



SASTA

May 2023

Newsletter



Contents

- 2 Contact SASTA
- 3 CONASTA 70
- 4 Term 2 Professional Learning
- 5 Early Career Teachers Conference
- 6 Mary Anning Art Prize
- 6 Recreating Lost Worlds at the State Library
- 6 Premier's Reading Challenge - STEM Reading and Design Challenge
- 9 Oliphant Science Awards
- 10 Community is the Key to Success

Upcoming Events

Implementing the Australian Curriculum: Science V9.0

Monday 22 May 2023

See page 4 for more details.

Oliphant Science Awards

Student registrations close **Friday 19 May 2023**

See page 8 for more details.

7-10 Australian Curriculum Science: How can we design and assess differentiated tasks?

Friday 9 June 2023

See page 4 for more details.

CONASTA 70 - Program Available

9-12 July 2023

See page 3 for more details.

Mary Anning Art Prize

Student registrations close **Monday 10 July 2023**

See page 6 for more details.

Early Career Teachers Conference

Call for Workshops open. See page 5 for more details.



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Association member of the Australian Science Teachers Association (ASTA)

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Newsletter copy deadlines 2023

(Advertising deadlines one week earlier)

Edition	Deadline
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.



PROGRAM AVAILABLE

We're excited to release the program for CONASTA 70. With 16 concurrent workshop sessions in each time slot, there is something for everyone!

Join primary and secondary teachers, lab officers and other members of the science education community at the major science event in Australia for 2023.

The conference theme, The Space to Innovate emphasises the importance of building a culture of continuous innovation at all levels of schooling in Australia.

Keynote speakers

- Professor Mary L Droser, University of California, Riverside: **Bringing the world-famous half billion year old fossils of the Ediacara Biota to South Australian students: In the classroom and in the field**
- Dr Kristin Alford, MOD.: **Stanhope Oration**
- Professor Christopher Daniels: **Developing an ecoliterate community through nature education programs**
- Professor Tanya Monro, Chief Defence Scientist

Cutting Edge speakers

- **Dr Dominic McAfee**, The University of Adelaide
- **Dr Erinn Fagan-Jeffries**, The University of Adelaide
- **Michael Waite**, Fertilis
- **Dr Sheryn Pitman**, Green Adelaide, Department for Environment and Water
- **Associate Professor Zohra Lassi**, The University of Adelaide
- **Trish Hansen**, Urban Mind Studio

More details from all our presenters can be found in the Conference program.

Offsite Workshops

The city location and the free tram gives us access to a range of cultural, scientific and health organisations along North Terrace, which will have been incorporated into the CONASTA 70 program through offsite excursions & workshops. This includes, SAHMRI, MOD., Art Gallery of South Australia, SA Museum, Lot Fourteen, Space Discovery Centre, Adelaide Botanic Gardens and more.

Social Functions

We're excited about the social activities on offer throughout the program including:

- Welcome to CONASTA 70 on Sunday 9 July at SAHMRI where you can enjoy local wine tastings from four of SA's best wineries
- Stanhope Social Event on Monday 10 July at the SA Museum. Delegates will have a chance to chat to SAM Senior Researcher Associate Professor Diego Garcia-Bellido and a team of post graduate students to learn more about their research in different palaeontology areas
- PIEFA Conference Banquet on Tuesday 11 July at Adelaide Oval with spectacular views and a 3 course dinner.
- Farewell Drinks on Wednesday 12 July where you can find out what the future tastes like!

Conference Program

The complete program of concurrent sessions is now available on the website with over 120 sessions to choose from.

So, come along in July to network with others and see what you can learn in order to teach and inspire your students! Register now.

www.conasta70.com.au



anzuk.education

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Professional Learning for Term 2 2023

Implementing the Australian Curriculum: Science V9.0

Monday 22 May 2023

9.00 am – 3.00 pm

Education Development Centre

Presented by Jason Greenslade and Brayden Pullen, Westminster School

AC 9.0 has been released and with that the need to make changes to our sequences/rubrics and curriculum documentation to fit with the new descriptors. This session will take a practical approach and show implementation (which we have done this year) and also cover (more briefly): task design, assessment types and rubrics.

