



## Conferences/Events

Term 3 PD/conferences and science activities are now published. Please see pages 8-13 for details or visit the SASTA website [www.sasta.asn.au](http://www.sasta.asn.au)

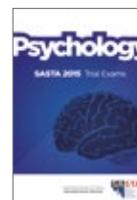
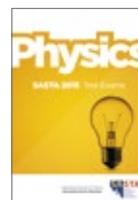
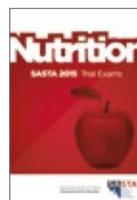
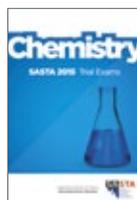
## Oliphant Science Awards

For the latest information concerning, judging, Open Day (including science demonstrations and come and try activities) and other key dates, please see pages 6 & 7 or visit our new website at [www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au)

## SASTA Trial Exams

Biology, Chemistry, Nutrition, Physics and Psychology Trial Exams can now be purchased and downloaded immediately online at [www.sasta.asn.au](http://www.sasta.asn.au)

Payment by credit card will provide you with a link to download the product immediately. If you select bank transfer or cheque as the payment option you will receive a link by email to download the product once payment has been received.



## Latest Events

For the latest events and Conference information go to SASTA's website: [www.sasta.asn.au](http://www.sasta.asn.au)

For information about science competitions go to: [www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au)

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### Early Career Teachers Conference

**Friday 9 October**

**Venue:** Immanuel College, Morphett Rd, Novar Gardens.  
See page 10 for program and check the SASTA website for updates.

[www.sasta.asn.au](http://www.sasta.asn.au)

### Call for Presenters—STEM Middle School Conference

**Friday 27 November**

**Venue:** Nazareth Catholic College, 1 Hartley Road, Flinders Park.

See page 12 for details and submit your abstract on the SASTA website.

[www.sasta.asn.au](http://www.sasta.asn.au)



SASTA is on Facebook go to [www.sasta.asn.au](http://www.sasta.asn.au)



SASTA is on Twitter go to [www.sasta.asn.au](http://www.sasta.asn.au)

## South Australian Science Teachers Association Inc.

Patron: Dr Leanna Read ABN 22 938 317 192

Registered by Australia Post – Print Post Publication No. PP 100004158

Member of Australian Science Teachers Association (ASTA)

**Supporting teachers of science • Advancing science education**



## 2015 SASTA Committee

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## Newsletter copy deadlines 2015

(Advertising deadlines one week earlier)

Edition	Deadline
February	12 January
May	13 April
August	13 July
November	12 October

## Advertising

Advertising rates & booking form online at [www.sasta.asn.au](http://www.sasta.asn.au)

Views expressed in this newsletter are not necessarily those of SASTA or the editors. Whilst every effort is made to be factual, no liability is accepted for the accuracy of information presented.

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Adhering to the following guidelines would be appreciated:

Save as a Microsoft Word document

Tables to be set up as text with one tab between columns and a return at the end of each row.

For spelling please use the Macquarie Dictionary and where several alternative spellings are listed, use the first. The exception to this is when you are citing, referencing or quoting directly from a source which uses alternative spelling. Photographs should be high quality untouched digital photographs.

## From the Vice-President



I recently attended the 64th National Conference of the Australian Science Teachers Association, CONASTA64, in Perth. The events were split between the Pan Pacific Hotel and Mercedes College, which were 5 minutes walk from each other in central Perth.

The speakers were excellent but I particularly enjoyed Ian Macleod's entertaining talk on the chemical

preservation of old artefacts as well as Sabine Streller's presentation on using fairy tales in science lessons.

Sabine Streller outlined examples of how science teachers in Germany have used fairy tales (eg the witch's cottage in Hansel and Gretel with a roof of bread and windows of sugar ,etc) to teach science concepts such as the influence of weather on building materials or the separation of substances by referring to the mixture of lentils and ashes used in Cinderella.

I attended Ian Macleod's tour of his Shipwreck museum at Fremantle as well as a guided tour of the Maritime museum and submarine. I would highly recommend both of these world-class museums for anyone visiting Fremantle.

I am usually happy if there is at least one workshop at a conference that I can take back and use with my students at school. This time, 5 of the 6 workshops I attended gave me ideas and resources that were directly transferable to the students I teach. The one by Geoscience Australia on teaching Year 8 Geology was perfect as I can use the material at my school this term.

