

# SASTA

September 2023

# Newsletter

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## Upcoming Events

### Early Career Teachers Conference

Friday 13 October 2023

See page 8 & 9 for more details.

### Leading in Science Workshop

Friday 17 November 2023

See page 8 for more details.

### STEM Conference - Call for Workshops open

Friday 1 December 2023

See page 4 for more details.

### Oliphant Science Awards - Presentation Ceremony

Friday 20 October 2023

Invitations have been sent to prize winners via their school coordinators.

### SASTA Annual Conference - Save the Date

15 & 16 April 2024

Call for workshops will open in Term 4.



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@SASTAInc



Follow us on Twitter  
@SAScience

### South Australian Science Teachers Association Inc.

Association member of the Australian Science Teachers Association (ASTA)

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Supporting Teachers of Science | Advancing Science Education

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## SASTA Board

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Liz Gehling

Paul Gavini

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**ASTA Board representative**

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**ASTA delegate**

Brent Banham

**Educators SA representative**

Claire Hughes

**National Youth Science**

**Forum representative**

Brent Banham

## Newsletter copy deadlines 2023

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

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## Honorary Life Members

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Tony Diercks

Elma Gurney

Bob Morton AM

Ronne Page

Mike Roach

Lester Russell

Peter Schodde OAM

Jack Smith

Ray Smith

Alby Whitelaw

Dr Jane Wright

## Board Renewal

The governance of the association is vital to SASTA's proper functioning. It is important that the association have a full complement of Board members to bring their expertise to decision making and strategic planning. The SASTA Board has recently had a number of members step down from their role, so the Board has undertaken to fill these vacancies.

SASTA Board members are normally elected at the Annual General Meeting each year, however SASTA's constitution allows the Board to appoint members to fill casual vacancies in the interim without election by members.

SASTA called for expressions of interest from members wanting to fill these casual vacancies.

The SASTA Executive met on 17th August to review the applications.

Claire Hughes, Liz Gehling, Jordan Della Pietra, Jarrod Johnson, Paul Gavini, and Brent Banham were appointed to fill casual vacancies with a term of office ending at the next AGM in April 2024 at which time they may choose to stand for election.

We wish all Board members well in their new roles.

## From the President

Hey Sci-nerds!



Can't believe it's September already. We are heading into the home stretch of the year, and what an incredible year it has been. Question: what kind of books are hardest to get through?

The last couple of months in particular, have

been very busy for SASTA. We had back-to-back events with CONASTA 70, and the Oliphant Science Awards. Both were incredibly successful, with so much positive feedback from attendees.

It was a great joy to be able to catch up with my Science network from interstate, some of whom I hadn't seen since CONASTA 68 in 2019. Professional development opportunities aren't just about your teaching and learning, but also the connections you make. CONASTA's social functions certainly allow for this to happen. And if you're not much of a people person, there's lots of great food and drink as well!

For the second year in a row, SASTA was able to host its Oliphant Science Awards Open Days at Science Alive! What an excellent venue we had access to, which not only allowed us to better display student projects, but also set up a palaeo drawing activity in conjunction with the Mary Anning Art Prize & Professor Flint!

A huge congratulations to the SASTA office staff for their tireless efforts over these two events. So much goes in behind the scenes that we don't often know about, especially in the lead-up to them. Awesome work, Kate, Tegan, Rebecca, and Isabelle!

I must also acknowledge Peter Turnbull, CONASTA Convenor, as well as co-convenor of the OSAs, along with Gerald Little. It's no easy feat working on large-scale events such as these, but they sure made it seem cruisy.

As well as our office staff and convenors, neither events would have run so smoothly without the help of our volunteers, including our CONASTA Conference Organising Group & OSA committee. They assisted in organisation, guiding attendees around venues, providing information, and judging OSA entries.

And of course, our numerous sponsors, in particular our CONASTA 70 Platinum sponsors: Department for Education, and The University of Adelaide. The incredible amount of sponsorship SASTA has been able to draw in for both events really highlights how valued science education is here in South Australia.