Implementing changes due to AC 9.0

- What are the changes
- How can they work with what you currently have
- Moving topics between year levels
- Curriculum documentation
- Leading teams in a time of change – driving buy in
- Auditing

Assessing accurately and meaningfully

- Example assessments
- What needs to be added to what you might already have
- Meaningful assessment of soft skills in the age of AI (a discussion of what this means for your existing assessment tasks that are not tests)
- Integration of cross curricular priorities and the general capabilities

Rubrics

- Changes in AC 9.0
- Reports and investigations
- Tests
- Assessing against rubrics
- Moderation/benchmarking activities

7-10 Australian Curriculum Science: How can we design and assess differentiated tasks?

Friday 9 June 2023

9.00 am – 3.00 pm

Education Development Centre

Presented by Jason Greenslade, Curriculum Leader Science, Westminster School

This session will only focus on Australian Curriculum 7-10 Science courses – these are so critical for making sure we are retaining students in Science in the senior years. It is essential that we equip students in these year levels with confidence and the skills needed to explain, analyse and be critical.

We know that the profile of our middle school classes is also becoming more and more complex with a wide range of skills and learning needs.

This session aims to provide a framework (and plenty of practical examples) of the following:

- How to design and assess via rubrics in AC 7-10 Science for assignment and practical work
- How to design, structure and execute differentiated assessments in the 7-10 science classroom (+ examples!) – practicals and assignments!
- 7-10 Scientific reports – what should we put in there? What is appropriate?
- Moderation of student work and standard setting in each year level

The session will give you an opportunity to work on your own tasks, share with the group, moderate your own student work and engage in professional discussions about marking – so please bring plenty!

Professional learning calendar

Plan out your professional learning for the rest of the year! You can download the SASTA Professional Learning Calendar as a PDF on the website.

Go to www.sasta.asn.au/professional_learning

2023 Early Career Teachers Conference

Friday 13 October

Call for Workshops now open

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



Leading learning within and beyond the classroom

You may wish to consider choosing from the categories below when determining the focus of your presentation:

- Practical tips for teacher wellbeing
- Unpacking the curriculum
- Inquiry-based learning
- Assessment

More detailed ideas can be found here:
www.sasta.asn.au/professional_learning/early_career_teachers_conference

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.**

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.

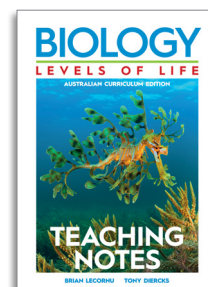
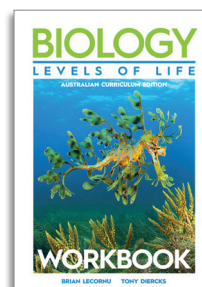
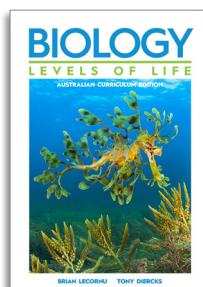
Biology: Levels of Life - Teaching Notes (\$120.00)

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.

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



For full details visit the SASTA website.



Mary Anning Art Prize

The aim of the Mary Anning Art Prize is to have young South Australian artists create an original piece of artwork that tells us something about the prehistoric life of South Australia. 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!

Check out this video to find out what the judges are looking for in a successful entry:

<https://bit.ly/3p7YpNU>

Submissions are now open and will close on 10 July 2023



Do you know someone aged 5 to 12, who might want to know how to paint a plesiosaur swimming through what is now the South Australian outback? Maybe they want to draw a sketch of a giant, prehistoric wombat or use charcoal to create an underwater scene from more than half a billion years ago.