The conference was very well attended with 37 participants travelling from South Australia. However next year's CONASTA 65 on the Gold Coast is unfortunately being held during week 10 of term 2 because the Qld school holidays don't line up with ours. I'm glad I was able to get so much from this year's conference as it is unlikely I will be able to attend next year.

### Mark Divito

SASTA Vice-President



Conference Banquet at Government House Ballroom.

## Exam Prep Seminars for SACE Stage 2 Students

To be held at The University of Adelaide, Napier Building, Lower Ground Floor as follows:

### Biology

Saturday 5 September  
2:30 pm – 5:00 pm

### Chemistry

Saturday 19 September  
2:30 pm – 5:00 pm

### Physics and Psychology

Saturday 12 September  
2:30 pm – 5:00 pm

Registration fee \$15 (incl.GST) per student. Register online at [www.sasta.asn.au](http://www.sasta.asn.au) For teachers registering a class, please fax a list of participant names with school purchase order number and the school will be invoiced accordingly at \$15 per student. Teachers accompanying a class are free.



Dr Ian MacLeod, Executive Director, Fremantle Museums and Collections delivered the Stanhope Oration.

**3 or 4 days of Science Activities for students in years 9 & 10**

# THE CONOCOPHILLIPS SCIENCE EXPERIENCE



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**[www.scienceexperience.com.au](http://www.scienceexperience.com.au)**

Early application is advised as we have only limited places available in all programs

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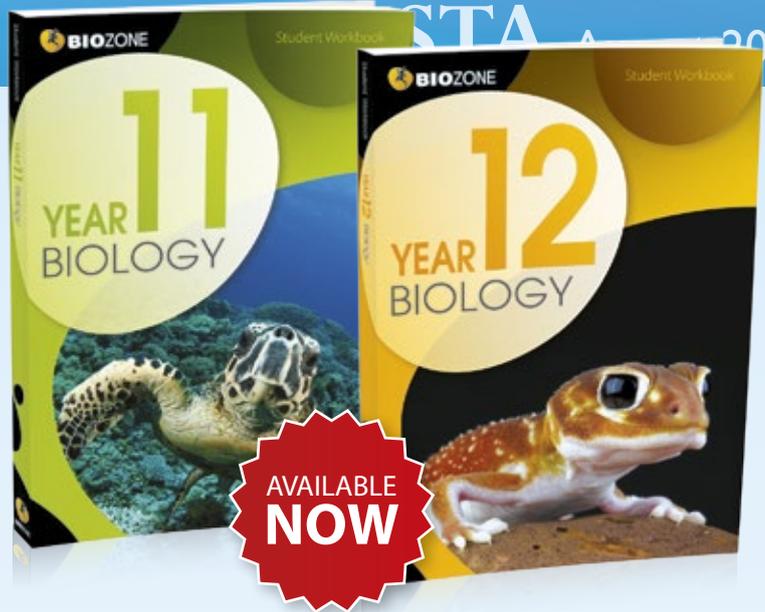
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“ I very much doubt you can make a more significant impact on student learning for such a small outlay in terms of department budget. ”

*Maurie Wetherall, Science Coordinator,  
University Senior College, Adelaide University*

## WHAT THE TEACHERS SAY

- ✓ **The great visuals make it so easy to explain difficult concepts**
- ✓ Data-driven approach and activities requiring modeling promote critical thinking
- ✓ **The extensive variety of activities caters for the different learning styles in my classes**
- ✓ I really love the well-thought-out support resources, they save me so much time



## WHAT THE STUDENTS SAY

- ✓ **Each activity focuses on one idea, so it's really clear to me**
- ✓ The excellent diagrams make me really interested in the topics
- ✓ **It's easier and faster to learn**
- ✓ Related information is easy to find
- ✓ **Questions throughout provide me with great exam practice**



# The Oliphant Science Awards this year!

This year the Oliphant Science Awards has seen some changes, with the release of a new dedicated website for the Awards – [www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au)

