

## Conferences and Events



### Latest Events

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

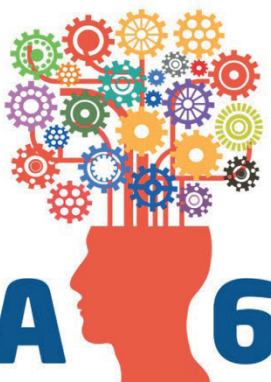
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**ADELAIDE 2014**  
**THE HUMAN FACES**  
**OF SCIENCE**



**CONASTA 63**

6-9 July 2014, University of Adelaide

Earlybird rates  
have been  
extended until  
30 May 2014!

**South Australian Science Teachers Association Inc.**

Patron: Dr Barbara Hardy AO ABN 22 938 317 192  
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**Supporting teachers of science • Advancing science education**



## 2014 SASTA Committee

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## Newsletter copy deadlines 2014

**(Advertising deadlines one week earlier)**

Edition	Deadline
February	20 January
May	22 April
August	21 July
November	20 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 President



It was my pleasure recently to present at the UniSA Scholarships, Prizes, Awards and Grants Ceremony, the SASTA Prize for Outstanding Pre-service Science Educator to Emma Kerr. The prize included a free SASTA membership and paid registration to our Early Career Teachers Conference later this year.

I would like to commend to teachers the National Youth Science Forum being held for students in January 2015. It is an amazing opportunity for current year 11 students who are interested in a career in science, technology or engineering. Applications and information are available online at [www.nysf.edu.au](http://www.nysf.edu.au) but the closing date is 31 May 2014 and if your school hasn't had a student apply in recent years, I would highly recommend you draw it to the attention of your year 11 students.

Registrations are now being taken online for CONASTA 63, the 63rd National Science Teachers Conference that is being held at the University of Adelaide from 6-9 July. Australia's Chief Scientist, Ian Chubb and Nobel Laureate, Brian Schmidt will both be speaking at the event and the whole program and range of workshops can only be described as outstanding. This time, as well as the plethora of sponsor's prizes to be given away at the happy hours, every registrant is being put into a draw for VIP tickets to the MythBusters live tour of Australian capital cities this August. As CONASTA only comes to South Australia once every 8 years, I'd certainly recommend that you at least check out the program if you're in Adelaide and not committed in July.

**Mark Divito**  
President

## Outstanding Pre-Service Science Educator Award



*Mark Divito, SASTA President, presenting the Outstanding Pre-Service Science Educator Award to Emma Kerr at the UniSA EDS Scholarships, Prizes, Awards and Grants Ceremony on March 17 2014 in the Kerry Packer Civic Gallery, Level 3, Hawke Building City, West Campus.*

*Emma's prize included a year's Personal Membership, SASTA Journal (esteemed publication) and complimentary registration for the Early Career Teachers Conference in September 2014.*



## SASTA Workshops

### SASTA Workshops available in Term 2 2014

#### Science in a Nutshell: Primary Years

**Date:** Monday 12th May 2014

**Time:** 9:00am–3:00pm

**Venue:** Education Development Centre,  
Milner Street, Hindmarsh

Explore the new Australian Curriculum – Science and increase your confidence with implementing a teaching and learning program that covers the content using an inquiry-based approach.

[Repeat of Term 1 Workshop]

#### Aims of the workshop:

- Enhance engagement with the Australian Curriculum: Science in primary schools
- Raise primary teachers confidence in methods of teaching science
- Empower teachers to develop engaging, teaching, learning programs

This workshop will provide teachers with explicit curriculum materials, investigations, planning tools and contemporary pedagogical strategies to enable them to successfully implement the Australian Curriculum: Science.

#### Year 7 Science: Earth & Space Science

**Date:** Monday 19th May 2014

**Time:** 9:00am – 3:00pm

**Venue:** Education Development Centre,  
Milner Street, Hindmarsh

This workshop will support teachers to further develop their current understanding of the Science Understanding Strand: Chemical Sciences

The workshop aims to build teacher knowledge and conceptual understandings while participants are actively engaged in science investigations using the Science Inquiry Skills. The workshop will use an inquiry approach to the learning of science, providing teachers with the confidence and resources to implement the requirements of the Australian Curriculum in their classrooms.

#### What Does Learning Look Like? (Year R-2)

**Date:** Wednesday 21st May 2014

**Time:** 3:30pm–5:30pm

**Venue:** SASTA Boardroom–249 Henley Beach Road,  
Torrensville

The aim of these workshops is to increase teacher confidence when making assessment judgements using the Australian Curriculum Achievement Standards.

