



MAV Regional conference

St Francis of the Fields, Strathfieldsaye 26 May 2023

Register online at www.mav.vic.edu.au

Session	Presenters	Level	Title
8.15am	Registration		
Keynote 9am–10am	James Russo	F - 10	A: When a good task alone is not enough: Sustaining challenge in mathematics classrooms
Session 1 10am–10.45am	Ellen Corovic	F - 6	1A: Going beyond 'share time'
	Jen Bowden	F - 6	1B: Picture Books – A spring board for effective maths teaching
	Di Liddell	F - 8	1C: Anticipate Phase of the Launch, Explore, Summarise Instructional model
	Carly Sawatzki	7 - 10	1D: Making maths meaningful by exploring young people's financial world
	Helen Haralambous	7 - 10	1E: Practical tasks and investigations
	Nick Devereux and Sophie Stewart	5 - 10	1F: Shoot and Score: leveraging sport to engage students in maths
Break: 10.45am–11.15am			
Session 2 11.15am–12.05pm	Ellen Corovic	F - 6	2A: Going beyond 'share time'
	Aylie Davidson	F - 6	2B: There are many ways to teach maths well.
	James Russo and Jane Hubbard	F - 8	2C: The power of spotlighting
	Carly Sawatzki	7 - 10	2D: Making maths meaningful by exploring young people's financial world
	Thomas Moore	7 - 10	2E: The first three weeks
	Danijela Draskovic and Peter Flynn	5 - 10	2F: Preparing Year 9 and 10 students for TI-Nspire use in VCE (Part 1)
Session 3 12.05pm–12.50pm	Ellen Corovic and Jen Bowden	F - 6	3A: A few of our favourites
	Aylie Davidson	F - 6	3B: There are many ways to teach maths well.
	James Russo and Jane Hubbard	F - 8	3C: Authentically assessing student work when using challenging tasks
	Bernard Kerrins	3 - 10	3D: Falling back in love with maths (exploring effective pedagogies, Improving individual and societal outcomes)
	Thomas Moore	7 - 10	3E: My first lesson - using maths to establish class values
	Danijela Draskovic and Peter Flynn	5 - 10	3F: Preparing Year 9 and 10 students for TI Nspire use in VCE (Part 2)
Lunch: 12.50pm–1.40pm			
Session 4 1.40pm–2.25pm	Ellen Corovic	F - 6	4A: Going beyond 'share time'
	Di Liddell	F - 6	4B: Exploring the anticipate phase of the Launch, Explore, Summarise Instructional model
	James Russo and Jane Hubbard	F - 8	4C: Authentically assessing student work when using challenging tasks
	Helen Haralambous	7 - 10	4D: Maths games to engage and challenge students.
	Nick Devereux and Sophie Stewart	5 - 10	4E: Shoot and Score: leveraging sport to engage students in maths
	Danijela Draskovic	5 - 10	4F: My top tips for beginner teachers on how to balance the spotlight in the classroom.
Session 5 / Plenary 2.25pm–3.50pm	Thomas Moore	F - 10	Cutting to the core. It's all about relationships!

