

2nd - 25th August
AUGUST 2021

INFINITE IDEAS

ONLINE NUMERACY FESTIVAL

SPEAKERS



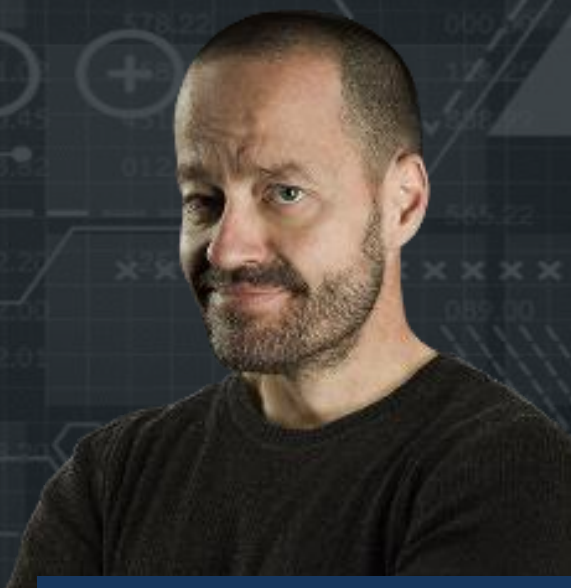
**MARGARET
BIGELOW**



CATHERINE ATTARD



PAUL SWAN



ADAM SPENCER

Australia's funniest maths nerd

Infinite Ideas is back and this year we've got a stellar line up of speakers ready to inspire, support and challenge you to engage your learners and improve numeracy outcomes from your school. This year our Keynote Speaker is Margaret Bigelow. Margaret played an integral role at ACARA developing the Australian Curriculum: Mathematics and will be speaking on where numeracy is headed in Australia and how you use the numeracy learning progressions to inform what you are doing to move students forward. We'll also be giving you a chance to connect online with Australia's most loved and funniest maths nerd Adam Spencer. Adam will be challenging participants to explore the wonderful land of numbers and will be sending out a copy of his Numberland book to every school that registers for the festival by the 30th June 2021.

Our festival also features leading mathematics educators joining us from across Australia and Canada including Dr Catherine Attard, Dr Paul Swan and Leicha Bragg. With 12 hours of sessions that you can access online live or via on demand recordings, the festival is your answer in 2021 for making high quality numeracy professional development accessible for you and your team.

12 HIGH QUALITY PD SESSIONS

Every session is recorded and available to view for a 12 month period.

REGISTER BY JUNE 30

to receive a copy of
Adam Spencer's Numberland



Whole School Access Pass - \$250 ex GST. Individual Access Pass - \$180 ex GST

View the program on the following pages to find out more.

Register via www.contemporarylearninghub.com

INFINITE IDEAS

THE 2021 ONLINE NUMERACY FESTIVAL FOR P-12 EDUCATORS

ABOUT THE FESTIVAL

The Contemporary Learning Hub at Meridan State College is proud to bring you Infinite Ideas - The 2021 Online Numeracy Festival. This festival brings together leading educators from across Australia to share best practice and innovative, research based strategies for improving numeracy learning outcomes in your school. Session topics this year cover everything from reasoning and metacognition to how problem solving is the core of the Australian Curriculum: Mathematics. Session facilitators include Adam Spencer, Margaret Bigelow, Dr Leicha Bragg, Dr Paul Swan, Mark Hansen, Ann Suthers and Darren Clark.

The program will run over a four week period in August with sessions on offer each week. Sessions in the program can be watched live or as on demand recordings. Recordings from the festival will be available online for twelve months after the festival and festival participants will receive the links to the recorded versions of the sessions at the end of each week. This makes the festival a flexible source of high quality professional development for schools.

HOW TO REGISTER

Registrations for the festival can be made via the Contemporary Learning Hub site at:

www.contemporarylearninghub.com

The festival has a one cost per school rate that enables a school to register and have unlimited members of staff access festival sessions live or via recording from multiple locations and unlimited devices. This whole school access pass rate is \$250 ex GST. There is also a registration option for individual teachers at \$190 ex GST.

