

# February 2017 SASTA

Newsletter of the South Australian Science Teachers Association Inc.



## Conferences/Events

### Teachers New to SACE Stage 1 & 2 Workshops

- Stage 2 Biology – 20 February
- Stage 2 Chemistry – 20 February
- Stage 2 Physics – 24 February
- Stage 1 & 2 Psychology – 24 February
- Stage 1 & 2 Nutrition – 3 March

Term 1 Professional learning workshops and conferences are now published. Please see page 5 for details or visit [www.sasta.asn.au](http://www.sasta.asn.au)

### Oliphant Science Awards

Details concerning the 2017 Oliphant Science Awards Competition are now available. Please see page 11 for details or visit [www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au)

### Annual Conference & Expo

SASTA's next Annual Conference & Expo will be held on Thursday 27 & Friday 28 April 2017 at Brighton Secondary School. Further details available page 4 or visit [www.sasta.asn.au](http://www.sasta.asn.au).



## 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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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

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Member of Australian Science Teachers Association (ASTA)

Supporting teachers of science • Advancing science education





## 2017 SASTA Committee

### Patron of the South Australian Science Teachers Association

**Dr Leanna Read FTSE, FAICD, Chief Scientist for SA**

#### SASTA Board

Karen Palumbo (President)  
Mark Divito (Vice President)  
John Glistak (Treasurer)  
Bruce Baker  
Vanessa Fay  
Yvonne Zeegers  
Peter Turnbull

#### Board Representatives

#### PD & Conferences

Mark Divito

#### Journal

John Glistak

#### Oliphant Science Awards

Peter Turnbull

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Mark Divito  
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Bob Morton AM  
Ronne Page  
Mike Roach  
Lester Russell  
Peter Schodde OAM  
Jack Smith  
Ray Smith  
Alby Whitelaw  
Dr Jane Wright

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## Newsletter copy deadlines 2017

(Advertising deadlines one week earlier)

Edition	Deadline
February	11 January
May	11 April
August	11 July
November	10 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



Welcome to the new school year! I hope everyone had a very good summer break, and that we are all ready for a wonderful start to the term. With the New Year SASTA will continue to work toward our goals outlined in SASTA's Strategic Plan including developing and increase access to high quality, contemporary products and services, build and

maintain a highly credible professional association, financial stability and effective governance. If you would like to know more about SASTA's Strategic Plan you can download a version from the SASTA website under the About Us tab.

With the New Year comes new membership opportunities. I hope everyone has renewed their SASTA membership subscriptions to ensure you will be eligible for full member benefits. Some of these benefits include discounted rates to up and coming SASTA professional development opportunities including the 2017 Annual Conference as well as Teachers New to SACE Stage 2 Chemistry, Biology and Psychology workshops.

As a member organisation SASTA is continually looking to improve its range and quality of services to members. Following member feedback, SASTA is currently investigating how we can improve services to country members, particularly those in isolated schools and regions.

Furthermore, SASTA offers a comprehensive range of science resources for teachers and students. These resources including Study Guides, Workbooks and Text Books. Resources are distributed through schools, book shops and the SASTA Office.

To support teachers with the introduction of the SACE Stage 1 Australian Curriculum this year SASTA has produced brand new resources for Biology, Chemistry and Physics. They contain a range of new original questions for students with worked solutions. All questions are mapped to the new performance standards for Stage 1 and there is topic test for each chapter. The SASTA resources cover all topics outlined in the new SACE curriculum in an easy to read format printed in colour and rich with illustrations and diagrams to enhance learning.

Wishing you all a great start to 2017.

**Karen Palumbo**

## 2017 SASTA Awards

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 nomination forms.

Start thinking now. Alert your Principal. There are a number of Awards for SASTA members.

### SASTA Medal

SASTA offers its members and award for excellent contribution to science education or teaching or both. The SASTA Medal is awarded to an individual who has made a significant contribution to SASTA and has been active in science education.

### Credit Union SA/SASTA Outstanding Teacher Award for junior primary, primary, middle years and senior years' teachers

The Outstanding Teacher Awards recognise teachers' contributions to the education of students in science.

### Helen Castle Memorial Scholarship

This Scholarship is in memory of Helen Castle, a dedicated and enthusiastic science teacher who tragically died during the Eyre Peninsula bush fires in 2005. The Scholarship is designed to assist country science teachers attend the SASTA Annual Conference and gain professional development to assist themselves and other country teachers to maintain a high standard of science teaching in country areas. **Two (2) scholarships of \$500 will be awarded to enable country based science teachers to attend the SASTA Annual Conference on Thursday 27 & Friday 28 April 2017.**

Nomination forms are available at [www.sasta.asn.au](http://www.sasta.asn.au).