As always though, as well-planned and well-organised as these events are, they could not happen without you: our science educators. Whether you're in the classroom, supporting students, a lab tech, or an organisation/industry professional, you're all playing vital roles in shaping the future of science here in SA. Thank you for coming, and hope to see you at future SASTA events!

Ngaityalya,

**Dina Matheson**

Answer: Friction books.

## Leading in Science Workshop

Friday 17 November | Education Development Centre

**Presenter: Jason Greenslade**

Calling all science leaders and budding leaders!

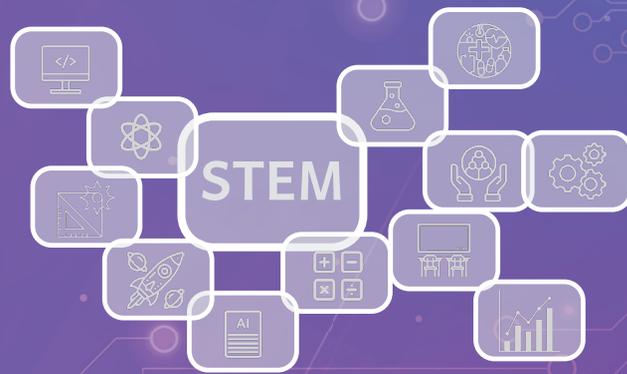
This session is intended for people who are current science department leaders or aspire to be one! Come along and network with other like-minded individuals whilst learning some new skills which might help you either in your current role, in the future or to further enhance the learning and teaching at your school.

Visit the website to see all topics covered in this session: [www.sasta.asn.au](http://www.sasta.asn.au)

# STEM Conference

1 December 2023

Flinders University



STEM Connections

## Call for Workshops is now open

The 2023 STEM Conference will bring together science, mathematics, design and technologies and digital technologies teachers, classroom teachers, leaders in education and businesses who are interested in sharing and exploring teaching methods, tools, resources, and related activities for implementing Maths, Science & STEM education into our schools and communities.

Ideas that can support this theme are:

- The connection between maths and science
- The convergence of industry and technology
- Industry connections with STEM learning in schools

- The emergence of AI and its connection to STEM learning
- Social justice as a consideration in STEM pathways and industry
- Emerging technologies and their connection to how STEM is taught
- Connections for students between classroom learning in STEM and future work and learning opportunities
- Developing school-industry STEM initiatives
- Ongoing partnerships between science, technology, engineering and mathematics (STEM) professionals and teachers in schools

Full details can be found on the SASTA website:  
[www.sasta.asn.au](http://www.sasta.asn.au)

## BIOLOGY: LEVELS OF LIFE

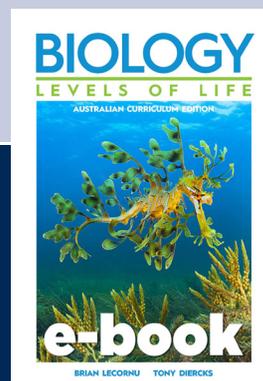
Brian LeCornu and Tony Diercks

\$29.95

### Biology: Levels of Life - Australian Curriculum Edition Textbook (\$63.95)

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. 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. **A complimentary 15 month subscription to the e-book is available with every hard copy purchased.**

The Biology: Levels of Life Textbook is now available as an e-book!



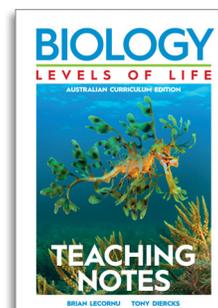
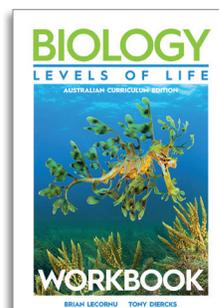
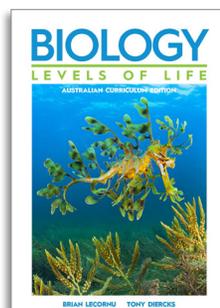
For full details visit the SASTA website.