HOW TO ACCESS THE FESTIVAL

In the week prior to the festival, all registered participants and schools will receive an email containing the link and password to the festival site. This site will contain the links and passwords for each of the live and recorded sessions. It will also contain information about how participants can access a test session to test their connection. These test sessions enable our team to support you prior to the festival to ensure there won't be technical issues when you try to access a live session. All sessions for the festival are recorded so if you miss a session or have a problem connecting, you will be able to watch it on demand at the end of the week. Recordings will be available for twelve months after the festival.

PARTICIPANT FEEDBACK FROM OUR FESTIVALS

Infinite Ideas has become the highlight of my year as a Master Teacher of Maths at Glenmore State School. If I could only sign up for one professional development experience or conference a year, then Infinite Ideas would be it. Congratulations on an outstanding resource.

Andrew Orr – Glenmore State School

I want to thank you for a fantastic festival. I have thoroughly enjoyed the sessions that I've done so far. I am slowly working my way through the ones I missed and will probably revisit a few sessions again .. and again. I have gathered so many ideas from the sessions. My favourite thing from the festival was the enthusiasm of the presenters about their topic and their many ideas that they were so willing to share. Again thank you and looking forward to further PD.

Sandy - The Summit State School

NUMBERLAND

Tuesday 10th August 3:30 - 4:30pm

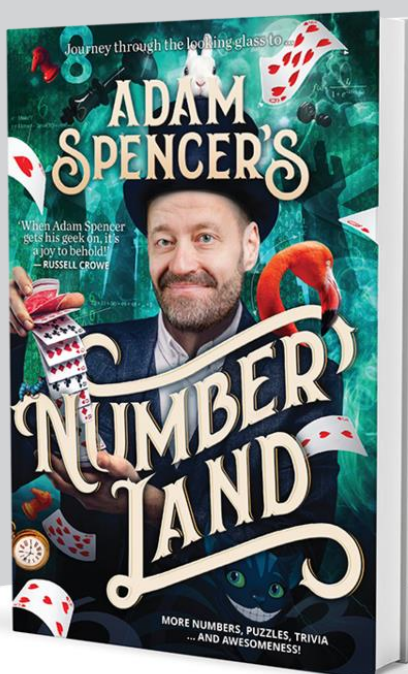
EXCLUSIVE SESSION FOR PARTICIPANTS
WITH ADAM SPENCER

ADAM'S BIO

How does GPS work? Can honey bees really count? What do you do when your smartphone locks you out ... for 48 years?

Australia's funniest and most-loved maths nerd is joining us online with fascinating facts and querulous quizzes.

Join in the fun and be inspired to take Adam's enthusiasm and ideas into your own classroom and school context.



Adam Spencer was completing a PhD in Pure Mathematics when he happened to win the national Triple J Raw Comedy championship in 1996. From there, a television and radio career beckoned and Adam completed 15 years as one of Australia's most respected, wittiest and thought provoking breakfast radio commentators across Triple J and later ABC 702.

The author of numerous books including Numberland, Adam explained his love of prime numbers and the magic of maths to an enraptured TED audience in early 2013. Since being posted online, his talk has had over two million views. Adam is the ambassador for many charities including Redkite and in 2014 was appointed University of Sydney's Ambassador for Maths and Science. He also co-hosts Australia's often No 1 podcast, Sleek Geeks with Dr Karl. Adam's latest books include The Big Book of Numbers, World of Numbers, Time Machine and The Number Games. These are available from www.adamspencer.com.au

'The things Adam writes about should be taught in every school worldwide.' - Malcolm Gladwell

WEEKLY OVERVIEW

THE 2021 ONLINE NUMERACY FESTIVAL FOR P-12 EDUCATORS

Festival Program

The following table provides an overview of the four week program. Every session will be available for viewing live and will also be recorded. Recordings will be made available to participants by 5pm on the Friday of each week. Links to each live session and recording will be uploaded to the Festival website. A short question time is scheduled for the end of each session.

