

Early Career Teachers Conference PROGRAM

11 October 2019
8.30 am - 4.30 pm
Immanuel College
Morphett Road, Novar Gardens

Teaching science inquiry with a STEM perspective

- ▶ For teachers in their first five years of teaching science/STEM or those new to a specialist science or STEM role
- ▶ An opportunity for early career and pre-service teachers to be involved in interactive learning activities that deepen understanding of the science content
- ▶ Provides skills and resources to engage your students in learning
- ▶ Hands-on interactive workshops for both primary and secondary teachers
- ▶ Morning tea and lunch provided
- ▶ Network with other teachers and the presenters at the happy hour!

REGISTER NOW at www.sasta.asn.au



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Supporting teachers of science; advancing science education



Registration & light breakfast				
Opening & Welcome				
8.00 am	Registration & light breakfast			
8.30 am	Opening & Welcome			
9.00 am	Session 1	PRIMARY YEARS	PRIMARY YEARS	SECONDARY YEARS
	101. Working as a specialist science teacher in a primary setting <i>Jade Tinney</i> <i>Salisbury Park Primary</i>		102. Reimagining primary STEM: Opportunities and options <i>Sarah Finney</i> <i>Stirling East Primary School</i>	104. Value your laboratory manager <i>Jane Hosking</i> <i>St Francis de Sales College</i>
10.00 am	MORNING TEA			
10.30 am	Session 2	PRIMARY/MIDDLE YEARS	PRIMARY YEARS	MIDDLE/SECONDARY YEARS
	201. Enlivening your classroom <i>David LeCornu</i> <i>The Nature Education Centre</i>		202. Primary Connections, STEM in action! <i>Angela Gigliotti & Jennifer Lawrence</i> <i>Primary Connections</i>	204. Interacting and engaging activities for middle and secondary teachers of physics <i>Daniel Rabbett</i> <i>Cardijn College</i>
11.45 pm	Session 3	PRIMARY YEARS	PRIMARY/MIDDLE YEARS	SECONDARY YEARS
	301. Primary school (R-7) science inquiry design <i>Jade Tinney</i> <i>Salisbury Park Primary</i> <i>Adam Spratt</i> <i>Kilkenny Primary</i>		302. From 'see, think, wonder' to investigation <i>Sonia Cooke</i> <i>Morphett Vale East School R-7</i>	304. Concept mapping: Improving student literacy, understanding and lesson planning <i>Paul Gavini</i> <i>Underdale High School</i>
1.00 pm	LUNCH			
1.30 pm	Session 4	PRIMARY YEARS	PRIMARY YEARS	MIDDLE/SECONDARY YEARS
	401. Formative and summative assessment <i>Jade Tinney</i> <i>Salisbury Park Primary</i> <i>Adam Spratt</i> <i>Kilkenny Primary</i>		402. STEM for every learner <i>Carly Tate & Karlia Brown</i> <i>The Grove Education Centre</i>	404. Lab lessons with a STEM focus <i>Kate Dilger</i> <i>SASTA</i>
2.45 pm	Session 5	PRIMARY YEARS	PRIMARY YEARS	MIDDLE/SECONDARY YEARS
	501. How to STEM 101 <i>Peter Beveridge</i> <i>Pennington School R-7</i>		502. Being a primary science specialist <i>Mike Hawkey</i> <i>Two Wells Primary School</i>	505. Risk assessment - Why do it? <i>Ana Marques Britto</i> <i>Playford International College</i>
4.00 pm	CLOSE & HAPPY HOUR			

SESSION 1 9.00 am

ROOM 05

101. Working as a specialist science teacher in a primary setting

Jade Tinney, Salisbury Park Primary

After spending two years teaching science in a high school, I quickly learnt that students either loved or loathed science by Year 8. It became my mission to share my love and passion for science in a primary setting in a fun, but engaging way. Join me for a practical conservation on how to implement fun, engaging and pedagogically rich science lessons, as a science specialist within a primary school setting.

