



February 2023

Newsletter



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Upcoming Events

Teachers new to teaching Stage 2 Science

- **Biology & Physics** – Friday 10 February 2023
- **Chemistry & Nutrition** – Friday 17 February 2023
- **Psychology & Scientific Studies** – Friday 24 February 2023

See page 4 for more details.

Early Career Teachers Professional Learning Day

Friday 10 March 2023 | FREE for SASTA Members

See page 6 for more details.

The SHE Task

Friday 17 March 2023

See page 4 for more details.

Design & Deconstruct Workshop

Monday 3 April 2023

See page 4 for more details.

CONASTA 70 - Call for Workshops

9-12 July 2023, The University of Adelaide

See page 5 for more details.

Oliphant Science Awards

Student registrations close Friday 19 May 2023

Open Day at Science Alive! 4-6 August 2023



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Newsletter copy deadlines 2023

(Advertising deadlines one week earlier)

Edition	Deadline
May	14 April
August	14 July
November	13 October

Advertising

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

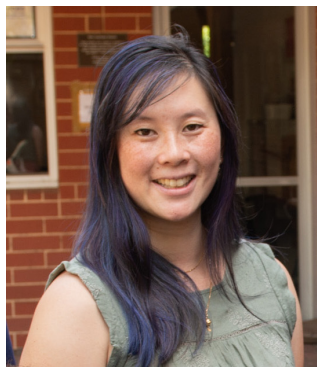
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Adhering to the following guidelines would be appreciated:

- 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



Hello Sci-Nerds!

We've made it; another lap around the Sun. Celebratory question for you: how does a chemist start a party?

What an incredible 2022 we had, with so many sci-filled events. Thank you to Westminster School,

for hosting our Annual Conference and Expo. I particularly enjoyed being surrounded by like-minded people as the very first images from the James Webb Space Telescope came through. What an exciting moment for science!

Another personal highlight was the potato ice cream. Potato is really proving itself to be a versatile vegetable. This creative dessert is the brain child of students at University of Adelaide's Waite Campus, who were looking at ways to reduce food waste.

In August, we had very successful Oliphant Science Awards open days, at Science Alive! This was our first time hosting the open days here, we were very fortunate to have the majority of the Duncan Gallery to showcase students' incredible entries. Special congratulations must be made to Isaiah Ajaero, the 2022 winner of the Oliphant Trophy. He wrote a very impressive paper titled 'Chimeric antigen receptor T-lymphocytes (CAR T-lymphocytes): The application of immuno-engineering in the treatment of haematological malignancies'. I strongly recommend everyone head over to the OSA website and check out his paper there.

I would also like to congratulate Peter Turnbull, who is the 2022 recipient of the SASTA Honour Award. This was presented to him at the Educators SA World Teacher's Day dinner. Peter has contributed so much to SASTA over the years, in various capacities. We highly value his experience and expertise, and hope to continue this relationship for many more years to come.

2023 is already going to be an exciting one for SASTA, as we host CONASTA 70: Space to Innovate. Keep an eye on our socials for registration and program information. I'm super excited for this event!

Finally, I'd like to put a call-out to those of you hosting pre-service teachers. Please encourage them to join our association. This is where I made, and continue to make, many connections within the science education community. I owe so much to SASTA for helping to shape me into the science educator I am today. It's an amazing network, with exceptional professional development opportunities – as you would know!

Wishing you all the best for the year ahead.

Dina Matheson

Answer: they drop the base! *ba-dum-tss*

Have you renewed your membership for 2023?

Thank you to those who have recently joined SASTA or renewed their membership for 2023.

If you haven't had a chance to renew your membership yet, this can be done on the SASTA website:

www.sasta.asn.au/renew/form

Personal Membership prices have all been reduced - Personal Members are now \$95 and there is great pricing for 1st & 2nd year teachers and student members. Check the website for full details.

