

SASTA

May 2025

Newsletter



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Upcoming Events

Members FREE Webinar Series (May)

- **Fostering Engagement: Strategies to Minimise Classroom Disruption**
 - **Unlock AI's transformative power in your school**
- See page 3 for more details.

Design and Deconstruct Workshop

Monday 16 June 2025 - NEW DATE!

See page 3 for more details.

Oliphant Science Awards

Student registrations close **Sunday 18 May 2025**

Open Day at Science Alive! **1-3 August 2025**

Mary Anning Art Prize

Student registrations open **Wednesday 21 May 2025**

See page 10 for more details.

Premier's Reading Challenge - STEM Competition

Student entries close **Friday 20 June 2025**

More details: <https://bit.ly/4k3k6Wt>

Early Career Teachers Conference

Call for Workshop Presenters. See page 4 for more details.



@SASTAInc



@sascienceteachers



South Australian Science Teachers Association

South Australian Science Teachers Association Inc.

Association member of the Australian Science Teachers Association (ASTA)

249 Henley Beach Road, Torrensville SA 5031

P 08 8354 0006 | E office@sasta.asn.au | W www.sasta.asn.au

Your Science Community

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249 Henley Beach Road, Torrensville SA 5031
ABN: 22 938 317 192
P: 08 8354 0006 F: 08 8354 0008
E: office@sasta.asn.au W: www.sasta.asn.au

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Newsletter copy deadlines 2025

(Advertising deadlines
one week earlier)

Edition	Deadline
August	11 July
November	17 October

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

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Professional Learning for Term 2 2025

Design & Deconstruct Workshop - NEW DATE!

Monday, 16 June | 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. It will also cover the writing and marking of practical questions for tests and exams as well. There will be time to examine your own student work and participate in some cross-moderation and marking of student work.

Morning Session: 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 Session: 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

“A range of resources and strategies provided which included different science subjects and it was a really good opportunity to network with educators from different fields.” - 2024 attendee

Upcoming Member Events

Webinar: Fostering Engagement: Strategies to Minimise Classroom Disruption

Wednesday, 21 May

4:00 PM - 5:00 PM | Online

Presenter: Michael Lincoln, CESA

This workshop will explore some of the reasons children and young people disengage from learning and become disruptive in the classroom. With an understanding of these in mind, the workshop will explain a series of teacher-centred strategies that can be put in place to encourage engagement in learning and minimise the potential for disruptive and anti-social behaviour.

Webinar: Unlock AI's transformative power in your school

Wednesday, 10 September

4:00 PM - 5:30 PM | Online

Presenter: Chris Bush, AI for Education Expert

In this webinar, AI expert and Leading Teacher Chris Bush will teach you how to harness ChatGPT and AI for revolutionary results. You'll learn how to use AI for planning, assessment, marking, and more. Join us to discover the power of AI to transform your classroom and school so you can work smarter, not harder.

SASTA Annual General Meeting

Thank you to everyone who joined us at the SASTA Annual General Meeting, held during the Annual Conference on Tuesday 15 April. We're delighted to confirm the official election of Alex Fowler and Sarah Finney, who had been serving in casual vacancies, and to welcome back Peter Turnbull, who was re-elected, to the Board for a three-year term.

At the recent Board meeting, Dina Matheson was re-elected as President, Claire Hughes as Vice-President and Peter Turnbull as Treasurer. We're lucky to have such a passionate and experienced team guiding SASTA, and we look forward to another great year ahead with your support.



Early Career Teachers Conference



Y O U R
SCIENCE
COMMUNITY

Friday, 10 October 2025
Nazareth College, Senior Campus

Call for Workshop Presenters

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 careers 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.

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

Unpacking the curriculum

- highlighting the essential components of the science curriculum e.g. SHE, General Capabilities, to allow teachers to develop effective and engaging lessons and teaching programs
- teaching specific aspects of the science understanding content
- STEM education

Supporting Teacher Wellbeing

- an exploration of the realities of teaching and the challenges that may arise in these early years.

- professional and personal wellbeing
- classroom management skills such as building relationships and maintaining high expectations and consistency
- working with peers, administrators, and parents to build support and foster collaboration
- online teaching strategies

Inquiry-based learning

- developing creative strategies to integrate the science inquiry skills and critical and creative thinking into the teaching of science
- building student capacity to construct their own learning.
- teaching social and emotional learning skills

Assessment

- discussing how different types of assessment can be used to monitor student achievement and guide future learning opportunities
- e-exams

Share-a-thon

We will be running the popular share-a-thon again this year! An informal setting for multiple presenters to share an innovative teaching idea. Each presenter will share a strategy or tool during a 10-minute presentation.

