

**Draft Program for QAMT State Conference 2024 – Gold Coast Teacher’s Day – Shared day – Wed 3 July (QAMT Gold Coast F2F Day 1)**

Time	8:00 Registration				
8:45 - 9	President welcome, Housekeeping and Texas Instruments address				
9:10-10:10	<b>Keynote - Beth Southwell Practical Implications Award (organised by MERGA and AAMT)</b>				
10:10-11:00	<b>Professor Merrilyn Goos - Learning from and with each other in mathematics education.</b>				
11:00-11:30	Morning tea - networking				
		<b>Room 5 (G30_2.10)</b>	<b>Room 6 (G30_2.15)</b>	<b>Room 7 (G30_2.11)</b>	<b>Room 8 (G30_1.13)</b>
<b>11:30-12:10 Session 1</b>	<b>MERGA Program</b>	Reverse Problem Solving and Modelling Tasks - Tiffany Beck and Karleigh Nicholls, Fairholme College (7-12)	Engagement and Empowerment through Questioning - Peter Fox, Texas Instruments (trade)	AC9 processes/Mathematical Modelling – Dr Kym Fry, GU and Judith Hillman (P-6)	<b>11:30-1 Master Class</b> Action Research – What, why and how? <ul style="list-style-type: none"> <li>• M Marshman (USC)</li> <li>• Prof P Grootenboer (GU)</li> <li>• T Reader (Redland Bay State School/GU)</li> <li>• E Bird (St Pauls Lutheran Primary School/Western Sydney University)</li> <li>• M Li (Moreton Bay College/UQ)</li> </ul>
<b>12:15 – 1:00 Session 2</b>	<b>MERGA Program</b>	Using Microbits and Programming using Python in Junior Mathematics - Rodney Anderson, Moreton Bay College (7-10)	Jacaranda Maths Quest 7-12 - Everything you need in a resource - Luke Withers - Jacaranda (7-12) (trade)	AC9 processes/Computational thinking – Computational thinking: What’s there to learn? Prof Katie Makar, UQ (P-10)	
1:00-2:00	Lunch - networking				
<b>2:00-2:40 Session 3</b>	<b>MERGA Program</b>	Using assessment to develop a deeper understanding of fractions. Michael Nelson, Drysdale Primary School (P-6)	WHAT’S NEW IN QCE MATHS? Anna Wethereld and Robert Yen, Nelson Cengage (10-12) (trade)	Promoting Critical Mathematical Thinking in the Classroom Part 1 - Prof Vince Geiger, Thorsten Scheiner and Katherine Fernandez ACU (P-10)	<b>2-3:30 Master Class</b> Building Thinking Classrooms – Panel and sharing <ul style="list-style-type: none"> <li>• Prof T Muir (ACU)</li> <li>• S Lye (Glenmore SHS)</li> <li>• W Westcombe (Pacific Lutheran College)</li> <li>• C Day (Rochdale SHS)</li> </ul>
<b>2:45-3:30 Session 4</b>	<b>MERGA Program</b>	Hands on Mathematics – Monique Russell (P-6)	AC9 processes/Statistics and probability – Margaret Marshman, USC (Years 3-10)	Promoting Critical Mathematical Thinking in the Classroom Part 2	
3:30-3:45	Afternoon Tea - networking				
<b>3:45-4:30 Session 5</b>	<b>MERGA Program</b>	Student Self/Assisted Marking of Mock External Exams. - Mark Ellingham, St Rita’s College Clayfield (Senior Secondary)	Digital Tools for Probability Simulations – Paulina Sliedrecht, QAMT (6-10)	Presentation based on article titled: Indigenous voices: reimagining Indigenous education through a discourse of excellence – Assoc Prof Jodie Miller, UQ	Sharing session – “A resource that I could not teach without”
4:30-6:00	Networking Drinks - sponsored by reSolve				
6:30 – 9pm	Conference Dinner – Southport Yacht Club, The Compass Room				

