to actively engage with a range of these strategies throughout the session.

By the end of this session, you will leave with a range of practical strategies, a copy of the presentation, and links to some related resources.

Key takeaways:

1. A range of practical teaching and learning strategies that facilitate learning, retention and retrieval.
2. The opportunity to engage with some of the strategies.
3. links to related resources.

CANCELLED B18 CREATIVE GEOMETRIC EXPLORATIONS WITH MATHOMAT

This is a commercial presentation

Subtheme: Innovation and inspiration

**John Lawton, Objective Learning Materials, Chris Tisdell
(Year 5 to Year 10)**

Tools are central to the learning and teaching of geometry. The ways in which students interact with these tools

can profoundly shape their creativity, motivation, and mathematical thinking. This workshop brings together mathematician and educator Chris Tisdell with John Lawton, designer of the Mathomat template, to explore the interplay between tool design and pedagogy.

Chris will present a series of classroom challenges designed to deepen students' understanding of geometry. These include the use of circle-arc templates (no compass required!), and the development of mathematical thinking through the emerging concept of geometography—a practice that blends geometric creativity with reflective tool use.

In response to these pedagogical ideas, John has adapted the Mathomat toolset to better support rich classroom engagement. He will introduce these new designs and share insights from the process of aligning tool development with educational goals.

Key takeaways:

1. Explore the use of physical tools and drawing for student activities.
2. Develop student creative thinking and confidence in mathematics through design.
3. Develop links between open ended creative geometry tasks and the mathematics curriculum.

B19 KNOWING YOUR STUDENTS THROUGH DEVELOPMENTAL RUBRICS

Subtheme: Innovation and inspiration

**Lianna Beeching, Amanda Fan, Preston High School
(Year 5 to Year 10)**

Get inspired with examples of leveraging rubrics in maths to:

- Help students see where they are, where they are going next, and how they have grown.
- Celebrate success with students by signposting what they have learned/ demonstrated.
- Generate data quickly and easily to adapt your teaching.
- Differentiate work for students based on their current point of need.

We will demonstrate how to link an existing maths activity to a rubric, so students can see their learning in real time and how to build rubrics, both for content and problem-solving tasks.

Key takeaways:

1. A student- like experience of using rubrics linked to a maths activity
2. Knowledge and confidence to build a simple rubric linked to your maths program
3. Examples of maths content rubrics for the full 7-10 curriculum that you can take away as inspiration

Remember:

Please bring a pen or pencil

B20 THRIVING THROUGH VISUAL REASONING: USING NUMBER LINES IN LINEAR ALGEBRA

Subtheme: Pedagogy and curriculum

**Lorna McClory, Kyle Hayes, Bacchus Marsh College
(Year 5 to Year 10)**

This session explores how number lines can support students in developing reasoning and number sense when solving linear equations. Often underutilised beyond the early years, number lines offer a powerful visual tool to promote conceptual understanding, reduce reliance on procedures, and deepen mathematical thinking.

Aligned with the MAV25 theme *Thriving in Mathematics*, this session highlights how number lines can:

- Support understanding of inverse operations and equivalence;
- Encourage students to reason visually about balance and structure;
- Provide opportunities for formative assessment and rich discussion.

Participants will engage with practical strategies for using number lines to create high-quality learning experiences that promote productive challenge and enjoyment in algebra. By building connections between numerical and algebraic thinking, number lines can help all students thrive in mathematics.

Key takeaways:

1. The importance of reasoning in linear algebra rather than rote memorising procedural steps.
2. The power of a number line in supporting reasoning in linear algebra.

B21 EMPOWERING MATHEMATICS CLASSROOMS THROUGH AI-ENHANCED HYBRID LEARNING

Subtheme: Innovation and inspiration

**Laila Sarraf, St John's College
(Year 5 to Year 10)**

In this presentation, we will share the journey and outcomes of our school-wide initiative designed to transform the mathematics classroom through a well-balanced, teacher-led, AI-enhanced hybrid learning model. Our vision is to reimagine how students engage with mathematical concepts by integrating artificial intelligence tools that support adaptive learning, real-time feedback, and meaningful differentiation.

The program sits at the intersection of pedagogy, technology, and innovation. Grounded in best teaching practices and research-informed strategies, the approach amplifies the teacher's role while leveraging AI to meet each learner where they are. It empowers students to take ownership of their learning, fosters deep conceptual understanding, and supports engagement with real-world problem solving.

Attendees will gain insight into our implementation framework, examples of AI tools used, student outcomes, and teacher reflections. The session is designed to inspire and equip educators and leaders to explore AI integration meaningfully and sustainably in their own contexts.

Key takeaways:

1. Explore a practical framework for designing and implementing a school-wide hybrid AI-enhanced learning model.
2. Learn strategies for maintaining a teacher-led approach while leveraging technology to amplify impact.
3. Discover real-world examples of how the program has improved student engagement, feedback cycles, and conceptual understanding.

SESSION B: Thursday, 12.10pm-1.10pm (cont.)

B22 TASKS DESIGNED TO BRIDGE YEAR 9 EXTENSION STUDENTS TO VCE

Subtheme: Pedagogy and curriculum

Jiqing Sun, Sanjeev Meston, Strathcona Girls Grammar (Year 7 to Year 10)

Many of Year 9 extension students (high-achieving students) choose to accelerate their VCE mathematics journey (e.g. Mathematical Methods) from Year 10. In this section, we report how we designed and introduced a series of tasks to foster their mindset and thinking approaches required for VCE mathematics. These tasks highlight sophisticated algebraic reasoning, linking graphical features with algebraic expressions, and making connections across different concepts. They are intended to develop students' adaptability and extend their capabilities, supporting a smooth transition to the VCE-style exam questions. We also present an analysis of the assessments based on these tasks, highlighting their effectiveness and the challenges encountered during implementation.

Key takeaways:

1. A series of tasks designed to foster Year 9 extension students' (high-achieving) mindsets and thinking approaches required for VCE mathematics, extending their capability and adaptability as they step towards VCE.
2. An analytical approach to the assessments, identifying students' progress and challenges towards the tasks.

FULL B23 RETRIEVAL PRACTICE AND ITS ROLE IN AN EXPLICIT INSTRUCTION CLASSROOM

Subtheme: Pedagogy and curriculum

Zoe Tamplin and James Dann, Brighton Grammar School (Year 5 to Year 12)

Some teachers may believe that reviewing knowledge from the previous lesson is the best form of retrieval practice. However, what happens around exam time? Why have students suddenly forgotten everything? Retrieval practice that is spaced and allows for previous content to be reviewed on a weekly or monthly basis aids in flattening the 'forgetting curve'. It strengthens long-term retention of the skills of previous topics.

I will describe a sequence and structure, with recommended curriculum and resources to help students retain knowledge and skills in their long-term memory through a range of

Daily Review and Retrieval Practice techniques, explicitly showcasing the distinct difference between these two types of retrieval. Workshop participants will reflect on their own lesson structures throughout a unit and semester and discuss how spaced retrieval could be implemented in their setting to help strengthen student understanding long-term, for their examinations and beyond.

Key takeaways:

1. Understand the difference between Daily Review and spaced Retrieval Practice.
2. How to implement different forms of retrieval in a unit and semester.
3. How to communicate the routines around implementation in the classroom to students and teaching teams.

Remember:

Unit plan of a topic in mathematics (not necessary but useful for the workshop), notebook to plan.

CANCELLED B24 LEARN THE SPARK METHOD: ASSESSMENT THAT DRIVES LEARNING

Subtheme: Pedagogy and curriculum

Muhammed Omer, Darul Ulum College (Year 7 to Year 12)

This presentation introduces the SPARK Method, a highly efficient, student-centred strategy transforming exam preparation for mathematics teachers and students.

Traditional exam prep often involves time-consuming marking for teachers and passive learning for students. Our strategy solves this by empowering students to self-assess diagnostic practice tests (1-2 questions per concept) using a guided template. Teachers then facilitate live, class-wide gap identification in minutes, eliminating marking piles and providing instant, actionable data.

This approach fosters student ownership over their learning, making weaknesses visible and guiding targeted revision. For teachers, it significantly reduces workload and ensures precise instructional focus.

Attendees will learn to design diagnostic tests, utilise the self-marking template, and master live data collection. We'll show how this strategy helps students thrive in mathematics by making exam prep active and targeted, while simultaneously allowing teachers to thrive by cutting workload and providing effective, data-driven instruction.

Key takeaways:

1. Utilise student self-assessment to instantly identify knowledge gaps and spark intrinsic motivation for revision.
2. Design diagnostic practice tests that reveal true understanding and channel emotional responses into targeted learning.
3. Implement real-time data collection for immediate class-wide insights, reducing teacher workload and guiding precise reteaching.

Remember:

No special software required. Participants should bring: A device for accessing digital templates (laptop/tablet preferred), Calculator (any brand - strategies work across all calculator types), Notebook for planning implementation. All templates and resources will be provided digitally during the session. Examples will cover various mathematical topics suitable for Years 7-12. Strategies can be adapted for any mathematics curriculum area. Participants will leave with ready-to-implement materials and a clear action plan for introducing the SPARK Method in their own classrooms.

B25 OPEN ENDED ASSESSMENT IN MATHEMATICS

Subtheme: Innovation and inspiration

Geoffrey Menon, Camberwell High School (Year 9 to Year 12)

We will talk about the experience of students' work with open-ended assessment in mathematics at Camberwell High School and some of the flow-on benefits to students. We will present some examples of student work as posters and mathematical paper (with examples mostly drawn from year 10 mathematics and year 11 specialist mathematics and mathematical methods)

Key takeaways:

1. Open-ended assessment provides all students in the class with a level playing field where they can show their skills.
2. Open-ended assessment promotes and encourages mathematical thinking that benefits students throughout their schooling.
3. Open-ended assessment is not very hard to set up and run and is not impossible to assess.

Remember:

No special equipment is needed but you may wish to take photos of the student work examples.

B26 SEQUENCES AND EVEN MORE SEQUENCES

Subtheme: Innovation and inspiration

Brett Stephenson, Guildford Young College, Leilani Stephenson (Year 9 to Year 12)

The patterns that can be found in sequences are evidenced by the substantive resource at the Online Encyclopedia of Integer Sequences (OEIS oeis.org). This workshop will investigate a number of sequences such as the family of Nacci sequences (Fibonacci, Tribonacci, Infonacci) and recursive sequences that can lead to cycles or chaos (such as logistic models). The use of web graphs will be introduced with the Casio Classpad to assist with these investigations.

Key takeaways:

1. Sequences chaos pattern.

Remember:

Bring a graphics calculator or device to assist if you have your own but Casio Classpads will be available and will be used to demonstrate the activities.

B27 FINANCE IN FOCUS: VISUALISING CONCEPTS WITH CAS CALCULATORS

Subtheme: Pedagogy and curriculum

Shelley Pendlebury, Thomas Laverack, John Paul College (Year 9 to Year 12)

Want to make finance tangible and accessible for your students? Join us for 'Finance in Focus: Visualising Concepts with CAS', a hands-on workshop designed to enhance student comprehension and retention. We'll explore powerful techniques using dynamic plots and recurrence relations to illustrate financial growth and decay, seamlessly transitioning into amortisation tables and the finance solver. While we'll primarily use the TI-Nspire CAS, the strategies are easily adaptable to other graphing technology. This visual approach will not only solidify your students' understanding of finance but also reinforce valuable data analysis skills from your curriculum. Prepare to empower your students with practical financial literacy!

Key takeaways:

1. Build teacher confidence in using CAS to teach financial concepts.

SESSION B: Thursday, 12.10pm-1.10pm (cont.)

2. Explore multiple representations — recurrence relations, graphs, and amortisation tables — beyond the finance solver.

3. Discover engaging, visual strategies suitable for middle years and senior financial maths to support conceptual understanding and data skills.

Remember:

CAS calculator or software required (the Ti calculator will be used in the workshop but the Casio is welcome).

B28 ONE SCHOOLS APPROACH TO TEACHING UNIT 3/4 FOUNDATION MATHS

Subtheme: Pedagogy and curriculum

Tom Robinson, Greater Shepparton Secondary College (Year 11 to Year 12)

This presentation will outline one schools approach to teaching Unit 3/4 Foundation Maths and the learnings from the first 3 years of the new study design. Resources that will be provided and discussed include:

- Student notes aligned with all chapters of the Jacaranda text book
- Accompanying PowerPoints for all notes with Warm Up tasks throughout
- A yearly planner
- The three SACs - iterations developed from QATs resource
- Discussion on latest and previous exams

This presentation will be relatively informal, welcoming the opportunity to network and learn from each other and share other schools approaches and experiences.

Key takeaways:

1. An opportunity to discuss the Unit 3/4 Foundation Maths course and the experience for schools so far.
2. Access to resources that can be used immediately, aligned with Jacaranda text book.

B29 MATRICES BY MAFFSGURU AND NELSON VICMATHS

Subtheme: Pedagogy and curriculum

Robert Yen, Cengage Learning Australia, Darren Smyth, Wesley College (Year 11 to Year 12)

Darren and Robert tackle this year's VCE exam questions on Matrices and explain their teaching tips for this complex topic. Learn about common student errors, what not to do, calculator shortcuts and exam hacks. Suitable if you're teaching General Maths for the first time or if you haven't taught it recently.

Key takeaways:

1. Teaching tips for this complex VCE General Maths topic.
2. Learn about common student errors and what not to do as a teacher.
3. Learn calculator shortcuts and exam hacks.

B30 THRIVING IN A CAS EXAM (METHODS AND SPECIALIST) WITH A CASIO CLASSPAD

This is a commercial presentation

Subtheme: Contemporary challenges and successes

Alastair Lupton, Casio Education Australia (Year 11 to Year 12)

This workshop will share a range of exam preparation tips for students using a Casio ClassPad in a VCE Methods or Specialist (CAS-permitted) exam. We will cover everything from operating system updates to global and app-specific settings, clever ways to work with input and output, and use the Graph & Table app efficiently, tips on equation solving, as well as how to create and use User Defined Functions and add-in programs. A video covering all this has been added to the Casio Education suite of VCE resources, which we will visit to see what else can support your students in these high stakes assessments.

Key takeaways:

1. How students can get the best out of their ClassPad in a high-stakes exam.
2. How user-defined functions and add-in programs can be best used.

3. Where other resources to help student exam preparation can be freely obtained.

Remember:

Bring your ClassPad.

B31 VCE VM: NUMERACY THAT MATTERS: MAKING SENSE OF THE REAL-WORLD

Subtheme: Pedagogy and curriculum

Dilan Abeyaratne, Taylors Lakes Secondary College (Year 11 to Year 12)

VCE VM Numeracy That Matters: Making Sense of the Real World explores how applied, real-world numeracy empowers students to build confidence, independence, and purpose in their mathematical thinking. VCE VM Numeracy supports students in using mathematics as a tool for decision-making, problem-solving and navigating everyday challenges. This session highlights how meaningful, relevant numeracy activities helps seeing maths as useful, understandable, and connected to their goals in work, life, and the community.

1. Numeracy builds confidence: Students thrive when maths is relevant — VCE VM Numeracy promotes confidence by connecting learning to real-life contexts.

2. Applied learning leads to success: Practical tasks like budgeting, planning and data interpretation help students understand how maths is used in everyday life and work.

3. Thriving = engagement + purpose: Students engage more deeply with mathematics when they see its value in their personal goals, future employment, and community involvement.

Key takeaways:

1. Participants will engage with practical examples, classroom strategies, and link VCE VM outcomes to deliver high quality learning experiences, and true engagement.

B32 SURPRISING OCCURRENCES OF E AND PROGRAMMING USING TI-NSPIRE

Subtheme: Pedagogy and curriculum

Raymond Rozen, Yeshivah College, Shane Dempsey, The Hamilton and Alexandra College (Year 11 to Year 12)

The sequence 0,1,2,9,44,265 ... captures a captivating pattern that intertwines concepts from several classical mathematical problems and is one of the many surprising occurrences of e that will be presented in this session. The sequence serves as a rich context for engaging with pseudocode and programming. In this session attendees will explore this interesting sequence and other simulations and learn how to write a TI-Nspire function and a program to generate this and related simulations. Attendees are encouraged to bring a TI-Nspire CAS calculator or a laptop with TI-Nspire CAS software.

Key takeaways:

1. Occurrences of e .
2. Interesting sequences.
3. Programming using TI-Nspire.

Remember:

TI-Nspire CAS Calculator.

AFTERNOON KEYNOTE: Thursday, 2pm-3pm

KPT01 LEADING CHANGE IN MATHEMATICS: CONTEXTUAL STORIES OF IMPACT, FRAMEWORKS, AND TRANSFORMATION

Subtheme: Leadership and agency

Sarah Asome, Bentleigh West Primary School, Kate Copping, The University of Melbourne, Eamon Light, St. Anne's Catholic Primary School, Patty Mete, The Knox School, Tara Richardson, Greater Shepparton Secondary College (F to Year 12)

This panel showcases the journeys of mathematics education leaders who have successfully implemented teaching and learning frameworks that have led to meaningful and measurable improvements in student engagement and achievement.

Across diverse school and system contexts, panellists will share their approaches to leading change, the frameworks that guided their work, and the professional learning and cultural shifts that supported sustained impact.

The session offers valuable insights into what effective leadership in mathematics education looks like in practice — highlighting both the challenges faced and the enablers of success — and how context plays a significant role in leading change in schools.

Participants will leave inspired by real-world examples and equipped with practical ideas to support their own improvement journeys and approaches to leading change in their school settings.

SESSION C: Thursday, 2pm-3pm

C02 CHECKING FOR UNDERSTANDING: MAKING THINKING VISIBLE

Subtheme: Pedagogy and curriculum

Anita Green, Monash University/Coral Park Primary School (F to Year 6)

Checking for understanding is a vital part of effective teaching. It allows educators to uncover student thinking, identify misconceptions, and make timely instructional decisions. This session, focuses on the importance of this formative assessment practice in supporting student learning. Participants will explore a range of practical strategies that can be used across different classroom contexts. We will unpack the purpose and effectiveness of each approach, considering when and how to use them to gather meaningful evidence of learning. Through hands-on activities and discussion, teachers will reflect on how these strategies can be embedded seamlessly into everyday practice. By the end of the session, participants will leave with a deeper understanding of why checking for understanding matters, and a toolkit of adaptable, classroom-ready techniques to use immediately.

Key takeaways:

1. Understand the importance of checking for understanding as a key part of effective, responsive teaching
2. Explore a range of practical, adaptable classroom strategies to make student thinking visible
3. Gain confidence in selecting and using strategies to inform next steps in learning

C03 FROM TELLING TO TEACHING: RETHINKING QUESTIONING IN MATHEMATICS CLASSROOMS

Subtheme: Pedagogy and curriculum

Alana Bandholz, Carly Millichap, Brisbane Catholic Education Office (F to Year 6)

This interactive session invites educators to explore how questioning shapes mathematical thinking and student engagement. Participants will analyse curated video clips of real classroom interactions, identifying and categorising teacher and student questions by purpose and cognitive demand using a visual framework.

Through collaborative reflection, they will examine how intentional questioning strategies shift practice from 'telling' to 'teaching,' promoting deeper understanding and student agency. The session concludes with a discussion on how questioning supports formative assessment and responsive teaching.

Aligned with the conference theme, this session highlights evidence-based practices that enhance mathematics teaching and learning through questioning.

Key takeaways:

1. Understand the types, purposes, and design of effective questions in mathematics classrooms, including strategies for implementation.
2. Use questioning as a formative assessment tool to promote student reasoning, independence, and engagement.
3. Reflect on the shift from 'telling' to 'teaching' by leveraging purposeful questioning to foster deeper mathematical thinking.

FULL C04 ENGAGE EVERY LEARNER: MAKING MATHEMATICS VISUAL, VISIBLE AND EXPLICIT

Subtheme: Pedagogy and curriculum

Catherine Epstein-Rodgers, Camberwell Grammar Junior School (F to Year 6)

Making mathematics visual through hands-on resources and shared strategies is a powerful way to engage learners and deepen understanding. This workshop explores how teachers can explicitly teach mathematical concepts using concrete materials and visual representations that make thinking visible and learning stick.

Participants will engage with practical tools — such as pattern blocks, counters, Cuisenaire rods, and playing cards — to help students represent their ideas, solve problems, and communicate their thinking with clarity. These strategies not only support differentiation but also encourage students to make meaningful connections across mathematical strands.