The screenshot shows the homepage of the Oliphant Science Awards website. At the top, there is a navigation bar with links for Home, Contact Us, and Coordinator Login. Below this is a main header with the SASTA Oliphant Science Awards logo and a menu with links for About, Event Info, Participant Info, Get Involved, and Register. The main content area features a large banner with the text "Great Opportunities for learning through SCIENCE" and an image of children in a science lab. To the right of the banner is a section titled "Upcoming Key Dates" with three entries: JUL 20 (Off-site Project Delivery Week at SASTA), AUG 08 (Computer Programming & Robotics Judging Day), and AUG 21 (On-site Project Delivery Day at Festival Functions). Below the banner are three columns of information: "Register as a coordinator" (with an image of a teacher and students), "Student Information" (with an image of students in a classroom), and "Judge Registrations" (with an image of a hand writing on a document). Each column includes a brief description and a "REGISTRATIONS FOR 2015 ARE NOW CLOSED!" message. At the bottom, there is a section for "Our Major Sponsors" with logos for the Government of South Australia (Department for Education and Child Development) and The Advertiser (with the tagline "WE'RE FOR SA"). A link "view all sponsors >" is also present.

Project and School Coordinator Registrations are now closed for the 2015 competition, after a huge response from almost 100 South Australian Schools, registering almost 2200 projects!

With such a large number of projects registered we are still looking for Judges to assist us in the Models & Inventions, Photography and Poster categories in the R-8 year levels. Judging of these categories will take place this year at Festival Functions (292 Findon Road, Findon) on Saturday 22<sup>nd</sup> August from 9am – 1pm (lunch provided).

All Judges will receive a Professional Development Certificate, as well as a chance to network with teachers from around SA and an opportunity to see a huge selection of student work to help you gain ideas for your classroom!

To register as a judge for this year's event head to [http://www.oliphantscienceawards.com.au/get\\_involved/judging](http://www.oliphantscienceawards.com.au/get_involved/judging)

## Reminder of Key Dates for Coordinators

**Monday 20 – Friday 24 July** – Delivery Week for Games, Multimedia, Science Writing & Scientific Inquiry entries at SASTA Office (*Only between 9am-4:45pm*). Unfortunately no late entries will be accepted, as our judges have limited time this year to review all projects.

**Saturday 8 August** – Computer Programming & Robotics Judging Day (time by appointment only) – Coordinators please make sure that your students are aware that they need to call to make a time as appointment times are limited!

**Friday 21 August** – Crystal Investigation, Models & Inventions, Photography & Poster entries to be delivered to Festival Functions (292 Findon Road, Findon) between 9am – 5pm

**Monday 24 August** – *Winning and Non-winning* entries to be collected from Festival Functions (9am-5pm) – coordinators please ensure that you contact SASTA if you are going to send a courier to collect your projects, as SASTA will dispose of any uncollected projects after 5pm!

## Open Day 2015

Come to see, learn and immerse the whole family in science this year at South Australia's largest student science Competition – The Oliphant Science Awards Open Day!

This FREE event is open to the general public this year on Sunday 23rd August from 12 – 4pm at Festival Functions (292 Findon Road, Findon).

All the 2015 Oliphant Science Awards prize winning projects will be on display, as well as come and try science activities, a selection of food to purchase and engaging science shows on our main stage to watch the fun and magic of science in action! Invite your family, friends, colleagues and students to attend this event!

Science shows throughout the day will include;

- SciWorld's Light Up Your Mind
- Mobile Science Education Critical Thinking or Light, Science Spectacular, Common Sense, Combustion.

Full program and more information will be available soon at – [www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au)



## Term 3 Teacher Professional Learning: Science

The workshops provided through SASTA will **provide practical strategies and resources to support teachers** in the development of teaching and learning programs that embed Science Inquiry Skills and provide clear opportunities for reflection and recording of student achievement.

### For Primary Years Teachers:

#### Designing quality assessment tasks

Teachers are engaged in ongoing assessment through a variety of differentiated tasks and strategies, both formal and informal, so that sufficient evidence is gathered to make sound judgements about individual students' learning.

This workshop will focus on the general principles and practices of designing and delivering assessment in Science at the primary level. Teachers will look at different assessment types and develop skills that will enable them to better assess their students' knowledge, understanding, application and process skills in Primary Science.

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**Date:** Friday 4th September 2015, 9.00 am - 3.00 pm

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**Venue:** Education Development Centre, Hindmarsh

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#### Registration Fees:

Personal Members \$120,  
Corporate Members \$155,  
Non-members \$180

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Program details and registration available online at –  
[http://www.sasta.asn.au/professional\\_learning](http://www.sasta.asn.au/professional_learning)

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"We are awaking to the consequences of political decisions for our future. In 2008 the American physicist, Richard A. Muller, noted for his renowned course for non-science students, wrote *Physics for Future Presidents: The Science behind the Headlines*, published by W.W. Norton & Company, New York. He provides information about aspects of physics for Presidents of the USA to consider. He covers these issues—terrorism, energy, nuclear possibilities, space, and global warning. Accessible in style – even if one disagrees – this book is of value for teachers across disciplines as well as interested citizens."