Nominations close Friday 3 March 2017 at 4.00 pm

## National Science Week 12-20 August 2017

### School theme - FUTURE EARTH

'Future Earth', launched in 2015, is a major 10-year international initiative to advance global sustainability science. Applications for school grants will open 27 February 2017 and close 24 April 2017.

#### In brief:

- Apply for up to \$500.
- Available to ALL Australian schools (preschool to senior secondary).
- Conduct any science activity or event during National Science Week.
- Involve your class to your whole school and even your neighboring school/s and wider community.

- Focus on the impact science, engineering, technology and mathematics has on our lives, our economy, our society and our world.
- The application process is all online.

*The Australian Science Teachers Association (ASTA), with funding assistance from the Australian Government, provides grants for school-initiated National Science Week activities.*

Website <http://asta.edu.au/programs/natscienceweek>

Enquiries about the schools grants can be sent to the SA Schools Grant Representative, Priscilla Martinus at [fullerst@adam.com.au](mailto:fullerst@adam.com.au)

# SASTA Annual Conference & Expo

## Theme: Human Endeavours

**27-28 April 2016, Brighton Secondary School**

The South Australian Science Teachers Association (SASTA) is delighted to announce details of the forthcoming Annual Conference program. Over 200 R-12 teachers, laboratory officers and tertiary educators are expected to attend.

## Distinguished keynote and cutting edge presenters

The SASTA Annual Conference has a reputation for outstanding Keynote and Cutting Edge Presenters.

In 2017 we are proud to have confirmed as presenters:

- Associate Professor Debra Panizzon, University of South Australia
- Dr Leanna Read, Chief Scientist for South Australia
- Dr Michelle Wirthensohn, Horticulture Innovation Australia Senior Research Fellow, The University of Adelaide
- Dr Tara Pukala, Senior Lecturer Chemistry, The University of Adelaide
- Professor Allan Cooper, Director - Australian Centre for Ancient DNA, The University of Adelaide

## High-quality professional learning program in outstanding facilities

The Annual Conference workshop program will be held in the new, state of the art Bright Learning Centre and Performing Arts Centre - Theatre and Concert Hall.

Approximately 50 workshops will be presented which will include primary, middle-school, secondary and lab tech topics and seminars.

## Social and networking events

Two much loved Annual Conference traditions are the Annual Conference Dinner held at the Morphettville Junction on Thursday 27 April and the Happy Hours at the conclusion of each day's program.

**REGISTRATIONS NOW OPEN at**  
**[www.sasta.asn.au](http://www.sasta.asn.au)**



## Term 1 2017 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 Secondary/Middle school teachers:

#### Laboratory induction workshop

**Date: Monday 13 February, 9.00am-3.00pm**

**Venue: Cabra Dominican College, 225 Cross Rd, Cumberland Park.**

This workshop is designed to address the needs of teachers who are new to teaching in a science laboratory. Instruction will include; safety guidelines, including how to complete risk assessment, equipment use and behaviour management. Teachers will be guided through typical laboratory lesson scenarios and have the opportunity to plan and complete a practical investigation.

The workshop will be held in a school laboratory setting and led by both an expert teacher and lab **technician**.

**Who should attend: Secondary/Middle school teachers.**

#### STEM in the middle years – practical investigations that develop STEM skills and dispositions

**Date: Monday 3 April, 9.00am-3.00pm**

**Venue: Education Development Centre, Hindmarsh**

This workshop explores curriculum resources that integrate Science, Technology, Engineering and Mathematics (STEM) and are designed to support teachers in implementing learning experiences that are linked to the Australian Curriculum – Science.

Participants will engage in hands-on inquiry based activities that will inform their understanding of investigation types and how to employ them in their teaching program.

The workshop will provide teachers with links to explicit curriculum materials, investigations and contemporary pedagogical strategies that will enable them to successfully plan and deliver integrated science investigations with a STEM focus.

**Who should attend: Secondary/Middle school teachers**

### For Primary Years Teachers:

#### Science in the Early Years

**Date: Thursday 16 March, 9.00am-3.00pm**

**Venue: Education Development Centre, Hindmarsh**

Science is a broad and exciting subject especially for young children, who are naturally curious and have questioning minds. In this workshop teachers will explore the importance of preparing the classroom environment for science exploration, focusing children's observations, and providing time to talk about what was done and seen.

