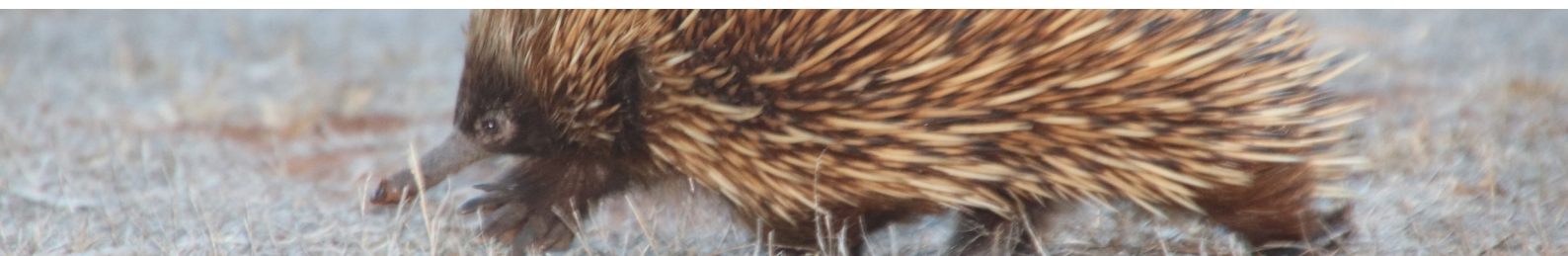




# SASTA

November 2024

# Newsletter



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## Upcoming Events

### 2025 Psychology Summer Conference

Friday 17 January 2025. See page 8 for details.

### Practical and Laboratory Work – Building Capacity and Confidence Workshop

Friday 17 January 2025. See page 4 for more details.

### Teachers new to teaching Stage 2 Science

- **Biology** – Friday 7 February 2025
- **Physics** – Friday 7 February 2025
- **Chemistry** – Friday 14 February 2025
- **Nutrition** – Friday 21 February 2025
- **Psychology** – Friday 21 February 2025

See page 4 for more details.

### Leading in Science - Established Workshop

Monday 24 February 2025. See page 4 for more details.

### The SHE Task Workshop

Monday 3 March 2025. See page 4 for more details.

### Harnessing the Power of AI to Enhance Teaching & Learning Workshop

Friday 14 March 2025. See page 5 for more details.

### Annual Conference - Call for Workshops

15-16 April 2025, Glenunga International High School

See page 6 for more details.



@SASTAInc



@sascienceteachers



@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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## Newsletter copy deadlines 2025

(Advertising deadlines one week earlier)

Edition	Deadline
February	31 January
May	18 April
August	11 July
November	17 October

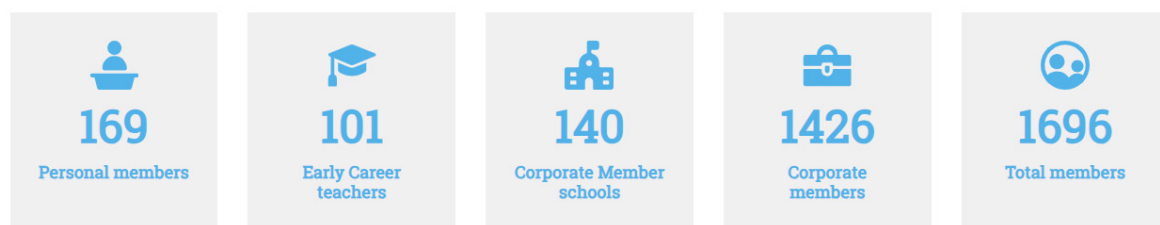
**Advertising rates & booking form available online at [www.sasta.asn.au](http://www.sasta.asn.au)**

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**Thank you to everyone for being a part of our Science community in 2024!**

## MEMBERSHIP STATS



## From the Vice-President



### Hello SASTA legends!

It's that time of year again—when I don my festive pinny, dive into some Christmas-themed kitchen chemistry with my daughter and whip up some of our favourite family treats. As the school year wraps up and

we all (hopefully) take a moment to spend time with family and friends, I want to pause and celebrate the amazing achievements of our SASTA community.