Time	Title/abstract	Presenter biography
Keynote 9am–10am	<p>When a good task alone is not enough: Sustaining challenge in mathematics classrooms</p> <p>This century, there has been increasing emphasis in educational research, policy and practice on the importance of choosing suitably challenging and rich tasks for developing mathematically proficient students. However, ‘good practice’ instructional models describing how such tasks can be effectively implemented in classrooms continue to evolve. During this keynote, James will present key elements of the instructional model that underpin the recently completed project, Exploring Mathematical sequences of Connected, Cumulative and Challenging Tasks (EMC³). He will focus on three elements that have received more explicit emphasis in the EMC³ project than previous projects involving challenging tasks including: the facilitation of a preliminary experience prior to launching the task; spotlighting of student work during the explore phase of the lesson; and the importance of carefully chosen follow-up tasks to consolidate student thinking. Participants will be given opportunities to reflect on how they might incorporate these aspects into their own instructional practise.</p>	<p>Dr James Russo</p> <p>James Russo is an educator and researcher interested in a wide range of research topics including: the role of challenging tasks, games, and children’s literature as pedagogical approaches; teacher and student emotional responses in the primary mathematics classroom; better understanding the relationship between classroom practice and academic research; and the learning and teaching of mental computation and estimation. James writes regularly for a range of teacher practitioner journals and continues to spend some of his week team-teaching in a primary classroom. He uses this as a space to develop and test teaching ideas, and to stimulate thinking about his research.</p>
Session 1 10am –10.45am	<p>1A: Going beyond ‘share time’</p> <p>The summary phase is an often overlooked part of the lesson with teachers frequently running out of time, or inspiration.</p> <p>In this session, Ellen will explore the importance of utilising the summary of the lesson to pull learning together in preparation for the following lesson. Several teaching strategies will be shared to help teachers’ to go beyond the traditional ‘share time’ to connect and deepen learning.</p> <p>1B: Picture books – A spring board for effective maths teaching</p> <p>Picture books are a springboard for creative and critical teaching where students can make strong mathematical connections between concepts and language. Picture books contain both imagery and dialogue that can ignite curiosity and in which teachers can create purposeful and innovative learning tasks. In this workshop, we will investigate how quality picture books can lead to tasks that develop deep mathematical understandings for our students. In addition, we will look at a range of tasks that utilise the mathematical proficiencies, effective pedagogies and assessment opportunities. We will discuss thoughtful choices of picture books, considering students academic and personal requirements and the lifelong students can make on our world.</p>	<p>Ellen Corovic</p> <p>Ellen Corovic is a passionate educator who enjoys collaborating with students, teachers and schools. As a teacher, school leader and now education consultant and researcher, she works to build individual and collective efficacy as well as teacher capacity in mathematics. Ellen has extensive experience as an education consulting, including ten-years based at The Mathematical Association of Victoria. She completed a Master of Instructional Leadership at the University of Melbourne in 2019 before commencing a PhD at Monash University in 2021. The focus of her current research is factors that influence teacher practice change. Ellen continues to support schools through coaching, advice and support. Ellen enjoys supporting teachers to find the beauty, fun and love of both mathematics, teaching and leading.</p> <p>Jennifer Bowden</p> <p>Jennifer Bowden has worked as an Education Consultant at the Mathematical Association of Victoria (MAV) for 15 years. She enjoys inspiring teachers, maths coaches, consultants and leaders to become more critical and creative in their teaching, empowering consultants and teachers to be better educators and provide the best learning experiences for their students. Jen coaches, mentors and guides consultants, teachers, and leaders to build teacher capacity, increase knowledge of curriculum content, and to develop better pedagogies to establish school-wide improvement. Jen’s current interest is in helping teachers and leaders to improve education in a way that promotes and challenges students’ thinking.</p>

1C: Anticipate Phase of the Launch, Explore, Summarise Instructional model
This session draws on some of the findings from the EMC3 (Exploring Mathematical consequences of Connected, Cumulative and Challenging task) project, by exploring the inclusion of the 'Anticipate' phase to the 'Launch, Explore, Summarise' instructional model.

Di Liddell
Dianne Liddell is an education consultant and researcher. She is the Founder and Director of Engage, Empower, Educate and has teaching experience across State, Catholic and Independent schools both nationally and internationally. Dianne's experience focuses on the implementation of play-based and inquiry teaching approaches and into early years learning environments. She is a strong supporter of the Reggio Emilia approach, advocating for the reconceptualisation of education, centred around a pedagogy that honours the voice of the child. As a professional mentor and coach, she has led the successful transformation of teaching pedagogies that have increased student (and teacher) engagement through active participation. Dianne is completing an Educational Research project through The University of Melbourne, teachers' beliefs and practices for enacting a pedagogy of listening.

1D: Making maths meaningful by exploring young people's financial world
Research shows that teachers think financial education is important and want to design and implement better finance-related programs and lessons. However, teachers often lack confidence in this area, because they experience money differently to young people, and they are unfamiliar with the sorts of modern financial contexts that can connect students' real and mathematical worlds. In this workshop, participants will explore what young people need from their financial education in an increasingly complex financial world, with a focus on tables, charts and graphs. Learn by experiencing tasks and pedagogies that make mathematics meaningful for teachers and students alike. This workshop will excite those teaching or preparing students for VCE Foundation Mathematics and VCE Vocational Major Numeracy.