In a workshop featuring singing palaeontologist Professor Flint, internationally renowned palaeo-artist Katrina Kenny, and palaeontologists from the Flinders University Palaeontology Society and the University of Adelaide Palaeontologists, they will learn to do just that.



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.

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

Recreating Lost Worlds

Creating the Art of Prehistoric South Australia

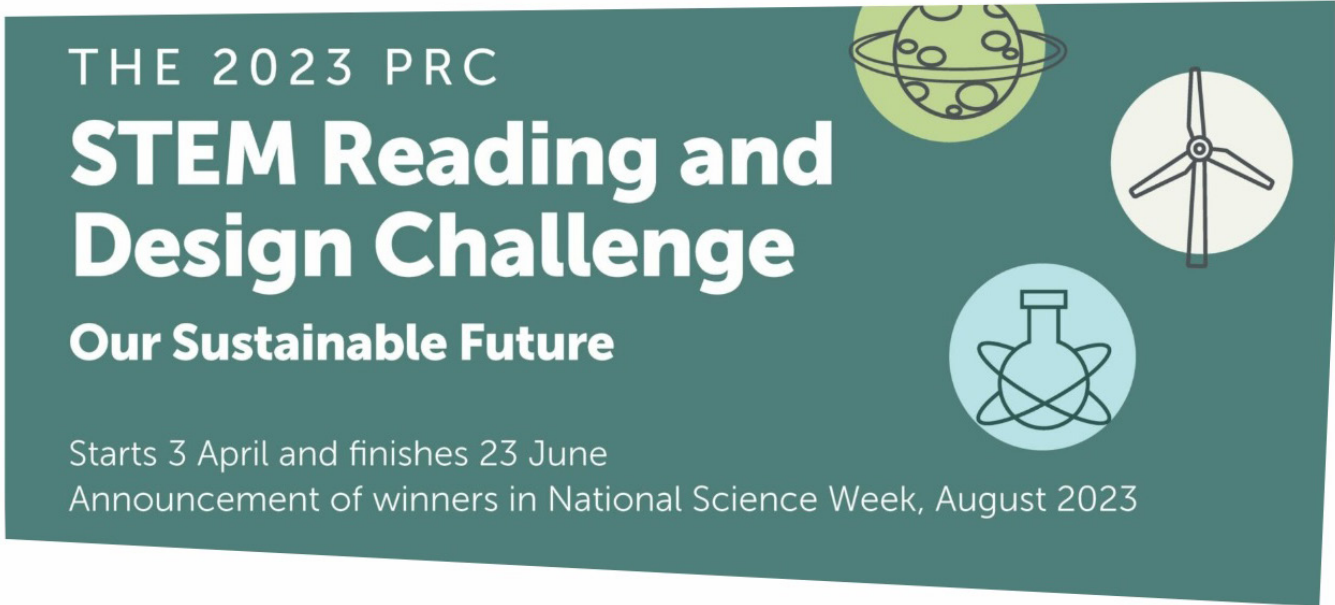
Sunday 4 June

State Library of South Australia

The Dinosaur University Mary Anning Art Prize is an art prize for young people, aged 5 to 12, to create a work of art that explores South Australia's amazing prehistoric story. If you know a young person who's thinking of entering, this workshop is just for them.

These workshops are made possible through the generous support of Inspiring South Australia. All art materials will be supplied.

All children must be accompanied by an adult.



THE 2023 PRC
STEM Reading and Design Challenge
Our Sustainable Future

Starts 3 April and finishes 23 June
 Announcement of winners in National Science Week, August 2023

SASTA and the Oliphant Science Awards are proud to be partnering with Inspiring SA and the Premier’s Reading Challenge (PRC) to support this year’s STEM Reading and Design Challenge.