A key focus is on helping students visually share their strategies and solutions, promoting classroom discussion, collaborative reasoning, and stronger mathematical confidence.

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SESSION C: Thursday, 2pm-3pm (cont.)

This session will leave you with ready-to-use resources and techniques to embed visual, explicit teaching into your everyday mathematics practice.

Key takeaways: 1. Explicitly teach concepts using hands-on tools and visual representations.

2. Use practical, differentiated resources to support student thinking and connection-making.

3. Encourage visual sharing of strategies to build confidence, collaboration, and rich discussion.

Remember:

Open mind and a willingness to participate in hands on investigations.

C05 ANTICIPATING LEARNING: PLANNING FOR STUDENT SUCCESS

Subtheme: Pedagogy and curriculum

Brendan Hodge, Orchard Park Primary School, Chris Terlich, Inverloch Primary School (F to Year 6)

How do teachers effectively anticipate and plan for student learning? With planning identified as a key element of the Victorian Teaching and Learning Model (VTLM) 2.0, this session explores how two schools approach this critical phase of practice. Participants will gain insight into how anticipation—thinking ahead about what students might say, do, or misunderstand—can strengthen lesson design and student outcomes. Through practical examples and real classroom strategies, this session will unpack how anticipating student responses shapes purposeful learning activities and sharpens instructional decision-making. Join us to explore how intentional planning not only improves teacher clarity, but also enhances student thinking, engagement and growth.

Key takeaways:

1. Concrete ideas to apply to your own planning and teaching.
2. Practical examples of how anticipating student responses helps shape learning activities, showing the direct application of theory into practice.
3. Learn about how anticipating student thinking can sharpen real-time instructional decisions, offering practical tools for responsive teaching.

C06 EXPLORE, DISCOVER, UNDERSTAND: CUISENAIRE RODS IN THE PRIMARY CLASSROOM

Subtheme: Pedagogy and curriculum

Antonio Sterich, Roxburgh Park Primary School (F to Year 6)

This practical session will empower primary teachers to build students' understanding of algebraic structures using Cuisenaire rods and templates, guided by the Concrete–Pictorial–Abstract (CPA) model of teaching. Participants will explore how hands-on manipulation of Cuisenaire rods can make number relationships, equivalence, and early algebraic thinking visible and meaningful for learners. The session will demonstrate ways to bridge the concrete experience with pictorial representations and symbolic expressions, helping students connect patterns, generalise, and justify their thinking. Teachers will engage in activities they can adapt for different year levels to foster curiosity, reasoning, and mathematical language. By using rods and templates strategically, teachers can cultivate a classroom culture of discovery, where students investigate mathematical structures rather than memorise procedures. Participants will leave with practical strategies, lesson ideas, and confidence to integrate this powerful approach into everyday maths teaching to develop flexible and connected mathematical thinkers.

Key takeaways:

1. Activities with Cuisenaire rods and templates to make abstract algebraic ideas accessible for students.
2. Moving students from concrete manipulation (using Cuisenaire rods) to pictorial representations (using templates) and then to abstract symbols, supporting conceptual understanding.
3. Create classroom environments where students explore, notice patterns, make generalisations, and communicate their mathematical thinking.

C07 THRIVING THROUGH INQUIRY: PROJECT-BASED AND INTEGRATED PRIMARY MATHEMATICS EXPERIENCES

Subtheme: Pedagogy and curriculum

Kate Eastcott and Nick Kirby, Phillip Island Village School (Year 3 to Year 6)

At Phillip Island Village School, project-based learning and integrated units are powerful approaches for engaging primary students in meaningful mathematics. This session will explore how real-world projects—such as establishing a school canteen or designing a regenerative garden—can embed mathematical thinking within authentic, student-driven inquiry. We will demonstrate how mathematical proficiencies are developed through purposeful contexts that promote curiosity, agency and collaboration. We will discuss how formative assessment can be woven through each stage of a project to support individual needs, guide instruction and challenge learners at all levels. Through practical examples and classroom stories, this session will highlight how these engaging pedagogies can help students not only understand mathematics, but enjoy it and see its relevance in their daily lives.

Key takeaways:

1. How to embed mathematics meaningfully in real-world, project-based learning.
2. Ways to use formative assessment to guide and differentiate maths instruction.
3. Strategies for fostering engagement, agency and enjoyment in primary maths classrooms.

FULL C08 TEACHING DECIMAL FRACTIONS THROUGH A SYSTEMATIC UNDERSTANDING OF PLACE VALUE

Subtheme: Pedagogy and curriculum

Heather McMaster, University of Sydney (Year 5 to Year 8)

Having learnt how to operate with whole numbers, many students think that new rules are required to operate with decimal fractions eg. They learn that with decimal fractions, you can 'add a zero' to the end of a number without changing its value, but you can't do this with whole numbers.

In this workshop you will be instructed in the use of various representations and games that connect the concept of decimal fractions to an understanding of our decimal place value system.

Key takeaways:

1. Connect decimal fractions to knowledge of our decimal place value numeration system.
2. The decimal point is best understood as a marker of the one's place.
3. Avoid confusing language such as 'crossing off' or 'adding' zero. Instead, talk about digits shifting their place in a number and zero as a place-holder.

C09 UNMASKING THE MATHS: EXPLORING MATHEMATICAL MODELLING RESOURCES FOR YEARS 3-10

Subtheme: Pedagogy and curriculum

John West, Celia Coffa, University of Adelaide (Year 3 to Year 10)

In this session, participants will engage with examples of mathematical modelling and statistical investigations. The examples are drawn from the Maths in Schools online courses and relevant to Years 3–10. We will showcase evidence-based methodologies such as Explicit Teaching, incorporating the Concrete-Representational-Abstract (CRA) model. Walk away with practical examples and classroom-ready supporting resources to guide you through the process.

The Maths in Schools project provides free online professional learning. The courses were developed by The University of Adelaide in collaboration with Education Services Australia and funded by the Australian Government Department of Education. These courses cater to teachers across all levels, including Foundation to Year 2, Years 3–6, and Years 7–10.

Key takeaways:

1. Practical examples of mathematical modelling and statistical investigations and classroom-ready resources
2. Access to free ongoing resources and support from the Maths in Schools project

SESSION C: Thursday, 2pm-3pm (cont.)

C10 NON-BINARY PEDAGOGY: BEYOND EXPLICIT VS. INQUIRY

Subtheme: Pedagogy and curriculum

**Em Thompson, Oxford University Press
(Year 5 to Year 12)**

What constitutes effective mathematics teaching? Pedagogy is complex and this question demands a nuanced response. Despite ongoing debates that pitch explicit teaching and inquiry-based learning against each other, we can all agree that such a binary doesn't do justice to the multifaceted reality of the modern mathematics classroom. Some insight is gained by instead imagining a spectrum from explicit teaching to inquiry-based learning, but this still isn't enough. In this session, we will consider pedagogy on a plane, with each axis representing its own spectrum. We will use this model to consider the role of the teacher and the role of the student independently and explore what can be gained by adding an extra dimension.

Key takeaways:

1. An expansive perspective on the mathematics pedagogy debate that moves beyond binaries and toward understanding.
2. A flexible framework for critiquing, reflecting on, and owning your teaching practice.

C11 EXPLORING THE PRACTICAL IMPLEMENTATION OF EXPLICIT-TEACHING STRATEGIES IN MATHS CLASSROOMS

This is a commercial presentation

Subtheme: Pedagogy and curriculum

**Lindy Sharkey and Julian Lumb, Pearson
(Year 7 to Year 10)**

In this session we will unpack and explore the power of explicit teaching strategies to lift outcomes and build mathematical confidence, especially when paired with resources designed to support clarity, structure and engagement.

We will unpack the key phases of explicit teaching including setting goals, the gradual release of responsibility, checking for understanding and immediate feedback whilst demonstrating how the purposeful design of Pearson Mathematics series supports you and your department

to easily and effectively meet the needs of the Victorian Teaching and Learning Model VTLM 2.0.

We will also share how this approach goes hand-in-hand with differentiation and the additional support we have on offer to help you build out a multi-tiered system of supports in your mathematics department.

Key takeaways:

1. The ability to recognise explicit-teaching practices in action
2. Some ready-to-use implementation strategies
3. A clear and consistent framework for lesson redesign

C12 TOOLKIT FOR TEACHERS NEW TO MATHEMATICS

Subtheme: Pedagogy and curriculum

**Vincent Lam, Loyola College
(Year 7 to Year 10)**

Are you a new mathematics teacher? Are you a out-of-field teacher who's been thrown into a maths class? I am going to share with you how I teach certain mathematical concepts. For example, I will share with you how I explain directed numbers to Year 7s, as well as how to factorise monic quadratic trinomials to Year 9s, using simple steps that can be broken down and easily remembered. I hope you can get at least one thing out of my session!

Key takeaways:

1. How to explain certain concepts in Years 7-10 mathematics.
2. How to help students remember procedures and steps.
3. How to break down mathematical ideas into smaller parts.

FULL C13 DIFFERENTIATING WITH IMPACT: OPEN-ENDED TASKS FOR YEARS 7 - 10

Subtheme: Pedagogy and curriculum

**Shiny Sood, Aitken College
(Year 7 to Year 10)**

This session promotes a pedagogical approach focused on open-ended tasks, enabling effective differentiation of instruction for students across Years 7-10, aligned directly

with the Victorian Curriculum's commitment to learning diversity and inclusion. By designing tasks with multiple entry points, we can cater to varied abilities and learning styles without requiring individually modified versions, a key aspect of efficient and equitable teaching. This strategy supports the Victorian Teaching and Learning Model (VTLM 2.0), particularly the "Enabling Learning" element and the High-Impact Teaching Strategy (HITS) of Differentiated Teaching. It fosters critical and creative thinking (a Victorian Curriculum Capability) by allowing students to engage at the level of challenge that caters for them, promoting deeper conceptual understanding.

Key takeaways:

1. Simplify differentiation to allow the learners to engage with a single task at multiple levels.
2. Tasks aligned with the Victorian Curriculum's diversity goals, VTLM 2.0, and HITS for differentiated teaching.
3. Encourage critical and creative thinking to allow students to demonstrate conceptual understanding at different levels.

C14 ON YOUR L-PLATES - USING THE TI-NSPIRE GRAPHING CALCULATOR

Subtheme: Pedagogy and curriculum

**Mark Ljubic and Daniel Gralow,
St Joseph's Secondary College
(Year 7 to Year 12)**

If you are brand new to using the TI-Nspire calculator then this session is designed for you. All you need to do is bring your TI-Nspire Calculator to this session and make sure you ask plenty of questions as we learn together how to:

- Enter data to produce graphs - dot plots, histograms, box plots, pie charts.
- Enter data to produce scatterplots and lines of best fit.
- Using the Notes Page to enter text, diagrams and formulas using 'math boxes'.
- Storing your completed masterpieces on the calculator.
- Sharing your calculator files with students.

Key takeaways:

1. I can enter data into a spreadsheet and produce a variety of graphical displays.

2. I can use the notes page and enter text, diagrams and mathematical formulas.
3. I can store and share the files that I have created.

Remember:

TI-Nspire CAS Calculator.

C15 NUMERACY ACROSS THE CURRICULUM - SUPPORTING GRAPHING IN SECONDARY SCHOOLS

Subtheme: Pedagogy and curriculum

**Lauren Jackson and Tyler Locker, Sunbury Downs College
(Year 7 to Year 12)**

Graphs are everywhere, but students often struggle to interpret or create them meaningfully — especially when key elements like scale, axes, labels, and titles (SALT) are missing or misunderstood. This presentation draws on cross-curricular findings from the Victorian Academy of Teaching and Leadership's Numeracy Across the Curriculum Applied Learning Project, showcasing how graphing skills can be strengthened across secondary school subjects through intentional teaching strategies.

Using simple checklists, graph analysis using open prompts like "What do you notice?", the session shows how to develop students' descriptive and critical thinking skills when interpreting and constructing graphs. Emphasis is placed on identifying and addressing common graphing errors and misconceptions, helping students in Years 7-12 become more confident in reading and producing data visuals in context—from Science reports and Humanities projects to Health and PE.

Key takeaways:

1. Learn how to use the SALT framework and checklists to support consistent graphing expectations.
2. Explore strategies to build student confidence in interpreting and critiquing graphs across subjects.
3. Identify and address common graphing misconceptions using cross-curricular, student-centred approaches

SESSION C: Thursday, 2pm-3pm (cont.)

FULL C16 NEW TI - CAS TOOLS FOR NETWORKS IN VCE GENERAL MATHS

Subtheme: Innovation and inspiration

**Michael Llewellyn and Ben Chenoweth, Donvale Christian College
(Year 9 to Year 12)**

We have developed programs for the TI-Nspire CAS calculator to support students with the Networks topic in VCE General Maths Unit 4. These programs allow students to engage with the deeper thinking questions without getting bogged down in tedious calculations. While they do not remove the need for understanding, they allow students to get to the interpretation stage in less time.

We will demonstrate the use of these programs and share teaching strategies that were successful with our classes in presenting this material, along with other hints and tips for teaching Networks in VCE General Maths.

Key takeaways:

1. Strategies for teaching Networks in VCE General Maths.
2. Helpful programs for the TI-CAS Calculator.

Remember:

Please bring a TI CAS Calculator, or have the software installed on your computer.

C17 UNLOCKING MATHEMATICAL THINKING: BUILDING METHODS READINESS USING CAS TECHNOLOGY

Subtheme: Pedagogy and curriculum

**Jotishma Singh, Nazareth College, Shelley Pendlebury, John Paul College
(Year 9 to Year 12)**

Are you looking to prepare your students for the challenges of Maths Methods Units 3 and 4? This engaging workshop focuses on strengthening key skills from Year 10 and Units 1 and 2 through strategic teaching approaches and task design that develop algebraic fluency, function sense, and graphing insight. We'll explore how rich tasks, visual thinking, and investigations can promote deeper understanding and mathematical reasoning. CAS technology will be utilized to support exploration, with an emphasis on pedagogy that fosters confidence, curiosity, and capability. Whether you're refining your current practice, seeking fresh inspiration, or

keen to share your ideas, this session offers practical strategies ready for immediate classroom use.

Key takeaways:

1. Targeted strategies to bridge gaps and build Readiness
2. Engaging pedagogy that promotes deep mathematical thinking
3. Confident use of CAS to support, not substitute, thinking

Remember:

TI Nspire CAS calculator.

C18 IMPLEMENTING PSEUDOCODE AND ALGORITHMS IN PYTHON ON COMPUTER AND CAS

Subtheme: Pedagogy and curriculum

**Enzo Vozzo, Mentone Grammar
(Year 9 to Year 12)**

The introduction of Pseudocode in the new Mathematical Methods and Specialist Mathematics Study Design indicates that algorithms and coding are beginning to be seen as important. This presentation introduces the three key elements of algorithm design: sequencing, decision-making and repetition. These elements will be implemented using the popular open-source computer language Python on a computer and on the new CAS TI Nspire CX II calculator, which has Python built into it. Delegates will have the choice of coding a variety of simple algorithms to calculate the value of pi (using the bisection method), generate Pythagorean triples and primes, run simulations and define (create your own) mathematical functions such as factorials, sine and square roots. Python also handles complex numbers, with the ability to calculate Euler's identity in a single line of code! No experience of coding or Python is required.

Key takeaways:

1. Introduction to pseudocode and algorithm design: sequencing, decision-making and repetition.
2. Introduction to the popular open-source computer language Python.
3. Choice of writing code to calculate the value of pi, generate Pythagorean triples, primes, run simulations, and define functions such as sine and square roots in terms of elementary arithmetic.

Remember:

Delegates do need to have Python installed on their computer or it can be installed from the Python.org website or use a web-based version. Delegates should bring their laptop and/or TI-nspire CX II which has Python built in. Python is not available on the Casio ClassPad FX-CP400.

C19 ACTIVITIES TO UNDERSTAND THE MATHEMATICS BEHIND THE ALGORITHMS OF AI

This is a commercial presentation

Subtheme: Pedagogy and curriculum

**Georgia Gouros, The Centre for Higher Education Studies
(Year 9 to Year 12)**

The session is intended to give teachers some ideas for teaching mathematics that:

- Develop deeper student understanding of mathematics and its real life applications by exploring its use in AI digital technology.
- Inspire students to appreciate the value of mathematics as an essential skill in automated decision making.
- Cover elements of VTLM 2.0 relevant to understanding AI.
- Develop ethical thinking in students around the issues surrounding automated decision making that can impact humans and society.

Key takeaways:

1. Covers elements of VTLM 2.0 relevant to real world problem - understanding algorithms of AI
2. Provides activities to build student understanding of algorithms, statistics and probability through the study of algorithms used in AI
3. Provides activities for students to explore issues around the application of AI in everyday life

C20 BRINGING VCE MATHS TO LIFE: HANDS-ON, CROSS-CURRICULAR LEARNING IN ACTION

Subtheme: Innovation and inspiration

**Jiahong Gong, Greater Shepparton Secondary College
(Year 9 to Year 12)**

Motivating high-potential students to pursue senior mathematics can be challenging, particularly when balancing the need to close gaps in foundational knowledge while also extending advanced learners. An effective approach is to spark curiosity through real-world applications, career connections, and opportunities to think mathematically in systematic and creative ways.

In this session, delegates will actively work through two adaptable Specialist Mathematics projects. The first is a trigonometry based task — surveying and designing a bridge — which can be readily applied at Years 9–10. The second is a hands-on logic and proofs investigation using LittleBits. Delegates will experience these tasks as learners, consider the mathematical proficiencies they promote, and reflect on how they might adapt the activities to suit their own school contexts.

Key takeaways:

1. A shared STEM project on trigonometry, adaptable for Years 9 to 11.
2. A collaborative investigation project for Year 11 Specialist Mathematics.
3. Strategies for strengthening connections across year levels and among areas of study in senior mathematics.

Remember:

It would be great if you could bring your laptop along to try out the activities.

SESSION C: Thursday, 2pm-3pm (cont.)

C21 LEVERAGING AI TO GENERATE CONTEXTUAL DATA FOR GENERAL MATHS

Subtheme: Innovation and inspiration

Fatima Farooqui, Point Cook Senior Secondary College (Year 10 to Year 12)

Artificial Intelligence can be used to generate synthetic data that mirrors real-world patterns, making it highly suitable for various types of data analysis. For example, AI can simulate categorical data for exploring frequency distributions, segmented bar charts, or two-way tables. It can also produce numerical data to support investigations into data spread, central tendency, and outlier detection using boxplots and histograms. In studying associations, AI can generate datasets to analyse relationships between response and explanatory variables using scatterplots. AI models can mimic linear and non-linear associations for practicing regression analysis, calculating Pearson correlation coefficients, and performing residual analysis. In time series contexts, AI can simulate trends, seasonality, and irregular fluctuations to support smoothing techniques and forecasting models. By transforming or generating data using logarithmic, square, or reciprocal methods, AI enables students to test a wide range of statistical techniques, supporting deeper understanding, experimentation, and effective modelling of complex data scenarios.

Key takeaways:

1. Understand how to formulate effective prompts for AI to generate realistic data for SACs.
2. Learn methods for creating real-life scenarios that give meaning and relevance to the generated data.
3. Develop practice worksheets using various types of data to reinforce analytical skills through targeted exercises.

Remember:

Delegates can bring laptops.

FULL C22 DESIGNING INVESTIGATIONS FOR VCE METHODS AND SPECIALIST

Subtheme: Pedagogy and curriculum

James Mott, Centre for Higher Education Studies, Greta Gomes (Year 11 to Year 12)

The VCE Mathematics study design for the 2023-2027 accreditation period stipulates that mathematical investigations are to be incorporated within Unit 1 and 2 Mathematical Methods and Specialist Maths, which will require students to utilise technology to engage in exploration, conjecture and generalise results. In this session, attendees will be exposed to strategies for designing mathematical investigations to support generalisation within Unit 1 and 2 Mathematical Methods and Specialist Maths. Attendees will explore sample 'starting points' and discuss how such tasks could be adapted to suit their school context. Collaboration amongst attendees will occur in this session, and attendees are encouraged to come with ideas to share. TI-Nspire will be used in the workshop. Attendees are encouraged to bring their own CAS device.

Key takeaways:

1. Ideas for designing and implementing a mathematical investigation.
2. Learning how TI-Nspire CAS can be leveraged to facilitate investigation.