I recently had the pleasure of attending the Educators SA World Teachers' Day Awards, where we celebrated our 2024 Honour Award winners, Jarrod Johnson and Jane Hosking, for their invaluable contributions to science education. It was also a wonderful surprise to accept an award recognising SASTA's outstanding contribution to supporting regional educators.

Congratulations to all the award winners and hats off to all educators for your dedication and hard work! I'm incredibly proud to be part of an association filled with such passionate and inspiring professionals.

But the year's not quite done yet! Don't miss our STEM Conference on November 29th—it's the perfect chance to squeeze in some last professional development and networking for 2024, featuring a fantastic lineup of workshops led by our knowledgeable members and partners. This year's conference is even bigger and better, as SASTA teams up with MASA, EdTechSA, and DATTA-SA for a STEM spectacular, with expanded opportunities for our Primary STEM educators.

Finally, be sure to renew your SASTA membership to stay connected to the exciting professional learning we've got planned for 2025. Check out our professional learning calendar for a sneak peek!

Wishing you all a joyful and well-deserved holiday season.

**Claire Hughes**  
SASTA Vice-President

## 2025 SASTA Membership - Time to renew!

It's that time again! Renew your SASTA membership for 2025 and gear up for another fantastic year with us! You can renew right here: <https://www.sasta.asn.au/renew/form>.

Our Professional Learning calendar is bursting with new member events, webinars, and workshops to spark inspiration all year. Get a head start on your 2025 planning: <https://bit.ly/SASTAPL>. We're also excited to continue to build our member resources library—your go-to spot for the tools and ideas you need, all in one place!

### Curious what it means to some of our members to be part of the SASTA community?

"I've been a SASTA member for nearly 10 years, and their support has been essential in my growth as a teacher and leader. Their support and guidance can take you further than you might imagine."  
— Abby, Science Coordinator

"As a Pre-Service Teacher, I have found the SASTA group to be influential in developing networks and resourcing that I can take with me into my career. Knowing that there's such a vibrant community in the state is very reassuring as I go into teaching as an Early Career Teacher."  
— Rhys, Early Career Teacher

"Being a SASTA Member means not only do I have contact with other like-minded individuals at other sites, but also access to relevant professional development to help me grow as a science educator."  
— Jean-Luc, Primary Science Specialist

**Thank you for being part of our community in 2024—your support is what makes SASTA thrive, and we can't wait to create more together in 2025!**

**Heads Up!** Your membership expires on 31 December 2024, so be sure to renew before registering for any 2025 events to lock in the member rate.

## Professional Learning for Term 1 2025

### Practical and Laboratory Work – Building Capacity and Confidence Workshop

Friday 17 January | 9.00 am – 3.00 pm  
Westminster School

In this workshop attendees will look at a variety of themes which concern early career and pre-service teachers with regard to successful planning and execution of laboratory practical sessions. Teachers will be guided through a typical laboratory lesson including the planning of the lesson, safety concerns, equipment use and managing risk whilst students are working.

Some topics covered will include:

- Safety equipment and risk assessments
- Skill building in specific areas – eg. microscopes, burners, chemicals, spectrometers, electrophoretic equipment
- Setting up effective and practical laboratory spaces
- Making effective use of laboratory staff + Q and A from lab staff
- What to do when – glass breakage, acid spills, fires, burns
- Lab work + demonstrations – how to run (this will be taught practically!)

### Leading in Science – Established Workshop

Monday 24 February | 9.00 am – 3.00 pm  
Westminster School

**Presenter:** Jason Greenslade, Westminster School

In this workshop we will look at more advanced topics of pedagogical and staff leadership. This day builds on the Leading in Science workshop in Term 4, 2024 but is not required. This will be useful for anyone hoping to work with or lead teachers in areas of curriculum. This session will include:

- Curriculum planning for 2025 – where do you want to go? What needs to be done and how to do it
- Targeted action planning – goal setting for you and your staff
- Staff management – goal setting, performance, planning for success
- Meetings and data management

### Teachers new to teaching Stage 2 Science

Walkers Arms Hotel  
9.00 am – 3.00 pm

Some of the key topics covered in these workshops include: an overview of the course, planning and assessment, sample tasks and discussion and moderation.

Participants will be given the opportunity to share and discuss ideas, tasks and other resources for teaching the current course.