Teachers will be involved in simple investigations that will allow children to question, explore, investigate, make meaning, and construct explanations and organize knowledge by manipulating materials.

**Who should attend: Primary Years teachers**

#### Investigations in Primary Science – STEM focus

**Date: Friday 3 March, 9.00am-3.00pm**

**Venue: Thebarton Community Centre, Torrensville**

Children need opportunities to develop practical and inquiry skills in order to engage with the world in a scientific way and to make sense of what they are learning.

This workshop will look at science investigations in action with a focus on integrating STEM skills and dispositions. Teachers will be led through the elements of a scientific investigation, develop an understanding of how to use an investigation planner and have access to a range of ready to use resources.

The workshop will provide teachers with explicit curriculum materials, investigations and contemporary pedagogical strategies to enable them to successfully incorporate the Science Inquiry Skills into their lessons.

### Time

**All Workshops run from 9.00am–3.00pm**

### Registration Fees

- **Personal Members \$135**
- **Corporate Members \$175**
- **Non-members \$215**

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

**Morning tea and lunch will be provided**

## Teachers New to SACE Stage 2 Biology

Monday 20 February 2017

- 9:00 am **Registration**
- 9:15 am **Introduction**
- The current SACE course
  - SACE Board documents
  - Designing a Teaching Program
  - Alternative Programs
  - Australian Curriculum 2018 (Topics and Assessment, SU,SIS,SHE)
- 10:30 am **Morning Tea**
- 10:50 am **Theory Lessons**
- Teaching biology
  - Analysing worksheets, class assignments, homework assignments using assessment design criteria and performance standards
  - AV and multimedia materials in Senior Biology
- Practical Lessons**
- Types of Practical
  - Assessing practical work
  - Test questions relating to practicals
- 12:15 pm **Assessment Plans**
- Designing an assessment plan
  - Sample assessment plans
- 12:30 pm **Lunch**
- 1:00 pm **Moderation**
- SACE moderation
- 1:15 pm **Preparing tests and issues investigations**
- Analysing test questions
  - Preparing answers
- 2:00 pm **Afternoon Tea**
- 2:15 pm **Marking**
- Marking tests and issues investigations
  - Marking extended response questions
  - Verification
- 3:15 pm **Questions & Resources**
- Where do you get help?
  - SACE Board and SASTA – how can they help science teachers?
- 3:30 pm **Close**

## Teachers New to SACE Stage 2 Chemistry

Monday 20 February 2017

- 9:00 am **Registration**
- 9:15 am **General Introduction**
- Subject outline walk through**
- Investigation skills
  - Content
  - Assessment
  - Performance Standards
- 9:30 am **Assessment Operations**
- Quality assurance cycle
  - Key dates
  - Assessment Groups
- 9:45 am **Assessment and SACE Board Policies**
- Moderation and external assessment
  - Supervision and verification of students' work
  - Assessment deadlines and submission dates
  - Special provisions
- 10:45 am **Morning Tea**
- 11:00 am **Learning and Assessment Program (LAP)**
- Structural elements
  - Exemplars
  - Addendum
  - Variations
- 11:30 am **Teaching Programs**
- Organization
  - Connections
- 12:15 pm **Lunch**
- 12.45 pm **Group Work**
- Practical program Formative/Summative
  - Example of a Skills & Applications Task (i.e. Test)
  - Example of an Investigation (i.e. Summative Prac.)
- 2.00 pm **Afternoon Tea**
- 2.15 pm **The Moderation Process**
- 3.00 pm **Resources available to support you (i.e. Texts, Study Guide)**
- Further Questions and Discussion
- 3:30 pm **Close**

**All workshops will be held at the Education Development Centre, Milner Street Hindmarsh.**

**Register online at [www.sasta.asn.au](http://www.sasta.asn.au)**

**Cost:** Personal Members/Student Members \$135  
Corporate Members \$175  
Non-Members \$215

## Teachers New to SACE Stage 2 Physics

Friday 24 February 2017

9:00 am **Registration and Welcome**

9:15 am **General Introduction to SACE Physics requirements**

### Subject outline walk through

- Investigation skills
- Content
- Assessment
- Performance Standards

### Assessment Operations

- Quality assurance cycle
- Key dates
- Assessment Groups

### Assessment and SACE Board Policies

- Supervision and verification of students' work
- Assessment deadlines and submission dates
- Special Provisions