This is a great first session for new conference presenters or as a way for seasoned presenters to share a go-to strategy or tool.

Workshop submissions close Sunday 6 July
Visit: www.sasta.asn.au/professional_learning

Marine Plastics: From Pollution to Solution

Dr Nina Wootton, The University of Adelaide

The problem with plastic

Plastic is everywhere. It's in our homes, our workplaces, our oceans, and even in the food we eat. Once considered a groundbreaking material for its durability and versatility, plastic has become one of the most pressing environmental issues of our time. Every year, we produce around 380 million metric tonnes of plastic, and a staggering amount of it ends up in the environment. Scientists estimate that 170 trillion plastic particles are floating on the ocean's surface, while millions of tonnes sink to the seafloor. This pollution affects marine life at every level, from tiny plankton to whales and turtles.

What are microplastics?

Microplastics are tiny plastic particles, typically smaller than 5mm, that come from larger plastic debris breaking down or are intentionally manufactured for use in products like cosmetics, industrial abrasives, and synthetic fabrics. These particles are now found in every environment on earth, from deep-sea trenches to ice in Antarctica. Because of their small size, microplastics can be ingested by marine life, working their way up the food chain and potentially impacting human health.

My research on microplastics

As a marine scientist, I've spent years investigating how plastics enter the environment and affect marine ecosystems. At the University of Adelaide's School of Biological Sciences, our team studies where microplastics accumulate, how they move through food webs, and their potential impacts on marine life and human health.

We've explored how much microplastic Australian seafood species are ingesting (don't worry — it's low compared to global studies), what organisms live on plastics in Australian waters, and how pollutants bind to plastics. Our work also looks at accumulation in mangroves and seagrasses, pathways like stormwater and river outflows, and contamination risks along the seafood supply chain. We're also collaborating on a national guide to help standardise microplastic sampling in water, sediment, biota and air.

Empowering educators

Understanding plastic pollution is essential for the next generation, and teachers play a crucial role in helping students grasp the scale of the issue and potential solutions. That's why I'm involved in projects that bring plastic research into classrooms. One initiative, Toys for Turtles, is a community-driven program in north-east Arnhem Land that works with Indigenous rangers, schools, and local communities to tackle marine debris. It focuses on recycling plastic waste into useful products while also teaching students about the cultural significance of sea turtles.

Educators from all over Australia can access free teaching resources from Toys for Turtles, which include lesson plans, hands-on activities, and information on marine plastic pollution. These resources help students understand where plastics come from, how they impact ecosystems, and what we can do to reduce waste. You can find these materials at <https://www.toysforturtles.com/education-resources>.

Moving towards solutions

The fight against plastic pollution isn't just about research — it's about action. Plastics are a great gateway into sustainability education because they're tangible and relatable. Students can take real steps to reduce plastic use, join clean-ups, or explore recycling innovations — all of which can inspire broader interest in topics like biodiversity and renewable energy.

Teachers, students, and scientists all have a role to play in tackling this challenge. I encourage educators to explore these resources and bring the conversation into their classrooms. Together, we can work toward a future with less plastic and healthier oceans.



2025 SASTA Annual Conference Wrap-up

The 2025 SASTA Annual Conference took place on Monday 14 and Tuesday 15 April at Glenunga International High School, with 104 delegates coming together for two days of professional learning, collaboration and inspiration.



Delegates were welcomed by Glenunga's eye-catching inflatable flask and dinosaur, which created a memorable start to a vibrant two-day program of professional learning and connection.

This year's theme, Decoding Science, aligned with the 2025 National Science Week theme and encouraged attendees to explore new ways of interpreting and communicating science in the classroom.

The Conference opened with a compelling keynote by Rahul Choudhary, Flinders University, who presented Rethinking Physics Education from Newtonian to Einsteinian Paradigms in Schools. On Tuesday, Angus Netting from Inspire STEM Education shared Advanced Microscopy driving research, industry and student engagement, offering a fascinating look at how microscopy is connecting scientific research with schools and industry.