Dr Carly Sawatzki
Dr Carly Sawatzki is a teacher educator and educational researcher in Deakin University's School of Education. She has more than 15 years' experience working with preservice and practising teachers (including out-of-field and non-specialist teachers of mathematics) across primary and secondary courses. Carly's work is distinctly "real world" and aims to gently influence the way teachers think about educating young people for active and informed citizenship. She is internationally recognised for her classroom research which explores how young people develop numeracy and financial capability within families, communities, and schools. Carly has led research and curriculum consultancies for Australian, State and Territory education authorities. She is a thought-provoking presenter who draws on educational research to challenge thinking, promote critical conversation, and inspire innovation. To find out more, go to www.carlyawatzki.com

1E: Practical tasks and investigations
In this workshop we will explore some problem solving, open – ended tasks and investigative projects, across the different strands. We will also look at mathematics investigations developed in collaboration with various Industry partners which demonstrate how maths is applied in real industry scenarios to solve problems. All tasks offer opportunities for differentiation and where applicable provide opportunities to incorporate technology. Different ways that open ended tasks can be incorporated as part of the assessment program will be explored. Delegates will work in pairs & groups of 4 role modelling a class setting.

Helen Haralambous
Helen is a MAV Secondary Mathematics Education consultant. She has extensive teaching experience in secondary schools. This includes 32 years teaching secondary school mathematics, in 4 different schools (various settings) and has held leadership positions including mathematics faculty coordinator and year level coordinator. Leading teacher positions in Numeracy, Curriculum and Professional Development. She has worked as an education consultant at the Australian Bureau of Statistics and has co-authored Year 7–10 mathematics textbooks. She is passionate about making Mathematics engaging for all students through interesting and challenging investigations and games.



	<p>1F: Shoot and Score: leveraging sport to engage students in maths</p> <p>In this workshop, teachers will explore resources that leverage sport to engage students (working from levels 3 -7) in fun and memorable STEM learning experiences (emphasis on the M). Teachers will experiment with a range of basketball and football STEM challenges and games to test how sport and play can strengthen student engagement in the classroom. All resources are freely available to use in your school and are guaranteed to get your students moving.</p>	<p>Nick Devereux and Sophie Stewart</p> <p>Nick Devereux is Educator Engagement Coordinator at The Huddle. With a wealth of experience in various educational settings, Nick is passionate about using sport to engage students and improve learning outcomes. At The Huddle, Nick works closely with educators to develop innovative, sport-themed education programs that enrich classroom learning. Additionally, he serves as a football coach with North Melbourne's AFLW and VFLW teams, where he helps athletes learn and grow both on and off the field. Through his work at the intersection of classrooms and elite sport, Nick has gained a unique perspective on the power of sport and how it can be leveraged to enrich learning.</p> <p>Sophie is an education facilitator with a Bachelor of Education (Honors) in Primary Education and a lifelong passion for sport. After completing her degree, Sophie worked as a primary school teacher for four years at schools throughout metropolitan Melbourne and the Latrobe Valley. Sophie is dedicated to creating engaging and effective learning experiences and believes that sport and play are powerful tools that can be leveraged to create powerful outcomes for students of all ages.</p>
<p>Session 2: 12.05pm -12.50pm</p>	<p>2A: Going beyond 'share time'</p> <p>See session 1A for session summary.</p>	<p>Ellen Corovic</p> <p>See session 1A for Ellen Corovic's biography.</p>
	<p>2B: There are many ways to teach maths well</p> <p>Teachers often ask: What is the best way to plan a maths lesson? What types of tasks should I use? My initial answer is always: There are many ways to teach maths well. In other words, students need a variety of learning experiences to develop meaningful understandings and build mathematical connections. In this workshop Aylie will offer practical advice to school leaders on how they can support teachers to plan challenging and balanced learning sequences using four different lesson types: (1) Active teaching, (2) Interesting games and puzzles, (3) Imagined representations, and (4) What if? questions. This workshop is applicable to teachers and school leaders.</p>	<p>Aylie Davidson</p> <p>Dr Aylie Davidson is an experienced mathematics educator having worked in teaching and leadership roles in metropolitan and regional school settings, initial teacher education, and project leadership for the Department of Education Victoria. Aylie's research examines ways to help teachers work together to plan student-centred mathematics learning sequences and experiences that involve innovative pedagogies. Her other research interests include: mathematical reasoning; the use of challenging tasks to support diverse learners; middle school leadership; 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 primary mathematics education at Deakin University.</p>