### Getting help

10:45 am **Morning Tea**

11:00 am **Programming**

- What to include
- When to do it
  - How much time at the end for revision?
  - How much formative work before students do summative tasks?
  - What are the peak times of the year for assessment tasks?
  - How much time do you have to prepare/mark/ provide feedback?
- Table discussion (10 minutes)

### Resources

- Textbooks
- Notes
- SASTA Study Guide
- Simulations (eg PHET, Scootle)
- Websites
- Time to explore resources at lunch

### Challenging concepts

- What misconceptions do students bring from earlier years?
  - How can these be identified and addressed?
- What concepts do students find most challenging in the course?
  - What is the evidence of this?
  - How can these concepts be taught?
- Table discussion  
Suggest concepts to go through in the Questions section at the end of the day.

12:15 pm **Lunch**

1:00 pm **SATs**

- Test / exam process skills (eg describe, explain, derive, calculate)
  - What is required for each of these types of questions?
  - What do students find the most challenging?
- Extended responses
  - Planning
  - Writing
- Appropriate & inappropriate tasks
- Marking tests / exams
- Performance standards; how to use differences between the grade bands

1:45 pm **Folio**

- Practical Investigations
  - Appropriate tasks
  - Inappropriate tasks
- Practical / Experimental skills
  - Design
  - Manipulation
  - Recording / displaying data
  - Analysis
  - Evaluation
- Marking Practical Investigations
- Issues Investigation
  - Appropriate & Inappropriate tasks
  - What is an issue?
  - Word count and how to adhere to it
  - Presentation formats
- Performance standards; how to use differences between the grade bands

2:45 pm **Moderation**

- What happens there
- How to best prepare for moderation

3:00 pm **Questions**

(Participants are requested bring a copy of the 2015 SACE Board of SA SACE Stage 2 Physics Exam and a Learning and assessment plan (LAP).

3:30 pm **Close**

## Teachers New to SACE Stage 1 & 2 Psychology

Friday 24 February 2017

- 9:00 am **Registration**
- 9:15 am **Overview**
- 9:30 am **Levels of Explanation**
- 10:30 am **Morning Tea**
- 11:00 am **Assessment Type 2: Skills and Applications Tasks**  
**Task design, examples and performance standards**
- 12:30 pm **Lunch**
- 1:00 pm **Stage 2 SACE Board Exam**
- How the exam is constructed
  - Marks scheme for the exam
- 2:00 pm **Afternoon Tea**
- 2:15 pm **Assessment Type 1: Investigations Folio**
- How to conduct a research program
  - Guiding students in writing research proposals, drafts and reports
  - Stage 1 Issues Investigation
- 3:15 pm **Question time**
- 3:30 pm **Close**

## Teachers New to SACE Stage 1 & 2 Nutrition

Friday 3 March 2017

*Provisional program - to be confirmed*

- 9:00 am **Registration and Welcome**
- 9:15 am **General Introduction to SACE Nutrition requirements**
- Subject outline walk through**
- Investigation skills
  - Content
  - Assessment
  - Performance Standards
- Assessment Operations**
- Quality assurance cycle
  - Key dates
  - Assessment Groups
- Assessment and SACE Board Policies**
- Supervision and verification of students' work
  - Assessment deadlines and submission dates
  - Special Provisions
- Getting help**
- 10:45 am **Morning Tea**
- 11:00 am **Central Moderation of School – based assessment at Stage 2, which includes**
- Assessment Type 1: Investigations Folio (30%)
  - Assessment Type 2: Skills & Applications Tasks (40%)
- Assessment Type 3: Stage 2 SACE Board Exam**
- How the exam is constructed
  - 2014 Exam feedback: the Chief Assessor's report
- Assessment Panels**
- Applying for marking and moderation panels
- 12:00 pm **Lunch**
- 12:45 pm **Approaches to Learning & Assessment Task Design**
- Teaching nutrition: It doesn't have to be just Classroom based!
  - Designing an Assessment Plan, and filling in Addendums
  - Designing a Practical program: Types of practicals & Assessing practical work
- 2:00 pm **Administration** at the school level – grading, reporting, watching for plagiarism
- 2:15 pm **Afternoon Tea**
- 2:30 pm **Here's How I Do it:** Attendees – come prepared with at least ONE good idea to share and discuss, and any Q & A. A Feedback Sheet to finish the day off (Thank You).
- 3:30 pm **Close**

## Notice of Annual General Meeting

Notice is given that the 2017 Annual General Meeting of members of The South Australian Science Teachers Association Incorporated will be held at Brighton Secondary School, BPAC Concert Hall, 305 Brighton Road, North Brighton on Friday 28 April, commencing at 8:50 am for the purpose of transacting the items of business below.

