# SASTA Newsletter



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## **Upcoming Events**

#### Stage 2 Marking & Moderation Workshops

- Chemistry Friday 21 August 2020
- Psychology Monday 24 August 2020
- Biology Friday 4 September 2020
- Physics Friday 11 September 2020 See page 4.

#### **Exam Prep Seminars**

- Biology Saturday 29 August 2020
- Psychology & Physics Saturday 5 September 2020
- Chemistry Saturday 12 September 2020 See page 8.

#### **Early Career Teachers Conference**

Monday 28 September 2020 Program Available. See page 5.

#### Planning for Stage 1 Psychology 2021

Monday 26 October 2020 See page 4.

#### **STEM Conference**

Friday 27 November 2020 Call for Workshops now open. See page 5.



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Association

Science Teachers

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Print Post Publication No. PP 100004158



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### Patron of the South Australian Science Teachers Association

#### **Professor Caroline McMillen, Chief Scientist for SA**

#### **SASTA Board**

President: Jane Wright Vice President: Peter Beveridge Treasurer: Peter Turnbull Katrina Elliott Katie Gloede Marianne Nicholas Dina Phan Anthea Ponte Anita Trenwith

#### **Board Representatives**

#### Membership & Awards

Anthea Ponte (Convenor) Marianne Nicholas Jane Wright

#### **Oliphant Science Awards**

Peter Turnbull (Convenor) Anita Trenwith

#### **PD & Conferences**

Jane Wright (Convenor) Katrina Elliott Marianne Nicholas

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The cover image of Carpenter ants (Camponotus sp.) was taken by Bryson Klein, Kangaroo Island Community Education (Teacher: Rachel Pillar) as an entry in the 2019 Oliphant Science Awards Photography competition (Category: Cryptic Nature - The hidden world).

## Newsletter copy deadlines 2020

## (Advertising deadlines one week earlier)

Edition	Deadline
February	10 January
May	10 April
August	10 July
November	9 October

### Advertising

Advertising rates & booking form available online at www.sasta.asn.au

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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 alternatives 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**



As I write this President's Report, I reflect on the unexpected and fast paced events that have occurred since our last SASTA newsletter in February, when this President's Report was written by Vanessa Fay.

On 24 March, Vanessa Fay informed the Board that for personal reasons, she was stepping down as President and from the SASTA Board, effective immediately. I would like to take this opportunity to thank Vanessa for her many years of service to SASTA. Vanessa served on the Board initially from 2009 – 2013 and again from 2015 – 2020. During this second term, she was elected President and filled this role admirably for the last 3 years. Her other roles included ASTA Councillor, Educators SA Rep and Convenor of SASTA's Membership Committee. Vanessa was a strong supporter of SASTA's professional learning offerings, as she presented workshops at both the SASTA Annual Conference and the STEM Conference and was an active member of the Professional Development Reference Group.

Following Vanessa's resignation, the next day the Board elected me to be President. In my long association with SASTA, I have had a number of roles including President, Treasurer, Convenor of the Professional Development Reference Group, Convenor of the both the Annual Conference and STEM Conference and ASTA Councillor. For the last 2 years I have served as Vice-President.

It was with great regret, but for obvious reasons, that we made the decision to cancel our Annual Conference to be held on 23 and 24 April. All things being well, we look forward to having virtually the same program next year at a similar time. COVID-19 also made it necessary to postpone CONASTA 69 which was to be held in Canberra in July and CONASTA 70 planned for July 2021 at Adelaide University. Hopefully CONASTA 69 will be held in Canberra in July 2021 and we will be able to stage CONASTA in Adelaide in July 2022. At the 2020 SASTA Annual General Meeting held via Zoom on 24 April, it was pleasing to have a keen group of 29 people in attendance. The straightforward meeting that took only 30 minutes to complete was an opportunity to welcome new Board members Dina Phan, Katie Gloede and Katrina Elliott. At this time, I would also like to thank Yvonne Zeegers, for her invaluable contribution to SASTA in her role as a Board member over the last 3 years.

I know that teaching became much more complex and stressful as COVID-19 swept through our community. Initially, teachers found the task of teaching students online and in the classroom at the same time to be very challenging, but with diligence, commitment and professionalism our teachers successfully navigated this daunting new normal. Thankfully, just after the beginning of Term 2, the successful containment of the pandemic in South Australia meant that, in general, teaching returned to a more typical scenario for most students and teachers. Nevertheless, I am sure that all of you will be enjoying the well-deserved respite brought by the mid-year school holidays.