We already have a number of professional learning activities confirmed for Term 1 plus CONASTA 70 in Adelaide in July, so if you're interested in attending any of these events your 2023 membership will need to be paid before you register to be eligible for the member price. **Plus we offer some FREE member events and giveaways!**

We look forward to working with you in 2023!

If you have any questions, see the Membership FAQ on the website or contact the SASTA office.

Professional Learning for Term 1 2023

Teachers new to teaching Stage 2 Science

Education Development Centre, Hindmarsh
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 10 February

Andrew Sayers
(Henley High School)

Physics

Friday 10 February

Presented by Michael Smith
(Concordia College)

Chemistry

Friday 17 February

Presented by Glen Arthur

Nutrition

Friday 17 February

Presented by Elizabeth Arthur
(Nazareth Catholic College)

Psychology

Friday 24 February

Presented by Carolyn Pinchbeck
(Xavier College)

Scientific Studies

Friday 24 February

Presented by Helen Godfrey
(Open Access College)

The SHE Task

Friday 17 March 2023 | 9.00 am – 3.00 pm
Education Development Centre, Hindmarsh

Presenter: Jason Greenslade, Curriculum
Leader Science, 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.

Morning: The SHE Task

- Performance Standards
- Introducing + structuring the task
- Providing guidance to students (drafting)
- Marking and moderation

Afternoon: SHE Questions in SATs/Exams

- Types of questions
- Guiding students to answer these questions
- Writing SHE questions – how to effectively use articles + how to structure them

Design and Deconstruct Workshop

Monday 3 April 2023 | 9.00 am – 3.00 pm
Education Development Centre, Hindmarsh

Presenter: Jason Greenslade, Curriculum
Leader Science, Westminster School

This workshop is aimed at people who want to further their skills in setting, assessment and providing feedback on the D&D + practical report task. There will be time to examine your own student work and participate in some cross-moderation and marking of work/drafts.

Morning: The D&D Reporting Task

- Performance Standards
- Introducing + structuring the task (inc. ideas for D&Ds + tasks sheets + resources to help)
- Providing guidance to students (drafting)
- Marking and moderation

Afternoon: The task continued + experimental questions in tests/exams

- Marking and moderation (cont.)
- Types of experimental questions
- Guiding students to answer these questions
- Writing experimental questions –how to structure them



Space to Innovate

CONASTA70

A D E L A I D E

9-12 JULY 2023

Join us in Adelaide from 9-12 July 2023 for four days of energising moments, engaging sessions, inspiring presenters, and community building across disciplines. The conference theme, **Space to Innovate**, emphasises the importance of building a culture of continuous innovation at all levels of schooling in Australia.

From relevant session topics to unique session formats, informative share-a-thons and morning coffee chats, to exciting social activities and networking events, CONASTA 70 is sure to bring you the best new thinking coupled with time-tested teaching approaches in a fun, one-of-a-kind, collaborative learning environment!

Within our theme 'Space to Innovate' we will be celebrating three extraordinary aspects of our wonderful state of South Australia:



Adelaide as a National Park City



South Australia as a great outdoor museum!



South Australia as the centre of Australia's space industry

Have an innovative practice or teaching strategy that works?

The Call for Workshops is now open!

Submit a session proposal and share your expertise and inspiration with others! Submissions close Sunday 19 February. For all details visit the CONASTA 70 website.

www.conasta70.com.au



This event is FREE for SASTA Members!

This Professional Learning Day has been specifically designed for teachers in their early years as a science teacher. The workshops cover a range of interactive and engaging presentations from experienced practitioners to provide the tools and skills needed to survive and thrive in the early years of being a science educator.

This day is suitable for Primary and Secondary Early Career Teachers, as well as Proficient Teachers who are new to teaching science.

Focusing on the development of sustainable, professional practice in early career science teachers, the topics covered include high impact teaching strategies, key concepts and key ideas, task design and teacher wellbeing.

Program Outline

Session 1: Early Career and Teacher Certification Advisors sharing strategies for recording evidence.