#### Erica Jolly

Author of "Challenging the Divide: Approaches to Science and Poetry" and "Making a Stand".

### For Secondary/Middle school teachers:

#### Investigating Earth and Space Science: Years 8-10

How do I teach Earth and Space Science? What activities can I do? Where can I find relevant and engaging activities and resources? This program will allow you to answer these questions and more.

This is the third in a series of workshops for secondary science teachers that aims to give teachers the opportunity to expand their subject knowledge and gather new ideas about how to teach some of the more difficult concepts in this Sub Strand of the Australian Curriculum: Science.

#### The workshop aims to give teachers the opportunity to:

- Gain in-depth knowledge of the Earth and Space Science sub strand
  - Learn instructional tips and techniques
  - Perform some investigations and classroom activities
  - Build resources
  - Share best practice with colleagues
- 

**Date:** Friday 21st August 2015, 9.00 am-3.00 pm

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**Venue:** Education Development Centre, Hindmarsh

---

#### Registration Fees:

Personal Members \$120,  
Corporate Members \$155,  
Non-members \$180

---

Program details and registration available online at –  
[http://www.sasta.asn.au/professional\\_learning](http://www.sasta.asn.au/professional_learning)

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#### Australian Professional Standards for Teachers:

Each of these workshops provide opportunities to extend a teacher's professional learning and capacity in relation to the Australian Professional Standards for Teachers.

Teachers will receive a certificate of attendance that details the Standards covered.

## Introducing SASTA's Project Officer



Kate Dilger started at SASTA in 2013 as the Project Officer. Her role was to provide much needed professional learning in science for our members and to develop supporting resources. Her role has grown remarkably since then with Kate being involved in activities as diverse as those shown below:

### Professional Learning workshops for both Primary and Secondary teachers

These are full day workshops in which teachers are engaged in hands-on experiences of science teaching and learning around the Australian Curriculum: Science. In addition, all teachers receive many free resources to support the workshop content. Recent workshops included:

- Assessing the Science Inquiry Skills
- Science Investigations in a Primary Classroom
- Working with the Achievement Standards
- Setting up a Science Classroom
- Investigating Physical Sciences: Years 8-10
- Teachers new to teaching SACE Stage 2 Chemistry

### In-School Consultancy sessions

Kate has been able to offer a range of in-school professional learning sessions that have been tailored to suit the needs of the school and teachers. All sessions focussed on concrete classroom applications of the skills and understandings present in the Australian Curriculum: Science.

Some schools that have worked successfully with Kate include; St Johns Lutheran Eudunda, St Augustine's Parish School, Antonio Catholic School, St Aloysius College, Valley View Secondary School, Mercedes College, Parafield Gardens High School, Christian Brothers College, Unley High School, Caritas College, Mt Gambier High School and Cabra College

### Pre-School Teachers Professional Learning

#### Grey Ward Children's Centre

The Centre has booked a series of consultancy days to be held at their site. Kate will run one 4 hour session each term. The sessions will be designed to reflect and explore the concepts and skills outlines in both the Australian Curriculum: Science and the Early Years Framework.

#### Catholic Education SA (CESA) Early Learning Project

Kate is working with consultants from CESA to present science professional learning to pre-school teachers and principals.

### Money Smart Professional Learning Program

Kate is able to present Money Smart Teacher Workshop 1 – *Introduction to consumer and financial literacy education in Australia* at no cost. This one hour presentation can be held during a staff meeting or any other suitable time as negotiated by the school.

### Development of Resources

Kate has been involved in developing a number of resources to support our members:

- A **Science Investigations resource for Primary Years teachers** – *What if ....we do Science?* that includes over 50 unique Science Investigations presented as easy to use student worksheets ready to photocopy.
- A list of **recommended Websites, Apps and Videos** added to the Member Resources page.
- A **booklet of excursions and Incursions** for Science Teachers.
- Stage 2 Chemistry trial exams

### Other Projects

Kate is currently working with the **Office of Science, Technology and Research**, Department of State Development to construct a professional learning opportunity for teachers that highlights the achievements of the Braggs in South Australia.