Although, in accordance with Government advice, the SASTA office closed for much of Term 2, it has now reopened and we continue to provide our members and other science teachers with the full range of services and support. Throughout this time, the SASTA Board and its committees like the Membership and Awards Reference Group, the Oliphant Science Awards Committee and the Professional Development Reference Group have remained very active by holding Zoom meetings. In addition, we have continued to sell our resources such as the **2020 Study Guides**, **Student Workbooks, text books**, as well as our new **Research Project Workbook & Guide**.

**Jane Wright** 

## **Term 3 Professional Learning**

## Stage 2 Marking and Moderation Workshops

An opportunity for teachers to discuss assessment and the application of the performance standards to samples of work, as well as to have invaluable professional input with their own student samples. An opportunity to readjust marking standards prior to final moderation.

Tasks that will be discussed include the deconstruct and design task, science as a human endeavour investigation and marking of SATs, in particular short answer and extended response questions, including SHE responses.

## More information and register at www.sasta.asn.au/professional\_learning

**REGISTRATION FEES:** Personal member \$145, Corporate member (SA School) \$185, Student member \$50, Non-member \$225

### Chemistry

Friday 21 August 2020, 9.00 am - 3.00 pm

Psychology

Monday 24 August 2020, 9.00 am - 3.00 pm

#### **Biology**

Friday 4 September 2020, 9.00 am - 3.00 pm

#### **Physics**

Friday 11 September 2020, 9.00 am - 3.00 pm

## Planning for Stage 1 Psychology 2021

Monday 26 October 2020, 9.00 am - 3.00 pm

This workshop will focus on the new course and provide an overview of content - SU, SIS, SHE, planning for learning and assessment, task design, conversation groups / brainstorming and networking. Attendees will also receive a resource 'starter pack'.

# 5 great reasons to bank with Credit Union SA...



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We support 48 different education associations... including SASTA!

Credit Union SA continues to be here to support South Australia's education community. Even though you won't be seeing us at events for a little while, our sponsorship and support behind the scenes will not waiver. If you need to discuss your finances, we're here for you! Please give us a call on 8202 7777 from 8am-8pm weekdays or 8am-2pm Saturdays. **creditunionsa.com.au/supporting-education** 



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## Early Career Teachers Conference 28 September 2020 | Immanuel College

**Building Capacity, Sharing Experiences** 

Program now available!

## **Program Available**

The Early Career Teachers Conference is aimed at teachers in their first five years of teaching science/ STEM or those who are new to a specialist science or STEM role.

This is an opportunity for early career and preservice teachers to engage in interactive learning activities that will deepen your understanding of the science content and will give you the skills and resources to engage your students in learning. The program includes specialised hands-on workshops for both primary and secondary teachers.

Monday 28 September 2020, 8.30 am – 4.30 pm Immanuel College, Morphett Road, Novar Gardens

Personal members	\$145
Student members	\$50
Corporate members	\$185
Non-members	\$225
Student non-members	\$90

Go to www.sasta.asn.au/professional\_learning



## **Call for workshops**

## How does STEM help us battle threats to our world?

Many of the problems we face in our world today will not be solved by today's adults, but by the students in our classrooms. Whether it is inventing a better way to distribute clean water, repopulate endangered species, or traveling and colonizing Mars; our students will be the ones leading the way.

The 2020 STEM conference will bring together classroom teachers, leaders in education and businesses who are interested in sharing and exploring teaching methods, tools, resources, and related activities for implementing STEM education into our schools and communities.



How does STEM help us battle threats to our world?

The workshop presentations aim to cover a range of the content and pedagogies of the Australian Curriculum: Mathematics, Science, Design & Technology, and ICT.

Looking for ideas or topics that link directly to the theme of the conference? Or a focus for your presentation? See the website for some suggestions.

Workshop proposals must be submitted before 25 September.

For more information, go to www.sasta.asn.au/professional\_learning

## Credit Union SA / SASTA Outstanding Contribution to the Teaching of Science Award Winners

Congratulations to our 2020 Credit Union SA / SASTA Outstanding Contribution to the Teaching of Science Awards Winners!

- Primary Jade Tinney, Salisbury Park Primary School
- Middle years Samantha Brown, Mount Gambier High School
- Senior Secondary Catherine O'Halloran, Cabra Dominican College

Unfortunately we weren't able to present these awards at the Annual Conference this year, however we will be celebrating these achievements at the 2021 Annual Conference. We asked our recepients for a few thoughts on their teaching journey and what winning this award meant to them.



#### Jade Tinney, Salisbury Park Primary School

What does winning the award mean for you?