The challenge encourages students to read about Science, Technology, Engineering and Maths (STEM) in the lead up to National Science Week. This year there are three additional themes - **NATURE IN SOUTH AUSTRALIA, SPACE & GREEN HYDROGEN**

The Premier’s Reading Challenge booklist contains excellent STEM books. To enter you need to read a STEM, nature or space themed book, preferably from the Premier’s Reading Challenge booklist and then use your imagination for your entry.

There are great prizes to be won in 4 age categories.

For full details about the STEM Reading and Design Challenge visit: <https://bit.ly/3NHfLvo>

Winning entries will be on display as part of the Oliphant Science Awards Open Day at Science Alive! from 4 - 6 August 2023.



Links to the Oliphant Science Awards

There are many opportunities for students to combine their OSA project work with the STEM Reading and Design Challenge. We have created STEM booklists for each age category from the PRC booklist. Students can select books from these booklists that will support them with their OSA project.

Examples:

- An R-2 student may be working on a Poster for OSA around the theme of Bushfires and Storms. They could source inspiration for their OSA Poster from one of the books listed in our STEM booklist (e.g., Bilby and the Bushfire by Joanne Crawford). They could then also complete the STEM Reading and Design Challenge task for entry to that competition.
- A Year 3-5 student can use a STEM booklist book (e.g., The Super Parp-buster by Janeen Brian) to inspire their OSA invention or model and then submit a copy of their invention plan/description to the STEM Reading and Design Challenge.

Age	PRC Task	Possible OSA link
R-2	Create	Posters
3-5	Invent	Models & Inventions
6-9	Design	Posters
Mature	Review	Science Writing

2023

SASTA OLIPHANT
SCIENCE AWARDS

SA'S LARGEST
SCIENCE
COMPETITION

Don't forget student registrations close on **Friday 19 May!** If you haven't registered / re-registered as a School Coordinator you will need to do this before registrations close so you can enter your student registrations online: www.oliphantscienceawards.com.au

The website and booklet have everything you need to know about this year's competition, including registration fees, deadlines, rules, forms, and titles (where relevant).

Key dates

- **Friday 19 May:** Student registrations close
- **Friday 19 May:** Judges registrations close
- **Friday 9 June - Friday 30 June:** Citizen Science, Multimedia, Science Writing and Scientific Inquiry entries and Reports for Programming, Apps and Robotics **MUST** be submitted online
- **Monday 24 July - Friday 28 July:** **Crystal Investigation and Models & Inventions reports / risk assessments MUST be submitted online.** Supporting documents for Games may also be submitted
- **Saturday 29 July:** Programming, Apps & Robotics Judging Day (strictly by appointment)
- **Tuesday 1 August:** Crystal Investigation, Games, Models & Inventions, Photography & Poster entries to be delivered.
- **Friday 4 - Sunday 6 August:** Open Day at Science Alive!
- **Friday 20 October:** Presentation Ceremony

Rowe Scientific Regional Science & Engineering Awards

- Entry is open to students in remote and regional schools*
- Entry in Models & Inventions and Scientific Inquiry categories only
- Entries will be judged in both the overall competition and the Regional Science & Engineering Awards.

**See the Information Booklet for more details.*

Further Student Opportunities

We're excited to have some great opportunities for students to submit their entries into National Competitions.

- **The South Australian Museum** is sponsoring the Photography category and winning entries of natural fauna, flora or natural land formations may be eligible to enter the South Australian Museum Nature Photographer of the Year competition.
- Prize winners and highly commended entries from **Crystal Investigation** will be automatically entered into the National Crystal Growing Competition. Find out more here: https://www.raci.org.au/RACI/Web/Schools/Crystal_Growing2.aspx
- Entry to the **ASTA i3 Awards** is open to school students from Preschool to Year 12 who have demonstrated exceptional results in their state or territory STEM awards program. This is via nomination only through the Oliphant Science Awards committee. See more here: <https://asta.edu.au/programs/asta-i3-awards/>

Community is the Key to Success

By Rachel Pillar, Brayden Wilson, Natasha Florance and Lenny Laver

2022 was quite the year for Kangaroo Island Community Education (KICE) in the Oliphant Science Awards. After several years spent building the profile of the Awards at KICE and some great successes, forty-five KICE students registered thirty-four projects. This might not sound like many, but for a small, regional school it was exciting. As the year progressed students (as well as the teachers and parents supporting them) found it increasingly challenging to work on their projects, and the impact of absences due to illness took its toll. In the end, nineteen students in Reception to Year 12 submitted fifteen different projects and we were feeling a bit deflated.