### Agenda

1. Welcome and Apologies
2. Minutes of the 2016 AGM
  - a. Acceptance
  - b. Business Arising
3. President's Report
4. Treasurer's Report
5. Executive Officer's Report
6. Election of Board Members
7. General Business
  - a. Membership Fees
  - b. Appointment of Auditor
8. Any Other Business

## Call for nominations – 2017

South Australian Science Teachers Association

ABN 22 938 317 192

**Closing date: 5:00 pm 31 March 2017**

### Background

#### 1. Call for Nominations

All members of SASTA are hereby notified of a call for nominations for three (3) positions on the Board.

#### 2. Composition of the Board and terms of office

The Board consists of up to nine elected members who shall hold office for a term of three (3) years. Continuous elected membership shall not exceed nine (9) years.

### Responsibilities of Board Members

The Board governs SASTA and has overall responsibility for determining the strategic plan and priorities, monitoring implementation and developing a resource base to support the organisation's activities. It is also responsible for the financial viability of SASTA and ensuring compliance with statutory requirements applicable to an association. All Board members are required to act in what the Board considers are the best interests of the organisation, being the interests of the membership as a whole.

Nominees should be aware that there are at least six Board meetings each year for the purposes of corporate governance of the organisation. There is an emphasis on policy and, specifically, corporate governance. The Board is not involved in the day to day running of the association's business.

### Position Description & Nomination Form

A Board Member position description and nomination form is available on the SASTA website at [www.sasta.asn.au](http://www.sasta.asn.au) in the 'Members Area'.

\*NB Only Personal Members are entitled to vote and hold office in the Association. Each Corporate Member shall be entitled to one vote by a nominated delegate acceptable to the Board in elections of the Association but no such delegate shall be entitled to hold office through Corporate Membership nor may Corporate Members nominate others for office.

### Further information

Members interested in nominating for the Board are welcome to contact Greg Cole, Executive Officer, on 8354 0006 if they require further information.

# Teacher Professional Development



## Teacher Professional Development Days

Learn teaching strategies for the nuclear science components of the new Australian Curriculum for Year 9 Science and Senior Physics. Hear from prominent Australian scientists, learn about Australia's capabilities in nuclear science, participate in workshops and receive new educational resources. NSW teachers receive BOSTES-registered hours at the proficient level for our programs.

Register free at [www.ansto.gov.au/education](http://www.ansto.gov.au/education)

<b>Queensland</b>	Monday 20 March, 2017, 9-3pm	<b>Queensland Museum</b> Corner of Grey and Melbourne Streets, South Brisbane, QLD 4101
<b>Western Australia</b>	Friday 31 March, 2017, 9-3pm	<b>Scitech</b> , City West Centre, Cnr Railway and Sutherland Sts, West Perth, WA 6005
<b>New South Wales</b>	Friday 5 May, 2017, 9-3pm (Primary teachers) Friday 16 June, 2017, 9-3pm (High school teachers) Friday 8 December, 2017, 9-3pm (High school teachers)	<b>ANSTO</b> Lucas Heights Campus, NSW 2234
<b>South Australia</b>	Thursday 8 June, 2017, 9am-3pm (pre-service teachers) Friday June 9, 2017, 9am-3pm (in-service teachers)	<b>The Science Exchange</b> 55 Exchange Pl, Adelaide, SA 5000
<b>Victoria</b>	Tuesday 20 June, 2017, 9-3pm Thursday 16 November, 2017, 9-3pm	<b>Australian Synchrotron</b> 800 Blackburn Rd, Clayton, VIC 3168

## Planning and reflecting on ANSTO tours and videoconferences

NSW teachers can receive BOSTES-registered hours at the proficient level for organising an ANSTO tour or videoconference and integrating the session into their teaching program. More information about how to apply for these hours is available on our website: [www.ansto.gov.au/education](http://www.ansto.gov.au/education)

Thank you to our partners for hosting our teacher professional development events in Victoria, Queensland, Western Australia and South Australia.