#### Biology

##### Friday 7 February

Presented by Andrew Sayers  
(Henley High School)

#### Physics

##### Friday 7 February

Presented by Michael Smith  
(Tatachilla Lutheran College)

#### Chemistry

##### Friday 14 February

Presented by Vera Dunaiski  
(Westminster School)

#### Nutrition

##### Friday 21 February

Presented by Elizabeth Arthur  
(Nazareth Catholic College)

#### Psychology

##### Friday 21 February

Presented by Carolyn Pinchbeck & Ben Whyte  
(Xavier College)

### The SHE Task Workshop

Monday 3 March | 9.00 am – 3.00 pm  
Education Development Centre

**Presenter:** Jason Greenslade, Westminster School

This workshop is aimed at people who want to further their skills in setting, assessment and providing feedback on the SHE task. It also will cover the writing and marking of SHE questions for tests and examinations. There will be time to examine your own student work and participate in some cross-moderation and marking of work/drafts.

## Harnessing the Power of AI to Enhance Teaching & Learning Workshop

Friday 14 March | 9.00 am – 3.00 pm  
Education Development Centre

**Presenter:** Chris Bush, Leading Teacher at University High School

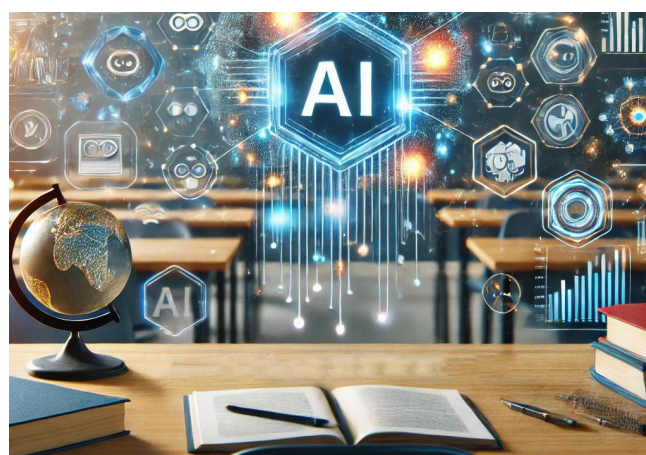
### AI in Education: A Practical One-Day Workshop for South Australian Science Teachers

Revolutionise your teaching with Artificial Intelligence (AI) in this hands-on, one-day workshop designed for educators of all levels. Discover how AI tools can streamline your lesson planning, support differentiated learning, and help you design rigorous assessments and feedback systems. Whether you're new to AI or already familiar with its potential, this workshop will equip you with the skills to effectively integrate AI into your teaching practice.

Throughout the day, you'll collaborate with peers to design AI-powered tools for creating personalised learning tasks, rubrics, and assessments.

You'll also learn how to use AI to mark student work and provide detailed feedback, significantly reducing your workload while maintaining high academic standards. Ethical considerations and responsible use of AI will be addressed to ensure thoughtful integration in your classroom.

By the end of the workshop, you'll have the tools and confidence to use AI for unit planning, marking student work, and designing differentiated assessments, preparing your students for the future while making your teaching more efficient.



## Members Events for Term 1 2025

### Networking and Nibbles

Friday 21 March | 4.00pm - 5.30pm  
Brickmakers Arms

We are excited to invite you to an exclusive afternoon of great conversation, networking, and refreshments.

**Connect:** Whether you're a seasoned member or new to the community, this event is the perfect chance to expand your network and enrich your professional journey.

**Indulge:** Indulge in a selection of snacks and your first drink is on us!

**Your Feedback Matters:** We value your input and insights! Take this opportunity to weigh in with your feedback and suggestions. Is there anything our association can be doing better? Your opinions shape the future of our community.

We can't wait to celebrate with you and express our gratitude for your continued support and contributions to our science community.

### MEMBERS FREE Webinar: Tips for increasing engagement and safety in Science

Wednesday 19 February | 4.00pm - 5.00pm  
Online

**Presenter:** Lara Golding, Marryatville High School

There are things experienced teachers say and do in the classroom (and laboratory) to increase student engagement and decrease the chances that students will misbehave - it's not as magic as it may seem. In this workshop I will discuss and model strategies for gaining students' attention, managing student movement, asking whole class questions and group work.