Kate is a member of the **SACE Australian Curriculum–Sciences Learning Area Reference Group**. This group will be formulating the structure of the SACE Stage 1 and 2 Sciences curriculum documents in response to the introduction of the Australian Curriculum.

Kate is the convenor of the **Early Career Science Teacher Conference** which will be held this year on September 28th at Immanuel College.

Inquiries concerning professional learning & consultancy services can be directed to Kate by email: [projectofficer@sasta.asn.au](mailto:projectofficer@sasta.asn.au) or telephone: 0437 749 486.

# SASTA Early Career Science Teacher Conference October 9th 2015 Immanuel College

8.15 am	Registrations			
8.45 am	Opening and Welcome			
9.00 am	Session 1 Science Stories <i>All delegates</i>	These short talks will describe creative new approaches to teaching science.  Speakers: <ul style="list-style-type: none"> <li>• Jeremy LeCornu (Brighton Secondary School)</li> <li>• Kirsty Costa (Cool Australia)</li> <li>• Julie McClements (CSIRO)</li> </ul>		
10.00 am	Session 2 Australian Curriculum	S201 Effective science planning using the Learning Design tool.  Marianne Nicholas <i>Manager, Pedagogy and General Capabilities/Cross Curriculum Priorities DECD</i>	S202 Science as a Human Endeavour  Bruce White <i>Program Director, School of Education, UniSA</i>	S203 All you need to know as an early career teacher about the Australian Professional Standards for Teachers  Melissa White <i>Project Officer: Early Career Teacher Quality, DECD</i>
Year level Focus		Primary Years	Middle Years	All Year Levels
11.15 am	MORNING TEA			
11.30 am	Session 3 Creative Classroom Strategies	S301 Managing difficult behaviours  Charlotte Holmes <i>DECD and Mobile Science Education</i>	S302 Classroom Management and Assessment using Digital Tools  Dina Phan <i>Swallowcliffe School P-7</i>	S303 How to build positive relationships  Andrea Richardson <i>Behaviour Education Consultant, CESA</i>
Year level Focus		Primary Years	Primary/Middle Years	Secondary
12.30 am	Session 4 Engaging with Pedagogy	S401 Drawing Scientifically in the Early Years  David Keystone <i>Balnarring Primary School Vic</i>	S402 CSIRO – Scientists in the classroom  Julie McClements <i>CSIRO</i>	S403 UniSA Connect – Engaging students through inquiry based activities  Nathaneal Scherer <i>UniSA Connect</i>
Year level Focus		Early/Primary Years	Primary/Middle Years	Secondary
1.30 pm	LUNCH			
2.15 pm	Session 5 Using ICT	S501 Technology Toolkit for Early Career Teachers  Tom Melingakos <i>Learning &amp; Technologies Team CESA</i>	S502 Scratch, visual programming for students!  Adrian Dilger <i>Numeracy Consultant CESA</i>	S503 How and Why You Should Flip Your Classroom  Jeremy LeCornu <i>Brighton Secondary School</i>
Year level Focus		Primary Years	Primary/Middle Years	Secondary
3.15 pm	Session 6 Resources to Enhance Learning	S601 Science ASSIST- a unique resource  David Keystone <i>Balnarring Primary School Vic</i>	S602 Sustainability Across the Australian Curriculum  Kirsty Costa <i>Cool Australia</i>	S603 Science by Doing  Christine Papanicolas <i>Prince Alfred College</i>
Year level Focus		Early/Primary Years	All Year Levels	Middle/Senior Years
4.15 pm	CLOSE AND HAPPY HOUR			

## SASTA Early Career Teachers Conference

### Are you new to teaching Science or in the first 5 years of your career?

If so then this conference is a great opportunity for you to be involved in **interactive and fun learning activities** as well as **gather resources** that will enrich and inform your science teaching.

Five main sessions will run throughout the day each with a different focus:

- **The Australian Curriculum: Science**
- **Engaging with Pedagogy**
- **Creative Classroom Strategies**
- **Using ICT**
- **Resources to Enhance Learning**

This hands-on interactive professional learning day will cater specifically for each level of schooling. Workshops will be offered concurrently at each session so participants can choose to attend those that are most relevant to their area of teaching.