#### Process

- To work with real samples of student work.
- To engage in professional discussion with colleagues about interpreting the standards.
- To gather assessment resources
- To look at modifying existing assessment resources

Teachers are asked to bring along samples of student work to share with the group.

#### Working with the Achievement Standards: Assessment that drives learning in science (Secondary/Middle School)

**Date:** Thursday 29th May 2014

**Time:** 9:00am-3:00pm

**Venue:** Education Development Centre,  
Milner Street, Hindmarsh

In this workshop we will look at assessment design and use exemplars to develop skills in designing assessment tasks that drive learning. We will also explore how to use the Achievement Standards to make on-balance judgments about the quality of learning demonstrated by the students. We will describe this achievement across an A-E continuum using an assessment rubric and look at how such an assessment tool can be used to assist teachers to plan rich units of work that allow for access as well as excellence. Teachers will have access to a wide range of resources to assist in their planning.

#### The Workshop will cover the following:

- Assessment Principles, Purposes and Features
- Assessment in The Australian Curriculum
- Achievement Standards
- Assessment Literacy
- An Assessment Tool
- Quality Assessment tasks
- Reporting

## What Does Learning Look Like? (Year 3-5)

**Date:** Wednesday 4th June 2014

**Time:** 3:30pm–5:30pm

**Venue:** SASTA Boardroom–249 Henley Beach Road, Torrensville

The aim of these workshops is to increase teacher confidence when making assessment judgements using the Australian Curriculum Achievement Standards.

### Process

- To work with real samples of student work.
- To engage in professional discussion with colleagues about interpreting the standards.
- To gather assessment resources
- To look at modifying existing assessment resources
- Teachers are asked to bring along samples of student work to share with the group.

## Investigating Biological Sciences: Years 8-10

**Date:** Friday 13th June 2014

**Time:** 9:00am–3:00pm

**Venue:** Education Development Centre, Milner Street, Hindmarsh

How do I teach Biology? 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 second in a series of workshops for secondary science teachers that aim 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 Biological Sciences sub strand
- Learn instructional tips and techniques
- Perform some investigations and classroom activities
- Build resources
- Share best practice with colleagues

## What Does Learning Look Like? (Year 6-7)

**Date:** Wednesday 18th June 2014

**Time:** 3:30pm–5:30pm

**Venue:** SASTA Boardroom–249 Henley Beach Road, Torrensville

The aim of these workshops is to increase teacher confidence when making assessment judgements using the Australian Curriculum Achievement Standards.

### Process

- To work with real samples of student work.
- To engage in professional discussion with colleagues about interpreting the standards.
- To gather assessment resources
- To look at modifying existing assessment resources

Teachers are asked to bring along samples of student work to share with the group.

## Planning Inquiry-Based Science Units–Australian Curriculum (Secondary/Middle School)

**Date:** Friday 27th June 2014

**Time:** 9:00am–3:00pm

**Venue:** Education Development Centre, Milner Street, Hindmarsh

In this workshop teachers will investigate the process and practicalities of inquiry learning in the Science classroom. They will engage in hands-on activities that will inform their understanding of the types of inquiry and how to implement them in their teaching program.

[Repeat of Term 1 Workshop]

Participants will collaborate to develop unit materials that exemplify inquiry approaches to teaching and learning.

This workshop will provide teachers with explicit curriculum materials, investigations, planning tools and contemporary pedagogical strategies to enable them to successfully plan using the Australian Curriculum: Science.

### The Workshop will cover the following:

- What is Inquiry Based Teaching?
- Practical Representation/The 5Es Model
- Strategies for Inquiry Based Teaching
- Planning materials and templates
- Resources available

## Booking Details

For further information regarding any of the Workshops listed above, please refer to the SASTA website for the cost of each event, the closing date for bookings, and how to book on-line.

## Money Smart Professional Learning Program

SASTA in association with CEASA and the Australian Securities and Investments Commission (ASIC) are offering schools the opportunity to have the Money Smart program introduced to their staff at no cost.

Money Smart Teacher Workshop 1 – Introduction to consumer and financial literacy education in Australia, will provide teachers with an opportunity to investigate a new financial literacy resource developed for R-10 schools through a one hour professional learning workshop led by a Money Smart Facilitator.

The resource package is designed to equip teachers with the tools and resources to effectively teach consumer and financial literacy through real-life contexts and the knowledge and skills to be able to confidently integrate this into and across relevant learning areas of the Australian Curriculum: English, mathematics and science, F-10.