Session 2: Key Ideas & Core Concepts

Session 3 & 4: Primary (R-6)

Curriculum resources - What, how and why

What does an Early Career Teacher need to know about the resources? Why would use them? How might you get started? This session will focus on the Department for Education, Primary Science Curriculum Resources. We will explore how the resources bring together the Australian Curriculum, innovative pedagogy, formative assessment to support teaching

and learning in Primary Science. This session is suitable for both classroom and specialist science primary teachers.

Session 3 & 4: Secondary (7-12)

Surfacing Prior Knowledge to Differentiate

How do you know what your students already know? Where do you start? The first step is to surface prior knowledge. We will look at and unpack several tools and hands on activities that you can use in your science classroom at the start of a topic. Not only are the tools and activities an opportunity to surface prior knowledge but also an opportunity to engage your student's interest in a topic, get to know your students to build relationships, highlight misconceptions and of course learn some cool science.

Task Design and the Achievement Standards

The AC clearly sets out what we want students to know by the end of the year - but what sorts of assessments best allow students to provide the evidence of them? This session will take you through how to take the achievement standard and AC and use it practically to design quality differentiated assessments - we will cover a range including reports, tests and assignments of varying year levels (7-10). We will discuss what student evidence might look like and then apply rubrics to marking of student work.

Session 5: Teacher Wellbeing

For the full program and to register:
sasta.asn.au/professional_learning



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making science visible

ADELAIDE * FRINGE ARTIST FUND

HeapsGoodProductions

A Curious Thing

The story of Mary Anning

Available as an incursion throughout the year
Fringe season at Ayers House
Teacher notes available

Come on a journey to discover a world of remarkable, prehistoric creatures, and of the extraordinary woman who discovered them.

UNIVERSITY OF ADELAIDE PALAEOLOGISTS

SASTA
South Australian Science Teachers Association Inc.

Contact Michael Mills at 0411287381
or michael@heapsgood.com.au

ADELAIDE * FRINGE * 2023
adelaidefringe.com.au

For more information



10 tickets to give away to SASTA Members!

SASTA has 10 tickets to give away to SASTA members to attend the Opening Night of **A Curious Thing: The Story of Mary Anning**. This includes the performance followed by a panel of some brilliant and inspiring South Australian scientists who will explore what's changed for women in STEM since Mary Anning's time, and what's not...?

To enter the giveaway, you will need to fill in your details online and let us know two pieces of advice you would give to an early career teacher. **Entries must be submitted by 15 February:** <https://bit.ly/3kpkYLJ>

2023 SASTA Awards

There are many great teachers out there that often fly under the radar and SASTA would like to acknowledge, and celebrate their outstanding achievements and contributions to the science community.

This is your opportunity to nominate a colleague who has inspired you or is a role model in the community or share your own accomplishments!

It is free to nominate and there are a number of Awards available 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.

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. This year two (2) scholarships of \$500 will be awarded to enable country-based science teachers to attend CONASTA 70 in July.

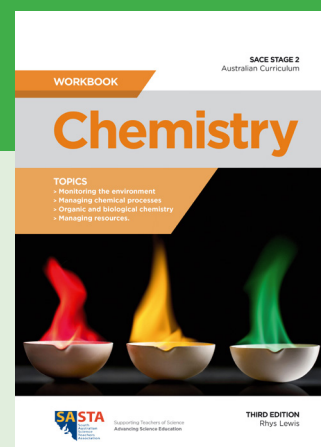
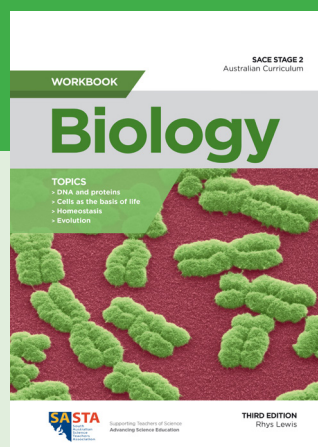
Nominations close Friday 12 May 2023 at 4.00pm. Online nomination forms and full award criteria can be found at www.sasta.asn.au/about_us/awards

Notice of Annual General Meeting

Notice is given that the 2023 Annual General Meeting of members of the South Australian Science Teachers Association Incorporated will be held on Wednesday 10 May at 4.00pm for the purpose of transacting the items of business listed below.