Morning Tea and lunch will be provided and there will also be a chance to network with other teachers and the presenters at the **HAPPY HOUR!!!**

**Date:** Friday 9th October 2015

**Time:** 9.00am- 4.30pm

**Venue:** Immanuel College, Novar Gardens

**Who should attend:** The Program includes specialized workshops for **both Primary and Secondary Teachers**

**Cost:** Personal Member \$115, Corporate Member \$140, Non-Member \$165

**Registration and session details can be found at:**  
[http://www.sasta.asn.au/professional\\_learning/early\\_career\\_teachers\\_conference](http://www.sasta.asn.au/professional_learning/early_career_teachers_conference)

#### **National Professional Standards for Teachers:**

*Teachers will receive a certificate of attendance that details the hours of professional learning and Standard 2 Focus Areas 2.1 and 2.2, Standard 3 Focus Area 3.2, Standard 6 Focus Area 6.2 and Standard 7 Focus Area 7.4*

**Contact:** For any further information please contact

**Kate Dilger at SASTA**

**Ph 8354 0006 Email [projectofficer@sasta.asn.au](mailto:projectofficer@sasta.asn.au)**



*Immanuel College, Novar Gardens.*

# STEM Middle School Conference

Friday 17 November 2015

Nazareth College, 1 Hartley Road, Flinders Park

## Keynote Presentation by: Associate Professor Paul Newhouse, Director of CSaLT, Edith Cowan University



I have always considered myself to be both an educator and learner. For nine years this was largely realised in an innovative state secondary school in Western Australia where I had the opportunity to put into practice a range of philosophically based programmes and strategies in teaching across the curriculum.

Since then I have had the privilege

of conducting research in schools and sharing my experiences with pre-service and practicing teachers for over 25 years in two universities. Currently I am an associate professor with the School of Education at Edith Cowan University and director of the Centre for Schooling and Learning Technologies (CSaLT). My focus is on implementation strategies for using computers to support learning in schools, particularly as applied to portable computing across the curriculum, assessment and curriculum development in technology education.

### Keynote Presentation: *STEM is boring? Using ICT to engage students with STEM*

STEM knowledge and skills are critical for the wellbeing of our society and economy but overwhelmingly by the end of schooling the majority of our students are not interested, and have no plans to continue study or work, in these areas. We need to build their interest and engage their minds, particularly during the middle years of schooling. There is no doubt that ICT can be used to achieve this but it needs to support appropriate pedagogy and particularly approaches to assessment. I will draw on research from my research centre to illustrate how this can be realised in typical school contexts.

In addition to his keynote presentation, Paul will present the following workshops.

### Workshop 1: *Planning and evaluating ICT support for learning*

In this workshop participants will use a tool to evaluate the use of ICT in their teaching, and then be guided through a problem-based approach to planning to build on this use.

### Workshop 2: *STEM learning activities supported by ICT?*

In this workshop participants will be guided through some examples of using ICT tools to support STEM learning activities.



Nazareth College, Flinders Park.

## Call for Workshop Presenters

### STEM Middle School (6-10) Conference

The one-day Middle School STEM Conference will provide high-quality professional learning opportunities for middle school teachers and educators, in the fields of mathematics, science, ICT and design & technology.

With program inputs from the members of four teacher professional associations, SASTA, MASA, EdTechSA\* and DATTA -SA\*, the event is designed to bring together teachers, educators and exhibitors who are interested in sharing and exploring tools, resources and related activities that will ensure successful implementation of STEM education into our schools and communities.

The Conference will also provide an excellent opportunity for educators and teachers to exchange ideas about STEM teaching and learning and to maintain and develop valuable networks.

Some workshops will address the critical importance of connecting different areas of STEM by considering ways of interrelating science and/or mathematics topics using the tools of technology with engineering emerging through hands-on and real-life applications. Other workshops will address activities to support teaching and learning in more specific topics in the disciplines of mathematics, science, design & technology and IT.