**Draft Program for QAMT State Conference 2024 – Thur 4 July (QAMT Gold Coast F2F Day 2)**

Time	Room 1 (G30_2.11)	Room 2 (G30_1.12)	Room 3 (G30_2.15)	Room 4 (G30_2.10)	Room 5 TBC	Room 6 (TBC)
8:30 -9	Registration					
<b>9:00-9:50 Session 6</b>	Mathemagics, Scott Wiggins, West Moreton Anglican College (7-12)	Interrogating the meaning of "success" within mathematics education – Doctoral Research, Rebecca Burtenshaw, USC	Relevant practice supporting AC V9 success - Essential Assessment (Years P-9) (trade)	How to teach writing in maths -Esther Hohenheim, Assumption College Warwick (7-12)	Introducing the Binomial Distribution Effectively with Technology - Peter Flynn, Educational Consultant (Senior Secondary)	<p><b>9-11 Master Class</b> AC9 panel and sharing What is working and what challenges we have faced.</p> <ul style="list-style-type: none"> <li>• Greg Bland (The Glennie School)</li> <li>• Linda Carroll (San Sisto College)</li> <li>• Alexander O'Connor, (Sunshine Coast Grammar)</li> <li>• Cara Avery (Southport SHS)</li> <li>• Elise Taylor (Brisbane South State Secondary)</li> </ul>
<b>10-10:50 Session 7</b>	Developing quality assessment: Creating questions using degree of difficulty Years 7–10 – Libby Foley, QCAA	An approach to Mathematics teaching: Challenges to overcome - Wendy-Lou Wescombe, Pacific Lutheran College	Kicking goals with trigonometry: video-enabled maths in the real world - Alastair Lupton, Adelaide Botanic High School	Low Prep, High Yield Games that Kids Love - Cath McKenna, Mountain Creek State School (P-6)	Hands-on activities in Maths Methods and Specialist Maths with Graphics Calculators Mellissa Hourigan, Murrumba State Secondary College (Senior Secondary)	
11-12pm	Brunch					
<b>12-12:50 Session 8</b>	Developing quality assessment: Creating questions using degree of difficulty Prep–Year 6 – Libby Foley, QCAA	Maths in Schools: Culturally Responsive Maths Pedagogy – Sue Carter, Maths in Schools (7-10)	Mathematical Modelling Peter Fox, Texas Instruments and Dan Wilkie, teacher in South Carolina, USA (trade)	Making Maths Memorable - Alexis Evans, Caboolture State High School (7-12)	Integrated curriculum design effecting senior higher-level mathematics selection - Chris Powell, UQ (Senior Secondary)	<p><b>Room TBC 12-1:50 Master Class Assessment</b></p> <ul style="list-style-type: none"> <li>• Cate Challen (QUT)</li> <li>• Rebecca Burtenshaw (USC)</li> <li>• T Reader (Redland Bay State School/GU)</li> </ul>
<b>1 – 1:50 Session 9</b>	Strategies to remove barriers to female selection of STEM subjects- Evan Shellshear, UQ and Rex Betrand, The Gap State High School (7-12)	Maths in Schools: Culturally Responsive Maths Pedagogy – Sue Carter, Maths in Schools (P-6)	New Calculator, new emulator, what’s the deal? - Alastair Lupton, Adelaide Botanic High School, for CASIO (trade)	v9.0 SHS Snapshots – Numeracy and Rich Routines in action - Rob Proffitt-White, The Learner First, Cara Avery, Southport SHS, Elise Taylor, Brisbane South State Secondary College (7-12)	Supporting teachers. Supporting students. Preparing for the external exams. - Tom Sprenger, Gregory Terrace (Senior Secondary)	

1:50-2:10	Afternoon Tea
2:10-3:15	Lecture Theatre G30_1.15 <b>CASIO Address and Developing a Curious Disposition in Maths - Bill Simpson Closing Address– Greg Bland (QAMT/The Glennie School)</b>
3:15-3:30	Thanks and Closing