Compounding these challenges, in the days leading up to on-site project delivery, we were anxiously watching the weather forecast. A massive front was expected to come through the night before projects had to be delivered, and all ferries over the coming days were going to be cancelled! The community really came together to support our students' projects to be delivered. Lilly, one of our SSOs, frantically organised for our AEU representative, Michelle, to meet our pastoral care worker, Pat, at the ferry terminal. Michelle was booked on the last ferry sailing that morning, and Pat dropped everything to do a mercy dash to Penneshaw to deliver our projects! Michelle safely transported them to the Adelaide Showgrounds, however after everything we had been through, we felt that it really didn't matter whether we won prizes or not – simply finishing and delivering our projects had been monumental.

However, the lengths our students, staff and extended community went to paid off, with eight projects winning either sponsor prizes or category awards in KICE's most successful year yet! We were astonished to come away with four sponsor prizes from Rowe Scientific, first place in the Department for Education Young Scientist Awards 9-12, the Flinders STEM Academy Regional Student Prize R-12 and the 11-12 Platinum Sponsor Prize (Defence Science and Technology Group Secondary School Prize)!

We were keen to hear from some of our prize-winning students to discover more about their experiences in participating in the Oliphant Science Awards, as well as their advice for this year's entrants.

We asked each student to respond to four questions. Here are their answers.

Questions

1. What were the most memorable parts of your experience in entering last year's Oliphant Science Awards?
2. What was most challenging (and how did you overcome challenges)?
3. What do you think makes KICE so successful as a school in entering the Awards?
4. What advice would you give to this year's entrants on how to create a successful project?

Lenny (Year R-2 Models and Inventions)

My most memorable experience in the Oliphant Science Awards was building my model. The biggest challenge was thinking of an idea. KICE is successful because we tried hard. Having Thursday catch ups with the teachers so they could help and see how our projects were going really helped. My advice to students in 2023 is to get help from Mum and Dad. Talk to your teachers and go to support sessions if they are run by your school.



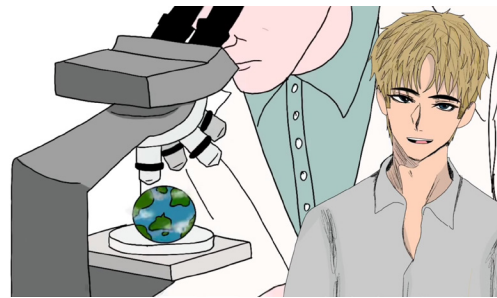
Tash (Year 5-6 Games)

The most memorable thing for me was creating all the drawings and making the little tokens for my game with my Mum's help. It took a long time, but I enjoyed spending time with her. Challenges I overcame were trying to figure out new and interesting (but still easy to follow) game rules and also researching bees for new and interesting facts for the question cards. At KICE children are encouraged to join OSA, but it is not compulsory. Kids that are doing it are interested in science and want to research and learn more about a topic of their choice (and there are so many options - it is sometimes hard to choose!). There is such a wide variety of interests among KICE students and that everyone likes different things, and the teachers help expand our knowledge and achieve great things. Kangaroo Island is also such a unique place and we are surrounded by so many interesting things in nature - it's fun to share this in a game or a poster. My advice to other students is to look at the things that other people do in that category and try to learn and do something new and interesting, because that is the intent of the Oliphant Science Awards.