### Biology: Levels of Life - Australian Curriculum Edition Workbook (\$24.40)

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. There are teaching tips throughout as well as additional information. Answers to questions in the Workbook will assist teachers in explaining concepts to students.





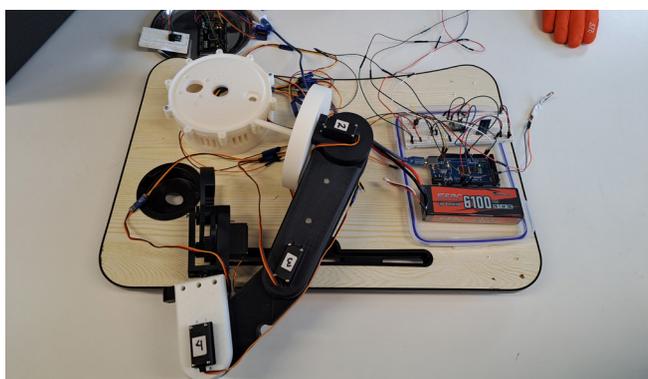
## 2023 Oliphant Science Awards

Student registrations for the 2023 Oliphant Science Awards (OSA) closed on 19 May, with electronic submissions for Multimedia, Science Writing, Scientific Inquiry and reports for Programming, Apps & Robotics due in June

- 35 volunteers judged the Citizen Science, Multimedia, Science Writing and Scientific Inquiry entries (total 505 entries)

The Programming, Apps & Robotics Judging Day was held on Saturday 29 July at Pulteney Grammar School. Students made appointments to meet with the judges to demonstrate their projects.

- 49 students made appointments to see 9 judges across the day



*Nivaan Sardana, St Peter's College  
Programming, Apps & Robotics 5-6*



*Chloe Yaan Yuit Yew, Norwood International  
High School, Models & Inventions 7-8*



*Shaya Ismail, Adelaide Botanic High School  
Models & Inventions, 7-8*



SASTA partnered with Science Alive! to host the Oliphant Science Awards onsite competition again this year. It was a very busy week for SASTA staff & OSA volunteers including:

- **Tuesday - Project delivery day**
  - 1367 onsite projects delivered
- **Wednesday - Onsite judging & Sponsor judging**
  - 63 volunteers onsite to judge Crystal Investigation, Games, Models & Inventions, Photography and Poster entries
  - 40 sponsor prizes were awarded
- **Thursday - Photography for Virtual Open Day & final set up**
  - Photographs taken of 312 winning entries
- **Friday - STEM Day Out at Science Alive!**
  - 4,203 teachers and students attended STEM Day Out
- **Saturday & Sunday - Science Alive!**
  - The Science Alive! event was SOLD OUT with 7,348 people through on Saturday and 9,253 on Sunday

There were 4 SASTA staff onsite across 7 days and we did a total of 337,308 steps!!



*SASTA staff in our new 'I want to be a Scientist' photo cut out!*

At Open Day all Models & Inventions entries plus the winning entries for the other 9 categories were on display. We had iPads and TVs set up to view the electronic entries.

Hosting the Open Day at Science Alive! was a fantastic opportunity to showcase students' work and increase the awareness of the competition.

Students could find out if they were prize winners at Open Day, however they won't find out their place until the Presentation Ceremony on Friday 20 October. Winning students should have received an invitation to the Presentation Ceremony via their coordinator.



The Virtual Open Day on the OSA website was released from 15 August. It took approximately 37.5 hours (5 days) to collate the electronic entries, organise corresponding photos and upload them all to the website.

This is such a great opportunity to celebrate the enormous effort students put into their projects and provide inspiration for future entries! The past 4 years of winning OSA entries can now be viewed on the website under the 'About' tab.

This year we added a few elements to our display. We had the Australian Institute of Physics onsite running a Come and Try activity with jelly and lasers! There were some cool cut outs where visitors could have their photo taken as a South Australian scientist or as Mary Anning. We had a palaeo-artist onsite as part of our Mary Anning display to help kids draw prehistoric life and we had a chill out zone with books and bean bags as part of the Premier's Reading Challenge - STEM Challenge.