Agenda

1. Welcome and Apologies
2. Minutes of the 2022 AGM
 - (a) Acceptance
 - (b) Business Arising
3. President's Report
4. Treasurer's Report
5. Election of Board Members
6. General Business
 - (a) Membership Fees
 - (b) Appointment of Auditor
7. Any Other Business



The Third Edition of the popular SASTA Stage 2 Biology, Chemistry and Physics Workbooks set students on the path to success in their studies of these subjects through their clear and engaging narrative, innovative use of art and photos, and superior contextual questions that enhance teaching and learning.

Call for SASTA Board nominations 2023

South Australian Science Teachers Association
ABN 22 938 317 192

Closing date: 5.00 pm 12 April 2023

Call for nominations

All members of SASTA are hereby notified of a call for nominations for four (4) positions on the Board.

Composition of the Board and terms of office

The board consists of up to nine (9) 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.

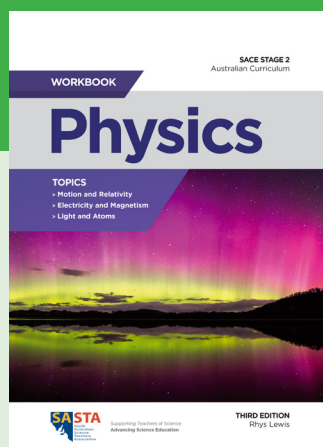
Position description and nomination form

A Board Member position description and nomination form is available on the SASTA website in the 'Members Area'.

NOTE: 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 Kate Dilger, Executive Officer, on 8354 0006 or email kate@sasta.asn.au if they require further information.



These workbooks provide an unmatched comprehensive text fully mapped to the Stage 2 Biology, Chemistry and Physics course in South Australia

SACE Stage 2 Workbooks

ALL NEW | Third Edition now available!

\$64.00 each

- concise, accessible, and engaging writing style of past editions while maintaining a clear emphasis on developing the reader's ability to apply their knowledge in new and familiar contexts
- develops critical thinking, problem-solving skills, comprehensive factual knowledge.
- hundreds of new Chapter Questions and new Review Tests that assess student learning in the key areas of Science Understanding, Science Inquiry Skills and Science as a Human Endeavour.
- comprehensive set of solutions to all Chapter Questions and Review Tests.
- expanded text, providing students and teachers with greater content knowledge.
- hundreds of new illustrations that engage students while simplifying complex concepts.

Oliphant Science Awards

Congratulations to all prize winners in the 2022 Oliphant Science Awards. A list of winning and highly commended entries is available at 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. In 2022 there were 2,249 registered entries across 9 categories and 6 age groups and 2,879 students from 106 schools involved in last year's competition.

The 2022 Oliphant Trophy Winner was Isaiah Ajaero from Concordia College for his Science Writing entry: Chimeric antigen receptor T-lymphocytes (CAR T-lymphocytes): The application of immuno-engineering in the treatment of haematological malignancies.

The Virtual Open Day is available again 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.

We're excited to partner with Science Alive! again for our 2023 Open Day event. Put Friday 4 August - Sunday 6 August 2023 in your calendar! Find out all the details and key dates for 2023 in the Information Booklet.

Find out about the 2023 competition at oliphantscienceawards.com.au



New Category for 2023: Citizen Science

We're excited to announce a new category for the 2023 Oliphant Science Awards competition: Citizen Science! This category is aimed at involving whole class or school groups in meaningful citizen science projects.

The project can be one that you have designed yourself or an existing project that you take part in. Think about not only what type of citizen science project your students would like to try, but also what types of projects are feasible for them to do, based on where you live, what you're able to do in your classroom or your school, what equipment you will need, etc.