Wk	Monday	Tuesday	Wednesday	Thursday
1	2 Aug Numeracy - The Australian Perspective <i>Margaret Bigelow</i>	3 Aug Persisting with Place Value <i>Dr Paul Swan</i>	4 Aug	5 Aug Engaging Highly Capable Mathematicians <i>Ann Suthers</i>
2	9 Aug Learning Progressions - Moving Students Forward <i>Margaret Bigelow</i>	10 Aug Numberland <i>Adam Spencer</i>	11 Aug Reasoning and Metacognition <i>Darren Clark</i>	12 Aug Making High Yield Activities a Habit <i>Mark Hansen</i>
3	16 Aug	17 Aug	18 Aug Fostering School - Home Connections in Mathematics Education <i>Dr Leicha Bragg</i>	19 Aug Mathematical Reasoning - What, Why, How and When <i>Dr Leicha Bragg</i>
4	23 Aug Games as a Pedagogical Tool in P-2 Pre-recorded Session <i>Dr Paul Swan</i>	24 Aug Games as a Pedagogical Tool in the Middle Years Pre-recorded Session <i>Dr Paul Swan</i>	25 Aug Problem Solving: The Core of the Australian Curriculum <i>Dr Catherine Attard</i>	

2

Aug

Festival Keynote with Margaret Bigelow

Monday 2nd August

3:30 - 4:30pm

Numeracy - The Australian Perspective

Margaret Bigelow

Join Margaret Bigelow for this session on the current state of numeracy in Australia and where the focus is going. Everyone is talking about numeracy as opposed to mathematics as a result of the comparisons between Australia's performance with the rest of the world. Margaret will explore what we should do with this information as educators and how it affects teachers working in their own classroom context.

SPEAKER BIO

Margaret has a long and varied career in Mathematics education. She has played an integral role at ACARA developing the Mathematics Curriculum F-10 and the Senior Secondary Mathematics Curriculum. Margaret has developed projects to assist teachers to understand the importance of Mathematics Proficiencies in the teaching of Mathematics. Her most recent work includes the development of learning progressions for Numeracy.



3

Aug

Tuesday 3rd August

3:30 - 4:30pm

Persisting with Place Value

Dr Paul Swan

Leading Australian Mathematics Consultant and Author - <https://drpaulswan.com.au/>

Place value is the basis of our number system. There are many trigger points that can cause issues for students. These include the teen numbers, renaming, spotting the pattern in the way whole numbers are said, issues with decimals (decimal fractions).

None of these issues may be fixed overnight, but require focussed teaching. In this session Dr Paul Swan will share some ideas that he has found successful, when helping students who struggle with Place Value concepts.



5
AugThursday 5th August
3:30 - 4:30pm***Engaging Highly Capable Mathematicians
in Primary School***Ann Suthers
Executive Coach - Brisbane Small Schools Cluster

This session will examine a process that can assist teachers to plan for the more capable mathematicians in primary school. The process will develop problem solving and reasoning through an inquiry model. Using a Year 3 and 4 scenario, strategies and resources will be shared that can be used across the many facets of primary school.

**WIN MABBLE**

Join in our live sessions to have a chance to win a copy of Mabble. Mabble was invented by our final festival speaker Dr Catherine Attard and comes in board game and floor mat game versions.

We'll be giving away some Mabble games randomly during our live sessions so make sure you try to hop online and join our presenters live during the festival.



9
AugMonday 9th August
3:30 - 4:30pm

Learning Progressions - Moving Students Forward

Margaret Bigelow

Join Margaret Bigelow for this session where she'll explore what you can do when you know a child doesn't get a concept and how you can use the numeracy progressions to inform what you are doing to move students forward.

SPEAKER BIO

Margaret has a long and varied career in Mathematics education. She has played an integral role at ACARA developing the Mathematics Curriculum F-10 and the Senior Secondary Mathematics Curriculum. Margaret has developed projects to assist teachers to understand the importance of Mathematics Proficiencies in the teaching of Mathematics. Her most recent work includes the development of learning progressions for Numeracy.