Brayden (Year 11-12 Multimedia and Photography)

The most memorable part of my experience in last year's Oliphant Science Awards was the presentation night, particularly the speeches. It was challenging to fully flesh out an open-ended question and include comprehensive content in a such short video for a rather large field of science. I think KICE is successful because of the teacher support and passion of students to learn in the classroom and discover more outside of school. The relevancy of the topics to the students also helps. My advice to entrants in this year's competition is to fully understand the task and pick a topic that has some relevancy to you, or that you are particularly passionate about. Relate the topic back to reality in some way. For multimedia specifically, write the script almost like it is an essay, and try your best to produce the highest quality presentation as possible.



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.

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

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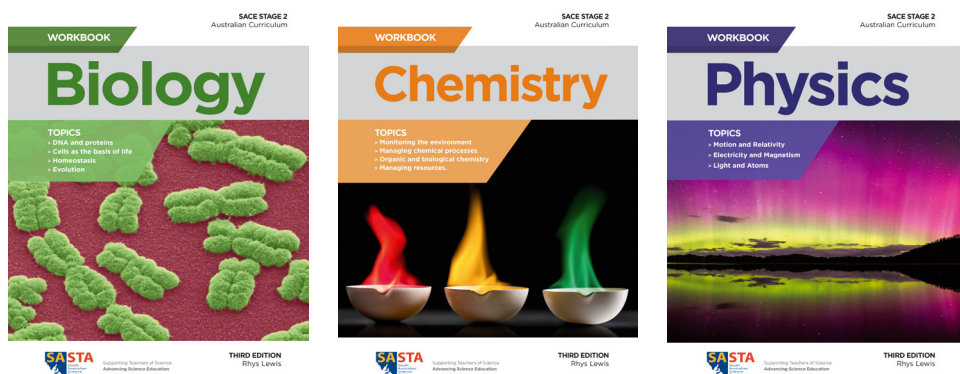
NEW

SACE 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!

\$15 per chapter per subject

Topic 1 videos are now available!

More information is now available on the SASTA website.



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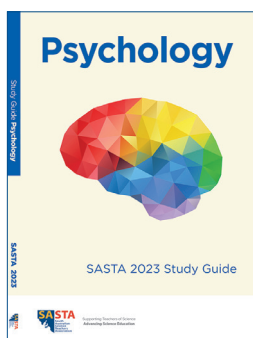
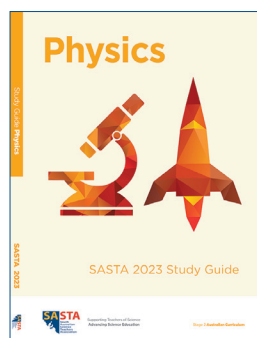
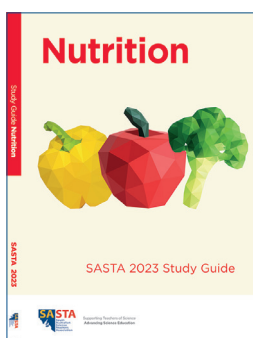
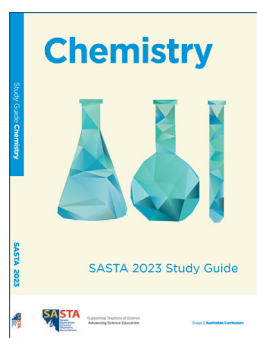
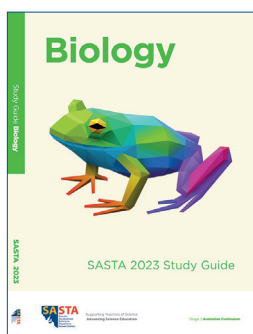
Supporting teachers of science
Advancing science education

2023 STUDY GUIDES

Now available to purchase on the SASTA website!

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.

\$33 each
+ delivery
or collect
orders from the
SASTA office



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 now available

Available to order at sasta.asn.au