**Presentation Abstracts from Day 1 Teacher’s Day – Shared day – Wed 3 July**

<b>Presentation Time and Room</b>	<b>Presenter Name, organisation and Bio</b>	<b>Prestation Title and Abstract</b>	<b>Session Audience</b>
10:10-11am Lecture Theatre	Professor Merrilyn Goos, USC	<b>Learning from and with each other in mathematics education.</b> The aim of this session is to provoke conversations about how researchers and teachers can work together to develop new knowledge in mathematics education. What can we learn by coordinating our complementary perspectives? How can we form partnerships to focus on our common goals? I will illustrate some productive ways of collaborating with examples from our shared MERGA and QAMT conference programs.	All
<b>Session 1: 11:30-12:10</b>			
Room 5	Tiffany Beck and Karleigh Nicholls, Fairholme College	<b>Reverse Problem Solving and Modelling Tasks</b> With PSMT’s contributing significant marks towards a students’ ATAR, this session will take you on a reverse journey towards understanding the criteria and task through a student perspective. The students will put on the ‘marking hat’ and delve into guided practice by analysing multiple exemplars. In this session you will walk away with data from an implemented case study and documents to help you and your students start your own reverse PSMT experience.	Years 7-12
Room 6	Peter Fox, Texas Instruments Trade Session	<b>Engagement and Empowerment through Questioning</b> How can we extract the “what if” from students that may otherwise be compliant to the extraverts? A combination of anonymity, inclusiveness and questioning techniques will be used to explore how to engage the whole class.	Years 7-12
Room 7	Dr Kym Fry – Griffith University Judith Hillman	<b>AC9 processes/Mathematical Modelling – Primary</b> Mathematical Modelling is one of the Mathematical Processes valued in the revised Australian Curriculum v9.0. This session will unpack what Mathematical Modelling is, and how it is represented in the revised Australian Curriculum. We will consider how students demonstrate Mathematical Modelling through inquiry in a Primary setting and how an understanding and experience with this process prepares them for success in secondary schooling. Finally, we will look at examples of what the teaching and learning of Mathematical Modelling can look like.	Years P-6
Masterclass 11:30-1:20 Room 8	<ul style="list-style-type: none"> <li>• M Marshman (USC)</li> <li>• Prof P Grootenboer (GU)</li> <li>• T Reader (Redland Bay State School/GU)</li> </ul>	<b>Action Research – Why and how with examples from teacher Researchers</b> Are you interested in improving your practice through research, but do not know how to make a start and fit it into your busy school load? Join us for a session to unpack	All

	<ul style="list-style-type: none"> <li>E Bird (St Pauls Lutheran Primary School/Western Sydney University)</li> <li>M Li (Moreton Bay College/UQ)</li> </ul>	what action research is, why you would want to do it and how to make it work when you are so time poor. Come and ask questions of classroom teachers and research academics engaging in action research at all levels, from informal research in the classroom, to working with an academic critical friend and completing post graduate studies.	
Session 2: 12:15-1:00			
Room 5	Rodney Anderson, Moreton Bay College	<b>Using Microbits and Programming using Python in Junior Mathematics</b> Who thought that four lines of Python programming and with a Microbit you could determine the angle of elevation (Who needs clinometers?)? During this session we will program using Python and also use calculators attached to a Microbit to investigate Mathematical concepts.	Years 7-10
Room 6	Luke Withers, Jacaranda Trade Session	<b>Jacaranda Maths Quest 7-12 - Everything you need in a resource</b> In this session, we will dive into a comprehensive suite of resources that streamline planning, teaching, learning, assessment, and analysis, all conveniently located in one place. Discover ways Australia's most powerful learning platform, learnON, can significantly reduce preparation time and leave no student behind. Engage with hundreds of meticulously crafted lessons tailored for grades 7-12, designed to elevate the educational journey for both you and your students. Get an exclusive sneak peek at the upcoming Jacaranda Maths Quest for QLD Senior, meticulously developed by Queensland authors for the 2025 curriculum!	Years 7-12
Room 7	Prof. Katie Makar – University of Queensland	<b>Computational thinking: What's there to learn?</b> As we move deeper into the digital age, technologies provide new access to problems once considered too difficult for children. Computational thinking provides a contemporary approach to build skills needed to address complex problems that take advantage of computing power. What is computational thinking and how do we support learners to develop its most critical skills in Mathematics? In this talk, I will use a practical example from a recent study of primary children investigating their use of cyberspace to introduce the key tenets of computational thinking for a mathematics classroom. This presentation will teachers with an appreciation of the importance of computational thinking in mathematics education. We will see how computational thinking can help students develop critical thinking, problem-solving skills, and a rich understanding of mathematical concepts. We will explore practical strategies for integrating computational thinking into primary mathematics education and highlight the benefits that this can bring to students as they prepare for the challenges of the digital age.	Years P-10
Session 3: 2-2:40			