## Oliphant Science Awards

### BHP Billiton Awards

**Congratulations to Sarah Finney from Stirling East Primary School who is South Australia's teacher finalist in the BHP Billiton Teacher Awards.**



Winning entries from 2016 Scientific Inquiry and Models & Inventions categories were forwarded to the BHP Billiton Science & Engineering Awards national competition.

Anyone planning a scientific inquiry, model or invention entry should 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 2017 theme 'Future Earth' could be used in Computer Programming & Robotics, Scientific Inquiry, Games, Models & Inventions or Multimedia, and there are topics with this focus in Science Writing, Posters and Photography.

### Rowe Scientific New and Country Schools Incentives

#### Rowe Scientific Support for new schools and country school's participation:

**New schools** who have not participated in the past five years, have the opportunity to receive up to \$200.00 in entry fees to enter the Oliphant Science Awards by applying for the New Schools Incentive (*Incentive is deducted from registrations invoice only – no cash payments*).

**Country schools** can apply for the Country Schools Incentive, in which they will receive reimbursement for couriers/postage of entries to and from the competition of up to \$200.00 (*with copies of original receipts*).

**Applications close 9 June 2017**

**Apply now:** Please fill out the form online at [www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au)

### Rowe Country Schools Camp Project 2017

Thanks to Rowe Scientific & SASTA, this year we are inviting remote/country schools to apply for a rare opportunity to experience the Oliphant Science Awards as a class!

Rowe Scientific will help fund camp accommodation, meals and mini excursions for school classes (*number of schools/ classes subject to winning applications*) to stay in Adelaide on Friday 25 August – Sunday 27 August 2017 for The Oliphant Science Awards!

**Applications will close 5 May 2017**

**Further details and application forms will be available on the Oliphant Science Awards Website ([www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au)) in early 2017!**



## Oliphant Science Awards

*South Australia's largest student science competition*

### Great opportunities for learning through science

#### 2017 OLIPHANT KEY DATES

**Monday 20 March** - New Coordinators meeting, 4:15pm at Education Development Centre.

**Thursday 22 June** – School Coordinator Registration and Project Registrations due.

**Friday 23 June** – Judges Registrations due.

**Monday 24 to Friday 28 July** – Delivery of Science Writing, Scientific Inquiry, Games and Multimedia entries to SASTA.

**Saturday 12 August** – Computer Programming and Robotics judging interviews

**Friday 25 August** – Crystal Investigations, Models & Inventions, Photography and Poster entries delivered between 9am – 5pm to Festival Functions.

**Saturday 26 August** – Crystal Investigations, Models & Inventions, Photography and Poster Judging Day.

**Sunday 27 August** – Open Day 12:00 noon – 4:00pm.

**Monday 29 August** – ALL Entries to be collected from Festival Functions.

**Friday 23 September** – Presentation Ceremony (Invitation Only event).

**All details are subject to change, please keep checking The Oliphant Science Awards Website ([www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au))**



#### 2017 CATEGORY TITLES

##### Photography

- The Art of Science
- Movement
- Scientific Measurement
- Uniquely Australian
- Scientific Transformations
- Biodiversity

##### Posters

- Big & Small in Astronomy
- Medical Imaging
- Radioactive Elements
- Evolving Electricity
- Identifying the Elements
- Friends or Foes

##### Science Writing

- Hot Science a Century Ago
- Chemistry is Like Cooking?
- Radioactive Waste
- Future Earth
- Trace Elements & Crops
- Responding to Environmental Change
- Year 11-12 Science Issues Investigation (YEAR 11-12 AGE LEVEL ONLY)

#### Get involved!

Find the Oliphant Science Award information at:  
[www.oliphantscienceawards.com.au](http://www.oliphantscienceawards.com.au)



# Science Resources Catalogue

## Biology Levels of Life

Brian LeCornu and Tony Diercks

### Biology Levels of Life – Teacher Resource Pack

**BILOL.TRP \$110.00**

Includes lesson notes and complete Workbook answers.