Why choose a citizen science project?

A Citizen Science Project can supplement and broaden a topic you are already planning to teach. It should be part of a purposeful plan to develop an aspect of Nature of Science that also connects strongly to the science concepts being taught. Participation in a citizen science project will guide your students through the full scientific inquiry process.

A Citizen Science Project enables teachers to:

- focus on developing science inquiry skills in context- gathering, interpreting or categorising data or critiquing evidence
- highlight the relevance and value of the science learning, with students contributing to a real-world science project
- create opportunities for working with real and relevant datasets that often have been co-created
- support students to learn about how science works - considering how scientists collect and use data and the reliability of particular data, making sense of data and exploring what it means to behave scientifically

More details about this category can be found on the Oliphant Science Awards website.

Mary Anning Art Prize

What's the big idea?

We have a remarkable fossil heritage here in South Australia, across millions of years, and yet most South Australians know little of it. In the swirling cacophony that was 2020, an idea was born! An idea to encourage young people, the core group I work with, to engage with their local prehistoric story. A point amongst the malaise, I asked myself... "What if we created a natural history art competition for young people, where just as Mary had, the artwork needed to be of something local?" And the Mary Anning Art Prize was born!

Putting the idea into practise

As a South Australian, you'd not be able to enter an artwork with a T.rex or Triceratops in it, as they don't come from here. As a young artist, your job would be learn about our story here in South Australia, and to create something telling something of that story. Stories from the Ediacara Biota... of the first big life found anywhere in the world. Anomalocaris and the half a billion year old Trilobites from Kangaroo Island, where we see the best examples of some of the world first great predators. Life in the Eromanga Sea... the shallow inland sea that covered much of South Australia. Home to Plesiosaurs, Ichthyosaurs, Ammonites, and other amazing sea creatures that swam where we now walk during the Age of Dinosaurs. And the giant marsupials we find in places like Naracoorte, Hallet Cove and Burra... Kangaroos three metres tall that walked. A giant scissor-toothed possum called Thylacoleo. A wombat as big as a rhinoceros.

2022 Prize Winners

Reception - Year 2

- 1st Prize - Malina Bachmann, Year 1, Ediacaran fauna
- 2nd Prize - Cody Emms, Year 2, Pliosaur
- 3rd Prize - Lila Goundar, Year 2, Kronosaurus

Year 3 - Year 5

- 1st Prize - Emily Richardson, Year 4, Procoptodon goliah / short faced kangaroo
- 2nd Prize - Maxwell Sierp, Year 3, Kakuru Kujani
- 3rd Prize - Rose Nield, Year 4, Wonambi

Year 6 - Year 8

- 1st Prize - Charlie Michell, Year 6, Discovery
- 2nd Prize - Maya Holgate, Year 7, Thylacoleo
- 3rd Prize - Zazie Newall, Year 7, Ammonite

Out of State

- 1st Prize - Teresa Kenworthy, Procoptodon

Aim of the competition

It is essential, to be eligible, that the artwork explores an element of South Australia's rich and remarkable prehistoric past, and that the artist lives in South Australia. To explore and illustrate our own past is to better know who we are as South Australians, and to better understand our unique place in the history of life.

While all visual art-forms are eligible, each entry must be presented in the form of a single photograph of the artwork.

What makes a successful entry?

- Scientific accuracy, creativity, and originality
- The best art isn't just a picture, or a sculpture. It tells a story!

Opening and Closing Dates:

Submissions open - 22 February 2023

Submissions close - 10 July 2023

Entry categories:

- Reception to Year 2
- Year 3 to Year 5
- Year 6 to Year 8

Prizes

1st, 2nd & 3rd prizes will be awarded in each year group category. Plus a People's Choice Award.