Room 5	Michael Nelson, Drysdale Primary School	<b>Using assessment to develop a deeper understanding of fractions.</b> How do we know when students truly 'understand' fractions? This presentation will allow teachers to use high-quality, evidence-based assessments to ensure their students have a deep understanding of fractions.	Years P-6
Room 6	Anna Wethereld and Robert Yen - Nelson Cengage Trade Session	<b>WHAT'S NEW IN QCE MATHS?</b> Have you caught up with the changes to the QCE maths syllabuses to be implemented from next year? Nelson Maths author Anna Wethereld and publisher Robert Yen will tell you what's new and different about the revised senior maths courses Essential Maths, General Maths and Maths Methods. Learn about how the new Nelson Maths 11-12 series approaches QCE maths through an exam focus and a pedagogy that is backed by research into the science of learning.	Years 10-12
Room 7	Prof Vince Geiger, Thorsten Scheiner and Katherine Fernandez, ACU	<b>Promoting Critical Mathematical Thinking in the Classroom Part 1</b> This session, part of a project funded by the Australian Research Council, is aimed at mathematics teachers who want to improve their skills in promoting students' critical thinking in mathematics. It provides professional development on Critical Mathematical Thinking (CMT), teacher noticing skills and identifying CMT in classroom situations. CMT involves the use of mathematical reasoning to solve complex real-world problems, including considerations of societal benefit, ethics and social justice, and aligns with the Australian Curriculum's focus on critical and creative thinking, numeracy and sustainability. Participants will also practise using a CMT Noticing Instrument. This session will directly address two aspects of the Australian Curriculum – the General Capabilities of Numeracy, and Critical and Creative Thinking, the Cross-curricular Priority of Sustainability. Practical examples will be provided of how these aspects of the Australian Curriculum can be included in mathematics classrooms. Please bring your laptop to this session.	Years P-10
Masterclass 2-3:50 Room 8	<ul style="list-style-type: none"> <li>• Prof T Muir (ACU)</li> <li>• S Lye (Glenmore SHS)</li> <li>• Cassie Day (Rochdale SHS)</li> </ul>	<b>Building Thinking Classrooms – Panel and sharing</b> "Building Thinking Classrooms" is a set of teaching strategies that many educators have started to use with great impact on increasing student thinking behaviours and engagement. In this session a group of teachers and academics share their experiences and ideas around how its implementation can work in QLD schools, how they use it for assessment and how it 'fits' in with the other pedagogies in their toolkit. Come along if you are also on this journey to want to know more.	All
<b>Session 4: 2:45-3:30</b>			
Room 5	Monique Russell, QAMT	<b>Hands on Mathematics</b> Hands-on materials in Mathematics teaching and learning not only engage students, they aid in the building of understanding of concepts, and allow for connections	Years P-6