### Biology Levels of Life – Text Book

**BILOL.S2.TB \$62.00**

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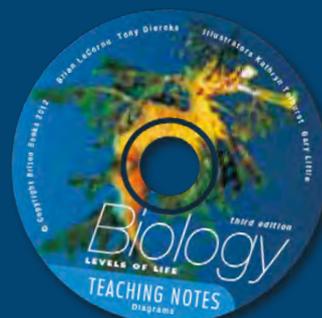
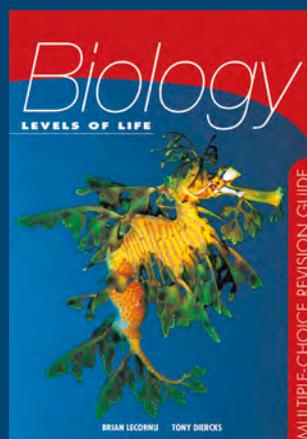
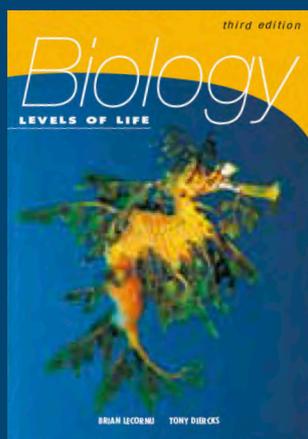
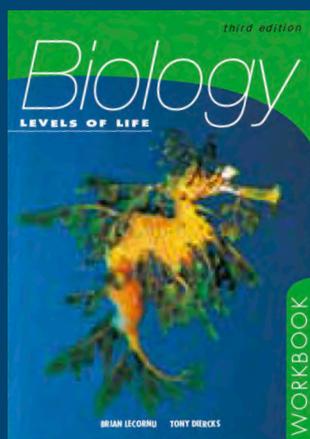
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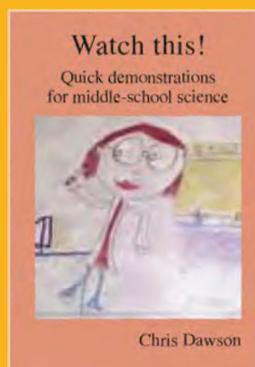