Thank you to our generous sponsors, volunteers, school coordinators, judges and committee members without whom the Oliphant Science Awards would not be possible!



**Virtual Open Day now live!**  
[oliphantscienceawards.com.au](http://oliphantscienceawards.com.au)



# Early Career Teachers Conference



Leading learning within and beyond the classroom

13 October 2023

Nazareth College

## Program now available

SASTA is committed to providing opportunities for Early Career Teachers to network and learn with and from each other. In addition, we seek to provide you with access to expert education practitioners and leaders to ensure you have every opportunity to understand and succeed in this important profession.

This one-day conference provides graduates and teachers in the first few years of their career with an opportunity to share and reflect on their professional identity, professional practice, wellbeing, and to develop connections with other early career educators.

The Conference will include specialised workshops for both Primary and Secondary Teachers.

This year the program includes a 'Share-a-thon', where each presenter will share a strategy or tool during a 10-minute presentation and delegates will rotate around the room. We received great feedback from this format at CONASTA 70.

More details and full the program can be found here: [www.sasta.asn.au/professional\\_learning/early\\_career\\_teachers\\_conference](http://www.sasta.asn.au/professional_learning/early_career_teachers_conference)

## Science Active Schools Program

The Science Active School Program is a new initiative by SASTA to recognise and promote schools that show a high level of engagement in science education.

Teachers have a unique capacity to promote excitement about science and impact student outcomes. This award recognises the dedication, innovation, and engagement of teaching staff with Science Education. Science Active Schools support and encourage the professional learning of their Science Educators through their involvement with, and support of, SASTA.

Examples of criteria that would contribute to a school's standing can be found on the website. Along with an application form for schools to be recognised. Find out more here: [www.sasta.asn.au/about\\_us/science-active-schools](http://www.sasta.asn.au/about_us/science-active-schools)

**Congratulations to our 2023 Science Active Schools:**

- Brighton Secondary School
- Clarendon Primary School
- Coromandel Valley Primary School
- Glenunga International High School
- Kangaroo Island Community Education
- Stirling East Primary School
- Westminster School.



# Early Career Teachers Conference Program Outline

## Session 1

<p><b>S1.1 SmartScience - How can I get the most out of 50 minutes a week?</b> Sarah Todd, Coromandel Valley Primary School</p>	<p><b>S1.2 Teaching Tomorrow: Merging Design Thinking, Problem-Based Learning, and Gamified instruction for Inspired Education</b> Ross Riach, Gleeson College</p>	<p><b>S1.3 Designing and Building with STEM - Utilising Design and Build Activities in your STEM Lessons</b> Michelle McLeod, RiAus Education</p>	<p><b>S1.4 Transition from Provisional to Full Registration</b> Adrian Dilger &amp; Belinda Radcliffe, CESA</p>
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## Session 2

<p><b>S2.1 Empowering Future Innovators</b> Claire Hughes, The University of Adelaide</p>	<p><b>S2.2 Promoting “Design Thinking” through flipping the Senior Science classroom</b> Carly Conlan, MeriSTEM</p>	<p><b>S2.3 Changing the world with STEM - Sharing how STEM changes our world</b> Michelle McLeod, RiAus Education (The Royal Institution of Australia)</p>	<p><b>S2.4 Sharing early career teacher strategies and experiences for supporting personal &amp; professional wellbeing</b> Lizzy Mann &amp; Katie Sandow, Sacred Heart College</p>
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## Session 3

<p><b>S3.1 Integrating ChatGPT in Science Education: A Practical Guide for Early Career Teachers</b> Jarrod Johnson, Pulteney Grammar School</p>	<p><b>S3.2 Mystery Box Science Lessons</b> Lara Lang, ASMS and Angeline Buckler, Aldinga Payinthe College</p>	<p><b>S3.3 Practical Science Classes - Achieving the best outcome for you and your students</b> Jane Hosking, St Francis de Sales College and Laboratory Managers Association of SA</p>	<p><b>S3.4 Behavioural Management &amp; Student Wellbeing</b> Andrea Richardson, CESA</p>
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## Session 4