FULL C23 CONNECTING AND CONSOLIDATING LEARNING SO STUDENTS DON'T QUICKLY FORGET

Subtheme: Pedagogy and curriculum

Ellie Drayton, Victorian Mathematics Ambassador, Hume Central Secondary College (Year 7 to Year 12)

Remember that amazing lesson you taught when every student demonstrated excellent understanding? Remember the next lesson when many had no recall of the content? In secondary maths classrooms, students often appear to understand concepts during lessons, only to forget them soon after.

We have seen that students have a greater chance of retaining new ideas if they can connect them to ones they already have stored in their long-term memory. Once students have been exposed to an idea, they need to have multiple retrieval opportunities to strengthen the connections.

How can cognitive load theory and the VTLM 2.0 guide us toward our goal of increasing students' retention?

An interactive session delving into what this looks like in a secondary maths classroom.

Key takeaways:

1. How we can harness the power of daily review, low-stakes quizzes, etymology, spacing and interleaving in our everyday practice.

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C24 EXPLICIT TEACHING USING THE VICTORIAN LESSON PLANS

Subtheme: Pedagogy and curriculum

Emily Glen, Victorian Maths Ambassador (school) (F to Year 6)

Looking to strengthen your practice in explicit teaching? This practical and engaging session will unpack one of the Mathematics Victorian Lesson Plans (VLPs) with a focus on how to use it as a powerful teaching and planning tool. Our key questions for the session to guide our work include:

- How can VLPs support collaborative planning across teams?
- How can we maximise the impact of explicit teaching using enabling and extending prompts?
- How can we adapt VLPs to support the diverse needs of our students while also building consistency and common resources?

Whether you're new to VLPs or looking to strengthen your use of them, this session will provide hands-on strategies and ideas to embed them meaningfully in your practice to drive teacher clarity and student growth.

Key takeaways:

1. How can VLPs support collaborative planning across teams?
2. How can we maximise the impact of explicit teaching using enabling and extending prompts?
3. How can we adapt VLPs to support the diverse needs of our students while also building consistency and common resources?

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SESSION D: Thursday, 3.10pm-4.10pm

TOPIC DISCUSSION GROUPS

Join an engaging discussion group, where you'll gather to share knowledge, experiences and resources on a specific topic (see list below).

You'll be encouraged to actively contribute and collaborate, fostering a supportive environment and build valuable networks. The group will be facilitated to ensure productive discussions, with a strong focus and set questions provided to guide the conversation.

These discussion groups promise to be a dynamic and enriching experience, offering a unique opportunity to connect with peers and enhance your professional community

D01 CURRICULUM - IMPLEMENTATION OF VC 2.0 (F-6)

D02 CURRICULUM - IMPLEMENTATION OF VC 2.0 (7- 10)

FULL D03 MATHEMATICAL MODELLING (PRIMARY)

FULL D04 MATHEMATICAL MODELLING (SECONDARY)

D05 BUILDING TEACHING NETWORKS BETWEEN PRIMARY AND SECONDARY SCHOOLS

D06 EVIDENCE-INFORMED PEDAGOGICAL PRACTICES (PRIMARY)

FULL D07 EVIDENCE-INFORMED PEDAGOGICAL PRACTICES (SECONDARY)

D08 VCE TEACHING, LEARNING AND ASSESSMENT (FOUNDATION)

D09 VCE TEACHING, LEARNING AND ASSESSMENT (GENERAL)

D10 VCE TEACHING, LEARNING AND ASSESSMENT (METHODS)

D11 VCE TEACHING, LEARNING AND ASSESSMENT (SPECIALIST)

D12 VM TEACHING, LEARNING AND ASSESSMENT

D13 EFFECTIVE ASSESSMENT PRACTICES (F-6)

D14 EFFECTIVE ASSESSMENT PRACTICES (7-10)

D15 LEADERSHIP - MATHEMATICS AND NUMERACY (PRIMARY)

D16 LEADERSHIP - MATHEMATICS AND NUMERACY (SECONDARY)

D17 MATHEMATICAL WELLBEING - SUPPORTING STUDENTS AND TEACHERS (PRIMARY)

FULL D18 MATHEMATICAL WELLBEING - SUPPORTING STUDENTS AND TEACHERS (SECONDARY)

D19 CULTURALLY RESPONSIVE MATHEMATICS TEACHING

SESSION
DETAILS
FRIDAY
5 December 2025

KEYNOTES: Friday, 9.15am-10.15am

KF01 ORCHESTRATING LEARNING CONDITIONS TO SUPPORT THRIVING PROBLEM-SOLVERS IN MATHEMATICS

Subthemes: Pedagogy and curriculum; Contemporary challenges and successes; Innovation and inspiration

**Jane Hubbard, Deakin University
(F to Year 6)**

In this session Jane will explore particular classroom conditions that teachers can facilitate and monitor to enable students to thrive when learning through problem-solving approaches in mathematics. Drawing upon her PhD findings, Jane will present a conceptual model that can be adopted by educators to better understand the interconnected relationships that exist between the cognitive and affective domains of learning, noting how these can be directly influenced by different learning environments including current instructional and assessment practices. Using this holistic framing, the affordances and constraints of offering suitable mathematical problem-solving experiences to students of all ability levels will be discussed.

Key takeaways:

1. Appreciating the interconnectedness relationships between cognitive and affective learning domains.
2. Designing and monitoring enabling conditions for learning.
3. Holistic evaluation of mathematics learning and student progress.

KF02 CHILDREN'S USE OF DERIVED-FACT STRATEGIES FOR ADDITION AND SUBTRACTION WITHIN 20

Subthemes: Contemporary challenges and successes; Pedagogy and curriculum

**Sarah Hopkins, Monash University
(F to Year 6)**

To thrive in mathematics learning, it is well established that children need to learn to solve basic arithmetic problems using retrieval and derived-fact strategies [e.g., $7 + 8 = (7 + 7) + 1 = 14 + 1$]. Yet, there is surprisingly little research to illuminate exactly what number facts children should learn to retrieve (just know) and what number facts might be suitably derived. In this address, I present findings from a study where

we individually interviewed 132 children in Years 3 and 4 to investigate the different derived-fact strategies they used to solve addition and subtraction problems within 20. Findings indicate the prevalent use of derived-fact strategies and their comparative efficiency, as well as the known facts that are most commonly used to derive answers. Implications are discussed in terms of which number facts children should know and how the teaching of subtraction might be improved.

Key takeaways:

1. Retrieval is not synonymous with memorisation.
2. Being able to reliably retrieve facts within three specific fact communities — add-to-10, add-10, and add-small — is pivotal for unlocking derived strategies and enabling flexible, efficient mental computation.
3. For subtraction problems, derived-fact strategies are faster than counting strategies but are only marginally more accurate.

KF03 STUDENTS THRIVING MATHEMATICALLY – WHAT DOES IT LOOK LIKE?

Subthemes: Pedagogy and curriculum; Innovation and inspiration

**Kristen Tripet, Australian Academy of Science
(F to Year 12)**

Teachers want their students to thrive mathematically—but what does that truly look like? Francis Su, a distinguished mathematician and author of *Mathematics for Human Flourishing*, writes, “Exploration and understanding are at the heart of what it means to do mathematics.” For students to thrive, they must be exploring patterns and relationships, making conjectures, forming generalisations, justifying their reasoning, and representing their thinking in multiple ways.

In this keynote, Kristen will unpack both the what and the how of mathematical thriving, shifting the conversation from inquiry-based teaching to mathematical inquiry as the active work of the student. Kristen will also examine the important role that different pedagogical practices can play in supporting students’ mathematical inquiry, including explicit teaching, demonstrating how purposeful instruction and inquiry work together in the mathematics classroom.

Key takeaways:

1. Understand what it means for students to thrive mathematically as knowers and doers of mathematics.
2. Learn key mathematical practices students use in when engaged in genuine mathematical inquiry
3. Explore how different pedagogical practices can support and enhance students’ mathematical inquiry.

FULL KF04 THRIVING IN MATHEMATICS TEACHING: THE ROLE OF PRODUCTIVE TEACHER NOTICING

Subthemes: Pedagogy and curriculum; Contemporary challenges and successes; Innovation and inspiration

**Ban Heng Choy, Nanyang Technological University, Singapore
(F to Year 12)**

What are the key characteristics of effective mathematics teaching? Against the backdrop of highly polarised discourse on what constitutes high-quality instruction, teachers have been pulled in different pedagogical directions, although it is widely recognised that effective teaching can take different forms. How can teachers thrive as they continue doing the ambitious work of improving their teaching expertise amidst this pedagogically divisive educational landscape? In this keynote, I aim to argue that the key to unlocking the kind of teaching that empowers teachers to be adaptive in their instruction—a hallmark of effective teaching—is to improve their ability to productively notice critical mathematical and instructional details as they prepare, teach, and reflect on their lessons. By seeing every lesson as an opportunity for improving teaching, teachers can begin to focus on providing high-quality learning experiences for their students to learn and do mathematics.

Key takeaways:

1. To thrive in mathematics teaching, mathematics teachers need to learn to be adaptive, embracing different pedagogical approaches to meet the diverse needs of their students.
2. Productive noticing is the key to unlocking adaptive teaching, a hallmark of effective teaching.

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EDUCATION



SESSION E: Friday, 11am-12pm

E01 BEYOND DIFFERENTIATION: TARGETED SCAFFOLDING AND EXTENSION IN PRIMARY MATHEMATICS

Subtheme: Pedagogy and curriculum

Stephanie Nitschke, Victorian Mathematics Ambassador, Nazareth School Grovedale (F to Year 6)

One of the most persistent challenges in mathematics education is addressing the scope of abilities within a single classroom. While differentiation is often promoted as the solution, it can be misunderstood or inconsistently applied. What does it actually mean to differentiate, and is it truly the gold standard for effective teaching?

This workshop invites educators to look beyond traditional notions of differentiation and instead focus on the power of purposeful scaffolding and extension.

Most importantly, we'll examine what these strategies look like in practice across Foundation to Year 6. Through practical examples and classroom-tested techniques, participants will gain insight into how to target instruction precisely, by supporting struggling learners and providing genuine challenges for those ready to go further. You'll leave with practical, high-impact strategies to support and stretch every student in your maths classroom.

Key takeaways:

1. Meeting students at their point of need.
2. Targeted instruction.
3. Strategies for scaffolding and extension.

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E02 THE POWER OF NUMBER LINES

Subtheme: Pedagogy and curriculum

Sheila Griffin, Sheila Griffin Maths (F to Year 4)

To thrive in mathematics students need a good understanding of number lines. The first part of this session will examine the progression from number tracks to number lines to empty number lines.

Secondly, participants will work through differentiated activities to support their students' learning and growth. By engaging in this session educators will leave with an understanding of misconceptions as well as simple effective activities to use in their classroom.

Key takeaways:

1. Number lines are used to understand how numbers relate to one another.
2. Number lines help with mathematical operations such as addition and subtraction.
3. There are many examples of number lines in everyday life.

E03 SORTING IT OUT: MAXIMISING MATHEMATICAL CONNECTIONS THROUGH CARD SORTING TASKS

Subtheme: Pedagogy and curriculum

Jane Hubbard, Deakin University (F to Year 6)

Presenting mathematical concepts through the task design of card sorting can be an effective way for students to make connections between mathematical notation and visual representations that deepen conceptual understanding. In this workshop, Jane will present some key design principles of card sorting tasks she frequently adheres to when teaching through problem solving. These principles maximise opportunities for students to engage with concepts deeply while still attending to the development of critical foundational content knowledge. Participants will have the opportunity to explore a range of card sorting examples suitable to implement from Foundation to Year 6. Reflective discussions will be focused on how these exemplars meet the 'enabling conditions for learning' as presented earlier in Jane's keynote presentation.

Key takeaways:

1. Understanding the principles of card sort task design.
2. Opportunities to plan for effective differentiation.
3. Reflecting on enabling conditions for problem solving.



SESSION E: Friday, 11am-12pm (cont.)

CANCELLED E04 THRIVING IN MATHEMATICS: FADING LESSON TECHNIQUES

Subtheme: Innovation and inspiration

Lidia Cummins, Bentleigh West Primary School
(F to Year 6)

Fading is a teaching strategy grounded in cognitive science and educational psychology, where support and scaffolding are gradually reduced as students gain mastery. The goal is to help students move from dependence on teacher guidance to independent, confident problem solvers. This session will draw on the research of Sweller and Hiebert & Grouws.

In practice, fading techniques include:

- Moving from worked examples to completion problems to independent problems
- Reducing prompts in questioning
- Removing visual or step-by-step guides over time
- Encouraging metacognitive skills (e.g., “What do I do next?” self-questioning)

Key takeaways:

Fading helps students thrive in mathematics by:

1. Strengthening long-term understanding
2. Supporting transfer of skills to new problems
3. Building mathematical confidence and independence

E05 DEVELOPING CONCEPTUAL UNDERSTANDING AND PROCEDURAL FLUENCY THROUGH ENGAGING WARM-UP ACTIVITIES

Subtheme: Pedagogy and curriculum

Jodie Hunter, Massey University
(F to Year 6)

Mathematics education research studies highlight the importance of developing both conceptual understanding (rich deep connected understanding of mathematical concepts) and procedural fluency (being able to choose and apply an efficient procedure based on the characteristics of the mathematics task) in concert during mathematics lessons.

Designing and using high-quality and engaging warm-up activities is the perfect opportunity to support your students to develop both understanding and fluency in mathematics lessons. With careful planning, you can use this time to support your students to be both thinking and working mathematically. This workshop will use a hands-on format where you will be engaging in the warm-up activity before you work in a group to adapt it to your classroom and setting. By the end of the workshop, you will have planned a set of relevant worthwhile warm-ups for your own class that provide opportunities to develop conceptual understanding and procedural fluency.

Key takeaways:

1. Both conceptual understanding and procedural fluency are necessary for student success in mathematics education.
2. Warm-up activities can be used to develop both conceptual understanding and procedural fluency.

E06 STRENGTHENING PRIMARY MATHEMATICS THROUGH AGENCY, GOAL SETTING, AND PROFICIENCIES

Subtheme: Leadership and agency

Jessica Morgan, Georgia Schumann and Michelle Freeman, Ringwood Heights Primary School
(F to Year 6)

At Ringwood Heights Primary school, we’ve embarked on a sustained inquiry into how mathematics teaching and learning can be deepened, in our context, through a focus on agency, goal setting, and conceptual understanding. This session shares our journey of refining how both teachers and students engage with mathematical proficiencies to ensure we maximise connections between concepts and allow for time to revisit concepts. High levels of collaboration, professional risk-taking, and shared ownership among staff enabled the trialling, review, and ongoing improvement of practices that support consistent, high-quality mathematics learning across the school. We’ll begin by “zooming out” to explore the whole-school structures and levers that supported this improvement work, before “zooming in” on the classroom strategies that helped embed it — from goal-setting routines to strengthening shared metacognitive language and reflection. This session offers practical insights for anyone aiming to build a culture of confident, reflective, and mathematically curious learners.

Key takeaways:

1. Understand how a whole-school approach supports sustained improvement in primary mathematics teaching and learning.
2. Explore the role of learner agency and goal setting in deepening students’ engagement with mathematical concepts.
3. Practical strategies for embedding reflective and metacognitive language in mathematics lessons

E07 EXPLICITLY CONNECTING KNOWN STRATEGIES TO FLEXIBLE MENTAL STRATEGIES

Subtheme: Pedagogy and curriculum

Katherin Cartwright, The University of Wollongong
(Year 3 to Year 6)

This session takes a deep dive into the Mathematics Hub’s explicit teaching module on how teachers can make explicit the connections from known strategies to flexible strategies with their students. Katherin will present some of the practical advice provided in the module particularly in relation to; selecting the right numbers, drawing on students’ prior knowledge, linking to intuitive strategies, and anticipating responses to help plan useful prompts and questions. Katherin wrote the Explicitly connecting known strategies to flexible mental strategies module and acknowledges both the Australian Association of Mathematics Teachers’ (AAMT) and Education Services Australia’s (ESA) role in developing this module.

Key takeaways:

From this sessions teachers will:

1. make connections between automaticity with early number concepts and the development of efficient mental strategies
2. gain pedagogical knowledge of how to provide intentional and explicit opportunities for students to explore, create and practice flexible strategies

Remember:

Delegates do not need to bring anything with them.

E08 BUILDING A COHORT OF COLLABORATIVE LEARNERS

This is a commercial presentation

Subtheme: Pedagogy and curriculum

Nerida McCredie, The Australasian Problem Solving Mathematical Olympiads (APSMO)
(Year 3 to Year 6)

This practical, hands-on workshop will explore how teachers can unlock the potential of young mathematicians by fostering a classroom culture that values cooperation, risk-taking and resilience among students.

It will provide insight into the role that collaboration plays in promoting and supporting the application of mathematical knowledge in different contexts, requiring students to share, evaluate and select from their collective skill set.

By building a cohort of collaborative learners, teachers will support students to tackle complex problems together, develop essential skills for future success and build meaningful relationships with their peers.

Key takeaways:

1. Strategies for creating a learning environment that promotes persistence and communication.
2. Teaching techniques that assist students to collaboratively solve mathematical challenges.

E09 PRODUCTIVE OR DESTRUCTIVE STRUGGLE? FACILITATING CHALLENGE WITH PURPOSE

Subtheme: Contemporary challenges and successes

Eamon Light, St. Anne’s Primary School
(F to Year 8)

This workshop explores the role of productive struggle in primary mathematics: what it is, what it isn’t and how it differs from unproductive or destructive confusion. We’ll examine how cognitive conflict fits into learning, how it interacts with cognitive load and how, when thoughtfully managed, it can activate rather than overwhelm thinking. Participants will consider how carefully designed challenges, with timely episodes of teaching explicitly, can guide students toward conceptual understanding.

SESSION E: Friday, 11am-12pm (cont.)

Through hands-on activities and classroom discourse, we'll explore how productive struggle aligns with phases of learning: acquisition, fluency, mastery, and maintenance. The session challenges the misconception that struggle means being left to flounder, highlighting instead how scaffolded challenge can build mathematical resilience, the confidence and perseverance to engage with difficulty. Educators will leave with strategies to design tasks that promote generalisation, strategy development and flexible thinking, balancing explicit instruction with purposeful struggle to support students to thrive in mathematics.

Key takeaways:

1. Struggle is a learning tool, not confusion. Purposefully designed challenges activate thinking without overwhelming students, fostering deeper understanding.
2. Balance teaching explicitly with strategic challenge. Well-timed instruction supports generalisation, strategy development and flexible thinking.
3. Build mathematical resilience. Scaffolded struggle helps students develop confidence, perseverance and problem-solving skills for conceptual understanding.

E10 ENSURING YOUR EXPLICIT TEACHING IS EFFECTIVE AND ENGAGING

Subtheme: Pedagogy and curriculum

Michael Minas, Love Maths
(F to Year 8)

There is currently a push for greater emphasis on explicit teaching in maths classrooms both in Australia and across the globe. Rather than tackling the vexed question of what is the best way to teach maths, this session aims to help teachers and school leaders with practical ideas to make explicit instruction both effective and engaging. The effectiveness of any practice in a maths classroom is measured by how well we build conceptual understanding with our students. We will outline four key questions that any educator can use to help improve their capacity to build conceptual understanding, bringing these to life with work samples and anecdotes from classrooms across Australia.

Key takeaways:

1. When is the right time to model strategies/concepts within a sequence of learning?

2. How can we make the key concepts/ideas as clear as possible for the students?
3. How do we ensure student engagement is maintained?

E11 DAILY REVIEW IN ACTION: PRACTICAL STRATEGIES FROM THE CLASSROOM

Subtheme: Pedagogy and curriculum

Emily Keeling, The Friends School, Hobart, Sharyn Livy, Monash University, Theresa Martin, ACU
(F to Year 8)

Join us for an engaging session as we explore how one primary school has embraced daily review as a pedagogical approach to support students' mathematical learning and foster a thriving mathematics community. In this presentation, we will showcase a range of teaching strategies used to implement daily review routines that provide students with opportunities to recall previously taught concepts while building their mathematical competence. Drawing on authentic stories from both teachers and students, we will share what works effectively in practice and offer practical suggestions for enhancing students' mathematical experiences and dispositions. We will share how we use a combination of formative assessment through daily practice, coupled with the implementation of a universal screener in mathematics, to explain how daily reviews are organised and adjusted to improve student learning. These insights will highlight the impact of consistent, purposeful reviews on student engagement, confidence, and achievement.

Key takeaways:

1. Offers valuable takeaways whether new to or experienced in daily reviews.
2. Supports deepening of student understanding in mathematics.
3. Promotes a culture of continuous learning in the classroom.