It's an honour to be the recipient of this award which has come very unexpectedly and at a time when our world has been so chaotic. This award has highlighted what

my school community has been expressing for many years and I am extremely humbled for being given the opportunity to participate in this category.

## What aspects of your teaching are you most proud of?

I am very proud of the innovative Science program I run for my students which centres around student engagement, inquiry based learning and is driven by student choice. I also facilitate an environmental club which empowers our students to make active changes within our community and our future sustainability. I also believe in giving back to the education community through the various networking opportunities provided by SASTA and through my Personal Learning Communities I have established.

## What advice would you give to a new science teacher?

My advice to any new teachers entering the field of Science is to be passionate, find a teaching buddy, continue to actively learn, but most importantly, have fun! Students learn more when you are having fun and learning with them, so don't be frightened to explore and get out of your comfort zone.



#### Samantha Brown, Mount Gambier High School

What does winning the award mean for you?

While I am not one for public acknowledgement it is lovely to be recognised for the work I love doing and is a passion of mine. I especially enjoy

working with middle school students as this is where we can build their interest /engagement in science and hopefully have upcoming scientists in the future. But not only that, have students see science as interesting and engaging, as some do it because they have to!

## What aspects of your teaching are you most proud of?

Being able to engage students in science even if it is not a key subject area of interest. Seeing students grow and develop over the year! Being able to bring students out of their shell and engage, especially ASD students. Having students come back to tell me they are now in science careers – one student told me they have become a science teacher after having me as a teacher! Very humbling! Building teacher confidence (mentoring other science teachers – new to the profession and more long term) to try new things such as demonstrations in their own classroom. Seeing students at the other end of their schooling in Year 11/12 and how they have grown and that they still remember our science classes from year 8 and/or 9.

## What advice would you give to a new science teacher?

While it can be a daunting experience as a new teacher with all these students looking to you as the teacher, science teaching is a highly rewarding

career as you can link science with the real world and get students to make connections with everyday activities and events. My advice is to be genuine, be prepared to try many things as some strategies/activities will work with some students and classes and not with others. Don't be afraid to fail – some lessons will just click and others you will walk out going why!!!! And you will go back to the drawing board. If students know you are invested in them, you will ultimately see better learning outcomes, and improved classroom dynamics as students see it as a safe, but comfortable space to learn and ask questions.



#### Catherine O'Halloran, Cabra Dominican College

What does winning the award mean for you?

Just being nominated made me feel proud, but to win is quite humbling. There are many great science teachers in SA and I've learnt a great

deal from them over the years. Teaching can be a little isolating – once you're in the classroom with your students, how do you know that what you're doing is best practice? Winning this award has been affirming.

## What aspects of your teaching are you most proud of?

Constantly questioning. Why am I teaching this in this way? Is this preparing my students for the future outside the classroom? Am I making Science relevant for my students? How am I ensuring girls (who are quite under-represented in the field of Science) can see themselves in science in the future? I am a reflective teacher who constantly tries to improve. I love it when a past student who is studying something in a STEM field tells me that I inspired them to follow this pathway.

## What advice would you give to a new science teacher?

Find a mentor. Someone who will push you to step outside your comfort zone and continually improve. Don't be afraid to try something new, and always reflect on what you are doing. What worked? What didn't work, and why? What are the outcomes for the students you are teaching? Learn and share what you have learnt. We teach our students the importance of continual learning, so we need to model this.

To find out more about SASTA awards go to www.sasta.asn.au/ about\_us/awards





**\$39.00** ISBN 9780975684535

## **RESEARCH PROJECT** WORKBOOK & GUIDE FOR SACE STAGE 2

This step-by-step workbook guides students through the three parts of the Research Project:

- the Folio
- the Research Outcome
- the Evaluation/Review.

Students are guided through activities and supported with information to enable them to:

- generate an idea
- develop a research question
- plan, conduct and analyse research, and then
- structure a research outcome and an evaluation or review with a focus on achievement of the performance standards (at a high level).

Along with activities and information, the workbook also includes sections that enable students to organise and store hard copy project material.

## **Preparing Students for Stage 2 Exams**





SASTA



## 2020 SASTA Study Guides

SASTA Study Guides are the complete resource for students preparing for Year 12 SACE exams. These guides include questions with worked solutions covering each topic in the subject outline and address all sections of the exam.

All guides include suggested solutions to the 2019 exams. The full range of new inclusions for each 2020 guide can be found on the SASTA website.

Limited copies now available! Make sure you order before they sell out. All SASTA Study Guides are \$29 each (plus postage if applicable) and are currently available for schools and individuals to purchase.