Workshop Purpose:

- to introduce consumer and financial literacy to whole staff — its importance and how it can be taught as a context for implementing the Australian Curriculum
- to provide an overview of the MoneySmart Teaching package and the MoneySmart units of work
- to provide an outline of the professional learning journey for the school to become a MoneySmart School

Workshop Structure:

- A one hour presentation that is interactive and engaging.
- Can be held during a staff meeting or any other suitable time as negotiated by the school.
- Can be held in conjunction with any other SASTA Professional Learning program delivered at the school.

### Book Your Session Today!

For inquiries and bookings please contact the SASTA office on (08) 8354 0006 or email Project Officer, Kate Dilger, at [projectofficer@sasta.asn.au](mailto:projectofficer@sasta.asn.au)

## SASTA In-School Workshops now available!

SASTA offers a range of in-school professional learning sessions that can be tailored to suit the needs of your school and teachers. All sessions focus on concrete classroom applications of the skills and understandings present in the Australian Curriculum: Science. The structure and length of these sessions is determined by the school in collaboration with the SASTA Project Officer.

Schools that successfully trialled these workshops in 2013 include: St Johns Lutheran Eudunda, St Augustines Parish School, Antonio Catholic School, St Aloysius College and Valley View Secondary School.

Please see enclosed brochure for more details about this exciting new opportunity.

### Book your session today!

For enquiries and bookings, please contact the SASTA office on (08) 83540006 or email the SASTA Project Officer; Kate Dilger at: [projectofficer@sasta.asn.au](mailto:projectofficer@sasta.asn.au)

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## South Australia's Largest Student Science Competition

Great Opportunities for Learning Through Science

### 2014 Oliphant Key Dates

- Thursday 19 June – Registration Forms due.
- Friday 20 June – Judges Registration Form due.
- Monday 21 to Friday 25 July – Deliver Science Writing, Scientific Inquiry, Games and Multimedia entries.
- Saturday 9 August – Computer Programming and Robotics judging.
- Friday 22 August – Deliver Crystal Investigation, Models & Inventions, Photography and Poster entries.
- Saturday 23 August – Judging Day.
- Sunday 24 August – Open Day.
- Monday 25 August – Collection of non-winning entries.
- Friday 19 September – Presentation Ceremony.

**Dates to be confirmed, check SASTA website for updates.**

### 2014 Category Titles

#### Photography

- Careers in Science
- Science in the Garden
- Shelter
- Adaptations to the Seasons
- Science in Architecture
- Light Shows

#### Posters

- The Amazing Properties of Water
- Scientific Shapes
- Waste or Resource?
- Renewable Energy

- Farming in the Future
- Collisions

#### Science Writing

- Science Feeding the World
- Scientific Advances in Food Production
- Scientific Measurement
- Coal Seam Gas and the Environment
- Predicting Natural Disasters
- Polymers
- Year 11-12 Science Issues Investigation

### BHP Billiton Awards



Congratulations to Maria Caruso South Australia's teacher finalist in the BHP Billiton Teacher Awards.

*Remember winning entries from the 2014 Scientific Inquiry and Models & Inventions categories will be forwarded to the BHP Billiton national competition. If you are planning a scientific inquiry, model or invention, have a look at the BHP Billiton judging*

*criteria. There are great prizes for Primary and Secondary entries, including cash, a science camp and a trip to the USA to attend a science fair.*

### Check the list of sponsors' prizes

Valuable prizes are awarded for entries that meet both the category requirements and the criteria described by our sponsors.

### Ideas for starting your entry

#### Scientists solve problems

Look around you – have you got a problem that needs fixing? Many discoveries and inventions have been made by scientists trying to solve a problem.

#### Invent a solution

Here is a good web site to help solve your problem. The 'Inventive Thinking Lesson Plan' gives you easy to follow steps to help spark your inventive abilities. Look up [http://inventors.about.com/library/lessons/bl\\_activity\\_2.htm](http://inventors.about.com/library/lessons/bl_activity_2.htm)

#### Experiment and find out why it is happening

Scientists experiment to understand how things work and what causes the effects seen. The scientific method is fundamental to designing good experiments. Check out the CSIRO CREST Awards <http://www.csiro.au/crest>

#### Scientists communicate their knowledge

Science Writing, Multimedia, Computer Programming and Robotics, Posters and Photography are great ways to inform people. Games can teach and be fun at the same time.