<p>2C: The power of spotlighting</p> <p>One of challenges of guided inquiry is scaffolding student mathematical thinking throughout the explore phase of the lesson, without reverting to ‘teacher-telling’. Many teachers are familiar with supporting student learning through providing access to enabling prompts. However, another strategy for managing the level of cognitive demand whilst students are exploring the task is to spotlight a student work sample. In this workshop, we introduce several underlying principles to guide teacher decision making regarding when, how, what, and who to spotlight to best support student learning. We will draw on a range of video snippets of ‘spotlights in action’ to illustrate these principles. Teachers will be given an opportunity to anticipate how they may use this strategy when planning to teach with challenging tasks using the launch-explore-summarise lesson structure.</p>	<p>James Russo and Jane Hubbard</p> <p>See Keynote for James Russo’s biography. Jane Hubbard has a passion for improving all areas of mathematics learning and teaching in primary schools. She has over 15 years of classroom teaching experience along with seven years driving school-wide improvement as a mathematics leader. Her own professional learning experiences such as Contemporary Teaching and Learning of Mathematics (CTLTM) (ACU) and Encouraging Persistence, Maintaining Challenge (EPMC) (Monash) have been transformative in shaping Jane’s beliefs about how students best learn mathematics. Jane is a current PhD candidate at Monash University where her research is focusing on the ways that sequences of challenging tasks impact student competence and emotional responses towards mathematics in the Early Years. She also works part time as mathematics learning consultant supporting leaders and teachers to drive school wide mathematics improvement.</p>
<p>2D: Making maths meaningful by exploring young people’s financial world</p> <p>See session 1D for session summary.</p>	<p>Dr Carly Sawatzki</p> <p>See session 1D for Carly Sawatzki’s biography.</p>
<p>2E: The first three weeks</p> <p>The first three weeks of any school year are exciting. We don’t know our students, they don’t know us, and these early lessons play a major role in setting the tone for the remainder of the school year... It’s fair to say, getting them right is crucial! In this workshop, I will ask attendees to consider a task they might typically run during the first three weeks of the school year, reflect on this, and consider the intended and unintended messages that students might pick up on when undertaking such tasks. I will then share an overview of my first three weeks of lessons and their intended purpose for teachers to trial and explore with their own students. While such lessons work well for establishing class norms during these first three weeks, they can also be used at any stage throughout a school year and to re-establish classroom expectations if required. Note - This session will be complemented by the workshop ‘My first lesson - Using Maths to establish Class Values’.</p>	<p>Thomas Moore</p> <p>Thomas Moore is a passionate educator who is driven by helping students and teachers enjoy the experience of working mathematically. He is in the final year of his PhD, exploring the idea of Productive Pedagogical Relationships between Maths teachers and their students and how these are formed with students in the middle years. When he isn’t studying, you will find Thomas developing resources for his Maths Education company, EngageME Mathematics, and working as a consultant with teachers and school leaders to help both primary and secondary schools implement an inclusive and engaging mathematics curriculum for all.</p>