A strong line-up of Cutting Edge presentations delivered new and thought-provoking ideas from across the education and research sectors:

- Turning failed antibiotics into weedkillers – Dr Tatiana Soares da Costa, The University of Adelaide

- Decoding Science – Glasses and optical fibres – Florian Calzavara, The University of Adelaide
- Unlocking AI's Potential in Engineering and the Water Sector – Jessica Bohorquez, Aurecon / Our Water Connection
- Microplastic and plastic pollution: The latest research for educators – Dr Nina Wootton, The University of Adelaide
- Genetic Diversity in Plants – Professor Michelle Waycott, The University of Adelaide

The program featured more than 40 workshops, with a number of sessions generating strong engagement and valuable discussion, including:

- The Art of Inspiring a Love for Science in Junior Primary Students – Laura Brace, Mitcham Primary School



- Experiential Approaches to Teaching the Australian Deep Time Story – Vera Weisbecker, Flinders University
- Turning Students into Scientists Using Game-Based Approaches – Karl Klose & Michael Kasumovic, Loxton Lutheran School & Arludo
- The Science of Storytelling: Unlocking Engagement, Memory & Meaning in the Classroom – Ross Riach, Gleeson College



- Strategies for Metacognitive Thinking - Renee Rees, Cardijn College
- Running Design Practicals in the Middle School - Jason Greenslade, Westminster School
- Nuclear-Powered Submarines: A Deep Dive into the Fundamentals of Radioactivity, Fission and Radiation Safety - Bridget Murphy, ANSTO

This year's Credit Union SA / SASTA Outstanding Contribution to the Teaching of Science Award was presented to Matthew Little from Seaview High School by John Elvin of Credit Union SA.

The Helen Castle Memorial Scholarships was awarded to Nicole Blackwell and Felicia Harding, with Professor Jamie Craig, 2024 Scientist of the Year, presenting the awards and sharing insights into his pioneering research into the genetics of glaucoma.

The Tuesday afternoon Happy Hour provided a great opportunity for connection and celebration, including the presentation of honorary life membership to Pete Turnbull. It was also wonderful to see such a strong turnout from primary educators across the state.



SASTA extends a sincere thank you to all presenters, delegates, exhibitors, and our Gold Sponsor Credit Union SA for supporting this year's Conference. Your contributions help ensure our professional learning community continues to grow, share and evolve.

Credit Union Advert

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

We were excited to announce the winner of the 2025 Credit Union SA / SASTA Outstanding Contribution to the Teaching of Science Awards at the SASTA Annual Conference on Monday 14 April. The award was presented to **Matthew Little from Seaview High School** by John Elvin from Credit Union SA.



Matt's leadership in science education is defined by his commitment to innovation, student engagement, and professional learning. As Convenor of the 2025 SASTA Psychology Conference, Matt played a central role in developing a dynamic program that connected cutting-edge educational research with real-world classroom strategies. His careful selection of expert keynote speakers and engaging workshops offered educators valuable tools to inspire learning and curiosity in their own classrooms.

Matt's teaching practice is characterised by creative approaches that make science both accessible and exciting. By integrating psychology and pop culture, current events, and hands-on learning experiences—including modelling neurons with lollies and exploring optical illusions—he fosters deep engagement and scientific inquiry among his students. His use of interactive platforms like Quizizz and Blooket provides immediate feedback and adaptive learning pathways, ensuring that each student is supported in their scientific journey.

A passionate advocate for evidence-based teaching, Matt draws on Cognitive Load Theory and Rosenshine's Principles of Instruction to design structured, inquiry-rich lessons. Beyond his own classroom, he mentors colleagues and leads professional development workshops, empowering teachers across his school to embed metacognitive strategies and foster learner agency.

Matt's influence extends through his ongoing leadership in professional learning, helping to build a culture of reflection, innovation, and continuous improvement. His dedication has not only transformed his own teaching but has also inspired others across the education community—making him a truly deserving recipient of this year's award.

Helen Castle Memorial Scholarship

The Helen Castle Memorial Scholarships were awarded to Nicole Blackwell and Felicia Harding, with Professor Jamie Craig, 2024 Scientist of the Year, presenting the awards.



Nicole Blackwell - Bordertown Primary School

Nicole is a dedicated Primary Science Specialist at Bordertown Primary School, currently teaching Years 1-4. Although she entered the role without formal science qualifications, she embraced the opportunity over a decade ago and quickly discovered a true passion for teaching science.

Nicole loves seeing her students engaged, collaborating, and thinking deeply—guided by her three favourite words: notice, wonder, and curious. Her classroom motto, "Be Curious," reflects her commitment to fostering a love of inquiry and exploration. Nicole is honoured to receive the Helen Castle Memorial Scholarship, which has supported her attendance across both days of the conference and her continued growth as a science educator.