		between Mathematics strands to be made. The Australian Curriculum: Mathematics V9 has a definite building up of knowledge from Prep to Year 10, with the use of physical materials highlighted explicitly in many content descriptions and content elaborations. Spend time in this session using the ‘must-have’ physical materials, seeing the critical role they play in conceptual understanding of mathematics. This is a hands-on session where doing the mathematics is the focus.	
Room 6	Margaret Marshman – University of the Sunshine Coast	<p><b>Mathematical process: Statistical Investigations and Probability Experiments and Simulations</b></p> <p>Statistical Investigations and Probability Experiments and Simulations are two of the Mathematical Processes valued in the revised Australian Curriculum v9.0. This session will unpack what Statistical Investigations and Probability Experiments and Simulations are and how they represented in the revised Australian Curriculum. We will consider the interconnections between Statistics and Probability, and how students demonstrate their understanding through these processes. Finally, we will look at examples of what the teaching and learning of Statistical Investigations and Probability Experiments and Simulations might look like.</p>	Years 3-10
Room 7	Prof Vince Geiger, Thorsten Scheiner and Katherine Fernandez, ACU	<p><b>Promoting Critical Mathematical Thinking in the Classroom Part 2</b></p> <p>This session, part of a project funded by the Australian Research Council, is aimed at mathematics teachers who want to improve their skills in promoting students’ critical thinking in mathematics. It provides professional development on Critical Mathematical Thinking (CMT), teacher noticing skills and identifying CMT in classroom situations. CMT involves the use of mathematical reasoning to solve complex real-world problems, including considerations of societal benefit, ethics and social justice, and aligns with the Australian Curriculum’s focus on critical and creative thinking, numeracy and sustainability. Participants will also practise using a CMT Noticing Instrument. This session will directly address two aspects of the Australian Curriculum – the General Capabilities of Numeracy, and Critical and Creative Thinking, the Cross-curricular Priority of Sustainability. Practical examples will be provided of how these aspects of the Australian Curriculum can be included in mathematics classrooms. Please bring your laptop to this session.</p>	All
Session 5: 3:45-4:30			
Room 5	Mark Ellingham St Rita’s College Clayfield	<p><b>Student Self/Assisted Marking of Mock External Exams</b></p> <p>This session will take you through a process used for the last 4 years where students mark their mock/trial external exams during class time with assistance from their teachers.</p>	Senior Secondary

		The idea was originally discussed in a QCAA Heads of Department Networking Forum for the Senior Curriculum and has been developed to promote responsibility and independence in students, give students a greater understanding of the EAMG, recognise how to maximise marks in external exams and still provide detailed feedback. Part of this session will also be used to discuss as a group various pros and cons of this process.	
Room 6	Paulina Sliedrecht - QAMT	<b>Digital Tools for Probability Simulations</b> Join me to explore how to use free tools such as Excel, CODAP and Polypad to easily create probability simulations. Bring along your laptop and ideas of simulations you would like your students to conduct.	Years 6-10
Room 7	Assoc Prof Jodie Miller and Dr Danielle Armour, University of Queensland	<b>Co-constructing mathematics tasks to embed Indigenous perspectives.</b> Teaching in ways responsive to the cultures of our students is vital towards enhancing equity of access to mathematics achievement putting educational policy and curriculum into practice. While many educators have the best intentions to undertake this in their classrooms, they are unsure where to start. One problem that contributes to this is that many mathematics tasks are often 'culture free' and designing and implementing learning tasks that draw on students' cultural backgrounds can be challenging. So how can we achieve this in our mathematics classrooms? This presentation focuses on our recent research on embedding Indigenous knowledges and perspectives into the mathematics classroom, drawing on a strengths-based approach. In particular, we focus the importance of building relationships to co-construct mathematics tasks that foreground students' worldviews. In this presentation Danielle and Jodie will share co-constructed learning tasks designed to embed Indigenous perspectives that develop and sustain young culturally diverse learners' natural curiosity about mathematics.	All
Room 8	Facilitated by Leah O'Neill	<b>Sharing Session: A resource I couldn't teach without</b> One of the most important features of a conference is the opportunity to meet and share with colleagues who have similar interests. To assist you, we have scheduled a sharing session. Your assistance is essential for its success. Our aim is to have every participant in this session to leave with a wealth of ideas that they can implement when they return to school. We ask that you each bring a practical classroom resource to share with small groups of teachers. Please keep your presentation short, approximately five minutes, and bring along any materials, objects or student samples you would like to show others. Suggestions for practical classroom resources: <ul style="list-style-type: none"> <li>• Adaptable teaching tools</li> <li>• Great teaching resources or equipment you have used</li> </ul>	All

		<ul style="list-style-type: none"><li>• Assessment or planning ideas or tools</li><li>• Extension tasks and ideas for fast finishers</li><li>• Useful apps or computer programs</li><li>• Ideas for cooperative learning</li><li>• Classroom organisation ideas</li><li>• Games or other activities</li></ul>	
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## Presentation Abstracts from Day 2