<p><b>S4.1 Reframing Design Think for active STEM engagement</b> Mel O’Leary CESA</p>	<p><b>S4.2 Getting Quicker and More Consistent at Assessment - Rubrics and Feedback</b> Jason Greenslade, Westminster School</p>	<p><b>S4.3 Concept Mapping for students and staff</b> Paul Gavini, Modbury High School</p>	<p><b>S4.4 Teacher Fatigue, Burnout and Resilience</b> Ms. Shaheen Ali, University of Technology Sydney</p>
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## Session 5: Share-a-thon

An informal setting for multiple presenters to share innovative teaching ideas. Each presenter will share a strategy or tool during a 10-minute presentation and delegates will rotate around the room.

### Key:

Primary Years	All Years	Primary & Junior Secondary	Junior & Senior Secondary
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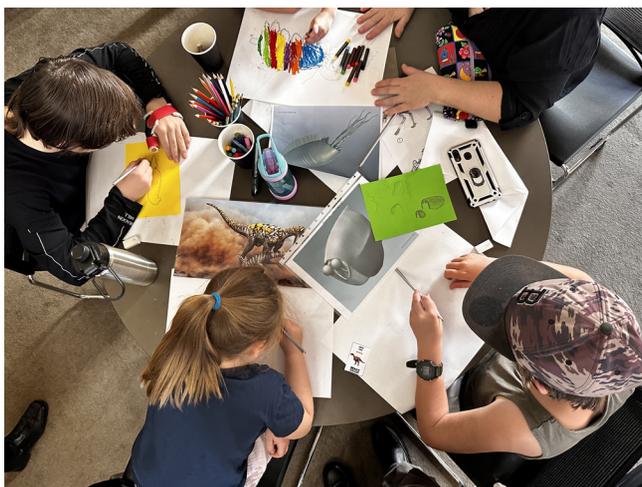
## 2023 Mary Anning Art Prize

In 2020, at the height of the pandemic in Australia, and while searching for things to help rebuild my own creative Universe, I had an idea. What if there was a natural history art prize that required entrants to create a work of art that explored their local prehistoric story. It was an idea consistent with a narrative I've promoted across many years that wherever we are, we need to know more about the organisms that once lived where we now live.

From that simple idea, the Dinosaur University Mary Anning Art Prize was born. Fast forward to 2023, where we've just run it for its fourth year. This year, we received close to 300 amazing entries of young people doing just that. Along the way, the project has garnered the support of the SA Science Teachers' Association, Inspiring SA, Childrens' University, the State Library of South Australia, the Flinders University Palaeontology Society, and the University of Adelaide Palaeontologists.

Judges for the award comprise internationally renowned palaeontologists and palaeo-artists Dr Kailah Thorn, Brian Choo, Katrina Kenny, and Dr Elizabeth Reed, along with myself.

This year, we held a day of creative art workshops at the State Library of South Australia, supported by Inspiring SA. The workshop saw around a hundred young people get to work on their art surrounded by palaeo artists and palaeontologists from Flinders University Palaeontology Society, and the University of Adelaide Palaeontologists. Workshop attendants and Art Prize Entrants who are part of the Children's University programme are eligible for several hours to be credited to their Children's University passports.



During this year's Science Alive, a special space was created that gave young artists the opportunity to see entries from this year's competition, create their own palaeo-art with help from a palaeontologist, and have their photo taken as Mary Anning, alongside Mary's best friend, her dog, Tray.



Amongst all of this, of course, the highlight is the entries themselves. This year, with close to 300 entries across the 3 age ranges, we have again seen some wonderful artwork from young people. We have again seen young people make the effort to learn about and share the prehistoric stories of our place here in South Australia.