Felicia Harding – Berri Regional Secondary College

Felicia is a passionate and dedicated science educator whose teaching journey began in Mount Gambier through the Targeted Graduate Recruitment Program. Since then, she has worked across regional and metropolitan schools—including Whyalla and Parafield Gardens High School—where she fostered inclusive, supportive classrooms and promoted accessible senior science pathways aligned with local community and industry needs.

Now serving as the Maths and Science Leader at Berri Regional Secondary College, Felicia brings energy and enthusiasm to creating hands-on, engaging learning experiences. Her commitment to making science accessible has already led to a 55% increase in practical experiments across the school this year. A standout moment has been watching the excitement of Year 7 students as they don aprons and goggles and light Bunsen burners for the first time.

Felicia's passion lies in sharing scientific phenomena and inspiring curiosity in her students, nurturing their sense of wonder about the world around them. She is honoured to receive the Helen Castle Memorial Scholarship, which has given her the opportunity to connect with colleagues and explore innovative strategies—particularly in junior school physics, a highlight of this year's conference program.

Honorary Life Membership

SASTA was proud to present an Honorary Life Membership to Pete Turnbull at the SASTA Annual General Meeting on Tuesday 15 April, in recognition of his long-standing contribution to the Association and science education in South Australia.



Peter Turnbull

For over 40 years, Peter Turnbull has been a driving force in science education and a steadfast advocate for professional associations. In recognition of his exceptional leadership, tireless commitment, and transformative contributions, the South Australian Science Teachers Association (SASTA) proudly bestows upon him the highest honour—Honorary Life Membership.

Peter's contributions to SASTA have been extensive and deeply influential. As a SASTA Board member for more than two decades (1998–2007, 2011–2016, 2019–2025), he has provided invaluable strategic leadership and governance. He has served as SASTA Treasurer (2001–2004, 2019–2025) and SASTA President (2004–2007), ensuring the association's financial sustainability and continued impact. His national influence is equally remarkable, having represented SASTA as an appointed ASTA Board Member (2001–2007, 2021–2023) and serving as

ASTA President (2008–2009). He was also instrumental in the success of CONASTA 63 (2014) and CONASTA 70 (2023) as a key convener.

Beyond governance, Peter's passion for science education has profoundly shaped SASTA's programs and outreach. As Convener of the Oliphant Science Awards competition since 2011 he has played a pivotal role in fostering scientific curiosity and engagement among students. His steadfast advocacy for teacher professional learning, curriculum development, and resource production has elevated SASTA's standing as a premier science education association.

Peter's dedication has not only strengthened SASTA but has also inspired generations of science educators. His enduring legacy is one of leadership, innovation, and unwavering service to the profession. It is with immense gratitude and admiration that we celebrate his contributions and welcome him as an Honorary Life Member of SASTA.

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
- Art that tells a story, not just a picture or a sculpture

Submissions open on Mary Anning's Birthday - Wednesday 21 May and close in October.



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.

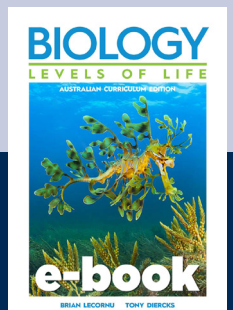
Full details of the competition can be found on the SASTA website: www.sasta.asn.au

View the 2024 winning entries at: www.sasta.asn.au/student_activities/mary-anning-art-prize

BIOLOGY: LEVELS OF LIFE

Brian LeCornu and Tony Diercks

**BOTH E-BOOKS
UPDATED FOR 2025**



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.**

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

For full details visit the SASTA website.

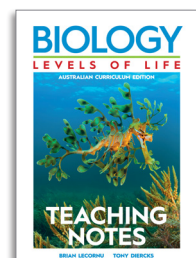
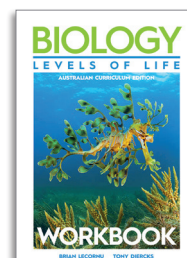
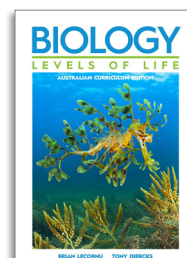
BIOLOGY: LEVELS OF LIFE - WORKBOOK **PRINTED VERSION \$24.40 | E-BOOK \$9.50**

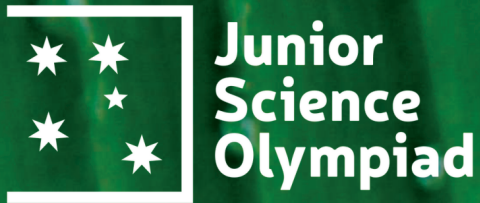
Written specifically to complement the textbook, the workbook covers all Science Understandings of the Biology subject outline. It can be used in conjunction with the textbook, or on its own as an aid for understanding and revision. By completing answers to the workbook questions, students will develop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

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.