E12 USING AI CRITICALLY TO IMPROVE THE QUALITY OF MATHEMATICS TEACHING

Subtheme: Contemporary challenges and successes

Max Stephens, University of Melbourne, Sebastian Sardina, RMIT University
(Year 5 to Year 8)

This session will introduce teachers to strategies for productive and critical use of AI-based chats to develop questions, teaching approaches, as well as different kinds of assessments and quizzes for specific areas of mathematics. A fundamentally important skill for teachers is being able to write productive prompts, including follow-up prompts. At the same time, teachers need to remain critical users of these tools. While an AI-based chat can be an excellent source of teaching ideas, it can be too "eager" to help and may generate content that contains serious factual or logical errors, requiring teachers to be aware of its workings and limitations. This session will be relevant to upper primary and junior secondary teachers who wish to deepen their understanding of AI-based language models and learn how to effectively integrate these tools into their teaching practice to enhance content creation and classroom engagement.

Key takeaways:

1. the importance of effective prompts in accessing AI-based chats
2. utilising follow-up prompts to improve and extend AI-based responses
3. deciding what makes sense mathematically and what is suitable for your students

Remember:

If possible have ChatGPT on your laptop.

E13 THINK, CODE, MOVE: EXPLORING MATHEMATICS THROUGH ROBOTICS

Subtheme: Innovation and inspiration

Alex Lim Tze Ming, Yishun Town Secondary School
(Singapore)
(Year 5 to Year 8)

This hands-on session demonstrates how mathematics, science, and STEM concepts can be meaningfully integrated into mathematics classrooms through the use of programmable rovers. Students will apply angle properties,

scaling, and sequencing to program a rover and complete spatial reasoning challenges, culminating in a modelled real-world navigation task.

Through experiential learning, students develop algorithmic thinking, logical reasoning, and a deeper understanding of mathematical concepts. They are encouraged to reflect on their experiences, observe outcomes, and iteratively refine their code — promoting critical and adaptive thinking. Creativity is also nurtured as students explore multiple strategies to solve navigation challenges.

Designed for upper primary and lower secondary learners, this workshop offers an engaging platform for applying mathematics in a purposeful and enjoyable way. Educators will be inspired to design technology-enhanced learning experiences that deepen student engagement, foster computational thinking, and build 21st-century competencies. Post-session reflections showed increased confidence and stronger conceptual understanding among students.

Key takeaways:

1. Learn how to integrate coding and robotics into math teaching.
2. Explore strategies to develop computational and 21st century competencies (critical, adaptive and inventive thinking).
3. Discover how real-world contexts enhance mathematical understanding and student engagement

Remember:

Best if participants can bring their TI-Nspire™ CX II graphing calculators, but not necessary for the presentation.

CANCELLED E14 MATHS HUB: ADVANCING NUMERACY THROUGH FAMILY AND COMMUNITY ENGAGEMENT

Subtheme: Innovation and inspiration

Joshua Salter, Tasmania Counts
(F to Year 10)

This session explores the impact of community-driven initiatives in advancing numeracy outcomes, including the transition from primary to secondary school. By fostering collaboration across school clusters, families, and local communities, we demonstrate how collective efforts can improve maths achievement.

SESSION E: Friday, 11am-12pm (cont.)

Through the development of community partnerships and family engagement, schools create supportive environments that strengthen numeracy skills. Participants will learn about key strategies employed in Tasmania Counts, including family and community engagement strategies in numeracy, aligning curriculum, delivering targeted professional learning, and supporting smooth transitions for students. This approach empowers educators, engages families, and builds stronger community connections to improve student numeracy outcomes.

Key takeaways:

1. Effective strategies for fostering family and community engagement to support numeracy development.
2. Collaboration across clusters to create sustainable numeracy initiatives.
3. Supporting transitions from primary to secondary school through aligned curriculum and targeted professional learning.

E15 VISUAL INSTRUCTIONAL PLANS: A TECHNIQUE FOR BREAKING DOWN COMPLEX PROCEDURES

Subtheme: Pedagogy and curriculum

**Brad Nguyen, Docklands Primary School
(F to Year 12)**

Many students find it difficult to learn standard algorithms, even when the procedure is modelled by the teacher. Visual Instructional Plans are a technique that teachers can use to break down procedures by providing a picture for each step on the board. They have additional benefits of supporting student explanations prior to guided practice and providing a reference for students to build confidence during independent practice. This session will provide a concrete example of a Visual Instructional Plan being co-constructed by the teacher with students, explore how the technique is supported by cognitive science and provide interactive opportunities for participants to plan their own Visual Instructional Plan.

Key takeaways:

1. Complex procedures can be broken down into a picture for each step
2. Visual Instructional Plans support student explanations

3. Students can refer to Visual Instructional Plans during independent practice

Remember:

Participants will need paper to write on and two colours of pen.

E16 RETRIEVAL PRACTICE IMPLEMENTATION

Subtheme: Leadership and agency

**Emma Moore, DE - SEVR - SMA regional office
(F to Year 12)**

This session explores how implementation science can guide the effective integration of retrieval practice into teaching. Rather than focusing solely on retrieval practice as a strategy, we will unpack key concepts of successful implementation. Participants will use AEROs framework to understand stages of implementation, drivers of success, and the importance of fidelity and adaptation.

We will highlight how implementation science bridges the gap between knowing and doing.

Key takeaways:

1. A clearer understanding of how to plan, embed, and monitor a new practice effectively.
2. Enhanced confidence to lead or support implementation initiatives in their own contexts.
3. Experience using a framework for implementation.

E17 WHAT EXACTLY IS THE EVIDENCE FOR EXPLICIT TEACHING?

Subtheme: Pedagogy and curriculum

**Liam McMahon, Coburg High School
(F to Year 12)**

Explicit teaching is widely recognised as an effective approach to supporting student learning but what does the research actually say? This presentation explores key features of explicit instruction, including common misconceptions, and examines the evidence base that underpins it. Drawing on cognitive load theory and process-product research, Liam traces how the research has evolved over time and what it

means for practice today. He shares insights from his own classroom experience and his work with the Victorian Lesson Plans, offering practical strategies.

Key takeaways:

1. Explicit teaching aligned with VTLM 2.0 is supported by robust, systematic empirical research as a foundation for effective mathematics instruction.
2. Understanding cognitive science principles enhances the design and delivery of explicit teaching.

E18 DEVELOPING 21ST-CENTURY SKILLS THROUGH EVERYDAY MATHEMATICS LESSONS

Subtheme: Innovation and inspiration

**Ban Heng Choy, National Institute of Education,
Nanyang Technological University, Singapore
(Year 3 to Year 10)**

Mathematics tasks form the centrepiece of many mathematics lessons to develop critical, adaptive, and inventive thinking.

These tasks initiate mathematical activity and open up opportunities for orchestrating mathematics discussions and developing these emerging 21st-Century Competencies (21CC). Often, these mathematics tasks are open and rich in mathematical connections.

However, designing such tasks can be challenging because they have to be low-floor (easy to access by students with diverse learning readiness), high-ceiling (potential for making connections to other topics and important ideas beyond the immediate learning outcome), and wide-wall (opens up for multiple answers, solutions, or methods).

In this workshop, I will share some ideas on how we can notice and harness typical problems, beyond rich and open tasks, used in everyday classrooms to nurture 21CC in our students.

Key takeaways:

1. Teachers can use relatively “simple” mathematics tasks to nurture 21CC
2. The key lies in noticing and harnessing new possibilities for these tasks
3. Some principles to foster a more conducive mathematics classroom for developing mathematical thinking skills.

CANCELLED E19 PRACTICAL AI APPLICATIONS - TEACH MORE, STRESS LESS

Subtheme: Innovation and inspiration

**Adrian Lam, St John's College Preston
(Year 3 to Year 12)**

This session explores how artificial intelligence can be leveraged to support mathematics teaching in practical and accessible ways. Focusing on freely available tools and real-life examples, the presentation will demonstrate how AI can help streamline workload and support a healthier work-life balance. There is no affiliation with any company or platform provider; all insights are drawn from personal classroom experiences. The session will conclude with time for attendees to share resources and engage in discussion, including requests for specific use cases.

Key takeaways:

1. A discussion on my mindset and approach to AI tools
2. Sharing practical tips and ideas for everyone to use beyond the classroom
3. Resources and links that will be updated in the future as the technology progresses.

E20 MODELLING AND PROBLEM SOLVING TO DEEPEN AND EXTEND STUDENT'S KNOWLEDGE

Subtheme: Pedagogy and curriculum

**Ben Dennis, Timboon P-12
(Year 5 to Year 10)**

The Victorian Curriculum 2.0 places a strong emphasis on problem-solving and modelling tasks within the mathematics curriculum. However, knowing when and how to effectively implement these tasks can be a challenge for many educators. In this session, we'll explore practical strategies for integrating problem-solving and modelling into your classroom practice. We'll also examine how these tasks can be leveraged to extend high-achieving students—broadening their mathematical thinking and providing a meaningful pathway to introduce more advanced content.

Key takeaways:

1. When to incorporate problem solving and modelling tasks.
2. How to find or create meaningful tasks.

SESSION E: Friday, 11am-12pm (cont.)

3. How these tasks can be used to extend high achieving students.

Remember:

Participants are encouraged to consider units of work that they would like to incorporate modelling tasks into so these can be discussed during the session.

E21 SPACED PRACTICE: BOOSTING RETENTION THROUGH STRATEGIC QUESTIONING

This is a commercial presentation

Subtheme: Pedagogy and curriculum

Craig Blake and Alex Bunt, Mathspace (Year 5 to Year 10)

This practical session explores how strategic questioning and spaced retrieval can help students retain key concepts and build fluency over time. We'll unpack a three-tiered approach to practice — from scaffolded first exposure to gamified review — and look at how it can support differentiation in mixed-ability classrooms. You'll leave with classroom-ready strategies and tools to help students move knowledge from short-term to long-term memory, without sacrificing engagement.

Key takeaways:

1. Classroom-ready strategies and tools to help students move knowledge from short-term to long-term memory
2. Supporting differentiation in a mixed ability class
3. Increasing engagement of students in their learning

E22 THE MATHEMATICS OF INFINITY

Subtheme: Innovation and inspiration

Kaye Stacey, The University of Melbourne (Year 7 to Year 12)

Even young children talk about infinity as the 'biggest number'. It is an intriguing idea, involved in many famous paradoxes. In school mathematics, infinity lurks behind repeating decimals and limits, geometric and numerical recursive processes, at undefined points of graphs and far at the end of number lines. But what is infinity and what is the mathematics of infinity?

In this session, we will look at how infinity relates to the topics above and how it links to counting. We will count rational, real and irrational numbers. We will spend time in the 'Infinity Hotel' to do some arithmetic with infinity (it is surprisingly easy!), then visit the flip side where the infinitesimals live.

Key takeaways:

1. Infinity is a very intriguing mathematical idea.
2. Aspects of infinity sit behind many curriculum topics.
3. Ideas of infinity can be accessible to students.

Remember:

Any calculator; pen and paper for mathematical investigation.

E23 CREATING THINKING CLASSROOMS WITH MIDDLE SCHOOL INVESTIGATIONS

Subtheme: Contemporary challenges and successes

Angel Wong and Peter Beissmann, St Andrews Christian College (Year 7 to Year 10)

This presentation explores practical strategies for creating a Thinking Classroom in the middle years of schooling, with a focus on reasoning and student-led investigation. Drawing on real classroom examples, I will showcase engaging investigation-based activities that promote deep mathematical thinking, collaboration, and curiosity. These tasks are designed to challenge students' reasoning skills and encourage them to explore multiple pathways to problem-solving. Participants will gain insight into how the Thinking Classroom framework can be applied effectively in middle school settings to foster a culture of inquiry, resilience, and meaningful mathematical discourse. Whether you're new to the Thinking Classroom model or looking to enrich your existing practice, this session offers ready-to-use ideas and reflections from everyday teaching experiences.

Key takeaways:

1. Discover how to promote reasoning through rich investigations.
2. Explore ways to foster engagement, collaboration, and deep thinking in a fear-free classroom where struggle is normalised.
3. Encourage active listening and clear justification, creating a space where it's okay to be unsure and learning through challenge is expected.

Remember:

This session will showcase a range of middle school investigation tasks designed to develop reasoning, collaboration, and deep thinking within a Thinking Classroom. Some activities will incorporate the use of the Texas Instruments CAS calculator to support exploration and mathematical justification. Participants are encouraged to bring their TI-Nspire CX CAS handheld to engage fully in the tasks and reflect on how these strategies can be applied in their own classrooms. While having your own device is preferred, shared use will be supported during the session.

E24 BEYOND THE MATHS CLASSROOM: BUILDING A NUMERACY-RICH SCHOOL CULTURE

Subtheme: Pedagogy and curriculum

Samantha Hellessey, Dromana Secondary College (Year 7 to Year 10)

At Dromana College, we've transformed numeracy from being just a maths focus to a whole-school priority. Through targeted professional learning and a strong data-informed approach, we've built a culture where numeracy is embedded across all learning areas. This session will share our journey in achieving this. It will consider how we've engaged staff, used student data to inform practice, created a shared responsibility for numeracy development, as well as challenges along the way. Attendees will walk away with practical ideas and examples on how to build staff confidence in numeracy instruction, make numeracy visible across learning areas, and ultimately help students improve their numeracy skills.

Key takeaways:

1. How Dromana College has successfully embedded numeracy across all subjects
2. Strategies that empower staff to confidently teach numeracy.
3. Practical examples of how numeracy is explicitly integrated into different disciplines.
4. The impact of a whole-school numeracy approach on student outcomes.
5. Challenges encountered and lessons learned in implementing a school-wide numeracy strategy.

Remember:

Laptop, paper and pen.

E25 THE IMPORTANCE OF TEACHING FROM FIRST PRINCIPLES FOR STRUGGLING STUDENTS

This is a commercial presentation

Subtheme: Pedagogy and curriculum

Olis Kinnear, Big Picture Tutoring (Year 7 to Year 12)

Many maths students struggle not because they lack ability, but because they've been taught procedures instead of mathematical thinking. Through extensive tutoring experience, I've observed that struggling students often improve dramatically when we strip away memorized steps and focus on a relatively small number of fundamental concepts.

Teachers frequently teach "tips and techniques" - telling students what steps to follow rather than helping them understand why. For example, in trigonometry, students learn to mechanically apply formulas without recognizing that subsequent steps are simply algebra. This procedural approach creates students who freeze when problems look unfamiliar.

Teaching from first principles means helping students see the underlying mathematical structures, and it almost immediately reduces overwhelm.

This presentation will explore practical strategies for identifying where conceptual understanding breaks down and techniques for building genuine mathematical reasoning from the ground up.

Key takeaways:

1. Identify where procedural teaching masks conceptual gaps - recognize when students follow steps without understanding underlying mathematical structures.
2. Replace 'tips and techniques' with fundamental concepts - show students that complex problems reduce to familiar operations like algebra.
3. Reduce student overwhelm immediately - focus on core mathematical ideas rather than endless procedures.

SESSION E: Friday, 11am-12pm (cont.)

E26 GAME, SET, MATHS!

Subtheme: Pedagogy and curriculum

**Peter Fox, Texas Instruments Australia
(Year 7 to Year 12)**

In this workshop we explore how well-designed mathematics games captivate and motivate students, deepen understanding of conceptual understanding and foster problem-solving skills. We will examine the cognitive benefits of play, analyse what makes a game mathematically rich and play a variety of games. You will leave with ready-to-use resources to transform your classroom.

Key takeaways:

1. Games elicit different neurological responses that can enhance learning opportunities;
2. Combining an element of chance or risk can encourage engagement by creating a perception of opportunistic success;
3. Novelty is a great way to increase engagement and improve memory recall.

CANCELLED E27 THREE WAYS WITH EXPONENTIALS

Subtheme: Pedagogy and curriculum

**David Leigh-Lancaster, Leigh-Lancaster Consulting
(Year 7 to Year 12)**

This interactive session will engage participants with a range of activities and approaches that can be used to enable students to progressively build their understanding, make connections, and develop their skills in working with exponential functions and models.

We will cover a progression of key concepts, skills and processes related to exponential functions across Years 7 – 10 and show how these can be developed using a combination of numerical, graphical, and algebraic approaches. This will include examples of computational thinking involving exponential functions.

Key takeaways:

1. A progression of key concepts, skills and processes related

to exponential functions across Years 7 – 10.

2. Examples of computational thinking with exponential functions.

3. An integrated presentation of numerical, graphical and algebraic aspects of exponential functions and modelling with these functions.

Remember:

Participants should bring along a device with access to a graphing/CAS application (e.g. Desmos, Wolfram Alpha) or a CAS calculator.

E28 TEACHING COMPUTATIONAL THINKING IN MATHEMATICS

This is a commercial presentation

Subtheme: Pedagogy and curriculum

**Catherine Newington, ACS - Australian Computer Society
(Year 9 to Year 10)**

This session explores how algorithmic thinking is integrated into the Victorian Mathematics Curriculum. The session will cover topics such as algorithms, pseudocode, flowcharts and general-purpose programming. Teachers will gain practical ideas, resources, and classroom strategies to help teach these concepts. Educators will leave with practical strategies to confidently teach computational thinking in mathematical contexts.

Key takeaways:

1. Explore key concepts in algorithms, pseudocode, flowcharts, and general-purpose programming.
2. Gain practical strategies and resources to teach computational thinking in Maths.

E29 VCE VM: DEVELOPING ASSESSMENTS FROM THE NUMERACY AROUND US.

Subtheme: Pedagogy and curriculum

**Tamara Zerafa, Amy Casati, Harvester Technical College
(Year 9 to Year 12)**

This session will explore strategies for extracting key elements of the VCE VM Numeracy curriculum (Units 1 & 2) to

design engaging, relevant assessments. We will unpack the distinction between applied and hands-on learning, focusing on creating tasks that reduce sedentary learning and encourage real-world problem-solving. Participants will examine current assessment examples from other schools and discuss how to enhance them to better reflect Outcome 3. The session aims to equip educators with practical tools and ideas to make Numeracy assessments more dynamic, purposeful, and student-centred.

Key takeaways:

1. Assessment exemplars
2. Strategies on how to develop Numeracy assessments with more buy in

E30 THRIVING IN A CAS EXAM (GENERAL) WITH A CASIO CLASSPAD

This is a commercial presentation

Subtheme: Contemporary challenges and successes

**Alastair Lupton, Casio Education Australia
(Year 11 to Year 12)**

This workshop will share a range of exam preparation tips for students using a Casio ClassPad in a VCE General Maths exam. We will cover everything from hardware and operating system updates to global and app-specific settings, clever ways to work with input and output, scientific notation, the efficient use of the Statistics, Financial and Sequence apps, and how add-in programs can help with the Hungarian Algorithm and other matrix questions. A video covering all this has been added to the Casio Education suite of VCE resources, which we will visit to see what else can support your students in these high stakes assessments.

Key takeaways:

1. How students can get the best use of a Casio ClassPad in a General Maths exam
2. Tips on working with Statistics, Financial and Sequence apps
3. Using add-in programs for the Hungarian Algorithm

Remember:

Bring your ClassPad.

E31 VCAA INSIGHTS: VCE MATHEMATICS SCHOOL-BASED ASSESSMENT

Subtheme: Contemporary challenges and successes

**Michael MacNeill, VCAA
(Year 11 to Year 12)**

To provide a rationale for inclusion of mathematical modelling as part of school-based assessment and indicators of VCAA expectations.

Key takeaways:

1. Understanding of the link between mathematical modelling and learning in VCE Mathematics
2. Understanding of expectations for tasks
3. Understanding of benefits for students and society

E32 INSPIRING ETHICAL THINKING: TI-NSPIRE, PAGERANK, AND MATHEMATICAL MODELLING

Subtheme: Innovation and inspiration

**J Kishore, Indus International School Bangalore
(Year 11 to Year 12)**

This option explores how the TI-NSpire GDC can be used innovatively to teach the concept of Eigen Vectors of IB DP AI-HL syllabus in real life applications. Students investigate the Google's Page Rank Algorithm by constructing a simplified web of connected pages, developing the transition matrix and using GDC to calculate the dominant eigen vector, which represents the steady state probability distribution of web-surfer's location. This offers a powerful connection between the abstract mathematics and everyday technology. Through dynamic GDC visualisation, this activity inspires students inquiry, interdisciplinary thinking and strengthen the understanding of matrix transformations and steady states. It promotes the deeper conceptual engagement and real world relevance of advanced topics by the integration of technology (GDC) in mathematics. This session aligns with the MAV sub-theme of "Innovation and Inspiration" by highlighting a powerful tech-driven approach to mathematical modelling and global digital literacy.