Please order online at sasta.asn.au/ resources/study\_guides\_stage\_2

## **Stage 2 Trial Exams**

These exams are newly written for 2020 and are now available to purchase. This vital resource will familiarise teachers and students with the SACE Stage 2 exam format. Teachers will be able to use the resource with students, as a standalone assessment tool or to develop exam preparation skills.

- Nutrition
- Psychology
- Biology
- Chemistry
- Physics

\$132.00 per exam.

As Biology, Nutrition & Psychology will have e-exams this year, a fillable PDF version of the trial exam has been produced.

Exams can only be ordered by emailing office@sasta.asn.au

## **Exam Prep Seminars**

These seminars help students to get maximum benefit from their study time. Attendees will:

- meet the Study Guide editorial teams
- discuss exam techniques and receive hints for answering questions
- discuss the Chief Examiner's comments for last year's exam paper
- discuss the extended response requirements.

Attendees should bring their Study Guides with them.

#### Biology

Saturday 29 August 2020 2.30–5.00 pm The University of Adelaide Napier Building

#### **Physics**

Saturday 5 September 2020 2.30–5.00 pm The University of Adelaide Napier Building

#### Psychology

Saturday 5 September 2020 2.30–5.00 pm The University of Adelaide Napier Building

#### Chemistry

Napier Building

Saturday 12 September 2020 2.30–5.00 pm The University of Adelaide

All seminars are \$20 per attendee. Teachers accompanying a class group are free.

Register at www.sasta.asn.au/student\_ activities/exam\_prep\_seminars

## **Engage with SASTA**

## Invitation to join the Membership & Awards Reference Group

Are you interested in contributing to the growth of SASTA's membership and awards programs? The Membership & Awards Reference Group (MARG) are looking for members to join this new committee!

The focus of the MARG is to review, evolve and advocate SASTA's membership and awards programs to the benefit of all members. All meetings will be held via Zoom to encourage and enable members from both regional and metro areas to participate. The next meeting will be held on Wednesday 29 July at 5pm.

To register your interest email tegan@sasta.asn.au

Our other Reference Groups include Professional Development and the Oliphant Science Awards. Find out more at www.sasta.asn.au/about\_us/ board\_and\_reference\_groups

## **Facebook Discussions**

Have you seen Fake News Friday on the SASTA Facebook page? Each fortnight we will be posting a new topic to explore how you can discuss antiscience messaging in your classroom. Keep an eye out for Talking Science Tuesday too with a new topic to discuss each fortnight! If you have any suggestions for topics please email tegan@sasta.asn.au

## **National Science Week**

We'd love to know what you have planned in your school for National Science Week this year! Send us an email so we can share what's happening with our science community.

You can check out our round up of National Science Week events from 2018 on the SASTA blog at www.sasta.asn.au/blog/2018/08

And keep an eye on our Facebook page for some National Science Week activity demonstrations!

## **Biology: Levels of Life**

**Brian LeCornu and Tony Diercks** 

Updated to match minor changes in the subject outline for 2020

#### Biology: Levels of Life – Australian Curriculum Edition Textbook (2020), \$62.40

This textbook provides detailed coverage of all the content (Science Understanding) of the SACE Stage 2 Biology subject. The new content is relevant, up-to-date and addresses Science as a Human Endeavour, with many examples throughout. It is attractively presented in full colour with numerous links to videos, animations, and useful resources. The textbook is divided into four topics, with each topic presented in chapters designed to make the material easy to follow, with study questions at the end of each chapter.

#### Biology: Levels of Life – Australian Curriculum Edition Workbook, \$23.95

Written specifically to complement the textbook, this workbook covers all Science Understandings of the Biology subject outline. It can be used in conjunction with the textbook or on its own as an aid for understanding and revision. By completing answers to the workbook questions, students will develop their knowledge and understanding of biological principles and concepts.

#### Biology: Levels of Life - Teaching Notes, \$120.00

Teachers will find the Teaching Notes invaluable in ensuring that all Science Understandings are covered for each of the four topics. The book is designed so that when open on the desk the pages lay flat and the notes can easily be seen at a glance. There are teaching tips throughout as well as additional information. Answers to questions in the Workbook will assist teachers in explaining concepts to students.







## SA'S LARGEST SCIENCE COMPETITION

SASTA

OLIPHANT

SCIENCE AWARDS

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## The entries are coming in and judging time is approaching!

## From late July

Science Writing, Scientific Inquiry and Multimedia entries are sent out to judges. These must be judged and returned to SASTA by Sunday 16 August.