Presentation Time and Room	Presenter Name, organisation and Bio	Prestation Title and Abstract	Session Audience
Session 6: 9-10am			
Room 1	Scott Wiggins, West Moreton Anglican College	<p><b>Mathemagics</b></p> <p>The aim of this session is to present another array of intriguing number tricks that could be used with a middle or upper secondary class to increase student interest. These include: how to quickly square, calculate the square root of and multiply certain types of integers without the use of a calculator. If time, use of a mnemonic for reciting the first 100 digits of <math>\pi</math> will also be discussed.</p>	Years 7-12
Room 2	Rebecca Burtenshaw, USC	<p><b>Interrogating the meaning of "success" within mathematics education</b></p> <p>This session is part of a PhD research project investigating the meaning of "success" in mathematics education and how success is determined in mathematics education. Through hands-on activities, this focus group seeks to explore educators' experiences and ideas on the indicators of valuable mathematics learning and whether these manifestations provide adequate measures of students' learning success.</p>	Years P-12
Room 3	Jacqueline Clark, Essential Assessment Trade Session	<p><b>Relevant practice supporting AC V9 success</b></p> <p>In this workshop, we translate education research into relevant and practical information for educators to improve student learning outcomes aligned with the Australian Curriculum Version 9 in Mathematics.</p> <p>We unpack the science of learning, explore cognitive research and demonstrate how our resources help to identify student understanding, grow numeracy skills, and support data-informed instructional decisions.</p> <p>Essential Assessment supports the practical implementation of AC V9 and your success in the teaching and learning of Numeracy.</p>	YearsP-9
Room 4	Esther Hohenheim, Assumption College Warwick	<p><b>How to teach writing in maths</b></p> <p>With the ever increasing importance of the PSMT not only in senior but throughout the version 9 curriculum it is time to face the terrifying truth...us Maths teachers need to teach writing. But where to start? And how do we bring these crucial writing skills into our Maths lessons? I'm hoping to make the teaching of these skills less scary and more accessible to classroom Maths teachers.</p>	Years 7-12
Room 5	Peter Flynn, Educational Consultant	<p><b>Introducing the Binomial Distribution Effectively with Technology</b></p> <p>In this session, strategies and approaches for introducing the binomial probability distribution effectively will be showcased. A central focus of the session will involve demonstrating how the use of technology can achieve positive learning outcomes.</p>	Years 11-12
Masterclass	Greg Bland, The Glennie School (Host)	<b>AC9 panel and sharing</b>	Years P-10

9-10:50 Room 6	Linda Carroll (San Sisto College) Alexander O'Connor, (Sunshine Coast Grammar) Cara Avery (Southport SHS) Elise Taylor (Brisbane South State Secondary)	We are all on a journey to implement the revised Australian Curriculum v9.0, but we do not need to do it alone. Come along to this panel style masterclass to hear from teachers at schools at different stages of implementation share their learning and successes. This is also your chance to share your journey, ask questions and gain great ideas from this community of learners.	
<b>Session 7: 10-10:50</b>			
Room 1	Libby Foley, Queensland Curriculum and Assessment Authority (QCAA)	<b>Developing quality assessment: Creating questions using degree of difficulty Years 7–10</b> When designing quality examinations in Mathematics, teachers ensure task validity through alignment to the Australian Curriculum v9.0: Mathematics and the creation of questions using degree of difficulty — simple familiar, complex familiar and complex unfamiliar. This workshop will provide opportunities for teachers and curriculum leaders to examine sample questions that demonstrate how a question is aligned to the curriculum and the degree of difficulty definitions. Practical strategies for the creation of valid Mathematics questions will also be explored.	Years 7-10
Room 2	Wendy-Lou Wescombe, Pacific Lutheran College	<b>An approach to Mathematics teaching: Challenges to overcome</b> Building Thinking Classrooms (BTC) is getting teachers to consider their approach to teaching. However, there are so many obstacles associated with the implementation of BTC that sometimes it is hard to know just where to start. From colleagues, parents but most of all your own self-doubt, I will share some of the issues that I have encountered and some solutions that have worked in my own classroom.	Years 3-12
Room 3	Alastair Lupton, Adelaide Botanic High School	<b>Kicking goals with trigonometry: video-enabled maths in the real world</b> “Do maths in the real world” is the cry - it adds meaning, relevance, and challenge, they say - sounds good in theory – but what if I don’t like excursions? Video is a great way of taking our students to the interesting real-world places, without leaving the classroom (and filling out a bunch of risk assessments), like this visit to the rugby field, where a conversion kick is being attempted. This workshop will share a video treatment of the “rugby kick” problem, a lovely piece of applied right-angled trigonometry and includes ‘teacher edition’ notes and all you need for a great lesson, or a nice little assessment task.	Years 10-12
Room 4	Cath McKenna, Mountain Creek State School	<b>Low Prep, High Yield Games that Kids Love</b> Want ideas for no fuss games and warm up routines that students at different levels can access (high ceiling low floor)? Activities that focus on Place Value and Computational Thinking to build number sense and self confidence in our children. A practical hands-on session where you will walk out the door with something you can use Monday morning.	Years P-6