Key takeaways:

SESSION E: Friday, 11am-12pm (cont.)

- 1. Learn how eigenvectors power real-world algorithms like Google's PageRank.
- 2. Use TI-Nspire GDC to dynamically explore transition matrices and steady states.
- 3. Inspire students by connecting abstract math to digital innovation and inquiry

Remember:

Participants are encouraged to download the TI-Nspire CX CAS Software or bring a handheld for full engagement with the session activities. The software offers dynamic features essential for matrix operations, eigenvector calculations, and visualisations used in the workshop. While the concepts can be explored on other platforms, some features — particularly symbolic manipulation and real-time matrix iteration — are best experienced on TI-Nspire. A limited-feature free trial of the TI software is available online for Windows and Mac. Please install it in advance for a smoother session experience.

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2026 REGIONAL MATHS TOUR

MAV IS COMING TO BENDIGO AND MOE IN MARCH 2026

- This event supports primary and secondary teachers with regionally based professional learning and networking opportunities in mathematics education.
- The VCE stream features facilitated workshops and discussions around previous exams, SACS writing starters and tips, and CAS workshops, with a dedicated focus on numeracy in secondary classrooms, including the Vocational Major.
- Primary and Secondary participants will engage with evidence informed teaching practices and deepen their expertise in knowing and teaching mathematics in context, using a range of pedagogies and strategies.
- **Bendigo:** 9am - 3.30pm, Friday 13 March 2026
- **Moe:** 9am - 3.30pm, Friday 27 March 2026



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SESSION F: Friday, 12.10pm-1.10pm

F01 BUILDING CONCEPTUAL UNDERSTANDING IN EDI USING HANDS-ON MATHEMATICS TEACHING STRATEGIES

Subtheme: Pedagogy and curriculum

**Silvin Brown, Loch Primary School
(F to Year 2)**

This workshop focuses on fostering deep conceptual understanding and developing essential skills through the power of explicit teaching, utilising the Explicit Direct Instruction (EDI) model. Participants will engage in hands-on strategies that help students build strong foundational knowledge as stepping stones for future learning. The session demonstrates how to effectively scaffold learning, frame key ideas, and actively involve students in making sense of mathematical concepts. The approach supports students in applying their understanding to new contexts within the same lesson. Through practical examples and discussion, educators will gain strategies to create clear, connected, and purposeful mathematics experiences that support all learners in moving from understanding to confident application.

Key takeaways:

1. Learn how to clearly frame and scaffold key mathematics concepts through explicit teaching using the Explicit Direct Instruction (EDI) model.
2. Explore hands-on strategies that actively engage students in building conceptual understanding.
3. Discover how to connect foundational skills to deeper application within a lesson sequence

F02 NUMBER FACT FLUENCY: BUILDING CONFIDENT FLEXIBLE THINKERS.

Subtheme: Pedagogy and curriculum

**Tina Richardson, Bentleigh West Primary School
(F to Year 6)**

This presentation focuses on how developing number fact fluency- quick and accurate recall of basic facts lays the foundations for higher order mathematical thinking. Participants will explore how fluency is not just memorisation but also includes flexibility, efficiency and strategy use. The session will unpack research-based strategies for building fluency in addition, subtraction multiplication and division.

while supporting students who may struggle with memory or number sense. Attendees will learn two to integrate fluency practice into everyday maths instruction in meaningful low-stress ways to help students thrive.

Key takeaways:

1. Differentiate between rote memorisation and strategic fluency.
2. Explore engaging strategies for teaching fluency (Number talks, visual models games).
3. Understand developmental progressions and when to introduce specific strategies.

F03 BRINGING PROFICIENCIES TO LIFE

Subtheme: Pedagogy and curriculum

**Christopher Short and Daphne Parker, Berwick Chase Primary School
(F to Year 6)**

Berwick Chase Primary School has developed and implemented a whole-school Learning and Teaching Model that ensures all students engage with the four mathematical proficiencies each week. Working closely with critical friend Rob Proffitt-White, the school has focused on structured professional learning, Learning Specialist coaching, and collaborative planning to drive consistency and confidence. Key outcomes include improved engagement, targeted changes to early years models, and increased teacher capability. Attendees will receive our Learning and Teaching Models, planning samples, and participate in problem-solving tasks using our Decode, Decide and Defend framework to experience our approach firsthand.

Key takeaways:

1. Exposure to a school-wide learning and teaching model that is focussed on mathematical mastery using the four proficiencies. An explanation of how our school-wide changes have been embedded including areas we would avoid if given a second chance. A solid model for bringing problem solving into primary classrooms.

CANCELLED F04 ACTIVATING PRIOR KNOWLEDGE: A LAUNCHPAD FOR DEEPER MATHEMATICAL THINKING

Subtheme: Pedagogy and curriculum

**Elise Copsey
(F to Year 6)**

This interactive workshop explores the potential of preliminary tasks to activate prior knowledge, spark curiosity, and prepare students for deep mathematical thinking. Drawing on research by James Russo and Jane Hubbard, and inspired by the work of Michaela Epstein, this workshop will outline the theoretical foundations that support the use of preliminary tasks. This includes insights into how to activate prior knowledge and manage cognitive load, whilst developing the mathematical proficiencies.

Preliminary tasks—short, purposeful activities that precede the core learning of a mathematics lesson—can play a pivotal role in shaping student engagement, curiosity, and readiness for complex thinking. Despite their brief nature, these tasks are often underutilised or overlooked in lesson planning. This workshop aims to highlight their value by drawing on both classroom-based research and insights from cognitive science. Participants will leave this workshop with practical examples they can take back to their school.

Key takeaways:

1. Understand the theoretical and research-based rationale for using preliminary tasks in mathematics lessons.
2. Explore diverse examples of effective preliminary tasks and their classroom impact.
3. Develop skills in designing purposeful tasks that activate thinking and foster engagement.

F05 REFRAMING PRACTICE: BUILDING NUMBER SENSE THROUGH A NUMBER LENS

Subtheme: Pedagogy and curriculum

Ben Dixon and Peta Overbury, St Thomas the Apostle Catholic Primary School

(F to Year 6)

What does it take to shift a school-wide maths practice? We identified a challenge: while students were competent in computation, they lacked rich opportunities to reason, problem solve and make meaningful connections through

number. In response, we shifted from isolated strand-based teaching to a connected, number-sense approach across all learning. We adopted a “number lens” approach, a schoolwide focus on number sense, reasoning and mathematical thinking embedded in diverse contexts. Rather than adding more, we realigned what we teach, how we teach it and how we support teachers to evolve their practice. This session explores the ongoing development of a whole-school approach that balances purposeful, rich experiences with explicit number instruction across all strands. Grounded in our commitment to educating the whole person, our goal is to grow confident, curious and numerate citizens who think critically, contribute compassionately and engage meaningfully with a complex world.

Key takeaways:

1. Develop an understanding of how a ‘number lens’ can unify teaching across strands and deepen number sense.
2. Explore rich mathematical experiences that combine conceptual thinking with explicit number instruction.
3. Discover ways to support sustainable teacher growth through collaboration, leadership and shared practice.

F06 WRITING CAS INSTRUCTIONS

Subtheme: Contemporary challenges and successes

**Neale Woods
(Year 9 to Year 12)**

It's one thing to know how to use technology but it is another thing to effectively convey this knowledge to others. In this session, participants will have the opportunity to learn a variety of techniques to use when writing CAS material for their students. The session will concentrate on layout, fonts and the sequencing of instruction to enhance effective teaching and learning. The presentation will feature both TI-Nspire and Casio ClassPad technology. Participants will have the opportunity to share their own experiences and ideas for writing effective CAS learning material.

Key takeaways:

1. Effective use of CAS technology.
2. Sequencing of instructional material.
3. Using correct formatting and layout to enhance student learning.

SESSION F: Friday, 12.10pm-1.10pm (cont.)

CANCELLED F07 BRINGING DATA TO LIFE

Subtheme: Pedagogy and curriculum

Naomi Fitzgerald, The Australian Academy of Science
(Year 3 to Year 4)

The power of statistics lies in its ability to manage variability, make predictions about the unknown, and use data to tell meaningful stories about the world. Viewing statistics through the lens of storytelling gives students a clear purpose for engaging with statistical concepts and helps them see data as part of everyday life. A widely used framework for statistical investigations — by both students and professional statisticians — is the PPDAC cycle: Problem, Plan, Data, Analysis, and Conclusion. This cycle highlights that every investigation begins with a problem and aims to uncover the story behind the data.

In this interactive workshop, we'll explore origami frogs using the PPDAC process. Along the way, we'll examine how the ways we collect and represent data can shape and even deepen the stories we uncover.

Key takeaways:

1. PPDAC cycle engages students as active participants in statistical investigation.
2. Problem, Plan and Data elements provide a meaningful context for data collection.
3. Analyse and Conclusion elements allow data to be used as evidence to make inferences.

Remember:

Participants will need a laptop to access the reSolve website.

F08 LEVEL UP: EXPLICITLY TEACHING MATHEMATICS THROUGH GAMES

Subtheme: Pedagogy and curriculum

Jessica Kurzman, St. Patrick's Primary School, Renee Ladner, The Mathematical Association of Victoria
(F to Year 8)

Engaging students in mathematics from Foundation to Year 6 requires a blend of creativity, strategy, and explicit teaching techniques. This workshop explores how games can be powerful tools for teaching mathematics explicitly, as aligned with the Victorian Teaching and Learning Model (VTLM) 2.0. Participants will discover how to integrate mathematical

games into lessons to clarify key concepts, promote skill development, and deepen understanding.

The session will highlight how games can support differentiated learning, build fluency, and encourage reasoning, leading to mastery. Strategies for designing and selecting games that align with curriculum goals will be shared, with a focus on scaffolding learning and assessing student progress. Attendees will leave equipped with practical tools and frameworks to implement game-based learning in their classrooms, ensuring that students enjoy mathematics while achieving success through explicit and targeted teaching methods.

Key takeaways:

Game selection:

1. How to select mathematics games that align with specific curriculum goals and scaffold learning.
2. Explicit teaching through games: Strategies to explicitly teach mathematical concepts and skills using games.
3. Assessment and Reflection Tools: Understand how to use games not only for learning but also as tools for formative assessment.

F09 10 MINUTES THAT MATTER - REFINING THE ART OF DAILY REVIEW

Subtheme: Contemporary challenges and successes

Brooke Brennan, Madame Maths
(F to Year 8)

Daily reviews are more than a warm up and more than fluency practice when used intentionally, they become a powerful lever for long-term retention, formative assessment, and curriculum mastery. This session explores how consistent, well-designed review routines can act as assessment, surface misconceptions, deepen thinking, and boost student confidence. Participants will see a range of flexible formats - from oral prompts and mini whiteboards to hinge questions and games - along with practical strategies for designing cumulative, varied, and engaging review questions.

Key takeaways:

1. How to use daily reviews as an assessment tool.
2. How to engage students in daily review routines.
3. How to plan for daily reviews in a way that ensures cumulative, systematic review of content.

F10 EMBEDDING ABORIGINAL PERSPECTIVES MEANINGFULLY IN TEACHING

Subtheme: Pedagogy and curriculum

Kris Westcott, Sackville Street Public School
(F to Year 8)

Drawing on the work of Dr Chris Matthews this workshop will explore how the elements of culture and mathematics are interwoven. It aims to build the confidence of teachers to embed cultural authenticity within their lessons for the benefit of all students. Participants will be guided to banks of resources that provide culturally appropriate lesson ideas as well as those that can be used for further professional development.

Key takeaways:

1. Explore Aboriginal ways of learning and how they inform mathematics pedagogy.
2. Identify authentic resources that support cultural inclusivity in mathematics.
3. Engage with professional learning opportunities that extend cultural responsiveness in maths teaching.

F11 MANAGING COGNITIVE LOAD WHILE TEACHING THE RICHNESS OF MATHEMATICAL THINKING

Subtheme: Pedagogy and curriculum

Peter Sullivan, Monash University
(F to Year 10)

A key feature of mathematics is to learn about the connections between concepts. These connections need to be taught explicitly but this cannot be done if concepts are taught in isolation following tricks and rules. To foster the building of connections, which requires student thinking and agency, there is a need to manage the necessary cognitive load. This session offers six strategies for managing the cognitive load involved in teaching the curriculum that emphasises connections, intuitive thinking and applications.

Key takeaways:

1. Develop an understanding of cognitive load.
2. Strategies for planning and teaching lessons with cognitive load in mind.

F12 WORKING TOGETHER: USING GENAI AS A CRITICAL FRIEND

Subtheme: Innovation and inspiration

Carmel Mesiti and Scott Cameron, University of Melbourne
(F to Year 12)

Generative AI tools, such as ChatGPT, have access to a wealth of knowledge. This knowledge makes GenAI tools a powerful, critical 'friend', offering feedback, suggestions, and fresh perspectives on your teaching practice. In this interactive workshop, mathematics educators from both primary and secondary settings will explore how GenAI can support reflective practice, spark new pedagogical ideas, and challenge assumptions about teaching and learning. Participants will engage with example prompts and trial strategies for using GenAI to both critique and extend their planning and practice.

Key takeaways:

1. Develop strategies for using GenAI as a critical friend.
2. Explore prompts for GenAI to provide feedback on resources.
3. Explore strategies for using GenAI as a reflective tool.

F13 NUMERACY VS MATHEMATICS: WHY DOES IT MATTER?

Subtheme: Leadership and agency

Justine Sakurai, The University of Melbourne
(F to Year 12)

Numeracy education goes beyond traditional mathematics teaching, it recognises that numeracy and mathematics are distinct yet complementary domains. This session explores how numeracy functions as a social practice, embedded in real-world contexts where people use mathematical thinking to navigate and thrive in daily work and life.

Participants will discover how contemporary frameworks distinguish numeracy from mathematics by integrating practical applications, student attitudes, and contextual problem-solving. Numeracy should be the responsibility of the whole school community; we'll examine how numeracy emerges naturally from workplace scenarios, community engagement, and personal decision-making.

SESSION F: Friday, 12.10pm-1.10pm (cont.)

The session considers leadership implications to strengthen both numeracy pedagogical methods and content knowledge.

By understanding numeracy as a social practice distinct from traditional mathematics education, teachers across all disciplines can embed numeracy throughout the school curriculum. This cross-curricular approach creates meaningful learning experiences that prepare students with transferable skills for active participation in an increasingly mathematical society.

Key takeaways:

1. Numeracy and mathematics are distinct educational domains, with numeracy functioning as a social practice embedded in real-world contexts and daily decision-making.
2. Numeracy can be embedded across all domains and disciplines in the school.
3. Numeracy as social practice can transform learning into transferable skills relevant to life.

CANCELLED F14 OUR LANGUAGE, OUR STRENGTH: REFLECTIONS FROM THE BIENNIAL ATSIMA CONFERENCE

Subtheme: Contemporary challenges and successes

Kerryn Sandford, Heathmont College, Jennifer Bowden, The Mathematical Association of Victoria

(F to Year 12)

This workshop shares key insights and inspirations from the Our Language, Our Strength ATSIMA Conference. The event explored how moments in time, through language, culture, and education, can strengthen the identity of Aboriginal and Torres Strait Islander children, supporting their resilience and capacity to shape futures for themselves and their Communities. Participants will hear reflections on the powerful messages shared by educators, Elders, and community leaders, and how these have informed the Mathematical Association of Victoria's Culturally Responsive Action Plan and broader strategic direction. The session will also explore the relevance and implications of this learning for the Victorian context, with a focus on deepening culturally responsive practice in mathematics education.

Key takeaways:

1. The power of language and culture in education.
2. Insights from educators, Elders, and community voices.
3. Implications for the Victorian education context and MAV.

F15 NAVIGATING THE IDEOLOGICAL IN CONTEMPORARY MATHEMATICS EDUCATION.

Subtheme: Leadership and agency

Tom Mahoney, Monbulk College/Deakin University (F to Year 12)

Mathematics education is fundamentally an ideological endeavor.

As any approach to mathematics education comes from a perspective of what mathematics education ought to look like, those involved in it need to be critical of an imposition of an illusory 'best practice' upon teachers and students.

Different school communities and contexts understand the purpose of mathematics education in different ways. As such, school leaders and teachers should allow space for the exploration of the purpose/s of mathematics in their schools, with an awareness of how dominant ways of thinking are directing educational policy in mathematics education.

This presentation will explore some of the dominant ideological perspectives influencing mathematics education in Australia and support teachers and school leaders to take responsibility to explore the purpose and practice of mathematics education in their contexts.

Key takeaways:

Participants will:

1. receive a framework to understand and address the ideological nature of mathematics education to more thoughtfully respond to their contexts and,
2. be challenged to consider how different ideological perspectives impact upon their work in mathematics education.

F16 THRIVING THROUGH MEANINGFUL ASSESSMENT: MAKING EVERY QUESTION COUNT

Subtheme: Pedagogy and curriculum

Crystal Afitu and Lee Gianfriddo, Victorian Curriculum and Assessment Authority (VCAA) (F to Year 10)

This session explores how meaningful assessment empowers students to thrive in mathematics. We begin by examining what makes assessment purposeful—knowing what to assess, when to assess, and how to interpret results to inform responsive teaching and improve outcomes. In a climate where assessment is often overused, we will consider how to maximise impact while protecting valuable instructional time.

Participants will explore the Digital Assessment Library (DAL), a free, curriculum-aligned and research-based tool designed to support effective planning, pedagogy and reporting. Through authentic case studies from Victorian schools, we will demonstrate how the DAL can support engagement and planning at the individual, class, cohort and whole-school level. The session concludes with a collaborative discussion on next steps in using data meaningfully to support all learners in mathematics.

Key takeaways:

1. Understand the key features of meaningful assessment and its role in effective teaching.
2. Explore how the Digital Assessment Library (DAL) supports curriculum-aligned, responsive planning.
3. Engage with real school case studies and reflect on using assessment to support individual, class and whole-school improvement.

Remember:

Laptops can be included, but are not essential.

F17 WEAPONS OF MATH INSTRUCTION; USING A DECK OF CARDS

Subtheme: Innovation and inspiration

Andrew Lorimer-Derham, Think Square (Year 3 to Year 10)

With just a deck of cards you can build skills and confidence in practically any number concept. Addition, multiplication, proportional reasoning, fractions, algebra, negative numbers, powers, division, mathematical vocabulary and more!

This hands-on session will equip you with half a dozen activities to engage a wide range of learners and empower you to make them your own.

The activities in this workshop will use logic, reasoning and creative thinking to bring number skills to life and provide meaningful opportunities to work like mathematician...all with a deck of cards!

Key takeaways:

1. Creative ideas you can immediately use in your classroom.
2. Tools and resources to help build skills and confidence with number.
3. A joyful hands-on experience.

Remember:

This is a hands-on experience

F18 MAKING SECONDARY MATHS ACCESSIBLE TO ALL USING THE CRA APPROACH

Subtheme: Pedagogy and curriculum

Tara Richardson and Jiahong Gong, Greater Shepparton Secondary College (Year 5 to Year 10)

Our presentation will show how we have made secondary maths, in particular Year 7 and 8 Linear Algebra, more accessible to students. We use the CRA approach with a big emphasis on bar models and algebra tiles. Our goal is to have students accessing as close to grade level content as possible, utilising manipulatives and visuals. We have found increased student engagement and confidence.

SESSION F: Friday, 12.10pm-1.10pm (cont.)

Key takeaways:

1. The importance of linking linear algebra back to number.
2. How to make secondary maths more accessible and inclusive.
3. How to allow students to have more success in secondary maths.

F19 STRIVING, THRIVING, AND PARALLEL-LINING: GEOMETRY WITHOUT CIRCLES

Subtheme: Innovation and inspiration

Chris Tisdell, UNSW, Sydney
(Year 5 to Year 12)

What if we asked our students a radical question — can you do geometry without circles? In this hands-on session, we explore how the humble ruler (or double-straightedge) can be used as a powerful and engaging alternative to the traditional tools of geometry.

Students often experience geometry as a set of rules to memorise — but with a parallel ruler, we can invite them to play, explore, and think differently. By constructing shapes, identifying patterns, and discovering properties of parallel lines and transversals, students have opportunities to actively build understanding and develop reasoning skills in alternative ways.