### Saturday 8 August 9.00 am – 2.30 pm

Judging of Computer Programming, Apps and Robotics entries. Students must book an appointment online.

### **Thursday 20 August**

Crystal Investigation, Models and Inventions, Photography and Posters are to be delivered. Ensure identification labels are firmly and clearly attached to each entry. Coordinators will be provided with more information regarding delivery of projects closer to the date.

### Saturday 22 August 9.00 am – 1.30 pm

Judging of Crystal Investigation, Games, Models & Inventions, Photography and Posters.

### **Online Winners Gallery**

Keep an eye on our website and social media at the end of August for our online gallery of winning projects!

All winners will be notified directly and invited to the presentation ceremony to be held Friday 13 November.

## **Oliphant Science Award Blog Posts**

We have been working with previous and current participants along with a range of Oliphant Science Award supporters to put together a range of resources, links and ideas to support you through this year's competition. Check out the **Ideas for Teachers** and **Resources of Students** available on the website **www.oliphantscienceawards.com.au** 

### **Judges Needed - Games Category**

We are still looking for a couple of judges for our Games category on Saturday 22 August. If you're interested please email **becci@sasta.asn.au** 

## **New SASTA Board Members**

The SASTA AGM was held via Zoom on Friday 24 April. With three board positions available, Dina Phan, Katie Gloede & Katrina Elliott were each elected for a three year term.



Dina is currently a middle school teacher at Woodville High School and was previously a specialist science teacher at Swallowcliffe Primary School, so she brings a range of knowledge from both primary & secondary school backgrounds. Dina has

presented at several SASTA Conferences, facilitates the Northern Science PLC, runs extra-curricular programs for students, is more than happy to share materials and pedagogy that she develops / discovers in the classroom and is proactive member of the science teaching community.



Katie has over 15 years teaching experience nationally and internationally and has developed integrative curricula from reception to Year 12. Katie's current role as Manager of the Adelaide Football club STEMfooty program involves developing

the bespoke program with a link to the ACARA curriculum.

Katie is also a part-time lecturer for the School of Education at the University of South Australia whilst also studying a Doctor of Education, all with a focus on STEM integration. This valuable experience brings together both an industry and educational perspective to the SASTA board.



Katrina is currently the Manager, Science Curriculum 7-10 at the South Australian Department for Education. Katrina has been involved with SASTA over the past 30 years as a conference attendee, previous board member, Professional

Development Reference Group member, workshop presenter and contributed to science publications. This contribution has provided valuable support to SASTA and it's members and will continue to do so in her new role on the board.

The executive positions on the board were elected at the recent May board meeting with Dr Jane Wright continuing as President, Peter Beveridge elected as Vice President and Peter Turnbull as Treasurer.

We're looking forward to working with the new and continuing board members this year!

## LIVING SCIENCE: BIOLOGY FOR SACE STAGE 1 & 2

#### Dr Kathy Adams

These textbooks are designed for both teachers and students and were written to complement the current subject outlines. Teachers will find them an invaluable resource for planning and

developing student knowledge as it has comprehensive coverage of the science understandings of the Stage 1 or 2 course.

Students will have a resource to complement their lessons and with its additional features, such as the **"Did you know?"** and **"SHE Alert"** boxes, to develop a broader knowledge of Biology. **Review questions** throughout the book allow students can check their understanding. At the end of each chapter there are short answer questions so students can practise answering SHE-style questions in Skills and Applications Tasks.



Stage: 14\$49:00er • JStage: 2 \$54.00

## **Book Donation**

SASTA recently donated 1150 Biology books to One in Four Children Inc. to be sent to schools in the Nuba Mountains, Sudan.

#### One in Four Children Inc.

The war in the Nuba Mountains has continued for over 30 years. Between 2011 - 2015 more than 100 of 141 schools were burnt to the ground. As a result, many children are without education and 1 in 3 children are illiterate.

Our mission is to eradicate poverty by building a future where



all children can read and write through education and knowledge sharing. Every book we donate opens up a window of opportunity to a new kind of future, one in which every child can live a life of dignity.

Our key priorities right now are to deliver 1 million books to the region within 2 years and work with "existing" schools in the region to set up libraries and provide volunteer led community-based literacy programs. Plans are also being drafted for the construction of Hope Library which will be used as a command centre for providing teacher-based instruction among other things.

To read the full story visit the SASTA Blog at www.sasta.asn.au/about\_us/sasta\_blog

For more information about One in Four Children Inc. visit www.oneinfourchildren.org.

## Year 8 & 9 Student workbooks



## Available from sasta.asn.au