Room 5	Mellissa Hourigan, Murrumba State Secondary College	<b>Hands-on activities in Maths Methods and Specialist Maths with Graphics Calculators</b> This session will look at some activities we can do in our Methods and/or Specialist Maths classes to help students visualise and understand the concepts we are teaching. The activities will incorporate the use of graphics calculators.	Years 10-12
<b>Session 8: 12-12:50</b>			
Room 1	Libby Foley, Queensland Curriculum and Assessment Authority (QCAA)	<b>Developing quality assessment: Creating questions using degree of difficulty Prep–Year 6</b> When designing quality supervised assessments in Mathematics, teachers ensure task validity through alignment to the Australian Curriculum v9.0: Mathematics and the creation of questions using degree of difficulty — simple familiar, complex familiar and unfamiliar. This workshop will provide opportunities for teachers and curriculum leaders to examine sample questions that demonstrate how a question is aligned to the curriculum and the degree of difficulty definitions. Practical strategies for the creation of valid Mathematics questions will also be explored.	Years P-6
Room 2	Sue Carter, Maths in Schools	<b>Maths in Schools: Culturally Responsive Maths Pedagogy</b> Join us for a hands-on workshop learning about culturally responsive maths pedagogies for the secondary classroom. Make Maths authentic and meaningful for your students – find ways to connect to culture and everyday maths. We also explore a range of digital tools and you will learn about Version 9.0 Australian Curriculum’s shared focus between Digital Technologies and Maths.	Years 7-10
Room 3	Peter Fox, Texas Instruments and Dan Wilkie, teacher in South Carolina, USA Trade Session	<b>Mathematical Modelling</b> Come along and enjoy the ride. From bouncing balls to flying high, the journey will stimulate, engage and captivate in more ways than one. We will look at different ways to capture and share data that can be modelled by linear, quadratic or trigonometric functions. Caveat: If you’re looking at flying any time soon, you may want to bale on this session.	Years 9-12
Room 4	Alexis Evans, Caboolture State High School	<b>Making Maths Memorable</b> Ideas for teachers to engage students in learning in a high school classroom in a memorable way.	Years 7-12
Room 5	Chris Powell, UQ	<b>Integrated curriculum design effecting senior higher-level mathematics selection.</b> Current research project looking at the effect of integrated STEM curriculum design on achievement, engagement and retention in senior higher level mathematics subjects. Data is being collected to determine if there is a correlation between learning mathematics through integrated STEM units in Year 7-10 and students' selection of higher level mathematics in Year 11 and 12. If there is a correlation, what are the requirements in schools to implement Intergrated units of work in Year 7-10?	Years 7-12

