SASTA **November 2023** lewsletter



Contents

- 2 Contact SASTA
- From the President
- 2024 SASTA Membership
- Professional Learning for Term 1, 2024
- SASTA Annual Conference - call for workshops
- **Psychology Summer** Conference
- Oliphant Science Awards
- SASTA Award Nominations
- SASTA Honour Award
- Post Dining
- SASTA Board Member 10 Profiles

2024 Events

Psychology Summer Conference 2024

Friday 12 January 2024, Westminster School See page 6 for details.

Teachers new to teaching Stage 2 Science

- Biology Friday 9 February 2024
- Physics Friday 9 February 2024
- Chemistry Friday 16 February 2024
- Nutrition Friday 16 February 2024
- Psychology Friday 23 February 2024
- Scientific Studies Friday 23 February 2024

See page 4 for more details.

Lab Induction Workshop

Monday 19 February 2024. See page 4 for more details.

The SHE Task Workshop

Friday 15 March 2024. See page 4 for more details.

Pre-Service Teachers Learning Day

Friday 22 March 2024. See page 4 for more details.

Annual Conference - Call for Workshops

15-16 April 2024, St Peter's Girls' School See page 5 for more details.







South Australian Science Teachers Association Inc.

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Supporting Teachers of Science | Advancing Science Education

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Newsletter



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Newsletter copy deadlines 2024

(Advertising deadlines one week earlier)

Edition Deadline

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

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From the President

Hello SASTA peeps!



And a begrudging hello to El Niño... Your sister's much nicer. I think so anyway.

As we begin tying up the loose ends, trying not to pull our hair out as kids come up with some interesting excuses for nonsubmission, I must assign you all one more task. And

that is to make sure you renew your SASTA membership for 2024! Think of it as a holiday gift to yourself. You'll need it for some our exciting professional development coming up in Term 1.

Hopefully, you'll be able to catch up with some of our Board members at these professional development opportunities. We've got a great board, who bring such a diverse range of skills and experiences. Please take the time to read their profiles.

Recently, SASTA presented its Honour Award at the Educators SA World Teacher's Day dinner. Congratulations to Cliff Rothenberg, a most worthy recipient of this award. He has contributed an incredible amount to science education in SA over the decades, not only through his teaching, but also as a member of the SASTA Board, hosting the SASTA BBQ, and his ongoing support of SASTA events.

We also just had our OSA Presentation evening in October, where the Oliphant Trophy was presented to our youngest winner to date: Shaya Ismail from Adelaide Botanic High School. She is such an inspiring young person, who has definitely got a keen passion for STEM.

Wishing you all a wonderfully relaxing and joyful holiday season. Put your feet up, have a drink (personally, I like milk), and just be a blob:)

Ngaityalya,

Dina Matheson

2024 SASTA Membership

It's that time of year already and 2024 SASTA membership is now open for renewal!

You can renew your membership on the SASTA website here: https://www.sasta.asn.au/renew/form.

Plan your 2024 with us using our jam packed 2024 Professional Learning calendar! We have planned a range of new member events and excursions, with more to come.

Check out the Professional Learning calendar here: https://www.sasta.asn.au/professional_learning.

We are currently working with our web developers to create a new 'member dashboard' on the SASTA website. Where you will be able to find all things SASTA and everything you need to make the most of your membership. Stay tuned for these developments!

Have you seen our latest video? We caught up with some of our members to find out what it means to them to be a SASTA member and what they get out of their membership. We hope this resonates with you. Check it out here: https://bit.ly/SASTAmembership



We sincerley appreciate your support of SASTA in 2023, your presence in our science community is so important and we look forward to working with you again next year!

Don't forget, your membership will expire on 31 December 2023, so if you want to register for any 2024 professional learning after this date, your 2024 membership will need to be paid before you register to be eligible for the member price.



Professional Learning for Term 1 2024

Teachers new to teaching Stage 2 Science

Walkers Arms Hotel 9.00 am - 3.00 pm

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

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

Biology

Friday 9 February

Presented by Andrew Sayers (Henley High School)

Physics

Friday 9 February

Presented by Michael Smith (Concordia College)

Chemistry

Friday 16 February

Presenter TBC

Nutrition

Friday 16 February

Presented by Elizabeth Arthur (Nazareth Catholic College)

Psychology

Friday 23 February

Presented by Carolyn Pinchbeck & Ben Whyte (Xavier College)

Scientific Studies

Friday 24 February

Presented by Helen Godfrey (Open Access College)

Member Excursion: FuseTec

FREE for Members!

Friday 22 March 2024

Fusetec is an award winning, advanced manufacturing medical training device company specialising in anatomical accurate, surgical training models.