# SASTA ANNUAL CONFERENCE

14 & 15 April 2025

Glenunga International High School

## DECODING SCIENCE

### Call for Workshops open!

The 2025 SASTA Annual Conference theme, “Decoding Science,” builds on the National Science Week focus by opening the door to diverse explorations in quantum science, genetics, environmental studies, and beyond. “Decoding Science” invites educators to uncover the tools and techniques that make scientific principles accessible, understandable, and engaging for students at all levels.

We are seeking workshops that inspire teachers to bring science’s hidden languages into the classroom, highlighting innovative methods, hands-on tools, and practical applications that connect complex topics with students’ everyday experiences.

#### POSSIBLE PRESENTATIONS COULD INCLUDE:

##### Decoding Scientific Concepts for the Classroom

- Quantum Science or Genetics Simplified
- Environmental Science and Ecosystem Exploration
- Data and Technology in Science Education

##### Innovative Strategies for Engaging Diverse Learners

- Inclusive and Ethical Science Education
- Making Science Tangible and Memorable
- Connecting Students to the Real World of Science

Full details are available on the SASTA website: [www.sasta.asn.au/professional\\_learning/sasta\\_annual\\_conference](http://www.sasta.asn.au/professional_learning/sasta_annual_conference)

**Call for workshops close on Sunday 9 February 2025**

#### GUIDANCE FOR WORKSHOP PRESENTERS

##### All Levels of Experience:

Whether you’re a first-time presenter or a seasoned educator, we welcome workshops from all experience levels. Our supportive environment aims to celebrate the diverse approaches educators bring to teaching science.

##### Collaborative Workshop Formats:

Consider teaming up with colleagues or co-presenting to share different perspectives on the same topic. Collaboration not only enriches the workshop but can also make presenting more approachable and enjoyable.

##### Practical Classroom Applications:

Workshops with a focus on practical, classroom-ready activities are highly encouraged. Sharing methods that have worked well in your own teaching, even small or simple ideas, can be incredibly valuable to others.

##### Flexible Presentation Styles:

Workshops can take many forms, from hands-on activities and interactive discussions to demonstrations and idea-sharing sessions. Pick a format that feels comfortable for you and best suits your content.

##### Sharing Personal Successes and Challenges:

Teachers find great value in real classroom stories, including both successes and challenges. Don’t hesitate to share your personal experiences—your unique journey is what makes your workshop impactful.

## 2025 SASTA Awards - Nominations now open

There are so many amazing teachers out there who often fly under the radar, and SASTA wants to celebrate their outstanding achievements and contributions to the science community!

This is your chance to shine a light on a colleague who inspires you, serves as a role model, or to share your own accomplishments! Nominating is free, and there are several awards available exclusively for SASTA members.

### SASTA Medal

SASTA offers its members an 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.

**Nominations close Monday 10 March 2025 at 4.00pm.** Online nominations can be completed at [www.sasta.asn.au/about\\_us/awards](http://www.sasta.asn.au/about_us/awards).

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

The Outstanding Contribution to the Teaching of Science 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, 14-15 April 2025.

## 2024 SASTA Honour Award Recipients

We are thrilled to announce the 2024 Honour Award recipients, Jarrod Johnson and Jane Hosking, whose outstanding contributions to science education embody the spirit of SASTA.



Jarrod & Jane were presented with their awards at the Educators SA World Teachers Day celebration on Friday 25 October.

Jarrod, a Science Teacher at Pulteney Grammar School, has been recognised for his innovative teaching methods, including his recent work on AI integration in the classroom and his dedication to professional development through SASTA conferences and the Oliphant Science Awards.

Jane, a Laboratory Manager at St Francis De Sales College and leader within the Laboratory Managers Association of SA, has been honoured for her unwavering support of science educators, particularly early career teachers, and her efforts to bridge the gap between educators and laboratory staff.

Together, their achievements reflect SASTA's mission to inspire and support excellence in science education across South Australia.



SUPPORTED BY



# PSYCHOLOGY SUMMER CONFERENCE

17 JANUARY 2025



## SAVE THE DATE!

**2025 CONFERENCE CONVENOR:** Matthew Little, Seaview High School

### KEYNOTE PRESENTER

**Professor Lydia Woodyatt, Flinders University**

Lydia Woodyatt is a Professor in Psychology at Flinders University. She uses psychological science to increase engagement and motivation and to help people work through difficult emotions following failure and transgressions. She conducts research in a wide range of practical contexts: relationships, organisational leadership, workplace conflict, debt management and customer service, military and veteran experiences, child protection, and universities - amongst many others.