Masterclass 12-1:50 Room 6	<ul style="list-style-type: none"> <li>• Cate Challen (QUT)</li> <li>• Rebecca Burtenshaw (USC)</li> <li>• T Reader (Redland Bay State School/GU)</li> </ul>	<p><b>Assessment – Getting the most out of your assessment.</b></p> <p>In this interactive workshop, we will explore and unpack the various roles of assessment in the mathematics classroom. Participants will generate a shared vision for students in mathematics and rework a summative assessment task to reflect that shared vision. We will investigate the design and implementation of a range of assessment for learning processes that promote reflective mathematics cultures.</p> <p>By the end of this session, participants will gain practical insights and tools to:</p> <ol style="list-style-type: none"> <li>1. Redesign summative assessments that align with educational values.</li> <li>2. Implement diverse assessment for learning strategies to improve student outcomes.</li> <li>3. Develop cohesive and effective assessment practices that integrate seamlessly into everyday teaching.</li> </ol> <p>Join us in experimenting with powerful assessment tools and strategies to strengthen student agency.</p> <p>Instructions on what to bring:</p> <ul style="list-style-type: none"> <li>• Bring a summative task you’d like to build upon</li> <li>• Your curiosity</li> </ul>	All
Session 9: 1-1:50			
Room 1	Evan Shellshear, University of Queensland and Rex Betrand, The Gap State High School	<p><b>Strategies to remove barriers to female selection of STEM subjects</b></p> <p>This workshop will present the approaches and strategies (discovered from a study of female STEM students at the Gap State High School) for removing the barriers to the selection of STEM subjects by young women. Although only a small and initial study, the insights gained correspond to the findings in the international literature. As an example of applying the results we compare them to current federal policy and provide recommendations.</p>	Years 7-12
Room 2	Sue Carter, Maths in Schools	<p><b>Maths in Schools: Culturally Responsive Maths Pedagogy</b></p> <p>Join us for a hands-on workshop learning about culturally responsive maths pedagogies for the primary classroom. Make Maths authentic and meaningful for your students – find ways to connect to culture and everyday maths. We also explore a range of digital tools and you will learn about Version 9.0 Australian Curriculum’s shared focus between Digital Technologies and Maths.</p>	Years P-6
Room 3	Alastair Lupton, Adelaide Botanic High School, for CASIO Trade Session	<p><b>New Calculator, new emulator, what’s the deal?</b></p> <p>Along with the new fx-8200 AU, the scientific calculator making its way into the hands of Australian teachers and students over the last year or so, Casio has released a new approach to calculator emulation, a vital part of technology use in the classroom.</p>	Years 7-12

		<p>Housing the 8200 emulator within a website (classpad.net) means no more installation or compatibility issues, and that we can expect more than what's been traditionally delivered by emulation software.</p> <p>Come to the workshop (with the web-enabled device of your choice) and get started with the 8200 emulator on classpad.net, see some of the advantages of the new interface and, most importantly, learn about sticky output!</p> <p>Note: if possible, visit the Casio team at their booth prior to the workshop to set up your classpad.net log-in and get a free emulator licence.</p>	
Room 4	Rob Proffitt-White, The Learner First, Cara Avery, Southport SHS, Elise Taylor, Brisbane South State Secondary College	<p><b>v9.0 SHS Snapshots – Numeracy and Rich Routines in action</b></p> <p>Rob, Cara and Elise will look at how they are embarking on ways to future proof approaches to</p> <ol style="list-style-type: none"> <li>Creating and sustaining Numeracy across KLA's and</li> <li>Rich routines to help foster students' will and skill to select use and apply key skills and processes</li> </ol> <p>The routines are ones that can be readily picked up by any High School wanting to deepen their whole school approach for enacting the true intent of v8.4 or translate v9 into practice.</p>	Years 7-12
Room 5	Tom Sprenger, Gregory Terrace	<p><b>Supporting teachers. Supporting students. Preparing for the external exams.</b></p> <p>Preparing students for the external assessment tasks in Methods and Specialist can be challenging (and daunting). In both subjects, for each exam, a different set of skills is required. The nature of these exams means that there isn't a one-size-fits-all approach, so how can we improve our practice? How can we balance preparing out students for both Tech-Free and Tech-Active papers? Do we favour accuracy, or do we target efficiency?</p> <p>The goal of this session is to share strategies for supporting our senior students as they prepare for their external assessment tasks. I'll share strategies I've used with my senior classes to support my students as they prepare for their external assessment.</p>	Years 11-12
<b>Bill Simpson Closing Address 2:20-3:15</b>			
Lecture Theatre	Greg Bland	<p>Bill Simpson Closing Address</p> <p><b>Developing a Curious Disposition in Maths</b></p> <p>Out of all of the school subjects, Mathematics traditionally seems to be the most polarising - loved and loathed by students and parents. How can we inspire young people to develop a genuinely curious and open-minded disposition in mathematics, and where can that mindset lead in the future? In this plenary keynote, one central message overshadows everything else - don't be bland!</p>	All

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