#### National Science Week

The chemistry theme could be used in Computer Programming and Robotics, Crystal Investigation, Scientific Inquiry, Games, Models and Inventions, Multimedia, and there are topics with a chemistry focus in Science Writing, Posters and Photography.

### Get involved!

**Find the Oliphant Science Award information at [www.sasta.asn.au](http://www.sasta.asn.au)**

# South Australian Science Teachers Association

## New and Country Schools Incentive

### Support for new schools and country schools

Schools who have not participated in the past five years and country schools wanting assistance for postage of entries are eligible to apply for support.

**SASTA** is offering new schools the opportunity to enter the Oliphant Science Awards by providing up to \$200 towards entry fees.

Country schools will receive reimbursement for couriers/postage of entries to and from SASTA of up to \$200.

SASTA will assist selected schools to a maximum amount of \$200 each.

### Applications close Friday 6 June 2014

Apply now to have the opportunity of receiving a \$200 entry fee subsidy and country schools to receive reimbursement for couriers/postage.

### Apply now

Please apply online at [www.sasta.asn.au](http://www.sasta.asn.au) or fill out the section at the bottom of this page and fax to 8354 0008 or email to [office@sasta.asn.au](mailto:office@sasta.asn.au)

### Get involved

The Oliphant Science Awards enrich the curriculum for Science, English, Design and Technology, Mathematics and the Arts. It also provides students with motivation and real-life learning opportunities.

School: _____
Address: _____ _____
Coordinator: _____
Phone: _____
Number of Entries: _____
Email: _____

## SASTA Awards Start thinking now for 2014

There are many great teachers out there that SASTA would like to acknowledge, but often they don't get nominated for awards because teaching is a very busy job and people don't get the time to fill in the nomination forms. Start thinking now. Alert your principal.

There are many awards for SASTA members:

- SASTA Medal – for significant contribution to SASTA;
- Credit Union SA/SASTA Outstanding Teacher Award – for junior primary, primary, middle years and senior years teachers;

Nomination forms are available at

[http://www.sasta.asn.au/about\\_us/sasta\\_awards](http://www.sasta.asn.au/about_us/sasta_awards)

**Nominations close Friday 30 May 2014.**



A yellow cartoon character with a blue, pixelated head and a smiling face, holding a large purple sign. The background is a bright blue sky with a yellow sun, white clouds, and a rainbow. The ground is green with stylized trees and flowers.

# ENERGY FOR SCHOOLS

## DID YOU KNOW

Origin Energy for Schools is now taught in nearly half\* of all Australian primary schools?

Featuring new and improved videos, games & activity sheets (IWB & tablet compatible) for Grade 3 – Year 8!

**Get involved today!**



\* Based on 2011 ABS data

[ORIGINENERGY.COM.AU/ENERGYFORSCHOOLS](http://ORIGINENERGY.COM.AU/ENERGYFORSCHOOLS)



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Ref: DECD13/1170

TO: PRINCIPALS

RE: THE CONFERENCE OF THE AUSTRALIAN SCIENCE TEACHERS  
ASSOCIATION - CONASTA 63

The Department for Education and Child Development is pleased to support the 63<sup>rd</sup> Conference of the Australian Science Teachers Association (CONASTA 63) to be held at the University of Adelaide from 6 to 9 July 2014.

CONASTA 63 offers unique opportunities for all educators R-12 to hear from some of Australia's foremost scientists and leading science educators, visit a range of science and research facilities and professionally connect with other educators around the latest research and approaches in science education.

The broad aims of CONASTA are to enable all educators (including teachers, site leaders, teacher educators, laboratory managers and policy officers) to:

- Hear about the latest developments in science, especially Australian research
- Interact with scientists, technicians and science education researchers
- Develop a repertoire of effective and contemporary approaches to science teaching, learning and assessment
- Learn and share from peers in over 100 engaging workshops
- Build strategic partnerships with educators across Australia and beyond

These aims support teachers formalising professional opportunities to gather evidence towards all of the AITSL Australian Professional Standards for Teachers, especially:

- Standard 2 – Know the content and how to teach it
- Standard 3 – Plan for and implement effective teaching and learning
- Standard 6 – Engage in professional learning
- Standard 7 – Engage professionally with colleagues, parents/carers and the community

CONASTA 63 will enable teachers to explore how the three strands of the Australian Curriculum: Science can be integrated, especially through the Science as a Human Endeavour Strand, and how science can be integrated into Science, Technology, Engineering and Mathematics (STEM) programs and learning opportunities.

