



## "Why Maths is the Key"

*A Symposium for Principals, Directors of Studies, Heads of Mathematics or STEM Departments, and Teachers of Mathematics.*

Monday 27<sup>th</sup> May 2019

### WORKSHOP DESCRIPTIONS

#### SESSION 1 WORKSHOPS – 11:15AM

Workshop Title & Description	Workshop Presenter
<p><b>Collaborative Change Leadership: finding the key to supporting learner growth in mathematics</b></p> <p>Challenging and changing the conceptions of learner growth in mathematics involves working across the whole school community. In this workshop, the presenters will share some of their experiences of leadership in navigating the current educational landscape, including some of their approaches and challenges to driving meaningful change in mathematics learning. Participants will have opportunities to reflect on and discuss their own challenges of leadership practice, and the complexities of curriculum leadership and learner growth in mathematics in their own sites.</p>	<p>Matthew Verdon, Australian Science and Mathematics School</p>
<p><b>Changing School Math Pedagogy from the Bottom Up</b></p> <p>During the last 4 years there has been a change in the approach to math and numeracy at Samaritan College in Whyalla. The two primary campuses were involved in developing a consistent approach to math lessons, improving basic number skills and developing capacity among the teachers to make the approach sustainable.</p> <p>Students have changed the way they see math and have become stronger problem solvers and mathematical thinkers. The secondary campus has seen the development and are now confronted with students who ask more questions and are more willing to share their ideas.</p> <p>The secondary campus is now coming on board. Asked with the question of how to deal with this change in attitude the Year 7 and 8 teachers are now programmed to teach combined math science classes with a focus no contextualizing the math in the science they do.</p> <p>This presentation will go through the steps taken to achieve the school goals and the tangible results they have had.</p>	<p>Adrian Dilger &amp; Jenna Edwards, Samaritan College, Whyalla</p>

<p><b>Mastery Learning and Formative Assessment: How embedded learning conversations can enrich your learning environment!</b></p> <p>What if learning conversations formed the core of your assessment approach in middle school? How might that look? This workshop will explore how to organise content and classroom practise in order to create intentional, embedded formative assessment. The workshop will use a case study of a year 9 probability unit to explore how formalising channels of communication between teacher and student before that *big test* can have a real impact on student confidence and achievement.</p>	<p>Jak Baddams, Brighton Secondary School</p>
<p><b>Innovation in high-stakes assessment</b></p> <p>Are teachers constrained by the requirements of the senior secondary curriculum and assessment requirements? In this workshop, some lead practitioners share and discuss their approaches to mathematics assessments that work within the subject specifications, but provide engaging and innovative ways to ensure every student is able to demonstrate their best evidence of learning.</p>	<p>Deanna Isles, SACE Board of South Australia/ Institute of Educational Assessors          Deb Woodard – Knight, Walford Anglican School for Girls</p>
<p><b>Why Desmos is the Key</b></p> <p>Desmos is more than just another online graphing tool. Participants of this workshop will learn how Desmos Classroom Activities are changing the way students learn and interact with mathematics, while also recognising the pivotal role the teacher plays in orchestrating meaningful learning experiences for students. Through this workshop, participants will have the opportunity to experience the various dimensions of Desmos and deepen their understanding about how to use the tool to leverage meaningful learning experiences for their students. Workshop participants will also learn about how to get started with creating and facilitating their own custom-made Classroom Activities, as well as places to find already made ones by teachers around the world. Participants of this workshop are strongly encouraged to bring their own laptop or iPad to this session as only a limited number of iPads will be supplied for those without a device.</p>	<p>John Rowe, SA Department for Education</p>

## SESSION 2 WORKSHOPS – 2:00PM

Workshop Title & Description	Workshop Presenter
<p><b>Fostering a collaborative team by utilising a flexible leadership approach</b></p> <p>In this workshop we will discuss ways to utilise a flexible leadership style to build a collaborative team. Many leaders are challenged with a diverse range of team members who are still learning to work together. Having a diverse team means more perspectives, provided the team learns how to work together efficiently. Participants will be given the opportunity to work through several scenarios to find the optimal path towards a collaborative team. Discussion points will include:</p> <ul style="list-style-type: none"> <li>• How to guide your team to achieve outcomes</li> <li>• How to have a difficult conversation with a team member</li> <li>• How to build trust in you as a leader</li> </ul>	<p>Rebecca Garrett – Trinity College</p>
<p><b>Leading from the Middle</b></p> <p>Mathematics has long held a hierarchical structure in which tertiary pathways dictate the leadership of mathematics faculties. As a middle-school mathematics specialist, I have disrupted this model by leading from the middle. In this session, I will aim to share the challenges of leading from this level, the outcomes of leading from this level, and advice for current leaders, aspiring leaders, and those who support them. Participants will have the opportunity to play with the possibilities of leading from the middle, explore the strengths of middle school pedagogy in the senior school, and to refine the role of a mathematics learning area leader.</p>	<p>Michael Murphy – Cornerstone College</p>
<p><b>Thinking Maths</b></p> <p>Mathematics must be taught in such a way that students 'recognise the role of mathematics in the world' and develop 'the dispositions and capacities to use mathematical knowledge and skills purposefully' (ACARA, 2017). The Thinking Maths professional learning programs for teachers is designed to develop teachers' pedagogical content knowledge to support students to be eager and confident to apply their mathematical knowledge in authentic contexts. This workshop will present some</p>	<p>Pauline Carter, SA Department for Education</p>

<p>of the tasks, key messages and the ACER findings regarding the effectiveness of the program.</p>	
<p><b>National and international developments in the integration of technology into examinations</b>  Rapid advancement in technology has provided mathematics educators with innovative ways to enhance student learning. Technology as an enabler also has the potential for teachers to examine new skills in different ways. Lisa will provide an overview of global developments in electronic examinations and facilitate interactive discussions on the challenges and opportunities this technology raises.</p>	<p>Lisa Wills, Institute of Educational Assessors</p>
<p><b>Aligning Maths with VETiS</b>  There has long been a misconception that non-academic students should be channelled into a trade. Does that work? We know the dropout rate for apprentices is high, we know you can increase the completion rate by vetting the applicants and that in general academic people tend to do better in life. How fair is this system, and does it work? Can we better prepare our students for the world of employment? Let's look at what's happening now....  Mathematics, the levels needed to be successful.  How Maths and Trades are linked.  Australian Cores Skills Framework (ACSF).  How ACSF fit into VET.  Where are we going wrong?  How do we start to repair the system and what is your role?  Remedial Maths  Preparing students in the first instance gives them a much greater chance of success. Watching our students succeed gives us a greater sense of achievement. It is a win win situation.</p>	<p>Linda Burton, St Patrick's Technical College</p>