More details to come.

Lab Induction Workshop

Monday 19 February 2024 9.00 am - 4.00 pm

This workshop is designed to address the needs of teachers who are new to teaching in a science laboratory. Instruction will include; safety guidelines, including how to complete risk assessment, equipment use and behaviour management. Teachers will be guided through typical laboratory lesson scenarios and have the opportunity to plan and complete a practical investigation.

The workshop will be held in a school laboratory setting.

The SHE Task Workshop

Friday 15 March 2024 9.00 am - 4.00 pm

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 crossmoderation and marking of work/drafts.

Pre-Service Teachers Learning Day

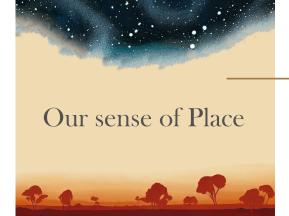
FREE for Members!

Friday 22 March 2024 9.00 am - 4.00 pm

This Professional Learning Day has been specifically designed for pre-service teachers beginning their journey into teaching & placements.

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 pre-service teachers.

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.



Call for Workshops now open



SASTA Annual Conference

15 & 16 April 2024 St Peter's Girls' School

The 2024 SASTA Annual Conference is a celebration of the rich scientific heritage and innovation rooted in South Australia, with a special focus on First Nations science.

This conference aims to delve into the unique connection between people, land, and knowledge, exploring how this profound sense of place has shaped scientific discoveries and innovations.

Educators play a pivotal role in bridging this connection, and the conference will provide insights into how teachers can bring these themes into the classroom.

By understanding and appreciating our sense of place, we can inspire future generations to be stewards of the land and innovators in science.

Call for Workshops close on 9 February 2024.

Possible presentations could include:

First Nations Science:

- Workshops exploring traditional ecological knowledge and how it complements Western scientific approaches.
- Strategies for fostering curiosity, critical thinking, and respect for Indigenous knowledge among students.

South Australia as our place:

- Workshops that highlight the extraordinary flora and fauna found in South Australia.
- Presentations showcasing South Australia's significant scientific achievements, from pioneering geological research to cutting-edge biotechnology.
- Interactive sessions where participants can engage with emerging technologies and scientific innovations.

More details available at www.sasta.asn.au

BIOLOGY: LEVELS OF LIFE

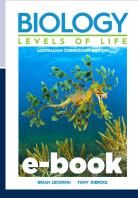
Brian LeCornu and Tony Diercks

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.

\$15.00

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



For full details visit the SASTA website.

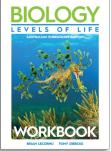
Biology: Levels of Life - Australian Curriculum Edition Workbook (\$24.40)

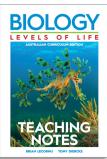
Written specifically to complement the textbook, this workbook covers all Science Understandings of the Biology subject outline. It can be used in conjunction with the textbook or on its own as an aid for understanding and revision. By completing answers to the workbook questions, students will develop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









SUPPORTED BY



PSYCHOLOGY SUMMER CONFERENCE

12 JANUARY 2024

'Starting strong is good...finishing strong is epic!'

~ Robin Sharma



8:45 am

WELCOME

Carolyn Pinchbeck & Nicole Marinos, Conference Convenors

9:00 am

KEYNOTE ADDRESS

Claire McKellar, Adolescent specialist Counsellor & Youth Mental Health First Aid Trainer

Adolescence is the peak age of onset for mental illness, with half of all people who will ever have a mental illness, experiencing their first episode prior to 18 years of age.

In recognising that Psychology teachers, due to their psychological knowledge and strong rapport with students, are naturally sought out by students who may be experiencing a range of mental health concerns; this keynote aims to provide current statistics around adolescent Mental Health and offer a variety of strategies teachers can practically implement, when responding to adolescents who disclose developing mental health concerns.

As Child Protective Practices are important when supporting students with mental ill health, Claire will identify the legal requirements staff need to meet and best practice ways to do so; and provide attendees with a clear, effective, and swift way to evaluate how significant students mental health concerns are and what steps should be followed, to protect both the students in your care – and yourself.

10:00 am

CONCURRENT WORKSHOP SESSION 1

1.1 KEYNOTE FOLLOW-UP WORKSHOP

Claire McKellar, Adolescent specialist Counsellor & Youth Mental Health First Aid Trainer

As a follow to her keynote presentation, attendees of this workshop will have the opportunity to practice how to respond to a variety of scenarios of student disclosure of mental ill health and receive further support and feedback on effectiveness of strategies used.