Through practical activities and classroom-ready examples, participants in this session will learn how the humble ruler can be used to challenge them to think deeply and grow in confidence. All activities demonstrated can be done with everyday classroom materials — no specialised equipment or purchases are required.

Key takeaways:

1. Explore accessible, hands-on geometry tasks using parallel rulers to foster reasoning and engagement.
2. Learn how this approach encourages creative thinking, mathematical exploration, and resilience in students.
3. Take away adaptable, classroom-ready activities that support formative assessment and inspire positive mathematical mindsets.

Remember:

Please bring your ruler and a pen/pencil to participate!

CANCELLED F20 MATHS - MORE THAN A TEXTBOOK

Subtheme: Pedagogy and curriculum

Jacinta Blencowe, Bendigo South East College
(Year 5 to Year 8)

The use of hands on materials and manipulatives is common in primary school, but lessens in secondary school, where notetaking, textbooks and worksheets are more common.

This workshop explores using hands on materials in Middle Years, with a focus on ‘mathifying’ activities – bringing out the mathematical concepts and understandings. Topics include fractions and decimals, algebra and measurement (and more if we have time!)

Key takeaways:

1. Understanding with hands-on learning
2. Strategies for “mathifying” activities
3. Reintroducing manipulatives in the middle years

F21 WAYS OF WORKING MATHEMATICALLY FOR MIDDLE YEARS STUDENTS.

Subtheme: Pedagogy and curriculum

Bernadette Mercieca, Australian Catholic University
(Year 5 to Year 8)

Both the Victorian and the Australian curriculum emphasise mathematical reasoning and ways of working mathematically as one of four proficiencies, including also understanding, fluency and problem solving.

Proficiency in mathematics enables students to respond to familiar and unfamiliar situations employing mathematical processes to solve problems efficiently and to make informed decisions. Proficiency in mathematics also enables students to reflect on and evaluate approaches, and verify that answers and results are reasonable in the context (Australian Curriculum)

However, in a busy middle years classroom these proficiencies often take a back seat, with teachers focusing more on content.

This presentation will focus on practical ways that teachers can build reasoning into the Year 5-8 curriculum and ways of determining when students are working mathematically. Strategies and teaching ideas will be shown in an interactive session.

Key takeaways:

1. Come away with a deeper understanding of the Reasoning component of the Victorian/Australian curriculum.
2. See practical examples that help to develop reasoning and ways of working mathematically.
3. Share ideas with other teachers of ways you are already working with reasoning in your classroom.

F22 THRIVING WITH AI: SUPPORTING MATHEMATICAL THINKING

This is a commercial presentation

Subtheme: Innovation and inspiration

Shirly Griffith, Jacaranda
(Year 7 to Year 10)

Emerging technologies are reshaping the way students engage with mathematics. This session explores how jacTUTOR, an AI-powered learning companion, helps students thrive by providing just-in-time support when they are confused, stuck, or need a concept explained differently, without simply giving them the answer. Instead, it guides students with questioning, modelling, and hints that keep them thinking and engaged until they succeed.

For teachers, jacTUTOR becomes a powerful tool at their fingertips, offering help to kickstart lessons, provide alternative explanations, or support planning and delivery across the curriculum. Learn how AI can enhance student agency, build persistence, and reduce barriers to learning, while supporting teachers with timely, targeted instructional help.

This session will include a live demonstration and practical examples of how jacTUTOR is being used in classrooms to personalise learning and lift confidence — for both students and teachers.

Key takeaways:

1. Discover how AI can support students when they’re stuck without giving answers, keeping them engaged and building confidence. Learn how teachers can use jacTUTOR for in-class support, planning, and differentiation.
2. See practical examples of how emerging technology helps both students and teachers thrive in mathematics. Access provided to attendees.

F23 10 PROBLEMS YOUR TEXTBOOK FORGOT

This is a commercial presentation

Subtheme: Pedagogy and curriculum

David Treeby and Gareth Ainsworth, Scotch College
(Year 7 to Year 10)

How do we sustain mathematical curiosity while building fluency and rigour? This session presents 10 carefully selected problems — one from each of 10 “mundane” curriculum areas — designed to develop algebraic muscle, reveal surprising connections, and spark joy in mathematical thinking. Each problem is accessible with standard content knowledge but rich enough to encourage extension, generalisation, and pattern exploration. We’ll discuss how strategic topic sequencing (e.g. using Pythagoras to enrich Measurement) and timely challenge can support both mastery and love of mathematics. The session also serves as a preview of a two-volume book written by David and Gareth and published by Cambridge University Press. The session is suitable for teachers seeking to stretch strong students without abandoning the curriculum — and for those who believe beauty and rigour can go hand in hand.

Key takeaways:

1. Design rich problems that extend core topics.
2. Sequence topics to enable depth and insight.
3. Foster mathematical independence through structured challenge.

F24 THRIVING IS A SPECIAL THING: STORIES OF SPECIAL NUMBERS

Subtheme: Pedagogy and curriculum

Brian Lannen, Murray Mathematics Curriculum Services
(Year 7 to Year 10)

Do you know the story behind the number 1729? How about the numbers 8191, 8128 and 8208 which featured together in an episode of The Simpsons? While one of these numbers is Perfect another is Narcissistic. What defines them to be such? 136 948 is a Vampire number, but what numbers define its Fangs? In this session we will learn the definitions of some special numbers and consider how we might use technology to explore and generate them. Resources for follow-on activities with groups of numbers like primes, tetrahedral and metallic ratios will also be shared.

SESSION F: Friday, 12.10pm-1.10pm (cont.)

Key takeaways:

1. Practical activities for fun and engagement.
2. Links to further resources.

Remember:

Bring along an expectation to have some fun.

F25 VICTORIA AND THE NEW MATHS CURRICULUM: LESSONS FROM ACROSS AUSTRALIA

Subtheme: Pedagogy and curriculum

**Alex de Lacy, Oxford University Press
(Year 7 to Year 10)**

Victoria has adopted and adapted the Australia Curriculum: Mathematics Version 9.0 to create the Victorian Curriculum: Mathematics Version 2.0. The curriculum has been compulsory to implement since the start of 2025. After a year of the new curriculum in Victoria, it's time to reflect on this implementation. But Victorian teachers and schools are not alone in this regard!

From 2026, every school across Australia will be implementing either the Australian Curriculum V9.0 Mathematics or a state based adaptation. In this session, we will consider the implementation of a new curriculum around the country and discuss challenges facing schools and talk about potential solutions. What is Victoria doing well? What could we do better?

No experience of working with other state curriculums is required. Come prepared to discuss your experiences of implementing the new curriculum!

Key takeaways:

1. Increased awareness of shared challenges in recent curriculum implementation across Australia.
2. Practical ideas for improving the implementation of the new curriculum in Victoria.

F26 UNPACKING THE MATHS IN SUPERANNUATION USING A SPREADSHEET

This is a commercial presentation

Subtheme: Pedagogy and curriculum

**Tracey West, Talk Money with Ecstra Foundation
(Year 7 to Year 12)**

Superannuation is a good real-world context with which to explore applied problems involving financial transactions and use of percentages and rates. This presentation will step participants through building a spreadsheet to explore rate calculations relating to the Superannuation Guarantee Rate, fees, and investment returns. First, the spreadsheet is set up to calculate rates annually and explore the necessary inputs, which include superannuation eligibility and income estimates over the lifecycle. Then, the spreadsheet incorporates monthly contributions. This allows students to directly compare the final balance between returns compounding annually and monthly.

In addition to developing skills in spreadsheet data entry and formulae across multiple sheets, graphs can be used to visually represent cumulative returns, income estimates and investment returns. Opportunities to further explore the data and other in-class discussion prompts will be discussed.

Key takeaways:

1. Superannuation calculations involve several rates (contribution rates, fees, investment returns).
2. Superannuation is a good application to understand compounding interest.
3. Modelling superannuation contributions in a spreadsheet allows students to explore a variety of scenarios over the lifecycle.

F27 LEAVING, LEARNING, LOVING AGAIN: CONFESSIONS OF A WASHED-UP MATHS TEACHER

Subtheme: Contemporary challenges and successes

**David Innes, Evaluate for x
(Year 7 to Year 12)**

After 12 years in the classroom, David Innes burnt out. He left to write curriculum, observe lessons, work with teachers — and doom-scroll LinkedIn. Now, he's back in front of the whiteboard with fresh eyes and a very full notebook. In

this funny, reflective session, David shares what he learned from stepping away: the difference between a classroom that survives and one that thrives. What gives a lesson that irresistible 'buzz'? What classroom practices look great but don't work — and which quiet choices make all the difference? David takes aim at tired teaching debates, shines a light on what really matters, and offers honest insights into what's worked (and what's flopped) since returning. Part memoir, part practical reflection, this is a session for anyone who's ever wondered: what makes a maths classroom really hum?

Key takeaways:

1. Recognise the subtle signs of a thriving maths classroom beyond engagement gimmicks.
2. Reflect on what really works (and what doesn't) by exploring honest, lived experiences from both inside and outside the classroom.
3. Gain fresh perspective on teaching debates by shifting focus to what helps students genuinely connect and grow.

F28 DIFFERENTIATE OR SCAFFOLD AND EXTEND?

Subtheme: Pedagogy and curriculum

**Ellie Drayton, Victorian Mathematics Ambassador, Hume Central Secondary College
(Year 7 to Year 12)**

Our mathematics classes consist of wonderfully diverse students, which can be challenging when considering how best to support all learners. Should teachers differentiate, or focus on scaffolding and extending?

Using the Victorian Lesson Plans as a practical framework, this session unpacks how scaffolding and extending - through targeted prompts - differs from traditional notions of differentiation and how they can be more responsive and sustainable in practice.

We will explore planning strategies that consider learning progressions, break down concepts into 'atoms' and maintain high expectations, whilst acknowledging the real challenges of mixed ability classes (which is every class!).

Key takeaways:

1. With a focus on purposeful planning and inclusive pedagogy, this session will offer concrete examples and collaborative discussion to improve our capacity to support, stretch and challenge all learners in mathematics.

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F29 FINANCIAL LITERACY: FREE COURSES AND GAMES TO DEVELOP STUDENTS FINANCIAL LIFE SKILLS

This is a commercial presentation

Subtheme: Pedagogy and curriculum

**Damian Nicholson, Financial Basics Foundation
(Year 7 to Year 12)**

Financial Basics Foundation provides free on-demand resources and services designed to support teachers and help students develop financial life skills.

This session will focus on free tools for student engagement with and understanding of 'real-life' financial concepts and contexts covered in mathematics. The session spotlight will be on the freshly launched Cashed Up, on-demand, engaging online short courses with financial literacy micro-credentials led by the classroom teacher.

It will also showcase the updated ESSI Money Game and the new animated MoneyIQ financial education video series.

ESSI Money is a free, award-winning, interactive online game delivered in an innovative app-based environment.

MoneyIQ is a collection of bite-sized animated videos. It's been designed to help teens deal confidently with the financial decisions and responsibilities that come with learning to manage their own money and establishing their financial independence.

All resources are free and mapped to the Australian Curriculum.

Key takeaways:

1. Free financial literacy education resources that you can use in your next lesson.

SESSION F: Friday, 12.10pm-1.10pm (cont.)

- 2. Free financial literacy training courses for your students, featuring micro-credentials.
- 3. Free Australian-context, animated, financial literacy education videos and games.

Remember:

Creating a free educator account at www.financialbasics.org.au and having an internet-enabled device with you will guarantee the most hands-on experience.

F30 10 WAYS TO MAKE TEXTBOOK STYLE QUESTIONS FUNNER

Subtheme: Pedagogy and curriculum

Troy Boote and Lizzy Barker, Warrnambool College (Year 7 to Year 12)

This session will provide examples and inspiration of 10 relatively easy ways to turn routine practice questions into more engaging classroom activities for high school maths students. Many ideas are also adaptable to other subjects. There will be an opportunity to play, some explanation and discussion amongst participants. Participants will have time and resources to begin making their own ‘funner textbook questions’ activity and/or be given a ready-to-use one from the session.

Key takeaways:

- 1. Textbook practice is important, but that doesn’t have to make it boring.
- 2. Maths can sometimes be difficult to integrate with other subjects, but this is one easy (if superficial) way.
- 3. Self-marking activities are the best.

Remember:

Please bring a collaborative spirit a pen or pencil and a calculator (any kind).

F31 NETWORKS BY MAFFSGURU AND NELSON VICMATHS

Subtheme: Pedagogy and curriculum

Darren Smyth, Wesley College, Robert Yen, Cengage Learning Australia (Year 11 to Year 12)

Darren and Robert tackle this year’s VCE exam questions on Networks and explain their teaching tips for this complex topic. Learn about common student errors, what not to do, calculator shortcuts and exam hacks. Suitable if you’re teaching General Maths for the first time or if you haven’t taught it recently.

Key takeaways:

- 1. Teaching tips for this complex VCE General Maths topic.
- 2. Learn about common student errors and what not to do as a teacher.
- 3. Learn calculator shortcuts and exam hacks.

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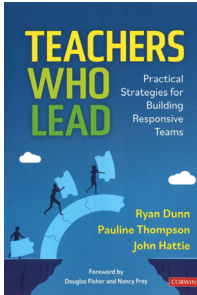
MAV 2025 EXAM SOLUTIONS

Pre-order for delivery in Term 1 2026

Ensure students prepare effectively for VCE Mathematics examinations with the MAV solutions to the 2025 VCAA Examinations for Foundation Mathematics, Mathematical Methods, Specialist Mathematics and General Mathematics.

Each solution set includes: fully worked solutions for all sections, advice on solution processes, marking allocation and permission to reproduce copies for students.

INDIVIDUAL STUDY	\$60 (MEMBER) \$75 (NON-MEMBER)
FOUNDATION	\$30 (MEMBER) \$37.50 (NON-MEMBER)
ALL STUDIES	\$160 (MEMBER) \$200 (NON-MEMBER)



ALL

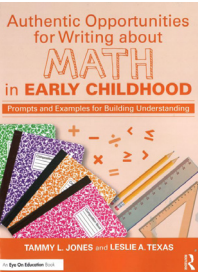
TEACHERS WHO LEAD

This book is designed for instructional coaches, year-level leaders and subject coordinators it will help you to support colleagues, inspire collaboration, and drive impactful school improvement. *Teachers Who Lead* emphasises the skills and mindsets required to bridge teaching excellence and schoolwide leadership efforts. Key features include:

- Diagnostic tools to address complex educational challenges.
- Strategies to create shared high-quality resources that reduce workload and promote consistency.
- Collaborative leadership techniques to strengthen team dynamics and foster collective teacher efficacy.
- Real-world success stories offering insights into what works in educational leadership.
- Reflection questions to apply the books ideas in your unique school context.

You’ll find actionable strategies to build confidence, promote student improvement, and make lasting contributions to your school.

\$84.25 (MEMBER)
\$105.30 (NON MEMBER)



K-2

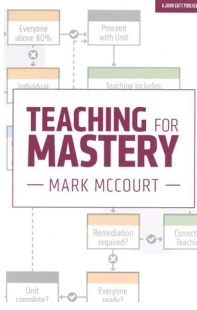
AUTHENTIC OPPORTUNITIES FOR WRITING ABOUT MATH IN EARLY CHILDHOOD

Teach students to write about maths so they can improve their conceptual understanding in authentic ways. This resource offers hands-on strategies you can use to help students discuss and articulate mathematical ideas, use correct vocabulary, and compose mathematical arguments.

Part 1 discusses the importance of emphasising language to make students’ thinking visible and to sharpen communication skills, while attending to precision. Part 2 provides a plethora of writing prompts and activities. Part 3 offers a crosswalk of writing strategies and math topics to help you plan, as well as a sample anchor task and lesson plan to demonstrate how the strategies can be integrated.

Throughout each section, you’ll also find blackline masters that can be downloaded for classroom use. You’ll have young children communicating like fluent mathematicians in no time!

\$45 (MEMBER)
\$56.25 (NON MEMBER)



ALL

TEACHING FOR MASTERY

There are many models of schooling; some work, some don’t. Mastery is an entire model of schooling with over 100 years of provenance, its impact has been researched for decades, with many of the world’s greatest education minds testing and refining the approach. It’s one of the models of schooling that actually works. Drawing on examples from cross disciplines, the story of mastery is one that all educators can engage with. The author draws on the subject of mathematics, to further exemplify the approach and to give practical examples of pedagogies and didactics that teachers can deploy immediately in their own classroom.

\$37.45 (MEMBER)
\$46.80 (NON MEMBER)

GOT SOMETHING ON YOUR MIND?



Share what's working in your classroom

Every classroom and context is different — and that's worth celebrating! Whether it's a new teaching strategy, a powerful student learning moment, or a lesson that really hit the mark, we want to hear about it.

YOUR VOICE MATTERS

Sharing your story in MAV's journals is a valuable way to:

- Celebrate success from your unique context.
- Reflect on and develop your professional practice
- Contribute to a thriving, collaborative mathematics education community.

MAV journals are distributed each term to over 17,000 mathematics educators across schools and settings — so your article can inspire real impact.

Support is available

Not sure where to start, or worried it's not 'word perfect'? Our editors are here to help shape your article and support you through the process. Reach out to discuss your ideas: *Vinculum* (secondary journal), Justine Sakurai, vinculum@mav.vic.edu.au or *Prime Number* (primary journal), Aylie Davidson, primenumber@mav.vic.edu.au.

SESSION G: Friday, 2pm-3pm

G01 WORDS COUNT: ELEVATING UNDERSTANDING THROUGH VOCABULARY MASTERY

Subtheme: Pedagogy and curriculum

Renee Ladner, The Mathematical Association of Victoria (F to Year 6)

The teaching of mathematical vocabulary is pivotal to improving problem-solving skills and performance in standardised assessments such as NAPLAN. This presentation explores the importance of explicit vocabulary instruction and its role in enhancing students' conceptual understanding and communication in mathematics. It delves into the categorisation of words into Tier One, Tier Two, and Tier Three vocabulary, offering a framework for identifying and prioritising which words to teach. Practical strategies for teaching vocabulary explicitly, including contextualisation and scaffolded practice, will be discussed to empower educators in their classrooms. By embedding robust vocabulary instruction into mathematics teaching, educators can foster deeper comprehension and improved outcomes for all learners.

Key takeaways:

1. Understand why explicit vocabulary instruction is essential in mathematics
2. Learn how to categorise and prioritise Tier 1, 2, and 3 vocabulary
3. Gain strategies to select and teach mathematical language with clarity and purpose

G02 SUPPORTED APPLICATION USING THE VICTORIAN LESSON PLANS

Subtheme: Pedagogy and curriculum

Emily Glen, Victorian Maths Ambassador (F to Year 6)

What does high-quality Supported Application really look like in the maths classroom? In this hands-on session, we'll look into how the Victorian Lesson Plans (VLPs) can be used to launch us into this stage of the VTLM 2.0. Our key questions for the session to guide our work include:

- What does effective Supported Application look like in practice?
- When and how do we plan for it to ensure meaningful challenge and consolidation?

- How can the VLPs support us to design rich, purposeful tasks that promote reasoning and problem solving?

We'll take a deep dive in some of the Maths VLPs and you'll walk away with practical tools, strategies and planning ideas that will foster student growth and curiosity with a clear throughline from explicit teaching to independent success.

Key takeaways:

1. What does effective Supported Application look like in practice?
2. When and how do we plan for it to ensure meaningful challenge and consolidation?
3. How can the VLPs support us to design rich, purposeful tasks that promote reasoning and problem solving?

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G03 IGNITING GROWTH IN MATHEMATICS: A PRACTICAL PATHWAY WITH THINKING CLASSROOMS

Subtheme: Contemporary challenges and successes

Sylvia Holroyd, Xavier College (F to Year 6)

Strong numeracy skills and a positive mindset towards mathematics are essential foundations for student success. This session explores how Peter Liljedahl's Thinking Classroom approach can transform mathematics education to meet these goals.

Drawing on our school's experience, we'll share the challenges, successes, and lessons learned in adopting this evidence-based pedagogy. Topics include navigating obstacles, managing time constraints, and fostering collaborative feedback cycles. Specific examples — such as shifting from teacher-led instruction to student-driven exploration — will highlight the impact on engagement, critical and creative thinking, resilience, and confidence in problem-solving.

You'll also experience a Thinking Classroom firsthand, with strategies to support diverse learners needing extra help, extension, or enrichment. By the end, you'll leave with actionable ideas to refine your teaching and inspire growth in your school.