ROOM N5

102. Reimagining primary STEM: Opportunities and options

Sarah Finney, Stirling East Primary School

Do you want to know about fitting STEM into your science teaching? Are you interested in hearing why STEM is more than just robots and coding? Learn how to incorporate quick games, competitions and deep inquiries into your program to beef up student energy and engagement. Sarah will draw on her experience running guided scientific inquiry at Stirling East Primary School and her participation in STEM X Academy to share ideas, successes and hopefully answer questions.

ROOM N6

103. From graduate to proficient

Adrian Dilger, CESA

Being early career teachers, you may not as yet have changed your registration from graduate to proficient. This workshop will go through the requirements needed to change your status and provide practical advice on the types of evidence required.

LAB 33

104. Value your laboratory manager

Jane Hosking, St Francis de Sales College, Mt Barker

If you are a science teacher in a secondary or R-12 school, then you are in the position of having one, or if you are really fortunate, more than one, laboratory staff members on site to support your teaching. Do not underestimate the amount of assistance, expertise and resources that we are able to provide, gained through personal experience or close collaboration with colleagues. This workshop will be presented by a laboratory manager with 18+ years' experience and who is a member of the Laboratory Managers Association of SA, who is happy to discuss requesting practicals, WHS requirements, making the most of teaching in a laboratory practical setting, and keeping the science in your STEM investigations.

SESSION 2 10.30 am

ROOM 05

201. Enlivening your classroom

David Le Cornu, *The Nature Education Centre*

NEC provides a range of resources including live animal loans, preserved specimens and educational kits for use in your classroom. We do presentations in your school or you can bring your students to us. In this workshop you find out more about what we can offer, will meet some of our animals and have the opportunity to explore the use of a selection of our kits.

ROOM N5

202. Primary Connections: STEM in action!

Angela Gigliotti & Jennifer Lawrence, *Primary Connections*

Primary Connections invites you to come along to experience easy-to-implement, hands-on science activities and gather teaching resources for your toolkit that support STEM learning. This workshop samples activities across Reception to Year 6 and includes examples from new Primary Connections units released in 2018. We look forward to sharing Primary Connections in a STEM context with you.

ROOM N6

203. Design challenges in STEM

Jennifer Chalmers, *Royal Institution of Australia*

Design challenges can be integrated in to almost any science content outcome and can be adapted to suit the needs of all learners. They can be easily made to integrate the T, E and M into STEM whilst putting the learning into an engaging real-life context. This workshop will give you some inspiration on the types of design challenges that cover the Australian Curriculum and can be done in a science classroom. You will get some hints and tips about sneaking in some maths and career information as well as advice about how to differentiate it to suit all learners. Finally, you will discover how it can be used to formatively assess the learning and the types of thinking that occurs within the classroom.

ROOM TBA

204. Interacting and engaging activities for middle and secondary teachers of Physics

Daniel Rabbett, *Cardijn College*

This workshop provides participants the opportunity to see and experience a number of simple classroom activities for Physics from Years 10–12. This includes practical investigations, both in and outside of the classroom, use of online resources, and explanation strategies for complex Stage 2 concepts. The workshop will run through some lesson ideas, and participants will engage and discuss various concepts.

SESSION 3 11.45 am

ROOM O5

301. Primary school (R-7) science inquiry design

Adam Spratt, *Kilkenny Primary School*

Jade Tinney, *Salisbury Park Primary School*

A look at the questioning for lessons and projects to help develop student interest and understanding – a guide to how to offer the frameworks that can be used to empower teachers to give inquiry a goal using science as the vehicle for learning.

ROOM N5

302. From 'see, think, wonder' to investigation

Sonia Cooke, *Morphett Vale East School R-7*

Who is doing the thinking in your science investigations? Is it the students? Is it the teacher? Or is most of the thinking already done on the worksheet or proforma you provide. In this workshop participants will explore different practical thinking strategies to help move the thinking from the teacher to the students during science lessons and when developing science investigations.

ROOM N6

303. Gamified assessment

Dina Phan, *Woodville High School*

Nail the 4 Cs of 21st century learning using BreakoutEDU – a fun way to assess students which brings the challenges of an escape room to the classroom. In this workshop, participants will get to experience one of the games, and receive tips for how to design and conduct their own. Please bring a WiFi-enabled device.