Her research applies social psychological theory and empirical approaches to understanding human responses to failure and transgression, contributing to the psychology of justice and moral repair, well-being, psychological needs, emotions, motivation and relationships. She utilises prospective-longitudinal, intervention, qualitative, dyadic and experimental designs to advance knowledge on these complex psycho-social processes. Lydia is the recipient of funding from both the ARC and Industry and was the senior editor of *The Handbook of the Psychology of Self-forgiveness* (Springer, 2017).

Lydia is a multi-award winning teacher and public speaker. She is co-creator of Flinders University's Certificate and Graduate Certificates in Mental Health and Wellbeing (Workplace and Community), and the highly successful online topic *The Psychology of Surviving and Thriving*, which develops wellbeing and self-management. She is the Teaching Program Director in Psychology at Flinders University and has previously held University leadership roles in the area of Wellbeing and Retention.

### WORKSHOP PRESENTATIONS INCLUDE\*:

- Follow up from Keynote Presentation - Lydia Woodyatt
- Getting Creative with Assessments: Engaging Formats in Psychology - Lauren Scarfe, Adelaide Botanic High School
- Tips and tricks on how to design and make interactive videos - Ethan Murphy, Muirden Senior College
- What I wish they told me - the ultimate guide for teachers to thrive in 2025 - Jai Dantonio, St Columba College
- Organisational Psychology in Popular Culture
- SACE Examination and Moderation review

### FULL DETAILS AND REGISTRATION AVAILABLE SOON!



## 2024 Outstanding Contribution to Regional Educators Award



**Exciting News! SASTA was honoured with the Outstanding Contribution to Regional Educators award on World Teachers Day 2024 on Friday 25 October!**

Recognised for our support of regional science teachers, our initiatives include online learning, webinar series, regional teacher incentives, and the Nilpena Ediacara Flinders Ranges Teacher Scholarship – all to help regional educators thrive!

Congratulations to our dedicated team, and a special thank you to our Vice-President, Claire Hughes, for accepting the award!

Check out our 2025 Professional Learning calendar to see what we have planned to support our regional educators next year including our FREE Member webinar series:

- Tips for increasing engagement and safety in Science
- AI Hacks
- Fostering Engagement: Strategies to Minimize Classroom Disruption
- Unlock AI's transformative power in your school
- Embedding gamification, innovation, immersion and storytelling into science lessons
- Building Resilience: Mental Health and Wellness Strategies for Early Career Teachers

Plus we're in the process of confirming some primary focussed webinars.

[www.sasta.asn.au/professional\\_learning](http://www.sasta.asn.au/professional_learning)

## BIOLOGY: LEVELS OF LIFE

**Brian LeCornu and Tony Diercks**

### Biology: Levels of Life - Textbook

**Printed version - \$64.95 e-book \$16.00**

This textbook provides detailed coverage of all the content (Science Understanding) of the SACE Stage 2 Biology subject outline. It is divided into four topics, with each topic presented in chapters designed to make the material easy to follow. Each chapter concludes with a set of Study Questions. QR codes and hyperlinks connect to videos and scientific articles. The e-book is up-to-date for the 2025 school year.

**A complimentary 15 month subscription to the e-book is available with every printed version.**

### Biology: Levels of Life - Workbook

**Printed version - \$24.40 e-book \$9.50**

Written specifically to complement the textbook, the 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. In the digital version, students can enter answers on their device (and save them).

**A special version of the e-workbook that includes suggested answers is available for \$49.00.**

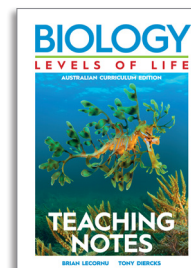
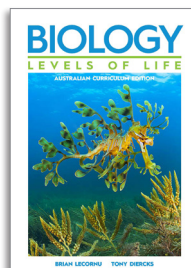
### Biology: Levels of Life - Teaching Notes \$120.00

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 Workbook questions will assist teachers in explaining concepts to students. Spiral bound to lie flat on the desk, and printed on high-quality spill-resistant gloss paper.