SESSION G: Friday, 2pm-3pm (cont.)

Key takeaways:

1. Approaches for integrating the Thinking Classroom pedagogy in your school.
2. Insights into navigating and overcoming common challenges.
3. Strategies for gathering evidence of impact on teacher effectiveness and student outcomes, including engagement, collaboration, resilience, confidence, and mathematical achievement.

G04 SMARTLAB: AN AUSTRALIAN DIAGNOSTIC AND LEARNING PLATFORM FOR MATHEMATICS

This is a commercial presentation

Subtheme: Pedagogy and curriculum

David Lewis, SmartLab
(F to Year 10)

SmartLab is an Australian online diagnostic and learning platform used by hundreds of schools to support differentiated the learning across the Victorian and Australian Mathematics Curriculum.

This session will demonstrate how SmartLab's comprehensive pre, post and retention diagnostics reveal student strengths and gaps across topics, allowing for informed, data-driven lesson planning. Teachers can access detailed individual, class and cohort reports to guide their teaching strategies. The session will also dive into SmartLab's adaptive learning tools including engaging videos, interactive worksheets and scaffolded practice questions. It will also show how learning material responds directly to diagnostic outcomes, offering tailored support that adapts to each student's progress. The session will also showcase how SmartLab promotes student agency by giving learners access to their own results and recommended learning pathways. This presentation will showcase how SmartLab helps drive targeted intervention, supports differentiated instruction and enhances student achievement and confidence in mathematics.

Key takeaways:

1. Discover how SmartLab diagnostics identify individual and cohort learning needs.
2. Learn how to use data to personalise instruction and inform lesson planning.

3. Explore adaptive resources that provide targeted, differentiated support for every student.

CANCELLED G05 PERSONAL MATHS - THAT YOU NEVER KNEW YOU HAD!

Subtheme: Innovation and inspiration

Paul Bowyer, Mathematicalendar, Mount St Benedict College, Sydney
(Year 5 to Year 10)

This presentation/workshop explores the hidden maths - personal maths - that's present in us all, derived from our birthdays. Covering ideas like personal fractions, coordinates, Pythagorean triads, equations and more, it can serve as an interesting framework for your maths teaching. It's creative and a rich source of surprising new ideas and frontiers!

Key takeaways:

1. Creative framework to motivate students and help them thrive.
2. Creative interpretation of the curriculum.
3. As well as the classroom, it can be used at home with family and friends.

CANCELLED G06 EMPOWERING MATHEMATICS THROUGH TEACHER INQUIRY: INSIGHTS FROM ISV

Subtheme: Innovation and inspiration

David Burton, Independent Schools Victoria
(F to Year 12)

The ISV Teacher Fellowship Program unites educators from a wide range of learning areas to lead practitioner-driven inquiry projects that address real-world challenges in teaching and learning. While the program embraces diverse inquiry themes — including cross-curriculum priorities, student agency, and engagement — this session will highlight projects specifically focused on mathematics.

Presenters will showcase how mathematics educators have used inquiry to:

- Deepen mathematical understanding through culturally responsive pedagogy.
- Amplify student voice and ownership in curriculum design.

- Re-engage disengaged learners with innovative, contextually relevant strategies.
- Enhance mathematics learning through interdisciplinary collaboration.

Attendees will gain a clear understanding of the Fellowship's structure and goals, and explore its underpinning inquiry model—an adaptable, sustainable framework for meaningful professional learning. This approach empowers teachers as change agents and fosters ongoing, school-wide improvement that extends well beyond individual inquiry projects.

Key takeaways:

1. Concrete examples of mathematics-related inquiry projects and their impact.
2. A transferable model of inquiry-based professional learning.
3. Practical strategies for implementing teacher-led inquiry in a school context.

G07 SUPPORTING DIVERSE LEARNERS TO THRIVE IN MATHEMATICS.

Subtheme: Pedagogy and curriculum

Julie Andrews
(F to Year 12)

This presentation will show how teachers can support Diverse Learners of mathematics by aligning their teaching practices with the Victorian Teaching and Learning Model 2.0 and the Victorian Mathematics Position Statement. Focussing on how students learn, teachers will learn how to use the elements of learning and teaching to plan in new ways, including providing explicit teaching, opportunities for supported application and mastery, and opportunities for the application of key mathematical concepts. Teachers will also unpack how they can use the proficiencies with their students for simultaneous development of the key concepts as well as ensuring that students learn the skills they need. Finally, teachers will explore how these teaching practices can support all learners, including diverse learners, to reduce student mathematics anxiety and develop student confidence in themselves as mathematicians.

Key takeaways:

1. How teachers can use VTLM 2.0 and the Victorian Mathematics Position Statement to make a difference for all students.
2. How teachers can provide explicit teaching, supported application and mastery of key mathematical concepts.
3. How teachers can support all learners, including diverse learners, to reduce mathematics anxiety and develop confidence.

G08 EXPLICIT TEACHING AND PROBLEM SOLVING, USING THE INSTRUCTIONAL HIERARCHY

Subtheme: Pedagogy and curriculum

Sean Alston, Strathtulloh Primary School, Zahra Harvey, Lysterfield Primary School
(F to Year 8)

The instructional hierarchy is a 4-stage model that helps educators understand how students progress through learning. By understanding these stages, educators can tailor their teaching strategies to optimise learning and ensure students progress effectively through each level of the hierarchy. More specifically, understanding where students sit in the instructional hierarchy dictates whether they will most benefit from explicit teaching or from a more open-ended, inquiry-based model. Through this session we will unpack each of the 4 stages of the Instructional Hierarchy and how it relates to the novice-to-expert continuum. We will provide specific examples of how to use this framework to inform planning and delivery of lessons throughout the primary school years to ensure equitable education for all students.

Key takeaways:

1. Understanding when to teach explicitly and when to teach using a problem-solving model.
2. Knowledge of the appropriate teaching strategy to match students' stage of learning.
3. Provided with specific resources to deliver content based on each stage of the instructional hierarchy.

SESSION G: Friday, 2pm-3pm (cont.)

G09 HOW TO ACHIEVE EVIDENCE-BASED MATHEMATICAL SUCCESS FOR STUDENTS WITH DISABILITIES

Subtheme: Pedagogy and curriculum

Cameron Peverett and Kerry Marriner, Lake Colac School (F to Year 8)

Lake Colac School has been on the edge of innovation in specialist education for students with disability for many years. The school adopted an evidence-based, science of learning model six years ago and hasn't looked back. While the focus has been on literacy, numeracy has now come to the fore over the past couple of years with the new Victorian Curriculum 2.0 in Mathematics, now including Foundation Levels A - D. Student growth has been outstanding throughout the school and through an innovative approach to the teaching of mathematics for students with intellectual disability and other support needs, Lake Colac will be able to show how all students can learn to be numerate with the right pedagogical models, resources, and structures. Come along and find out how science of learning principles can be applied so that all students can be successful in their learning, without ceilings.

Key takeaways:

1. How to apply science of learning principles in the teaching of mathematics for students with disability.
2. How to assess students with disability in their mathematical growth.
3. Which structures, routines and resources really make a difference in teaching students with disability.

G10 GUIDED PRACTICE - USING WORKED EXAMPLES FROM NOVICE TO EXPERT

Subtheme: Pedagogy and curriculum

Sacha Giurietto, Pleasant Street Primary School (F to Year 8)

How do we support students to practice new maths content as novices, and how can we adapt our teaching as students learn more? In this talk, Sacha will discuss using worked examples to support students to practice new concepts and as a scaffold so they can solve challenging problems.

Key takeaways:

1. Guided practice is an essential part of explicit maths lessons

2. Paired problems support students in guided practice
3. Faded guidance can be used to scaffold challenging problem-solving tasks

Remember:

A pen.

CANCELLED G11 THRIVING MATHEMATICALLY: USING TPACK, FLUENCY, IDENTITY WITH TEACHERS AND STUDENTS

Subtheme: Pedagogy and curriculum

Jacqueline Benson, Penleigh and Essendon Grammar School (Year 3 to Year 8)

Thriving mathematically is not defined solely by attainment; it also involves building confident, capable identities in students and teachers. This session shares Penleigh and Essendon Grammar School – Junior Boys' journey to identify the 'sweet spot' for thriving mathematically. Drawing on Dweck's Growth Mindset, research on mathematical identity, and the revised TPACK framework (2019), we explore how these dimensions can be integrated with cognitive science principles to foster positive mathematical identities and engagement. Data snapshots will illustrate measurable improvements in fluency and confidence, while teacher, student, and parent perspectives demonstrate how formative assessment and inclusive practices support thriving. Participants will gain practical strategies to build fluency, nurture curiosity, and support reflective growth in their own mathematical identities and those of their students, empowering them to apply these approaches in their own schools to create equitable, resilient mathematics communities where all learners can see themselves as capable mathematicians.

Key takeaways:

1. Understand how fluency, for both students and teachers, builds strong, resilient mathematical identities.
2. Reflect on practical strategies and lessons learned to help teachers and students develop resilience with cognitively informed learning approaches.
3. Consider how these strategies could be adapted to your school context by comparing experiences and perspectives.

G12 PREPARING FUTURE TEACHERS TO TEACH FOR NUMERACY ACROSS THE CURRICULUM

Subtheme: Contemporary challenges and successes

Kathy O'Sullivan, University of Galway (Year 3 to Year 8)

This presentation draws on research investigating pre-service teachers' knowledge of numeracy and their capacity to teach for numeracy across the curriculum. Aligned with the MAV25 theme *Thriving in Mathematics*, this paper explores how teacher education programmes can better prepare future teachers to develop students' numeracy skills in meaningful and authentic ways.

Using O'Sullivan's 'N' Framework (2025), which outlines the professional knowledge base required to teach for numeracy across the curriculum, this study examines how pre-service teachers conceptualise numeracy and their pedagogical readiness to support students' numeracy development in all subject disciplines. Findings reveal the challenges pre-service teachers face in supporting numeracy development across the curriculum, as well as key enablers that support effective numeracy development. This presentation will share practical recommendations for embedding numeracy across subject areas and offers valuable insights for teachers and teacher educators.

Key takeaways:

1. Understand how pre-service teachers conceptualise and approach teaching for numeracy across the curriculum.
2. Explore challenges and supports in preparing teachers to embed numeracy meaningfully in all subjects.

G13 STUDENTS NEED PERSONALISED-COMPETENCY BASED LEARNING (PCBL) TO THRIVE IN MATHS

This is a commercial presentation.

Subtheme: Contemporary challenges and successes

Janine Mowat, Blackburn High School, Liam Jones, Maths Pathway (Year 3 to Year 10)

Learning is defined as a change in long-term memory, after being processed in a limited working memory. When new information is too complex, presented too rapidly, or students

lack the necessary prior knowledge, their working memory becomes overloaded, hindering the transfer of learning to long-term memory. Australian research shows significant differences in student capabilities, spanning up to eight years by middle school.

PCBL directly addresses these challenges by aligning educational practice with the science of how students learn. Students advance based on demonstrated mastery rather than time spent on a topic or their age level. PCBL manages cognitive load by allowing students to work within their zone of proximal development. This ensures a solid foundation is built for subsequent learning and prevents students from being overwhelmed. Schools implementing such approaches have reported significant positive results, with students making substantial academic growth and feeling more confident.

Key takeaways:

1. Students struggle to learn new maths when they don't have the prior knowledge to draw upon.
2. A PCBL approach ensures all students have the prior knowledge they need.
3. Learn practical ways to incorporate PCBL into your classrooms.

G14 THE LEARNING SCIENCE OF AERO: SOME ASSOCIATIONS WITH STEM TEACHING

Subtheme: Contemporary challenges and successes

Fabio D'Agostin and Michael Lawrence, The Geelong College (Year 3 to Year 10)

Our presentation elaborates the AERO learning principles that underpin its subsequent pedagogical advice. We identify 3 central issues; concerns related to the differences between conceptual and procedural learning, the exclusively behaviourist nature of AERO's pedagogical advocacy and the highly limited treatment of student motivation. We present alternative approaches to developing effective pedagogies including the substance of Fabio's research. The presentation then shows two of AERO's demonstration teaching videos in STEM and offers constructive critiques. The final aspect of the presentation is a discussion of how teaching and learning in Finland differs from the approach promoted by AERO.

SESSION G: Friday, 2pm-3pm (cont.)

Key takeaways:

1. The AERO online teaching resource is limited in several ways.
2. Viable pedagogical alternatives exist, based on the same learning science used by AERO.
3. STEM teaching should involve more than strictly behaviourist approaches to learning.

Remember:

This presentation may be of interest to any teachers who are interested in the contemporary Australian teaching and learning landscape. We offer views that are founded in both conventional and alternative visions for what an education may be.

G15 RELATIONSHIPS, RELEVANCE, AND RIGOUR: DESIGNING FOR DEPTH IN MATHS

Subtheme: Innovation and inspiration

**Dominika Kapustka, Haileybury
(Year 5 to Year 10)**

This presentation explores how blended learning and flipped classroom approaches can enhance mathematics teaching by deepening engagement, supporting differentiation, and building student confidence. Grounded in the core philosophy of relationships, relevance, and rigour, the session highlights how strong teacher-student connections, purposeful and contextualised content, and high expectations create a powerful foundation for learning.

Participants will examine how high-quality digital and print resources, when thoughtfully designed, can streamline teaching, promote consistency across classes, and cater to individual learning needs. Real classroom examples will show how to structure blended lessons that maintain academic rigour while offering flexibility and relevance. Educators will leave with practical tools and strategies for creating engaging, student-centred lessons that support long-term success in mathematics.

Key takeaways:

1. Explore how blended learning and high-quality resources add relevance and rigour to maths lessons.
2. Strategies to build strong student relationships using flipped learning to support differentiation.

3. Create meaningful, consistent learning experiences that help all students succeed.

Remember:

Please bring a device to join the interactive presentation.

G16 MATHS300 BEYOND YEAR 10

Subtheme: Pedagogy and curriculum

**Damian Howison, St Mary MacKillop College
(Year 9 to Year 12)**

I am one of the countless believers who know that Maths300 is a world-class resource with so much to offer. It informs our teaching and lifts our classrooms creating wonderful environments as we navigate the primary and middle years . . . but then what? Alas, for many of us it becomes harder to reach for a Maths300 lesson after Year 10 in an often time-starved curriculum; lessons that align with the topics we need to address. But not all is lost. You may be surprised to know that there are still quite a few gems to bring out the best in our classrooms once again after Year 10, especially for the Mathematical Methods curriculum.

Key takeaways:

1. Maths300 lessons that align with the VCE and/or that provide for investigation using senior skills.
2. Discussion around strategies that create time for teachers to make use of these lessons in VCE.

Remember:

It may be an advantage to have a scientific or CAS calculator.

G17 EMBEDDING COMPUTATIONAL THINKING: DIFFERENTIATION DIMENSIONS FOR LOW-FLOOR, HIGH-CEILING MATHEMATICAL TASKS

Subtheme: Pedagogy and curriculum

**Danijela Draskovic, The Mathematical Association of Victoria, Max Stephens, The University of Melbourne
(Year 5 to Year 10)**

As computational thinking (CT) becomes essential in contemporary mathematics education, teachers need practical ways to design tasks that are accessible yet challenging for diverse learners. This presentation examines how the well-known low-floor, high-ceiling (LFHC) principle

can be applied deliberately across three key differentiation dimensions in CT-infused mathematics classrooms.

1. Content.
2. Cognitive load.
3. Affective.

Participants will unpack practical tasks illustrating these dimensions in action and consider the Victorian Coding Challenge (VCC) as a concrete example of how schools can integrate CT through coding, whether in mathematics lessons or broader STEM contexts. The session will explore design trade-offs, highlight implementation insights, and offer clear principles for developing CT-rich tasks that maintain mathematical integrity while supporting all students to go further.

Key takeaways:

1. Gain a clear three-dimensional framework for designing CT tasks with low-floor, high-ceiling reach.
2. Examine real tasks from the Victorian Coding Challenge.
3. Take away adaptable design principles to balance accessibility, depth, cognitive load, and engagement across mathematics and STEM contexts.

G18 RETHINKING PROBLEM – SOLVING: EMPOWERING MATHEMATICAL REASONING THROUGH THINKING ROUTINES

Subtheme: Pedagogy and curriculum

**Mark Grasso, Bialik College
(Year 5 to Year 10)**

How can we build confident, capable problem solvers in mathematics classrooms that vary in readiness and ability? This presentation explores how structured approaches to thinking can support the explicit development of problem-solving strategies from upper primary through to senior secondary. Drawing on classroom practice and pedagogy, it demonstrates how guiding students to articulate reasoning, generalise thinking, and engage with open-ended, non-routine problems fosters deeper understanding. Participants will explore how to identify and adapt rich mathematical problems that elicit multiple strategies and promote student agency. The session also addresses assessment, sharing how visible thinking and structured reflection can inform

teaching and enhance learning. A problem-solving rubric was developed to further support students in structuring and reflecting on their approach to problem solving. With practical examples and teacher-facing tools, this session offers actionable strategies for embedding a culture of thinking that nurtures capable, reflective, and persistent mathematical learners across diverse educational contexts.

Key takeaways:

1. Use structured thinking approaches: Implement thinking routines to facilitate problem-solving.
2. Adapt problems to make them suitable for problem solving: Explore modifications to encourage strategic thinking and multiple solution paths
3. Assess student thinking: Use a rubric to guide self-reflection and support informal and formal assessment of problem solving.

G19 HOW TO CREATE ANIMATIONS FOR MATHEMATICS CLASSROOMS USING GEOGEBRA

Subtheme: Pedagogy and curriculum

**Tran Trinh, Narcisa Corcaci, Suzanne Cory High School
(Year 5 to Year 12)**

This workshop provides an introduction to GeoGebra as a teaching and learning tool that supports students in visualising and developing a deep understanding of abstract Mathematical concepts. This versatile software is suitable for teachers at all year levels. Participants will be introduced to GeoGebra's key features, followed by a demonstration of its basic commands. The session will focus on creating animations on the graphing and geometry pages. Participants will have the opportunity to design their own applets to illustrate the impact of parameters, such as the discriminant, on the number of solutions to a quadratic equation. In addition, they will learn how to construct three-dimensional objects that can be viewed from different angles and explore concepts like scale factor and similar triangles. The workshop will conclude with a walkthrough of advanced features designed to make teaching more engaging. A guide consisting of additional examples will be provided for future reference.

Key takeaways:

1. Making animations to teach abstract concepts.

SESSION G: Friday, 2pm-3pm (cont.)

2. Creating graphs and objects for class activities.
3. Using as a tool for making assessments.

Remember:

Please bring a laptop or a notebook. Although it's not required, participants are encouraged to visit the GeoGebra website and download the 'Calculator Suite' in advance so we won't need to rely on an internet connection.

G20 EXPLICIT TEACHING STRATEGIES FOR THE DEVELOPMENT OF NUMBER FACTS

Subtheme: Pedagogy and curriculum

Leonie Anstey, The Mathematical Association of Victoria (F to Year 4)

This workshop considers effective mathematics instruction, by teaching explicitly with strategies and tools that support student understanding. It focuses on identifying the Number Core and Relations Core as foundational concepts in early numeracy. Participants will examine how to use Cognitive Guided Instruction (CGI) to design purposeful questions that reveal student thinking in addition and subtraction. The session will also highlight approaches for developing additive strategies, moving students from counting-based methods to mental computation. By integrating these elements, participants can deepen their understanding of how students build number sense and support progression in mathematical reasoning and fluency.

Key takeaways:

1. Understand the importance of the Number Core and Relations Core to strengthen students' foundational number sense.
2. Learn how to design learning experiences that uncover and respond to students' thinking in addition and subtraction.
3. Consider practical strategies to explicitly teach and support the development of efficient additive strategies beyond counting.

G21 LEADING EVIDENCE-BASED TEACHING THROUGH NUMERACY MEETINGS

Subtheme: Leadership and agency

Gloria Yi, Milton Bai, St Albans Secondary College (F to Year 10)

This session showcases how St Albans Secondary College drives evidence-based teaching through its Numeracy Team Meetings. These collaborative meetings are designed to respond promptly to emerging student numeracy needs by analysing data and developing targeted interventions. Delegates attending this session will be introduced to the structure and framework that guide these meetings, including how student work samples, formative assessments, and trend data are used to inform decision-making.