DECD is a Platinum Sponsor of CONASTA 63 as we believe that the conference offers the highest professional learning and opportunities for our educators, leaders, teachers and laboratory managers.

I urge you to support your teachers and laboratory managers to attend CONASTA 63 in Adelaide in July 2014, a once in 8 year opportunity to attend a national science conference in our own state.

For more information and the program I invite you and your teachers to access the conference web site: <http://www.conasta.edu.au>

Yours sincerely

Helen Wildash

EXECUTIVE DIRECTOR  
TEACHING AND LEARNING SERVICES

Date: 17.4.14



# CELEBRATE THE HUMAN FACES OF SCIENCE

CONASTA 63 NATIONAL SCIENCE EDUCATORS' CONFERENCE

ADELAIDE, 6-9 JULY 2014, UNIVERSITY OF ADELAIDE, CITY CAMPUS

CHOOSE  
FROM 100+  
WORKSHOPS  
ACROSS ALL  
TEACHING  
LEVELS

VISIT  
EXCITING  
SCIENCE  
FACILITIES

DISCOVER  
PRACTICAL,  
HANDS-ON  
LESSON  
IDEAS

TAKE PART  
IN SOCIAL  
EVENTS AND  
MAKE NEW  
FRIENDS

Hear fascinating and inspirational  
**Keynote Addresses from prominent  
scientists including:**

**Chief Scientist of Australia Ian Chubb, AC**

Who will be presenting the annual Stanhope Oration.

**Professor Brian Schmidt, AC FRS**

Distinguished Professor, Nobel Laureate and  
Australian Research Council Laureate Fellow Professor.

**Professor Roy Tasker**

The 2011 recipient of the highest accolade given by the Australian Learning  
and Teaching Council, the Prime Minister's Award for Australian  
University Teacher of the Year.

**Professor Lynne Cobiac**

Director of CSIRO's Preventative Health Flagship.

**Professor Tanya Monro**

ARC Federation Fellow and Director of the Institute for  
Photonics & Advanced Sensing.

**Professor Robert Hill**

Executive Dean, Faculty of Sciences at the University of Adelaide.

BE  
**ENCOURAGED**  
AND  
**INSPIRED**  
IN SCIENCE  
EDUCATION

The only National Science Educators' Conference,  
for science teachers and school laboratory technicians

[WWW.CONASTA.EDU.AU](http://WWW.CONASTA.EDU.AU)

# SASTA 2014 Study Guides

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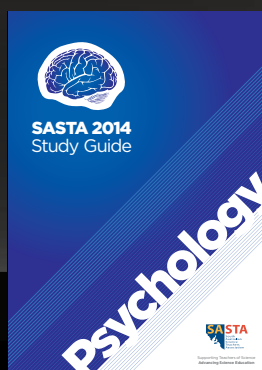
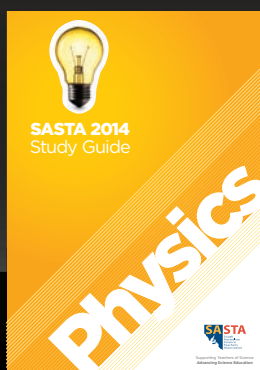
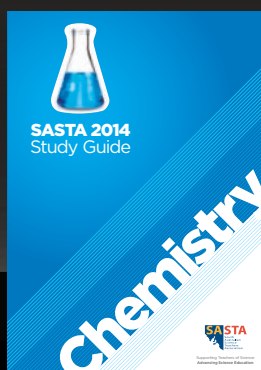
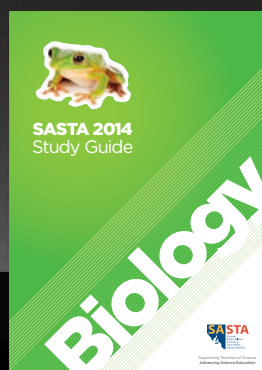
Copies of some past editions of the SASTA Study Guides, including exam answers, are available for \$15.00

SASTA study guides (approx. 200 pages) are the complete resource for students preparing for Year 12 SACE Board of SA exams.

These guides include questions with worked solutions covering each topic in the Subject Outline and address all sections of the exam.

Please fax school purchase order to 8354 0008 or order online at [www.sasta.asn.au](http://www.sasta.asn.au)

Inquiries concerning resources can be answered by the SASTA office by telephoning 8354 0006 or email [office@sasta.asn.au](mailto:office@sasta.asn.au)



Supporting Teachers of Science  
Advancing Science Education

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