Full details of the competition can be found on the SASTA website: www.sasta.asn.au/



Malina Bachmann (above), Maxwell Sierp (below)



Exploring Science through the Future of Food

Post Dining are an Adelaide-based duo using creative tools to inspire students to build meaningful relationships with food and the environment. As artists-cross-science communicators, our expertise lies in designing immersive scenario-based experiences which explore contemporary themes in food technology, science and culture. For example, picture yourself in the scenario below:

Today on the 15th of June 2050 Australians are about to change the way we think about food with our new currency: Water Dollars. Back in 2020 no-one would have guessed that food would one day be measured by its water footprint. But after continuous and devastating extreme weather events in the 2020s, the government stepped in. Working with scientists, economists and food industry, Water Dollars were developed - and starting today all Australians will receive a set weekly allowance to spend on food. Many citizens are fuming as the luxury of being able to afford meat and dairy is a thing of the past. Yet others are embracing a new era of affordable low-footprint products made from crickets, jellyfish and wild camel! How are you going to spend your weekly allowance, will you break the bank or choose wisely?



This is one of four future food scenarios explored in our new teachers resource kit launching soon. Exploring futures of Growth, Restraint, Catastrophe and Transformation, scenario-based learning invites students to think, eat and discuss ideas in an interactive way. Questions and activities then encourage students to creatively consider what the future might taste like, while linking back to the Australian Curriculum across Science, Design and Technologies, and HASS.

Accessed via an online portal, resources include powerpoints, teaching notes, worksheets and activities. We also provide engaging videos and animation, audio soundbites, digital illustration, plus a web-based app which gives students a chance to try using Water Dollars to purchase ingredients for a burger. The four themes are adapted from research by the Australian Academy of Science and are based on our award-winning immersive theatre show "Eating Tomorrow".



We've also been using these concepts to deliver workshops in primary and secondary schools for the past two years with excellent feedback from students, even if not everyone is ready to try insects yet! For more info about our workshops and teacher's resource kit, visit www.post-dining.com.

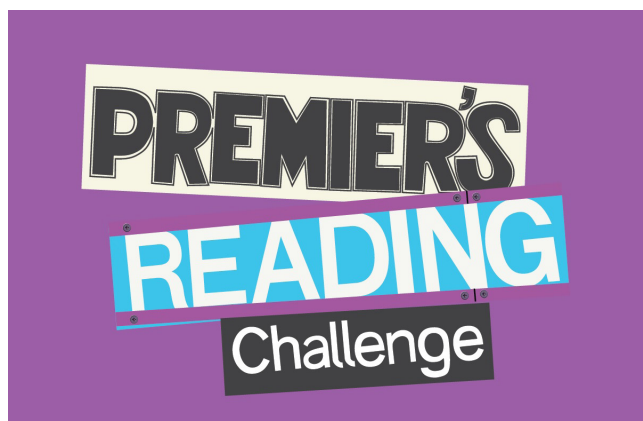
Premier's Reading Challenge

Once again SASTA was proud to partner with Inspiring SA and the Premiers Reading Challenge (PRC) to support the 2022 STEM Reading and Design Challenge.

Reading has the incredible ability to engage the student in new concepts, improve understanding of difficult ideas and promote science conversations and capabilities. Showing students how scientific concepts connect to things that they're passionate about allows them to gain confidence in science. More than this however, the STEM Reading and Design Challenge fosters imagination, using books to provide inspiration and encourage creativity.

The Premiers Reading Challenge STEM competition began in 2017 with 612 entries from 18 schools, and in 2022 we received 3353 entries from 58 schools. In 2020 we added a sub-category Space and in 2022 we also added Nature. Of the 3353 entries received, 34 award winners were selected.

Students were asked to draw, invent or design in response to reading science and nature-themed books from the Premier's Reading Challenge booklist.



We look forward to this year's creations in the STEM Reading and Design Challenge and to sharing more extraordinary student work inspired by reading!