Had we established an art competition where we simply asked entrants to create a work of art that tells any prehistoric story, we would also have gotten hundreds of wonderful entries. It's almost certain we'd have been sent lots of art telling a story about such dinosaurs as T.rex and Triceratops. The absolute delight for we who work in the local palaeontology space, is in seeing our stories being told. Stories of the first big life in the Ediacara Biota. Of our own megafauna. Of the plesiosaurs and ichthyosaurs that once swam in the shallow, inland sea that covered much of South Australia during the Age of Dinosaurs.

It has long been my view that we better know who we are when we better know the stories that come from the place where we live. Across the past four years, the Dinosaur University Mary Anning Art Prize has shown itself to be an effective vehicle through which to engage young people in our stories, and to have them being the one creating art that tells those stories.

Given the last 4 years, in looking toward 2024, we think there is an opportunity to keep growing this art award, and in having it as an increasingly central part of how we get young people across South Australia and beyond to connect to our stories.

What's also very cool is that there are a range of other things happening in this space. You learn more about the Ediacara Biota in the Flinders Ranges 360VR, free to download, from the University of South Australia as part of Project Live... <https://www.projectlive.org.au/360-flinders-ranges>

We're always looking for opportunities to partner with organisations who might be able to help expand the scope of the Dinosaur University Mary Anning Art Prize. Contact the team at SASTA if you think that could be you, and your organisation!

In 2020, palaeontologists from Flinders University and the University of Adelaide got together to share our local prehistoric stories through "The Great South Australian Fossil Debate", hosted by singing palaeontologist, Professor Flint. Check it out here: [https://www.sasta.asn.au/blog/2020/10/16/the\\_great\\_south\\_australian\\_fossil\\_debate](https://www.sasta.asn.au/blog/2020/10/16/the_great_south_australian_fossil_debate)

For more information about the Prof, and his songs about our local prehistoric animals, head to... <https://linktr.ee/ProfessorFlint>

Finally, while there are many organisations and individuals who have helped us get this to where it now is, I would personally like to thank Kate, Tegan and the remarkable team at SASTA for their belief in this idea, and in so enthusiastically leaping in to help it grow. For instantly seeing the merit of such a simple idea, and of running with it. As this project continues over the years, I can see that there will literally be thousands of young South Australians who will get to know our stories, and share them with their friends and families.

**Michael Mills**

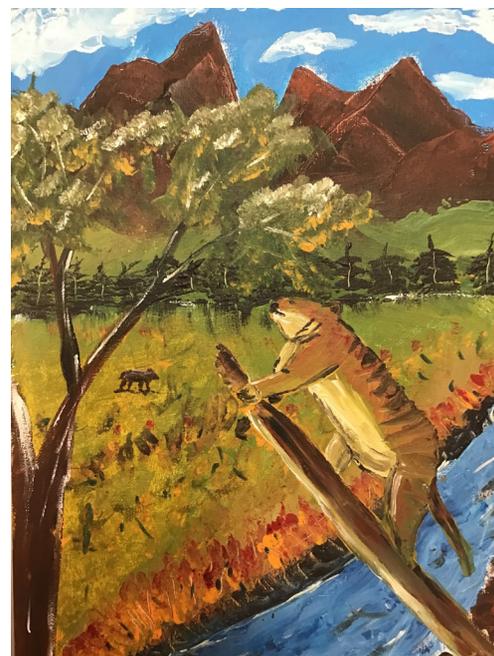
Creative Director, HeapsGood Productions



1st Prize R-2 - Ya Huey Faith Liew



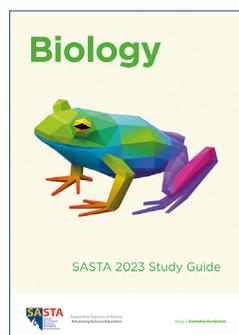
1st Prize 3-5 - Anakin Harbour



1st Prize 6-8 - Hamish Darrell (above)

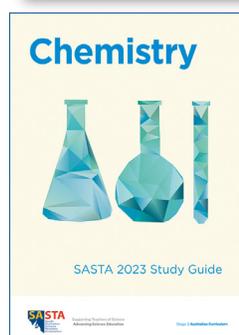
Peoples Choice Award - Ethan Wright (left)