10
AugTuesday 10th August
3:30 - 4:30pm

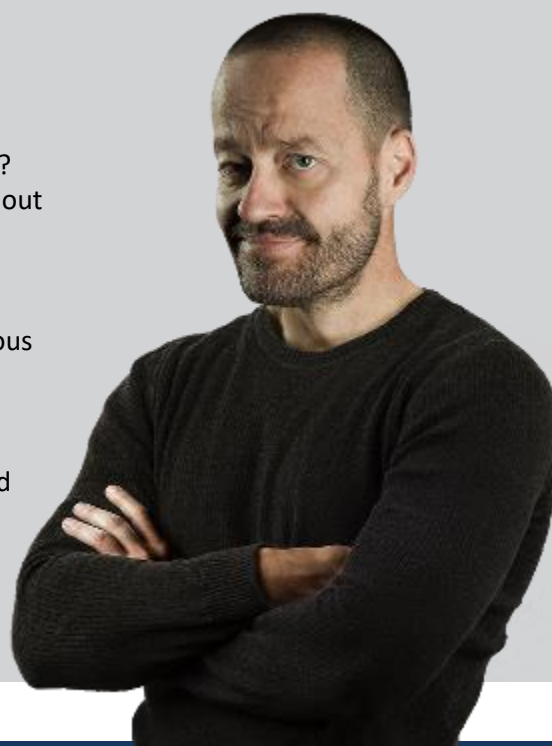
Numberland

Adam Spencer
Australia's Funniest and Most Loved Maths Nerd

How does GPS work? Can honey bees really count?
What do you do when your smartphone locks you out
... for 48 years?

Australia's funniest and most-loved maths nerd is joining us online with fascinating facts and querulous quizzes.

Join in the fun and be inspired to take Adam's enthusiasm and ideas into your own classroom and school context.



11
AugWednesday 11th August
3:30 - 4:30pm**Reasoning and Metacognition**

Darren Clark

Darren has worked as a Numeracy Coach internationally, for the North Coast Region and currently in local schools from P-12.

This workshop explores reasoning and metacognition, and how it can be harnessed to improve numeracy outcomes and enrich mathematical experiences in Upper Primary and Junior Secondary. You will be shown practical examples of how reasoning can extend your high achieving students, and how metacognition can enable the re-engagement of your more reluctant students regardless of their level. You will take away strategies and questioning tools to try tomorrow morning!

12
AugThursday 12th August
3:30 - 4:30pm**Making High Yield Activities a Habit**

Mark Hansen

Deputy Principal - Sandy Strait State School

There are so many great, research-based mathematics activities. How do we know which ones to include in our classroom and how do we make these a routine for us and students?

This workshop will give some background on how to do this as well as which activities to include for maximum engagement and learning with the aim of all students meeting the National Curriculum descriptors.



18
Aug**Wednesday 18th August**
3:30 - 4:30pm

Fostering School - Home Connections in Mathematics Education

Dr. Leicha A. Bragg

Central to student success in mathematics is fostering school-home connections. Families are your school's key partner in supporting their child's learning; they lay the groundwork for their child's educational success. The benefits of engaging families in their child's mathematical education include positive attitudes towards mathematics, motivation to learn, and academic achievement. When families talk about and do maths, children talk about and do maths. Dr. Leicha Bragg will share tips and strategies for forging and enhancing reciprocal and respectful school-home connections.

19
Aug**Thursday 19th August**
3:30 - 4:30pm

Mathematical Reasoning - What, Why, How and When

Dr. Leicha A. Bragg

Reasoning is the glue that ties mathematics together and is an essential proficiency within the Australian Curriculum. Increasingly reasoning is being explicitly included in the planning and teaching of mathematics lessons. Reasoning is multifaceted and goes beyond primary children explaining their thinking. In this session, Dr. Leicha Bragg will present engaging reasoning tasks and resources which will encourage primary students to analyse, justify, and generalise. Avenues for including reasoning in our daily practice will be explored through an array of stimulating tasks and question prompts.