**BOTH E-BOOKS  
UPDATED FOR 2025**

**The Biology: Levels  
of Life Textbook AND  
Workbook now available  
as INTERACTIVE e-books!**

For full details visit the SASTA website.



## Oliphant Science Awards

Congratulations to all prize winners in this year's Oliphant Science Awards. A list of winning and highly commended entries is available at [oliphantscienceawards.com.au](http://oliphantscienceawards.com.au). Thank you to all entrants, coordinators and teachers, and also the judges (who all agree that the standard of entries improves every year), volunteers and SASTA staff who all help to make the Oliphant Science Awards the amazing event that it is. We had a record breaking year in 2024, with 2,615 registered entries across 10 categories and 6 age groups and 3,505 students from 134 schools involved in this year's competition.

**The 2024 Oliphant Trophy Winner was Caleb Tang from Prince Alfred College for his Scientific Inquiry entry 'To what extent does different coloured light affect the bacterial growth of Staphylococcus epidermidis measured in terms of the colony size (CFU/mL) after 30 minutes of light treatment under each colour'.**



The Virtual Open Day is available again this year on the Oliphant Science Awards website to showcase and celebrate the enormous effort students put into their projects and provide inspiration for future entries! You will find photos, videos and reports for all the winning entries.

**Put Friday 1 August - Sunday 3 August 2025 in your calendar to visit our display at Science Alive!** Find out all the details and key dates for 2025 on the OSA website and in the Information Booklet (released later this month).

**Find out about the 2025 competition at [oliphantscienceawards.com.au](http://oliphantscienceawards.com.au)**

## Knowledge Counts

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**Peter Dinan**

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[pdinan@creditunionsa.com.au](mailto:pdinan@creditunionsa.com.au)

**Credit Union SA's commitment to shaping our state started over 65 years ago, when we were founded by teachers, for teachers.**

Our Knowledge Counts banking benefits provide the South Australian education community with special offers, discounts and products.

These offers are exclusive to current and retired employees of the South Australian education community, students carrying out studies in education, and their eligible immediate family members (parents, children, grandparents, grandchildren, siblings and partners only).

**It's our way of saying thank you.**

For more information, please visit [creditunionsa.com.au/knowledgecounts](http://creditunionsa.com.au/knowledgecounts)

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## Growing an oyster reef restoration revolution in South Australia



**Dr Dominic McAfee,  
Future Making Fellow at the University of Adelaide**

### **A lost part of the coast**

Most people are unaware that just 200 years ago, South Australia was home to some of the largest reef ecosystems on the continent. South

Australia's large gulfs and sheltered bays and estuaries were filled with enormous shellfish reefs formed by billions of oysters, mussels, and razorfish cemented together on the seafloor. This living crust of seafloor could be meters thick and full of large native Flat oysters (*Ostrea angasi*) the size of dinner plates (Captain Cook called Australia's Flat oysters "*Ostrea gigantus*" on account of them being the largest he had ever seen). In South Australia, these reefs characterised at least 1,500 km of coastline, but they were also part of a continent-wide network of shellfish reef ecosystems that spanned across southern Australia's coastline from the east coast to Perth, with reefs as deep as 40 m and right up into the intertidal.

It is hard to fathom the biodiversity and fish productivity that these reefs would have supported. Shellfish reefs function like trees in a forest or coral reefs in tropical seas, supporting highly biodiverse invertebrate communities and acting as the natural fish factories of the sea. The loss of these reefs has fundamentally changed the function, biodiversity, and fish productivity of Australia's coastlines.

### **A long love affair with oysters**

Shell middens attest to the important food and cultural value of these oysters to Aboriginal communities across Australia. Some shell middens (culturally significant piles of used shell) stretch for kilometres and would have accumulated over thousands of years; the oldest Flat oyster shells have dated middens back to 10,000 years ago, when sea levels began to stabilise (i.e., older middens were submerged by rising seas). This interaction with oysters over thousands of years is not unique to Australia, with Indigenous communities across the globe harvesting oysters over long periods of time. The human-oyster story goes deep.