## Preparing Students for Stage 2 Exams



### 2023 SASTA Study Guides

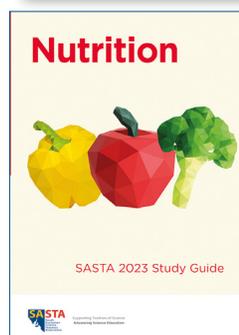
SASTA Study Guides are the complete resource for students preparing for Year 12 SACE exams. These guides include questions with worked solutions covering each topic in the subject outline and address all sections of the exam.



All guides include suggested solutions to the 2022 exams. The full range of new inclusions for each 2023 guide can be found on the SASTA website.

All SASTA Study Guides are \$33 each (plus postage if applicable) and are currently available for schools and individuals to purchase.

Please order online at [sasta.asn.au/resources/online\\_catalogue/study\\_guides\\_stage\\_2](https://sasta.asn.au/resources/online_catalogue/study_guides_stage_2)



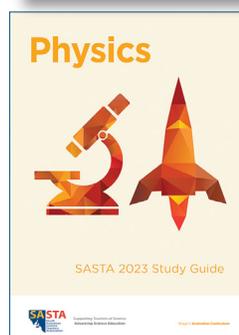
### Stage 2 Trial Exams

The SASTA SACE Stage 2 Trial Exams have been developed by leading teachers to support SACE Stage 2 Teachers. This vital resource will familiarise teachers and students with the SACE Stage 2 exam format. Teachers will be able to use the resource for students, a stand alone assessment tool or to develop exam preparation skills.

All exams are now available for purchase. **\$132.00 per exam**

A fillable PDF version of the trial exam has been produced for Biology, Nutrition & Psychology.

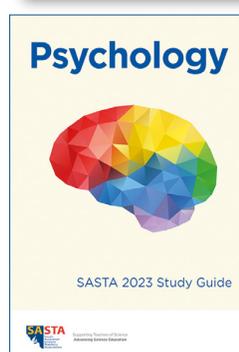
Exams can only be ordered by emailing [office@sasta.asn.au](mailto:office@sasta.asn.au)



### Stage 2 Topic Tests

New Topic Tests are available for 2023 that may be used as formative or summative Skills and Applications Tasks (SATs) in Stage 2 Biology, Chemistry and Physics.

These tests are of the highest quality and feature a comprehensive range of original questions including science understanding, science inquiry skills and science as a human endeavour.



There are 4 tests available for each subject. Prices start from \$100 for individual tests and bundles are available with SASTA Stage 2 Trial Exams.

For the full list of topics available, full price guide and purchase details visit [sasta.asn.au/resources/online\\_catalogue/stage-2-topic-tests](https://sasta.asn.au/resources/online_catalogue/stage-2-topic-tests)

### Stage 2 Topic Videos

#### A great revision tool!

SASTA is excited to present a new product available for teachers and students in 2023! Keeping pace with the way students learn, SASTA is developing a suite of high quality videos covering all topics in SACE Stage 2 Biology, Chemistry and Physics. Each video is between five and ten minutes and covers one or more concepts in the Science Understanding section of the Subject Outline.

The videos are designed to be used in conjunction with SASTA's Stage 2 Biology, Chemistry and Physics Third Edition Workbooks, but may be used separately. Each video begins with an outline of the content covered followed by a narrated presentation using brilliant artwork and animation and concluding with a summary designed to simplify student learning.

The videos are highly engaging and concise, allowing you to learn the content quickly while preserving the flexibility to pause and rewind parts you wish to review. These videos are a must have for all Stage 2 students and their teachers!

Chapter 1 & 2 are available for Biology, Chemistry & Physics.

Find out more at: [www.sasta.asn.au/resources/online\\_catalogue/stage-2-topic-videos](https://www.sasta.asn.au/resources/online_catalogue/stage-2-topic-videos)