The STEM Reading and Design Challenge will open in May 2023 and closes in July 2023. More information will be available on the website: <https://premiersreadingchallenge.sa.edu.au/>

BIOLOGY: LEVELS OF LIFE

Brian LeCornu and Tony Diercks

\$15.00

Biology: Levels of Life - Australian Curriculum Edition Textbook (\$64.95)

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!



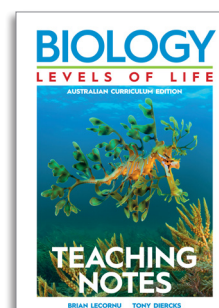
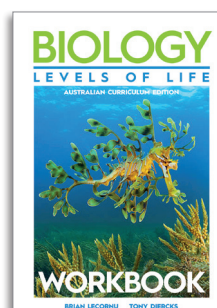
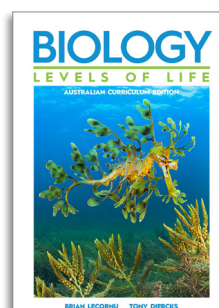
For full details visit the SASTA website.

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.



Educational Satellites to Inspire the Next Generation

The Australian Space Agency is anticipating that more than 20,000 new jobs will be created in our national space industry by 2030, creating an incredible opportunity for our students.

Robinson Aerospace is on a mission to educate students on space technology and career opportunities, ultimately inspiring them to pursue careers in our rapidly growing space industry.

RASCube is a flatpack educational satellite kit designed to look, feel, function and assemble just like a real satellite, but not go into space. With RASCube, your students can assemble a satellite, visualise its data wirelessly on-screen, run experiments and expand the satellite however they wish.

Whether you want to incorporate RASCube into your classroom, run a space technology workshop or just tinker after school, Robinson Aerospace provides all lesson plans and resources so you can hit the ground running and tick off those curriculum requirements.



ROBINSON
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If your school is ready to take the lead in educating the future of our growing space industry, head to robinson-aerospace.com to learn more about our 2023 Pilot Program and book a call.



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Living Science: Biology

Teachers will find these textbooks an invaluable resource for planning and developing student knowledge as it has comprehensive coverage of the science understandings of the Stage 1 & 2 courses. Students will find it a great resource to complement lessons and will develop a broader knowledge of Biology across many different contexts.

'Did you know?' breakout boxes throughout the text include related stories, concepts, perspectives and facts to help engage students in deeper learning.

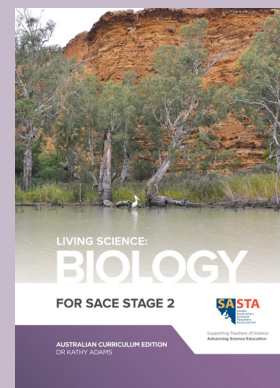
'SHE Alert' boxes are connected to the four SHE Key concepts: Communication and Collaboration, Development, Influence, and Application and Limitation.

These sections give students and teachers opportunities to consider how science and society interact to find solutions and overcome problems.

There are review questions throughout the books and at the end of each chapter. The Stage 1 textbook also has a list of possible Deconstruct and Design ideas at the end of each chapter, which could be used by the teacher to develop tasks. **Solutions are now available for both textbooks.**



\$49.00 each



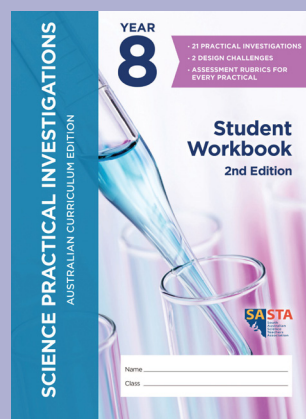
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STUDENT WORKBOOKS



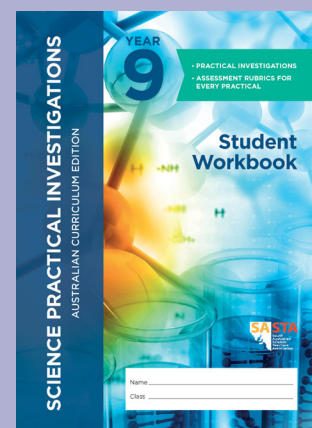
These write-in workbooks guide students through practical investigations, encouraging them to practice and enhance their inquiry skills, design procedures and answer questions about their learning.