Following the European settlement of South Australia in 1836, these reefs were the focus of one of the new settlement's most lucrative and widespread fisheries. Oysters were scraped from the seafloor by dragging dredges (metal chain bags) across the seabed by sailboat. This dredging was very effective at removing oysters, but as they indiscriminately removed all live and dead oysters, big or small, eventually all the shell material was lost from the seafloor. Baby oysters are free-swimming larvae that settle on the smell of other oysters, but with all the shells removed, these reefs were unable to regenerate. From covering thousands of kilometres of seafloor, South Australia's oyster reefs were all but destroyed within 100 years of European settlement, and have not returned since wild oyster harvesting ended. Today, Australia's oyster reefs are considered functionally extinct, with over 99% gone.

### **Bringing back oyster reefs**

For the past seven years, we have been working to bring back South Australia's oyster reefs. Collaboration between the University of Adelaide researchers, the South Australian Government, and The Nature Conservancy has led to some bold restoration efforts involving the construction of boulder reefs to reintroduce the hard structure that oysters need to settle down and form reef habitat. At some of these restoration sites, we have placed underwater speakers through which we play the natural sounds of healthy marine habitats to attract baby oysters to the newly built reefs. Sounds ridiculous, but it really works! Myself and Prof Sean Connell (University of Adelaide) first assessed which sounds oysters responded to the most in our research aquarium – the healthier the marine sound, the more they moved towards it. When we played their favourite sounds at the restoration sites, we had, on average, 5,000 more baby oysters settle on the reef per m<sup>2</sup>, compared to sites where we didn't use speakers.

**Check out the full article including details about community involvement in the Eyre Peninsula on the SASTA Blog!**

**DID YOU KNOW WE HAVE POSTED 46 BLOGS ON THE WEBSITE THIS YEAR!?**

# SASTA Resources

## SACE STAGE 2 STUDENT WORKBOOKS



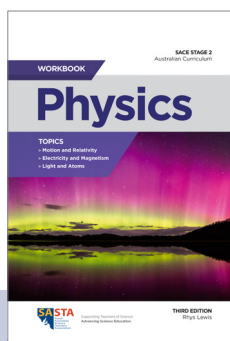
### REVISED 3RD EDITION WORKBOOKS

**\$69.00 EACH**

The Third Edition of the SASTA Stage 2 Biology, Chemistry and Physics Workbooks maintain the same concise, accessible, and engaging writing style that readers have loved in previous versions. There is a clear emphasis on developing the reader's ability to apply their knowledge both familiar and new contexts rather than simply recalling it.

These workbooks showcase a range of strengths, including their capacity to foster critical thinking, problem-solving skills, a wealth of factual knowledge, and their visually captivating artwork that masterfully simplifies complex subjects.

The Third Edition Workbooks feature an array of new Chapter Questions and Review Tests, offering comprehensive assessments of student learning across Science Understanding, Science Inquiry Skills, and Science as a Human Endeavour. We are confident that the text's clarity and the effectiveness of its assessment tasks will empower students to construct the mental frameworks necessary for a deep understanding of biology, chemistry, and physics.



#### Physics

3rd ed., 2022, 560 pp.  
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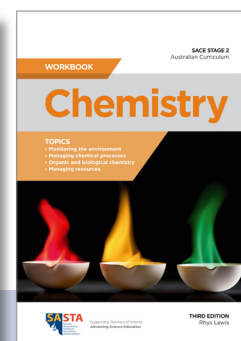
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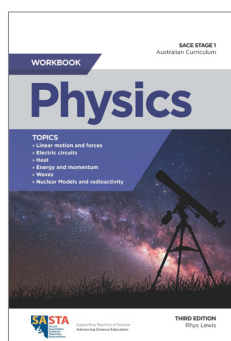
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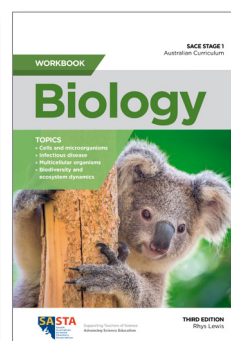
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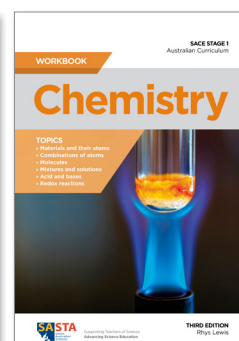
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