	<p>2F: Preparing Year 9 and 10 students for TI Nspire use in VCE (Part 1)</p> <p>Students often get to VCE mathematics having never used a CAS calculator before. Or, if they had used it previously, it was for simple calculations which could have been performed on any scientific calculator. Good command of the TI Nspire in VCE can make a significant difference in a student's efficiency, engagement and overall performance in VCE assessments.</p> <p>In this session we will present our suggestions for engaging year 9 and 10 students in CAS use which will set them up for VCE and give them a great head start.</p>	<p>Danijela Draskovic and Peter Flynn</p> <p>Danijela is a secondary mathematics education consultant for the Mathematical Association of Victoria. At MAV Danijela is involved in many different projects. She has founded the Victorian Coding Challenge (VCC), a DET funded initiative, which has had participation from thousands of students each year since its commencement in 2020 and has been approved for another 3 year round of funding. Danijela also supports VCE students and VCE teachers by putting together the VCE Revision Program – both teacher and student versions. Danijela has taught mathematics and physics in Independent Schools in Victoria as well as in the UK, and loves being in the classroom where she feels she is truly in her element. She believes that most people can engage and have success in mathematics by approaching the subject in a holistic and meaningful way. Danijela is passionate about exploring the affordances of technology in enhancing teaching and learning by modelling concepts in visual and dynamic ways. She is also an accredited trainer for Texas Instruments and has authored content for textbooks.</p> <p>Peter is an Educational Technology Consultant with Texas Instruments Australia. He has been a mathematics education teacher for over 30 years and has a keen interest in the effects of CAS on teaching, learning and assessment. Peter generously shares his experience via mentoring and conference presentations both locally and internationally.</p>
<p>Session 3: 12.05pm– 12.50pm</p>	<p>3A: A few of our favourites</p> <p>They're back! Join Ellen and Jen as they reunite to share with you a few of their favourites. In this session the presenters will take you on a journey to explore a selection of their favourite mathematics tasks and tips. Harnessing their many years as education consultants and drawing upon evidence-based practices this session will focus on effective mathematics pedagogies and collaboration. Join us for an engaging workshop and some favourites.</p>	<p>Ellen Corovic and Jen Bowden</p> <p>See session 1A and 1B for Ellen Corovic and Jen Bowden's biography.</p>
	<p>3B: There are many ways to teach maths well.</p> <p>Repeat session, see 2B for session summary.</p>	<p>Dr Aylie Davidson</p> <p>See session 2B for Aylie's biography.</p>
	<p>3C: Authentically assessing student work when using challenging tasks</p> <p>Traditionally interpretation of student achievement has been through the use of performative based assessments that are extraneous to actual learning experiences. One of the challenges to designing assessment so that it more authentically reflects what happens in a typical mathematics classroom is designing streamlined processes that are transferable across contexts and topics. In this workshop, James and Jane will introduce several approaches for introducing streamlined processes to interpret student progress when teaching mathematics through challenging tasks, with a particular focus on monitoring student thinking as the lesson unfolds, and whole-class observational checklists. Participants will have the opportunity to evaluate a series of annotated work samples to put into practice some of the key learnings from the workshop.</p>	<p>James Russo and Jane Hubbard</p> <p>See session 2C for James and Jane's biography.</p>

	<p>3D: Falling back in love with maths (exploring effective pedagogies, Improving individual and societal outcomes)</p> <p>For so long we have heard the cliché 'I'm no good at maths'. An attitude of defeatism often accompanies this. From parents, teachers and students. This workshop addresses this. Why is it seen as acceptable to publicly downgrade our own maths ability rather than strive to be proactive about it? Rediscover your own passion to learn and teach maths and pass on this enthusiasm to your students. Watch your lessons come alive, to the point where you and your students will eagerly anticipate your lessons rather than waiting to rush out of them. This workshop will present and demonstrate proven strategies that engage students and teachers, encourage them to be enthusiastic problem solvers while at the same time improving their capabilities across the maths curriculum. Developing a mindset that is directed towards becoming more involved in maths will be a focus.</p>	<p>Bernard Kerrins</p> <p>Bernard Kerrins has been teaching since 1986, having taught all levels from P-10 in Wodonga, Bendigo and Ballarat. Throughout this time he has developed a passion for maths teaching that stemmed mainly from his own negative experiences throughout Primary and Secondary school. Since then he has followed a mantra of trying to make maths "Meaningful, Relevant and Enjoyable" as much as possible. He strives to achieve this through learning through contexts, open ended learning and maths projects. His lessons are very hands on and discussion based, where children are encouraged to discover more about themselves as learners. After 12 years out of the classroom in leadership roles, Bernard returned to the classroom two years ago and rediscovered his passion for classroom teaching. This workshop focuses on rediscovering your passion for teaching maths, especially after extended absences caused by Covid and other circumstances that Bernard has experienced over the past two years. Hopefully he has something for you today!!</p>
	<p>3E: My first lesson - using maths to establish class values</p> <p>This workshop will explore a task that I use with each new class to establish classroom values and norms. What starts off as an exploration of hopscotch dives deep into a mathematical investigation and acts as a brilliant metaphor for developing class values, establishing norms, and enhancing a sense of student belonging - setting the tone for the rest of the school year.</p>	<p>Thomas Moore</p> <p>See session 2E for Thomas' biography.</p>
	<p>3F: Preparing Year 9 and 10 students for TI-Nspire use in VCE (Part 2)</p> <p>Students often get to VCE mathematics having never used a CAS calculator before. Or, if they had used it previously, it was for simple calculations which could have been performed on any scientific calculator. Good command of the TI Nspire in VCE can make a significant difference in a student's efficiency, engagement and overall performance in VCE assessments. In this session we will present our suggestions for engaging Year 9 and 10 students in CAS use which will set them up for VCE and give them a great head start.</p>	<p>Danijela Draskovic and Peter Flynn</p> <p>See session 2F for Danijela and Peter's biography.</p>
<p>Session 4: 1.40pm –2.25pm</p>	<p>4A: Going beyond 'share time'</p> <p>See session 1A for session summary.</p>	<p>Ellen Corovic</p> <p>See session 1A for Ellen Corovic's biography.</p>
	<p>4B: Exploring the anticipate phase of the Launch, Explore, Summarise Instructional model</p> <p>Repeat session, see 1C for session summary.</p>	<p>Di Liddell</p> <p>See session 1C for Di's biography.</p>
	<p>4C: Authentically assessing student work when using challenging tasks</p> <p>Repeat session, see 2C for session summary.</p>	<p>James Russo and Jane Hubbard</p> <p>See session 2C for James and Jane's biography.</p>