1.2 CHATGPT HOW TO - DON'T GET LEFT BEHIND!

Ange Travers, Xavier College

Join Ange Travers in an exploration of Al's future in education. In this interactive session, Ange uncovers Al's potential to simplify teaching and enhance student experiences. Learn how to create Al prompts for personalised resources, dive into Al's impact on research tasks, explore Al-powered learning games, and see how Al can transform exam preparation. Equip your classroom with these practical Al strategies and make Al your ultimate teaching tool.

 $\ensuremath{\mathsf{NB^{**}}}$ It will be beneficial if attendees have signed up for ChatGPT before this session.

1.3 DEVELOPING SEQUENCE AND SCOPE OF LEARNING IN PSYCHOLOGY ACROSS YR 10,11 AND 12

Sotiria Valchoulis, Marryatville High School

Mapping content across three year levels involves a lot of careful consideration and reason-based decision making to enable the best content exposure and learning outcomes for your students. This workshop explores how one school has organised a fluent sequence across the year levels to help students progressively grow and develop essential skills for successful learning. We will discuss the content taught in topics, essential scaffolding and overlap of key skill development, assessment approaches, and modifications.

10:45 am

MORNING TEA

11:00 am

SACE EXAMINATION AND MODERATION REVIEW - PART 1

12:00 pm

CONCURRENT WORKSHOP SESSION 2

2.1 DEVELOPING SEQUENCE AND SCOPE OF LEARNING IN PSYCHOLOGY ACROSS YR 10,11 AND 12

Sotiria Valchoulis, Marryatville High School

Mapping content across three year levels involves a lot of careful consideration and reason-based decision making to enable the best content exposure and learning outcomes for your students. This workshop explores how one school has organised a fluent sequence across the year levels to help students progressively grow and develop essential skills for successful learning. We will discuss the content taught in topics, essential scaffolding and overlap of key skill development, assessment approaches, and modifications.

2.2 WRITING TEST QUESTIONS TO THE CORRECT LEVEL TO PREPARE STUDENTS FOR THE STAGE 2 SACE EXAM

Ethan Murphy, Muirden Senior College

Do your year 12 students seem to 'bomb out' in the end of year exam?! Are you interested in helping your students better prepare for the SACE Exam and understand the work-standard required for success in the exam? Come to the Question Crafting 101 Workshop and discover the secrets of weaving exam-style questions that tick all the right boxes: relevant, engaging, and spot-on with the current subject outline standards for the SACE Digital Exam.

Have you ever wondered how to design those head-scratching, but oh-so-perfect, exam questions that truly test your students' scientific understandings? How to craft a bank of questions that provides an equal opportunity for students across the entire spectrum of ability to achieve success at a personal level? Say goodbye to the guesswork and hello to the science of question creation at the Question Crafting 101: Unlocking the Blueprint to Exam-Standard Questions Workshop.

2.3 COMMUNITY STUDIES - THE DREADED CONVERSION

Ben Whyte, Xavier College

Are you concerned about a student in your Psychology changing to community studies at the last-minute or having a student in your class that has decided to undertake community connections in Psychology? This presentation offers insights into what to anticipate and how to streamline the process of transitioning a student into community studies. You will be provided with practical examples to guide you in assisting students to attain the necessary 'C' grade while ensuring your school maintains a 100% SACE completion rate. This presentation is tailored for teachers who may lack experience with students undertaking community studies in Psychology or require additional confidence in teaching Psychology as a community connections SACE course.

12:45 pm

LUNCH

1:00 pm SACE

SACE EXAMINATION AND MODERATION REVIEW - PART 2

2:30 pm

CONCURRENT WORKSHOP SESSION 3

3.1 THE AI ENHANCED CLASSROOM

Ange Travers, Xavier College

Join Ange Travers in an exploration of Al's future in education. In this interactive session, Ange uncovers Al's potential to simplify teaching and enhance student experiences. Learn how to create Al prompts for personalised resources, dive into Al's impact on research tasks, explore Al-powered learning games, and see how Al can transform exam preparation. Equip your classroom with these practical Al strategies and make Al your ultimate teaching tool.

NB** It will be beneficial if attendees have signed up for ChatGPT before this session.

3.2 QUESTION CRAFTING 101: UNLOCKING THE BLUEPRINT TO EXAM-STANDARD QUESTIONS

Ethan Murphy, Muirden Senior College

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3:15 pm

CONFERENCE PLENARY

Carolyn Pinchbeck & Nicole Marinos, Conference Convenors

3:30 pm

HAPPY HOUR

Supported by





Oliphant Science Awards

Congratulations to all prize winners in this year's Oliphant Science Awards. A list of winning and highly commended entries is available at oliphantscienceawards.com.au. 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 2023 there were 2,553 registered entries across 10 categories and 6 age groups and 3,312 students from 119 schools involved in this year's competition.