SPEAKER BIO

Leicha is a Senior Lecturer in Mathematics Education at Deakin University. She has worked in education with preservice and practising primary mathematics teachers for over 20 years. Leicha has an international reputation for her work in developing engaging educational tasks for students. She is the author of three teacher resource books, including two on geocaching, and one on engaging with mathematics through picture books. Leicha's current research projects focus on: teaching mathematics for social justice; online adult learning of numeracy; and, champions of mathematical reasoning.



23
AugMonday 23rd August
Pre-Recorded Session

Games as a Pedagogical Tool in P-2

Dr Paul Swan

Teachers often use games to foster engagement and for developing fluency. In this session Dr Paul Swan will share five principles for improving the quality of games used in teaching mathematics. A sample of games that meet many of the five principles, have simple rules and only require minimal gear will be shared.

Teachers watching this session will need:

- a 6 sided dot dice and ten faced 0-9 dice (or equivalent spinner)
- a paperclip & pen to make a simple spinner.
- A standard deck of cards.

24
AugTuesday 24th August
Pre-Recorded Session

Games as a Pedagogical Tool in the Middle Years

Dr Paul Swan

Teachers often use games to foster engagement and for developing fluency. In this session Dr Paul Swan will share five principles for improving the quality of games used in teaching mathematics. A sample of games that meet many of the five principles, have simple rules and only require minimal gear will be shared. Teachers watching this session will need:

- a 6 sided dot dice and ten faced 0-9 dice (or equivalent spinner)
- a paperclip & pen to make a simple spinner.
- A standard deck of cards.

SPEAKER BIO

Dr Paul Swan has taught mathematics in both primary and secondary schools and worked as a Senior Lecturer in Mathematics Education at Edith Cowan University in Australia for 18 years. His website is www.drpaulswan.com.au Paul has written over 50 books, authored numerous journal articles and created many types of mathematics games - board, card and digital.

He currently designs mathematics manipulative materials and supports schools looking to improve the teaching of mathematics in both schools and across whole school systems (Private, Public, State, National and International)

He has received numerous awards, including an Honorary Fellowship of the Australian Council for Educational Leaders (ACEL) for his work with School Leaders. For his contribution to Mathematics Education in his home state of Western Australia he was awarded an Honorary Life Membership by the Mathematics Association of Western Australia. He regularly speaks on a variety of topics, particularly in early childhood and primary (elementary education). He received his PhD in 2002 for his study of the computational choices made by 10 - 12 year old students. He currently continues to write and develop materials as a private consultant to school sectors as well as industry.



25
Aug

Thursday 25th August : 3:30 - 4:30pm

Problem Solving: The Core of the Australian Curriculum

Dr Catherine Attard

President of the Mathematics Education Research Group of Australasia.

Associate Professor in Primary Mathematics Education and Deputy Director of Research - University of Western Sydney

Problem solving is at the core of the Australian Curriculum: Mathematics. However, many teachers find it challenging to incorporate problem solving into their programs. Where should it happen? When should it happen? How do you teach students to become successful problem solvers? What makes a good problem? How do you progress from problem solving to mathematical investigation? These questions and more will be addressed during this webinar.

SPEAKER BIO

Catherine is an Associate Professor in primary mathematics education and Deputy Director of Research within the School of Education at the University of Western Sydney. She regularly presents workshops and keynotes nationally and internationally and is the current President of the Mathematics Education Research Group of Australasia (MERGA, a past president of the Mathematical Association of New South Wales (MANSW) and past editor of the professional journal, Australian Primary Mathematics Classroom. Catherine is also the author of the leading mathematics education blog, www.engagingmaths.com, as well as the author of several popular mathematics teacher resource books.

Catherine's research is focused on student engagement with mathematics and issues surrounding the pedagogical practices that influence students' engagement. Catherine is also actively researching contemporary teaching practices through the use of digital technologies, and the use of financial literacy education as a tool to engage children with mathematics. Catherine has won several teaching awards, including a 2016 Australian Award for University Teaching (AAUT) Teaching Excellence Award, an Office of Learning and Teaching citation for Outstanding Contributions to Student Learning and the Western Sydney University Vice-Chancellor's Excellence in Teaching Award. In 2017 she was listed in The Educator's Hotlist as one of the most influential educators in Australia.