	<p>4D: Maths games to engage and challenge students In this hands-on workshop, participants will trial a selection of games and activities that will both engage students in the classroom, whilst also providing ideas for schools wishing to run smaller scale Games Days at a local level.</p> <p>Maths games are a useful tool in engaging all students. After two years of working virtually, you may have found students have become disengaged and have lacked the experience of talking maths. Experience playing some maths games with your colleagues that you can then use in the classroom.</p> <p>MAV conducts both interschool metro and regional Games Days which are very popular and a great way of engaging students through competing with like-minded individuals.</p>	<p>Helen Haralambous See session 1E for Helen’s biography.</p>
	<p>4E: Shoot and Score: leveraging sport to engage students in maths Repeat session, see 1F for session summary.</p>	<p>Nick Devereux and Sophie Stewart See session 1F for Nick and Sophie’s biography.</p>
	<p>4F: My top tips for beginner teachers on how to balance the spotlight in the classroom We will explore my top 5 tips for fostering a balanced classroom. Balanced in terms of who is in the spotlight; whose voice is being heard and whose work is in focus?</p> <p>As a beginner teacher, I was guilty of having superbly planned lessons, with fantastic looking full whiteboards of brilliantly described concepts and flawlessly executed worked examples. However, they were predominantly simply a really great monologue.</p> <p>And even though I questioned the students well, and, in my head, I described the concepts like a pro, how do I really know who was truly with me and who was thinking about the party on the weekend?</p> <p>I’ve since refined my practice and see the ideal classroom dynamic being vastly different. Here are some practical tips to get you out of the spotlight and get your students to willingly come into it.</p>	<p>Danijela Draskovic See session 2F for Danijela’s biography.</p>
<p>Session 5 Plenary 2.25pm –3.50pm</p>	<p>Cutting to the core. It’s all about relationships! Throughout the conference, all delegates will participate in several workshops that aim to inspire new and innovative practices within the mathematics classroom. Throughout my work as a teacher, tutor, education consultant, and budding researcher, I have seen the richest of lessons fall flat, and the simplest of lessons yield some of the highest levels of student engagement.</p> <p>The secret... the teacher’s craft and their ability to build strong pedagogical relationships with their students! Yet, no one is talking about how such relationships form... In this presentation, I will delve into some of the findings stemming from my PhD research into the formation of Productive Pedagogical Relationships between maths teachers and their students in the middle years, and how you can start to be more deliberate in how you form these with your students.</p>	<p>Thomas Moore See session 2E for Thomas’ biography.</p> 