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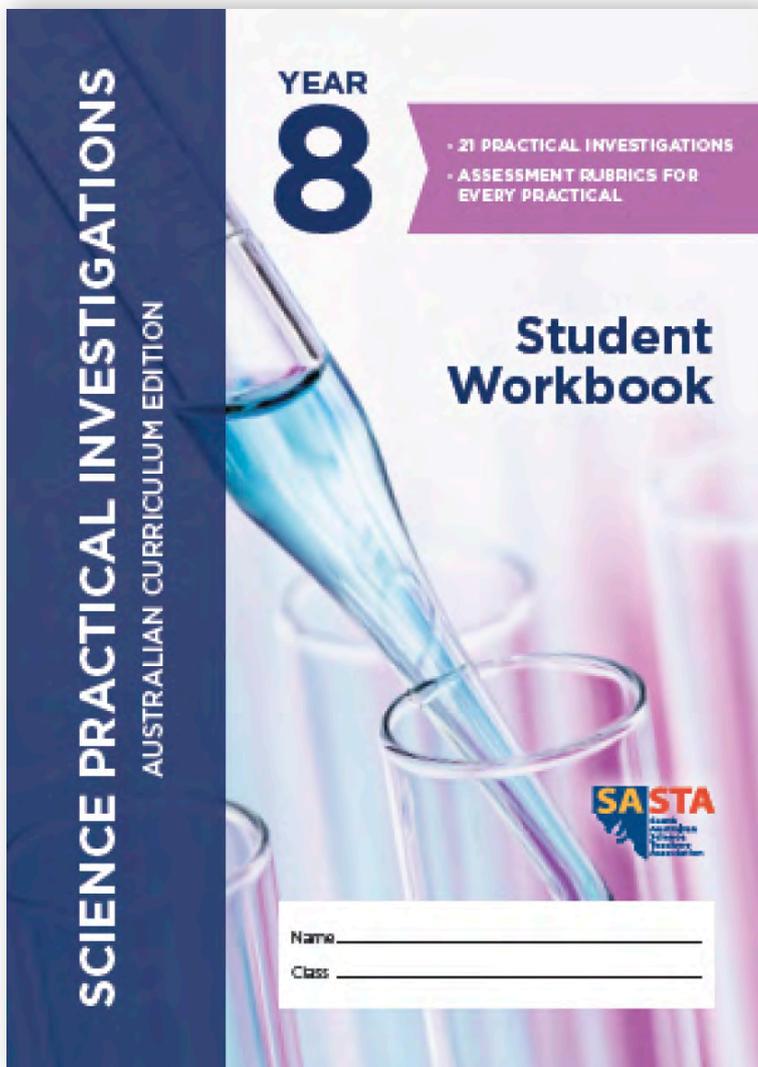
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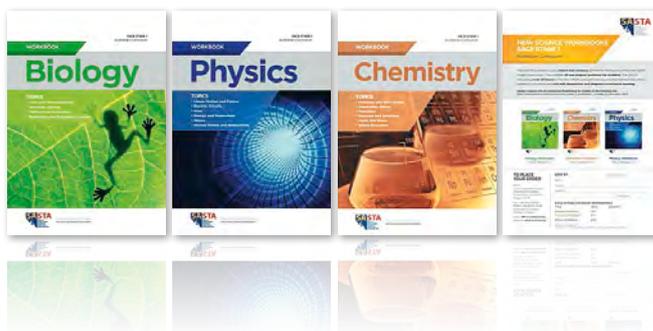
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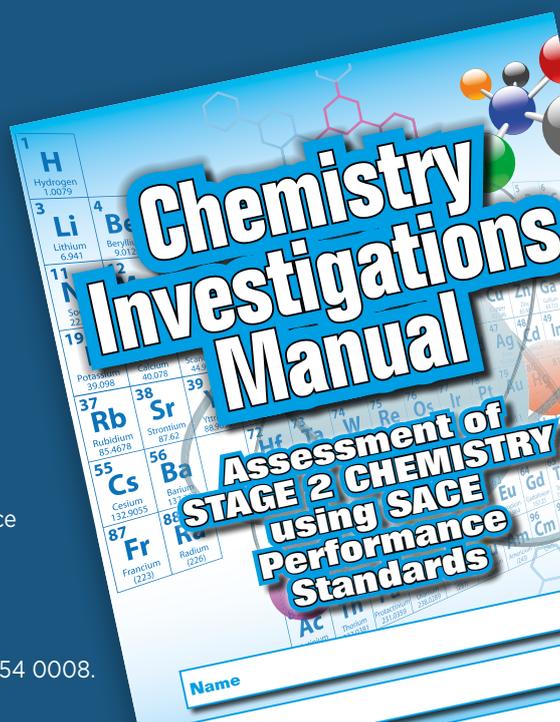
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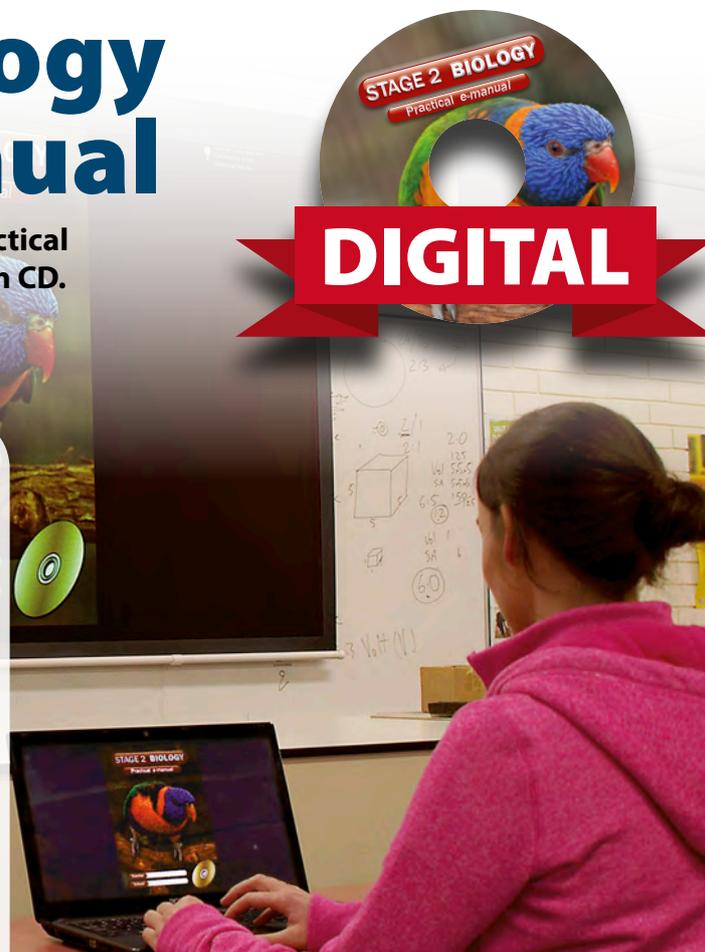
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