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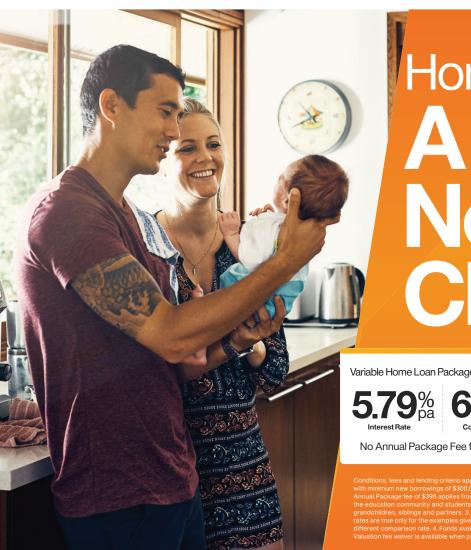
The 2023 Oliphant Trophy Winner was Shaya Ismail from Adelaide Botanic High School for her Models & Inventions entry 'VAMOS: Vehicular Autonomous Marine Observation System'.

We were excited to have so many entries in our new Citizen Science category for 2023! Congratulations to the inagural winners; Class project from Coromandel Valley Primary School and Jin Xing, Daniel Teng & Asad Khan from Glenunga International High School.

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

We're excited to partner with Science Alive! again for our 2024 Open Day event. Put Friday 2 August - Sunday 4 August 2023 in your calendar! Find out all the details and key dates for 2024 on the OSA website and in the Information Booklet (released later this month).

Find out about the 2024 competition at oliphantscienceawards.com.au



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2024 SASTA Awards - Nominations now open

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.

Nominations close Monday 11 March 2024 at 4.00pm. Online nominations can be completed at www.sasta.asn.au/about_us/awards.

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

The Outstanding Contribution to the Teaching of Science Awards recognise teachers' contributions to the education of students in science.

Helen Castle Memorial Scholarship

This scholarship is in memory of Helen Castle, a dedicated and enthusiastic science teacher who tragically died during the Eyre Peninsula bush fires in 2005. The scholarship is designed to assist country science teachers attend the SASTA Annual Conference and gain professional development to assist themselves and other country teachers to maintain a high standard of science teaching in country areas. Two (2) scholarships of \$500 will be awarded to enable country-based science teachers to attend the SASTA Annual Conference, 15-16 April 2024.

2023 SASTA Honour Award Recipient

Congratulations to Cliff Rothenberg, who was presented with SASTA Honour Award at the Educators SA World Teachers Day celebration on Friday 27 October!





Cliff has been a dedicated and active supporter of SASTA over many years. He has been instrumental in the organisation of two national conferences, supported early career teachers. provided professional learning and hosted social

gatherings. Cliff's contributions, both in terms of leadership and expertise, have been invaluable, and his positive impact on our organisation is undeniable. Cliff is the perfect example of what it means to be a dedicated and passionate member, and I have no doubt that his future endeavours will continue to benefit our association and its members.

Newsletter

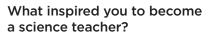
Board Member Profiles

Get to know your board members! We sent out a list of questions to each of our board members to find out a little bit more about them. Check out some below, with more to come on the SASTA website soon.

JARROD JOHNSON

School: Pulteney Grammar School

Current role: Science and Technologies teacher, Learning Designer



I love Science, talking to people and passing on what I know and my passion for Science to others. It seemed the logical progression to become a Science Teacher. I also love creating interactive learning opportunities.

How many years have you been teaching? 19 years

Why did you join the SASTA Board?

I joined the board to reconnect to the Science community and to give back to the team.

Are there any other committees / organisations you are involved with?

UniSA C3L, Google Educators Group, AI for Education

If you could travel back in time and attend any scientific discovery or experiment in history, which one would it be, and why?

I would like to be there when Galileo looked through his telescope and saw the moons of Jupiter for the first time. Even today with a simple telescope looking at the moon as a solid ball, or the tiny dots of light in a perfect line around the circular disc of Jupiter is amazing. I can imagine that it would have been an amazing moment. More recently would be when the Hubble Ultra-deep field photo was developed showing 10,000 galaxies in a tiny sliver of black space. It makes us feel so small and recognise how big the universe is.

If you were to sum up your teaching philosophy in one sentence, what would it be?