EMPOWER JUNIOR SCIENTISTS FOR A BRIGHT FUTURE



2025 Junior Science Olympiad Exams

Years 9 & 10 - Wednesday 11 June

Years 7 & 8 - Friday 13 June

Registrations close 5 June



This program is proudly delivered by



**AUSTRALIAN
SCIENCE
INNOVATIONS**

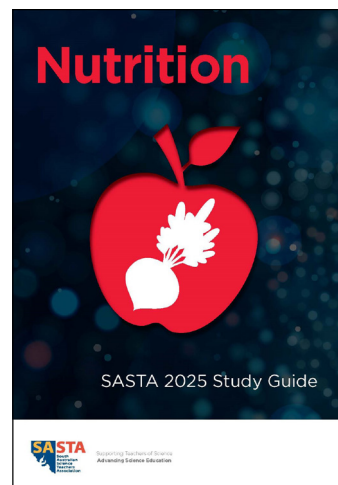
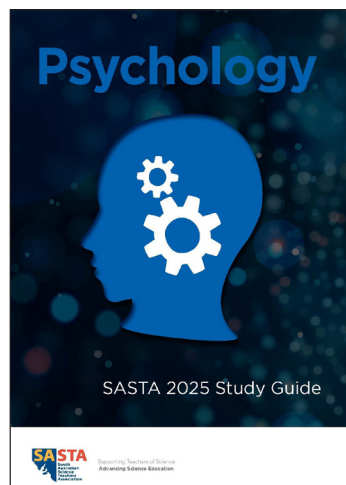
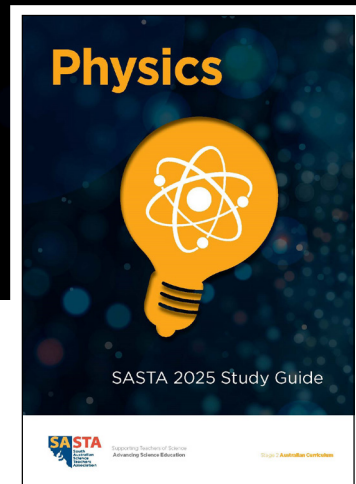
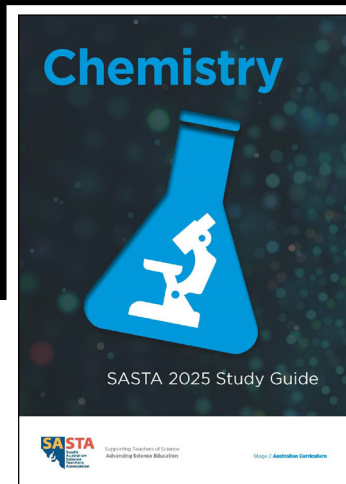
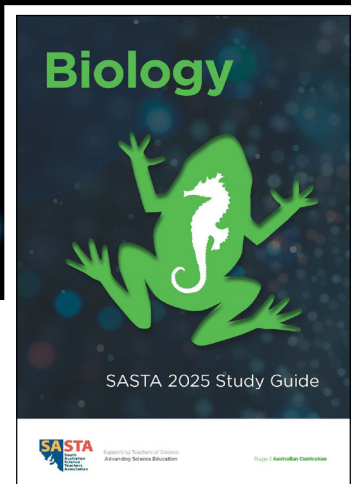
02 6125 6228

asi@asi.edu.au

www.asi.edu.au

[@ausscienceinnovations](https://www.instagram.com/ausscienceinnovations)

SASTA 2025 Study Guides



SASTA Study Guides are the perfect companion for students gearing up for their Stage 2 SACE exams. These guides provide a comprehensive range of questions, accompanied by worked solutions covering all topics in the Subject Outline. To keep things fresh and relevant, we update our guides each year with solutions from the previous year's exams and introduce brand new questions to further enhance exam readiness.

\$35 each

plus delivery or orders can be collected from the SASTA office

Available Now!

Available to order at www.sasta.asn.au