ROOM TBA

304. Concept mapping: Improving student literacy, understanding and lesson planning

Paul Gavini, *Underdale High School*

Concept mapping is a proven technique of visually illustrating relationships between information and concepts which help students (and teachers) organise and structure their thoughts. This session will focus on the principles of concept mapping and how its techniques can be expanded for student essay construction, media presentations, revision, evaluation tools and preparing units for teaching. Effective software and their use will be demonstrated for rapid deployment within the classroom.

SESSION 4 1.30 pm

ROOM 05

401. Formative and summative assessment

Adam Spratt, *Kilkenny Primary School*

Jade Tinney, *Salisbury Park Primary School*

What does it look like in science and why it is needed – a guide (with examples) of pre-testing, ongoing assessment and summative assessment to cater for differentiation through different year levels (R-7 focus).

ROOM N5

402. STEM for every learner

Carly Tate & Karlia Brown, *The Grove Education Centre*

This workshop will aim to assist educators in supporting students with disabilities and/or complex needs to access STEM learning. Videos and photos of real students will be shared from within a special school setting to show STEM engagement through play and other evidence-based practices. These practices support engagement and curriculum access, as well as complex communication and sensory needs. STEM teaching and learning is for everyone!

ROOM N6

403. Life-Hack Mythbusters! Teaching experimentation methodology by testing unsubstantiated tips from the internet

Shane Meegan, *Seymour College*

This workshop will run through an effective and engaging practice for teaching students basic and more in-depth processes associated with scientific experimentation and testing. This is applicable up to at least Year 10 and teaches students skills of critical thinking and evaluation, experimentation, scientific nomenclature, and data collection and analysis. The process hinges upon students finding tips (life-hacks) on the internet and developing a scientific experiment to determine their validity. The alternative version involves testing claims made on product packaging.

LAB 33

404. Lab lessons with a STEM focus

Kate Dilger, *South Australian Science Teachers Association*

Laboratory instruction allows students to engage in practical experiences and authentic discovery, apply theory to practice, and explore different methods of scientific inquiry while generating new knowledge. Leading a laboratory session has challenges and opportunities that differ from those in a standard classroom environment. This workshop examines how we can make the laboratory experience more meaningful for students and reflect the emerging emphasis on STEM. We will explore a practical investigation that asks students to apply their content knowledge and skills to create solutions to a real-world application of science. The workshop is aimed at resourcing teachers of Years 7-10 science.

SESSION 5 2.45 pm

ROOM O5

501. How to STEM: 101

Peter Beveridge, *Pennington School R-7*

This session will lift the curtain on some of the practical aspects of demonstrating concepts to students. Attendees will engage with and participate in a number of hands-on activities with a focus on how to transfer this experience to their own classroom. This session aims to build confidence for teachers to see practical demonstrations as a highly important and engaging teaching tool for science.

ROOM N5

502. Being a primary Science Specialist

Mike Hawkey, *Two Wells Primary School*

The role of a specialist teacher in the primary setting has some challenges unlike those of a classroom teacher. Mike will share some of the things he has learned. Whether it is timetabling considerations or classroom layout, managing lots of classes or planning for mixed year levels, Mike has ideas you may find valuable in your own situation.

ROOM N13

504. Using easily accessible ICTs in middle school STEM investigations

Stephen Hards, *Cardijn College*

The use of ICTs in STEM need not be expensive or difficult. In this workshop you will investigate some simple ways to use readily available features on your mobile phone and Microsoft Excel as data collection, processing and analysing tools in middle school science and maths investigations. You will come away with some effective tools to put into practice immediately.

LAB 32

505. Risk assessment – Why to do it?

Ana Marques Britto, *Playford International College*

This workshop will discuss the importance of doing a proper risk assessment before every practical lesson in science/STEM. Risk assessments are compulsory in the science area for all public schools in SA so it is important that they be done properly. It is important to know your students in order to choose interesting practical lessons and assess the possible risks of the materials and chemicals.