"All students should be challenged, but not frustrated; we need to create learning opportunities for them to stretch their boundaries." Jarrod Johnson



School: Ardtornish Primary School
Current role: Science Specialist
Teacher

What inspired you to become a science teacher?

I was always interested in the world around me, so when I

became a teacher it seemed like the natural step.

How many years have you been teaching? 10 years

Why did you join the SASTA Board?

I had been a member of SASTA since I started teaching so I though it was finally time to give back to an organisation that had helped me so much.

If you could travel back in time and attend any scientific discovery or experiment in history, which one would it be, and why?

I love space, I'd love the opportunity to be around when Galileo was doing his work.

If you were to sum up your teaching philosophy in one sentence, what would it be?

I encourage students to use Science to develop their own understanding of the world around them.

JORDAN DELLA PIETRA

School: Woodville High School

Current role: Science and STEM Coordinator

What inspired you to become a science teacher?

I have always loved learning. I remember helping my sister with her schooling from a young age. After completing studies in my passion, marine biology, I wanted to help others that might not have the support system I had or that I provided for my sister.

How many years have you been teaching? About 6 years

Why did you join the SASTA Board?

To give back to the community that made me feel like I could bring new ideas to schools with confidence that these ideas were shared by some great minds.

If you could travel back in time and attend any scientific discovery or experiment in history, which one would it be, and why?

There are so many! I guess the discovery of electricity or something microscopic, like the tardigrade. Imagine finding a tiny creature that is pretty much immortal!

If you were to sum up your teaching philosophy in one sentence, what would it be?

My teaching philosophy is really about nurturing a passion for learning, driven by a personal curiosity about science and how the world works.



Board Member Profiles

BRENTON BANHAM

School: St Peter's College

What inspired you to become a science teacher?

Science enriches lives. It is one of the best ways to appreciate all of creation and our place in it. Science is one pathway for a joyful life!



On the flipside, scientific thinking is important in a society that is full of crazy, self-interested, deceitful decision making and misinformation. Everyone deserves to know, or at least respect, how to think scientifically.

Most important to me, science teaching is an honest way to earn a living.

As an aside, the photograph shows me next to a bust of Howard Florey, one of the pioneers of penicillin. Florey went to a South Australian school! Isn't that amazing – all of the changes to health and to medicine that flowed from his insight. All of the lives that have been saved! Our students need to hear of contributions such as this and to recognise the importance.

How many years have you been teaching?

I started teaching in 1989 - the year Taylor Swift was born. A late starter, somehow she has edged past me in terms of audience size. Despite my want for global success, teaching has been good to me. At first, I used it as a way of travelling abroad (for anyone interested that way, it can be just as easy to find work overseas as it is in Australia). Next, I had the chance to work at resourcing the gap that exists between secondary and tertiary science education. Since then, I have had the chance to work in lots of different SA secondary schools.

Why did you join the SASTA Board?

It is a privilege to be on the SASTA Board. SASTA is the single most important organisation for science teaching in South Australia. There is a lot going on in science education in South Australia that needs to be shared and SASTA has the mission to do this.

If you could travel back in time and attend any scientific discovery or experiment in history, which one would it be, and why?

I gave this some thought, but I would stick to the here and now. There is more going on now in science than ever before and I only lack the time and imagination to keep up with it all. I think I would have liked to live next door to James Lovelock to feed off his creative and independent mind and his relentless energy. If you were to sum up your teaching philosophy in one sentence, what would it be?

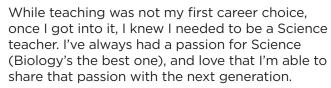
Keep learning! There is a multitude of different ways to teach and appreciate science!

DINA MATHESON

School: Woodville High School

Current role: Science & Digital Technologies teacher, International Students Program Manager

What inspired you to become a science teacher?



How many years have you been teaching? A dozen.

Why did you join the SASTA Board?

To be honest, this was not something I'd ever considered, but when the opportunity presented itself, I thought: "Why not?" I have a chance here to support the science education community in South Australia, and to promote excellence in science teaching. It's been a wonderfully challenging learning adventure, and I look forward to continuing my work as a SASTA Board member.

If you could travel back in time and attend any scientific discovery or experiment in history, which one would it be, and why?

You know what? I would just love to go back to my early years in life, and watch myself discover the world and its wonders for the first time. And, because it's me (and because I have no idea how time travel works), I would know what's going on in my head, and therefore know exactly what I was thinking and feeling at the time of those discoveries. How cool would that be? There is such joy in watching someone discover anything for the first time.

If you were to sum up your teaching philosophy in one sentence, what would it be?

Ask all the questions!



Resources

STAGE 2 STUDENT WORKBOOKS

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