The session will also highlight real examples of effective, evidence-based interventions implemented as a result of these meetings. Attendees will gain insight into how this approach strengthens teacher collaboration, supports differentiated instruction, and improves student outcomes. Whether you are establishing a numeracy team or looking to deepen your school's data-informed practices, this session offers practical strategies for embedding responsive, evidence-based teaching in your maths program.

Key takeaways:

1. Introduction to an innovative approach.
2. Discussions and resources of the approach and examples.
3. Opportunities to create programs for your school.

Remember:

Hard copies and digital copies of handouts will both be provided. Please bring a pen and/or a charged device.

G22 ENGAGED OR JUST COMPLIANT? RETHINKING STUDENT PARTICIPATION IN MATHS

Subtheme: Pedagogy and curriculum

Penne Grant, Mount Rowan Secondary College (Year 7 to Year 10)

This presentation explores the subtle yet critical distinctions between engaged students, compliant students, and those distracted by fun — particularly in middle years mathematics classrooms. While all three may appear attentive, their

cognitive engagement varies widely, influencing both learning outcomes and attitudes toward mathematics. Penne draws on 15 years of experience to help educators recognise these behavioural patterns and reflect on the unique ways adolescent brains process mathematical ideas. The session will delve into the role of purposeful questioning as a tool to deepen authentic engagement, promote a growth mindset, and build mathematical confidence in adolescents. Participants will learn practical questioning strategies to spark curiosity, elicit meaningful thinking, and move students beyond passive compliance towards deeper mathematical thinking.

Key takeaways:

1. Identify student behaviour types through observable cues
2. Use questioning to promote genuine mathematical engagement
3. Develop student buy-in through cognitive challenge and emotional relevance

G23 BODMAS AND THE TRANSITION FROM PRIMARY SCHOOL NUMERACY TO VCE

Subtheme: Pedagogy and curriculum

Stephen Paatsch, University High School (Year 7 to Year 10)

Firstly, order of operations is not explicitly mentioned in the descriptors of the current Victorian Curriculum 2.0 – Number. However, a deeper dive will find references. Despite this, order of operations remain central to multiple mathematical contexts in every secondary year of our mathematics curriculum. This presentation will begin by considering the simplest of numerical procedures before continuing through numerous topics that ends with VCE Matrices, noting that matrices is now a common topic in VCE General, Methods and Specialist courses.

All participants will receive examples of my own work and suggestions for reinforcing this most central component of reading mathematics. However participants are also invited to bring along examples of their student work to illustrate the success or otherwise of their experiences in teaching order of operations. And through this presentation, participants will experience the alternative title to this presentation: BODMAS – The gift that keeps on giving!

Key takeaways:

1. Teaching BODMAS to Year 7 students using a systematic method of equivalent expressions
2. The relevance of BODMAS in VCE - in particular in matrices.

Remember:

Participants are invited to bring along examples of their student work to illustrate the success or otherwise of their experiences in teaching order of operations.

G24 MAXIMISING EXPLICIT TEACHING IN DIVERSE CLASSROOMS

Subtheme: Pedagogy and curriculum

Yvonne Reilly and Emmie Keung, Sunshine College, (Year 7 to Year 10)

This workshop explores practical strategies for implementing the Victorian Teaching and Learning Model (VTLM) 2.0 and Vic Maths 2.0 in Years 7–10.

It focuses on combining high-quality explicit instruction with conceptually rich tasks that build deep mathematical understanding. Emphasis is placed on recognising and responding to students' points of need in diverse classrooms. Participants will examine lesson design strategies that embed purposeful questioning, support differentiation, and promote reasoning and problem-solving. The session will highlight ways to structure lessons that engage students, encourage active thinking, and build meaningful connections across mathematical concepts. Key themes include heightening the impact of explicit instruction and delivering it effectively at the point of need in heterogeneous classrooms.

Key takeaways:

1. Practical strategies to engage students, provide feedback, and deliver targeted teaching in heterogeneous classrooms.
2. Approaches to build student agency and ownership of learning.
3. Lesson design techniques that foster mathematical reasoning and deep conceptual understanding.

SESSION G: Friday, 2pm-3pm (cont.)

G25 HELPING STUDENTS THRIVE IN MATHEMATICS THROUGH INTERLEAVING AND RETRIEVAL PRACTICE

Subtheme: Pedagogy and curriculum

**Suzanne Ditchfield, Monbulk College
(Year 7 to Year 10)**

This hands-on session will explore the impact of two powerful, research-based learning strategies — interleaving and retrieval practice — for secondary mathematics classrooms. Often overlooked in favour of traditional blocked teaching and cramming, these strategies have been shown to significantly improve students' long-term retention, conceptual understanding, and ability to transfer knowledge to new problems.

They can support students to learn mathematics with greater confidence and success.

In this session, you will gain a clear understanding of what these strategies involve, why they work from a cognitive science perspective, and how they can be practically applied in your mathematics classrooms. We will examine examples of classroom routines, task design, and assessment practices that support interleaving and spaced retrieval. Participants will engage in discussion, explore examples across a range of topics and year levels, and leave with practical ideas ready for immediate implementation.

Key takeaways:

1. Define and distinguish between interleaving and retrieval practice.
2. Understand the cognitive mechanisms that make these strategies effective.
3. Explore research supporting their use in secondary mathematics.
4. Learn practical strategies to embed these into lessons, assessments, and revision.
5. Reflect on challenges and approaches to implementation in a typical classroom setting.

Remember:

Note taking materials. This session will combine brief presentations with practical, hands-on activities. Participants will analyse and adapt existing mathematics tasks, design retrieval routines, and consider how to sequence topics to enable interleaving. Group discussion and reflection will support shared learning.

G26 TEACHING FOR MATHEMATICAL WELLBEING IN SECONDARY MATHS CLASSROOMS.

Subtheme: Pedagogy and curriculum

**Colin Shnier, Victorian Academy of Teaching and Leadership
(Year 7 to Year 12)**

Emerging research shows that students' mathematical outcomes are related to their mathematical wellbeing (MWB). Many students find secondary maths classrooms places where MWB is hard to find, leading to lower levels of engagement, perseverance, confidence and achievement.

In this workshop, teachers will share the research and findings around mathematical wellbeing. They will consider the stories behind the data, through looking at student experience and prevailing pedagogical practices. Finally they will identify, model and share teaching practices that promote mathematical wellbeing.

Teachers will leave with a research-informed understanding of mathematical wellbeing and a set of teaching strategies to adapt to their own classroom settings.

Key takeaways:

1. Understand the seven dimensions of mathematical wellbeing (MWB)
2. Understand the MWB data for secondary mathematics, and the student stories behind this data
3. Explore teaching strategies that promote mathematical wellbeing for secondary students

G27 PROGRAMMING THE ROVER USING PYTHON VIA THE TI-NSPIRE CAS CALCULATOR.

This is a commercial presentation

Subtheme: Innovation and inspiration

**Steve De Domenico, Melbourne Grammar School
(Year 9 to Year 10)**

This presentation demonstrates how to use the TI-Nspire CAS calculator to program the TI-Innovator Rover using Python. Key programming concepts such as pseudocode, block design, and logic will be introduced to support structured problem-solving.

Coding tasks will be designed to reinforce mathematical concepts, including measurement, coordinates, angles, and algebraic reasoning. By integrating mathematics and coding, students gain practical experience in applying abstract ideas through real-world tasks. The use of the Rover promotes hands-on learning and encourages engagement with mathematical thinking in a dynamic, interactive way. The session highlights how coding enhances understanding by linking logic and computation to curriculum content. Attendees will see how technology can be effectively integrated into mathematics education to build confidence, encourage experimentation, and support deeper learning through meaningful connections between coding and mathematics.

Key takeaways:

1. Learn how to use Python with the TI-Nspire CAS to program the TI-Rover.
2. Understand how coding reinforces key mathematical concepts through real-world applications.
3. Explore strategies for integrating coding into the classroom to boost engagement, problem-solving, and logical thinking.

Remember:

As this session will be a demonstration of my coding and worked examples, delegates will not require a specific handheld device.

G28 GET IN SHAPE: THE TRANSFORMATION WORKOUT!

Subtheme: Pedagogy and curriculum

**Christopher Ireson, Leonard Bedier, Melbourne High School
(Year 9 to Year 12)**

Mathematical transformations are shape-shifting superpowers — flipping, sliding, turning, and stretching figures like geometric gymnastics! They keep the shapes the same at heart, just with a brand-new look or location. The TI-Nspire CX CAS Technology will be used to help to understand the concepts of transformations through graphical and equation based examples.

Key takeaways:

1. Using technology the effects of transformations can be easily visualised.

2. Using technology the effects of transformations on the equation can be easily shown.
3. Using technology a general template can be set up to help understand transformations.

Remember:

Please bring your computer with the latest version of the Texas Instruments TI-Nspire CAS Premium Teacher Software installed or the TI-Nspire CX II CAS Calculator with the latest OS installed. The Casio ClassPad may be able to be used in some examples.

G29 PREPARING FOR THE FOUNDATION MATHEMATICS INVESTIGATION SAC: OUR JOURNEY AND RESOURCES

Subtheme: Pedagogy and curriculum

**Lizzy Barker, Troy Boote, Warrnambool College
(Year 9 to Year 12)**

The new mathematical investigation style of SAC in Year 11 Mathematics and Year 12 Foundation Mathematics has taken some time and thinking to prepare our teachers and students for. Not sure we are there, yet, but keen to share our journey of empowering staff, providing support, and strategically planning the introduction and familiarisation with this type of task from year nine onwards. We will provide examples, information on resources used to support and how we supported staff, including graduate teachers to write, teach and assess assessment in this style. Blank templates for population will also be provided as a scaffold for your own/your team's journey.

Key takeaways:

1. Start the process early for teachers and students.
2. Provide lots of time for discussion, collaboration and feedback (for teachers writing tasks).
3. Provide exemplars and practice with lots of feedback for students.

Remember:

Please bring a collaborative spirit a pen or pencil and a calculator (any kind).

SESSION G: Friday, 2pm-3pm (cont.)

CANCELLED G30 AN INTRODUCTION TO PSEUDOCODING IN VCE

Subtheme: Pedagogy and curriculum

Toan Huynh, Code for Schools
(Year 9 to Year 12)

A gentle introduction to pseudocoding concepts applicable to VCE Math Methods and Specialist Maths. We'll take you from being a complete novice to being able to understand exam-style pseudocode and write simple algorithms in pseudocode. Slides, videos, worksheets and a free textbook will be provided which you can take directly into your classes.

Key takeaways:

1. Being able to understand the pseudocode concepts of variables, IF statements and loops.
2. Gain confidence and skills to analyse provided pseudocode and write simple algorithms in pseudocode.
3. Access to free slides, worksheets, videos and a textbook which you can use and share with students.

Remember:

Google Chrome for coding activities.

G31 APPLICATIONS OF TRIGONOMETRIC FUNCTIONS IN ASTRONOMY

Subtheme: Innovation and inspiration

Stephen Broderick, St Ursula's College, QLD
(Year 11 to Year 12)

Trigonometric functions will be used to model celestial motion, from our Moon's phases to distant exoplanets. Starting with sine and cosine functions to describe the Moon's cyclical phases and extend this to the orbital positions of Jupiter's moons, using circular motion and angular frequency. The same principles apply to exoplanets, where transits and radial velocity curves reveal orbital elements and masses. Kepler's Laws, especially the third law: tie these observations together, linking period and distance. TI-Nspire technology will be used to model, visualise and present data - bringing the harmony of the cosmos to life through mathematics.

Key takeaways:

1. Participants will understand how trigonometric functions model real astronomical phenomena.
2. See how Kepler's Laws can be used to analyse orbital data.
3. See how TI-Nspire technology can simulate and explore celestial systems interactively.

Remember:

Participants will be provided with a TI-Nspire calculator during the session. Participants may bring their own graphical calculator.

G32 FLUENCY WITH MEANING: EMBEDDING MATHEMATICAL FLUENCY INTO DAILY INSTRUCTION

Subtheme: Pedagogy and curriculum

Patrick Kennedy, Our Lady Star of the Sea
(F to Year 6)

Fluency in mathematics is about more than speed; it's about flexibility, efficiency, and deep understanding. In this session, we'll explore the vital role fluency plays in supporting students to become confident and capable mathematicians, and how it can be intentionally developed alongside conceptual understanding.

Drawing from the evidence on how students learn as recently published by the Grattan Institute and AERO, we'll unpack how explicit teaching builds accuracy, and how targeted fluency routines, warm-ups, review, and spaced practice, can consolidate knowledge, strengthen retention, and reduce cognitive load.

Participants will explore practical, engaging strategies for embedding fluency into everyday lessons across all levels of primary, with a focus on purposeful repetition and responsive teaching. Whether you're designing a daily review or a structured lesson sequence, this workshop will help you make fluency a natural, embedded, and essential part of every maths block.

Key takeaways:

1. Engaging strategies for embedding fluency.
2. Purpose of repetition.
3. Responsive teaching.

Supported by



KEYNOTE: Friday, 3.10pm-4.10pm

FULL KPF01 HOW ARE WE THRIVING? UNPACKING DATA, DEBUNKING MYTHS, AND REFRAMING THE NARRATIVE IN MATHEMATICS EDUCATION

Subtheme: Contemporary challenges and successes

Panellists:

Lisa De Bortoli, ACER
Chris Matthews, ATSIMA
Tom Mahoney, Monbulk College/Deakin University
Dianne Siemon, RMIT University
Peter Sullivan, Monash University
(F to Year 12)

This panel brings together education researchers and experts to explain how Australian students are performing in mathematics, drawing on data from PISA, TIMSS, and NAPLAN at state, national, and international levels.

Amid ongoing media commentary and public concern, this session aims to reframe the narrative by highlighting the strengths and areas in which Australian students are demonstrating success in mathematics. The panel will also address common misconceptions about Australia's performance and offer evidence-informed insights into current trends in students' mathematical achievement.

Panellists will discuss what the data actually tells us about student achievement, equity, and system performance. They will also consider what this means for the future of mathematics education in Australia, including identifying areas of teaching and learning that hold potential for further thriving.

Participants will gain a clearer understanding of how we are thriving in mathematics education and where strategic focus is needed to ensure continued progress.

PRESENTER LIST

Dilan Abeyaratne: B31	Kate Copping: KPT01	Mark Grasso: G18	Thomas Laverack: B27	Carmel Mesiti: KT04, A11, F12	Tina Richardson: F02
Crystal Afitu: F16	Narcisa Corcaci: A32, G19	Anita Green: B15, C02	Michael Lawrence: G14	Sanjeev Meston: A27, B22	Mike Ristovsky: A20
Gareth Ainsworth: F23	Ellen Corovic: B06	Sheila Griffin: E02	Antje Leigh-Lancaster: B17	Patty Mete: KPT01	Tom Robinson: B28
Sean Alston: G08	Maree Croft: B05	Shirly Griffith: F22	David Leigh-Lancaster: B13	Carly Millichap: A04, C03	Ange Rogers: B04
Julie Andrews: G07	Chelsea Cutting: KT01, A01	Zahra Harvey: G08	David Lewis: G04	Michael Minas: E10	Michael Rosenbrock: B16
Leonie Anstey: B13, G20	Fabio D'Agostin: G14	Kyle Hayes: B20	Di Liddell: B06	Alex Lim Tze Ming: E13	Raymond Rozen: B32
Sarah Acome: KPT01	James Dann: B23	Samantha Hellessey: E24	Eamon Light: KPT01, E09	Jessica Morgan: E06	James Russo: B07
Milton Bai: B14, G21	Aylie Davidson: KT02, A12	Abigail Henderson: B02	Sharyn Livy: E11	Narelle Anne Morris: B11	Toby Russo: B07
Alana Bandholz: A04, C03	Steve De Domenico: G27	Brendan Hodge: C05	Mark Ljubic: C14	Sonny Moshinsky: B12	Justine Sakurai: F13
Lizzy Barker: F30, G29	Shane Dempsey: B32	Sylvia Holroyd: G03	Michael Llewellyn: C16	James Mott: C22	Sebastian Sardina: E12
Leonard Bedier: G28	Ben Dennis: E20	Sarah Hopkins: KF02	Tyler Locker: C15	Janine Mowat: G13	Laila Sarraf: B21
Lianna Beeching: B19	Cathy Devlyn: A29	Damian Howison: G16	Laurinda Lomas: A01	Steph Murphy: A16	Georgia Schumann: E06
Peter Beissmann: E23	Elizabeth Dewar: B05	Jane Hubbard: KF01, E03	Andrew Lorimer-Derham: F17	Catherine Newington: E28	Lindy Sharkey: C11
Emma Bird: B10	Suzanne Ditchfield: G25	Jodie Hunter: KT03, A03, E05	Julian Lumb: C11	Brad Nguyen: E15	Colin Shnier: G26
Craig Blake: E21	Ben Dixon: F05	David Innes: F27	Alastair Lupton: B30, E30	Damian Nicholson: F29	Chris Short : F03
Troy Boote: F30, G29	Danijela Draskovic: G17	Christopher Ireson: G28	Michael MacNeill: E31	Peideng Nie: A30	Dianne Siemon: A08, KPF01
Lisa De Bortoli: KPF01	Ellie Drayton: C23, F28	Elizabeth Irwin: B10	Min Magee: A02	Stephanie Nitschke: A05, E01	Jotishma Singh: C17
Nicole Boyd: B15	Kate Eastcott: C07	Lauren Jackson: C15	Tom Mahoney: F15, KPT01	Daniel O'Kane: A21	Darren Smyth: B29, F31
Brooke Brennan: F09	Lucinda Edselius: A16	Liam Jones: G13	Kerry Marinner: G09	Kathy O'Sullivan: G12	Shiny Sood: C13
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Silvin Brown: F01	Peter Fox: A24, E26	Emmie Keung: G24	Lorna McClory: B20	Shelley Pendlebury: B27, C17	Michael Stephens : B03
Ian Bull: A18	Michelle Freeman: E06	Olis Kinnear: E25	Nerida McCredie: E08	Jen Perrett: B08	Brett Stephenson: B26
Alex Bunt: E21	Lee Gianfriddo: F16	Nick Kirby: C07	Lee McCullagh: A26	Taylor Pervan: A20	Leilani Stephenson: B26
Scott Cameron: KT04, A11, F12	Sacha Giurietto: G10	Jessica Kurzman: A09, F08	Liam McMahon: E17	Cameron Peverett: G09	Antonio Sterich: C06
Katherin Cartwright: E07	Emily Glen: C24, G02	Alex de Lacy: F25	Heather McMaster: C08	Sumati Randhawa: A02	Peter Sullivan: F11, KPF01
Amy Casati: E29	Greta Gomes: C22	Renee Ladner: F08, G01	Kevin McMenamin: A22	Sudha Rao: A21	Jiqing Sun: B22
Ben Chenoweth: C16	Jiahong Gong: C20, F18	Adrian Lam: E19	Allason McNamara: A29	Yvonne Reilly: G24	Paul Swan: A07
Ban Heng Choy: KF04, E18	Georgia Gouros: C19	Vincent Lam: C12	Geoffrey Menon: B25	Julie Richards: A10	Zoe Tamplin: B23
Celia Coffa: C09	Penne Grant: G22	Brian Lannen: F24	Bernadette Mercieca: F21	Tara Richardson: KPT01, F18	Chris Terlich: C05

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Em Thompson: C10

Chris Tisdell: F19

David Treeby: F23

Tran Trinh: A32, G19

Kristen Tripet: KF03

Joanna Tutos: A13

Enzo Vozzo: C18

Jennifer Wagner: A21

Robin Wang: A23

John West: A07, C09

Tracey West: F26

Kris Westcott: F10

Michelle Winch: A16

Angel Wong: E23

Neale Woods: F06

Robert Yen: B29, F31

Gloria Yi: B14, G21

Tamara Zerafa: E29

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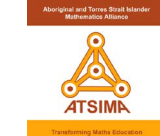
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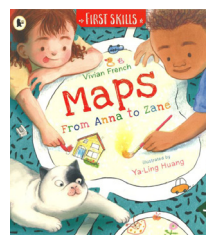
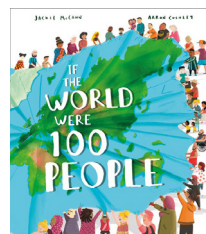
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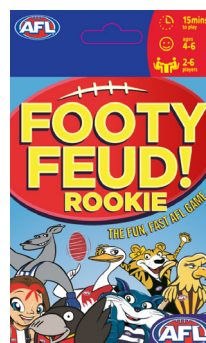
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