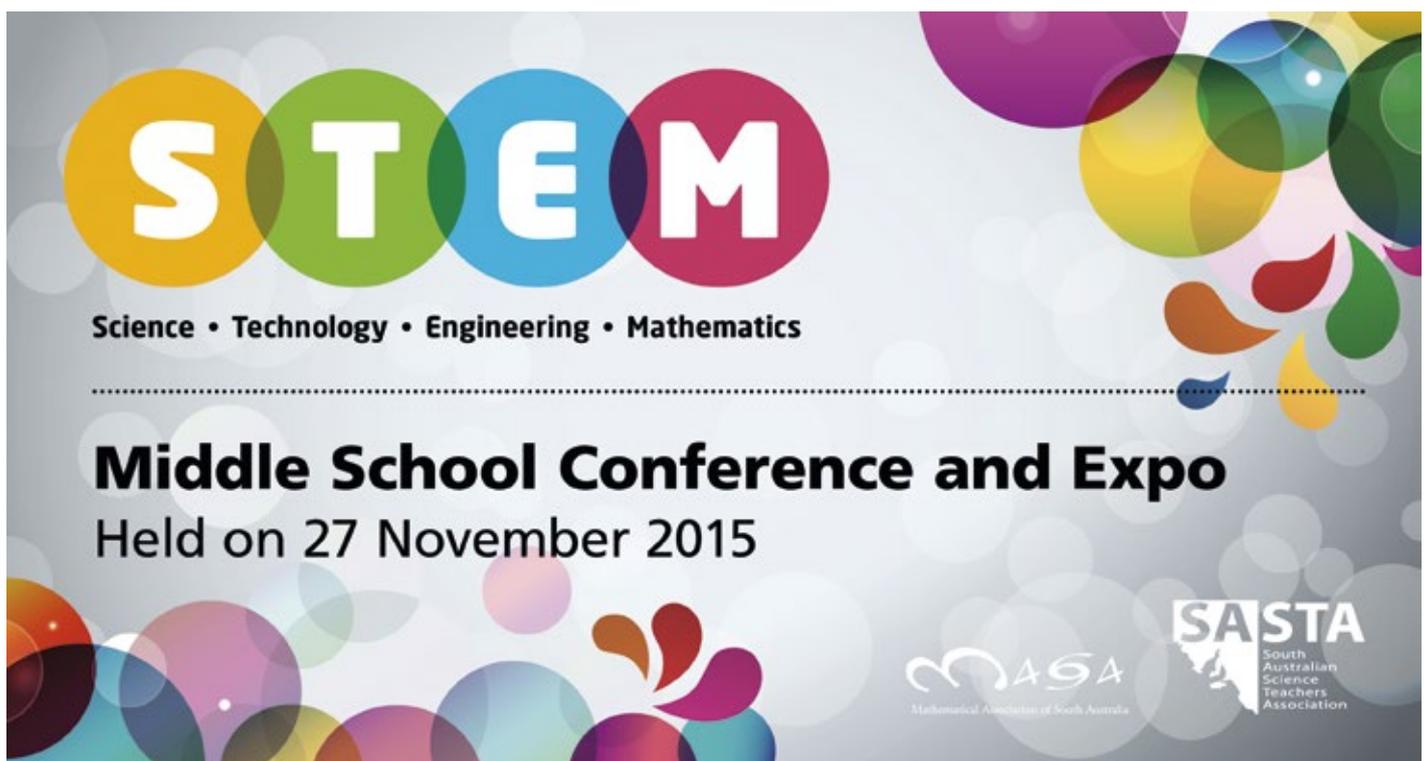
Teachers and Educators interested in presenting a practical one-hour workshop are encouraged to submit an abstract online at [www.sasta.asn.au](http://www.sasta.asn.au)

The closing date for submission of abstracts is **31 August 2015**.

Program	
8.30 am	<b>Registration &amp; Coffee</b>
8.43 am	<b>Welcome and Housekeeping</b>
9.00 am - 10.00 am	<b>Keynote:</b> Associate Professor Paul Newhouse
<b>10.10 am - 10.40 am</b>	<b>Morning Tea &amp; Trade Displays</b>
10.40 am - 11.40 am	<b>Workshop 1</b>
11.45 am - 12.45 pm	<b>Workshop 2</b>
<b>12.45 pm - 1.30 pm</b>	<b>Lunch &amp; Trade Displays</b>
1.35 pm - 2.35 pm	<b>Workshop 3</b>
2.40 pm - 3.40 pm	<b>Workshop 4</b>
<b>3.45 pm - 4.45 pm</b>	<b>Happy Hour</b>

\*EdTechSA (Educational Technology SA) is a professional association of educators that promotes and supports teaching and learning with Information and Communication Technologies [ICT] and the study of Information Technology [IT] as a discipline.

\*DATTA -SA (Design and Technology Teachers Association-SA) is the professional organisation for design & technology, innovation and engineering educators.



**STEM**  
Science • Technology • Engineering • Mathematics

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**Middle School Conference and Expo**  
Held on 27 November 2015

MASA  
Mathematical Association of South Australia

SASTA  
South Australian Science Teachers Association

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