- Explores Biological sciences, Chemical sciences, Earth and Space sciences and Physical sciences for the Year 8 or 9 Australian Curriculum
- Explanations of how to work scientifically, including manipulating variables, graphing and measurement
- Emphasis on science inquiry skills
- Assessment rubrics for each practical
- These workbooks reflect the current emphasis on STEM skills through the inclusion of Engineering Design Challenges



\$18.50 each

minimum order 20 copies



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, and 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.



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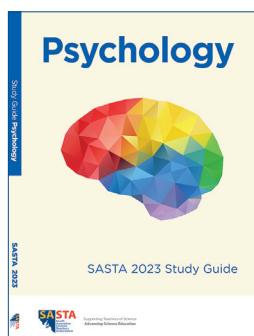
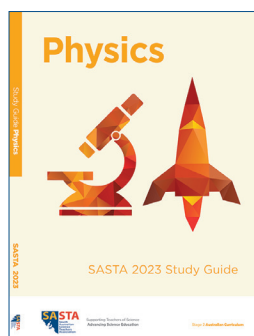
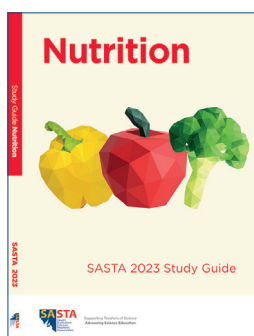
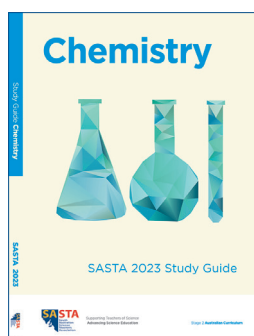
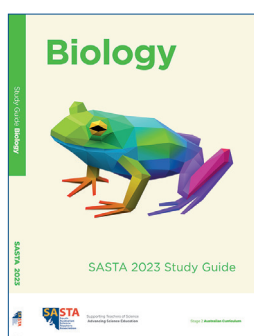
Available from sasta.asn.au

2023 STUDY GUIDES

Pre-order your copies now to ensure you don't miss out!

SASTA Study Guides are the complete resource for students preparing for Stage 2 SACE exams. These guides include questions with worked solutions covering each topic of the Subject Outline and address all sections of the exam.

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All new for 2023:

- Suggested solutions to the 2022 exams.

Biology

- All sections reviewed and any parts to questions beyond the scope of the course have been removed or modified.
- New questions have been added to all sections.

Chemistry

- Extended SHE questions and contexts.
- Thorough suggested solutions to the 2022 exam.

Nutrition

- Additional questions with worked solutions for all Nutrition topics.
- Science Inquiry Skills (SIS) chapter includes a breakdown to assist students writing an Investigation Report. Additional SIS questions included
- Science as a Human Endeavour chapter includes a breakdown to assist students in writing a SHE Report. Additional SHE exam-style questions have been added to allow for greater test and exam preparation.
- The addition of Case Study Practice Questions allows students to consider the over and under nutrition disorders, their symptoms and potential recommendations.

Physics

- Revision questions updated and new questions added.
- Solutions to questions updated to align with course requirements and expectations.
- Updated formatting of questions and solutions.
- All sections reviewed to align with the 2023 Subject Outline.

Psychology

- All sections reviewed and any questions beyond the scope of the course have been removed or modified.
- Design and Deconstruct and SHE resource sections have been reworked allowing students to more successfully prepare for both assessment types.
- Additional SHE exam-style questions have been added to allow for greater test and exam preparation.
- The inclusion of the 2022 SASTA Trial Examination and worked answers further supports students in their exam preparation.

Study Guides are due for delivery to SASTA in May 2023

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