SASTA South Australian Science Teachers Association

YOUR SCIENCE COMMUNITY

Early Career Teachers Conference

10 October 2025

Nazareth College, Senior Campus

Conference Program

8.00am	Registration
8.30am	Opening and Welcome
9.00am - 9.45am	Session 1
9.50am - 10.45am	Session 2
10.45am	Morning Tea
11.10am - 12.05pm	Session 3
12.10pm - 1.05pm	Session 4
1.05pm	Lunch
1.50pm - 2.45pm	Session 5
2.50pm - 3.50pm	Share-a-thon
4.00pm	Close and Happy Hour

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Workshop Sessions

Foundations	Innovative Pedagogies	Tools & Strategies	STEM in Context
Session 1			
1.1 Transition from Provisional to Full Registration *Adrian Dilger, Catholic Education SA*	**1.2 Wow to Purposeful Learning: Supporting Learners to Move from Watching to Wondering to Working Scientifically** *Denise Rule and Anthea Ponte, Department for Education*	**1.3 Running the Room - How to Manage Behaviour in the Labs** *Oliwia Derda, Daniel Mawhinney, St Columba College*	**1.4 Using a Dispositional Teaching Approach to Broaden Student Opportunities for Growth** *Abby Macpherson, Seaview High School*
Session 2			
2.1 Moderating with ACARA 101 *Dina Matheson, Specialised Assistance School for Youth*	**2.2 Low-prep, High-impact: Digital Tools to Engage the Modern Learner (Mathematics and Science focused)** *Jakob Roth, Mercedes College*	**2.3 Tracker Software in Science** *Paul Gavini, Modbury High School*	**2.4 Preparing Students for Online Exams** *Sarah Shoobridge, Scotch College, Adelaide*
Session 3			
3.1 Skills with Chill *Karina Darling, St Mark's College, Port Pirie*	**3.2 PBL - What Does This Even Mean?** *Jarrod Johnson, Pulteney Grammar School*	**3.3 Tips for increasing engagement and safety in Science** *Lara Golding, Marryatville High School*	**3.4 Agriculture, the ultimate STEM subject** *Sue Pratt, AgCommunicators*
Session 4			
4.1 Running Practical Work Efficiently *Jason Greenslade, Westminster School*	**4.2 Strategies for Metacognitive Thinking** *Renee Rees, Cardijn College*	**4.3 Dealing with AI in Science** *Jarrod Johnson, Pulteney Grammar School*	**4.4 Learning Outside the Classroom: Making the Most Out of a Visit to the Zoo** *Ellie Carless, Zoos South Australia*
Session 5			
5.1 Teaching Earth's Movements: Tools & Tectonics *Kieran Meaney, SA Museum*	**5.2 Making Physics simple** *Daniel Rabbett, Sacred Heart College*	**5.3 Outreach inspiration for the Circular Economy** *Jo Hendrikx, KESAB environmental solutions*	
Share-a-thon			

An informal setting for multiple presenters to share innovative teaching ideas. Each presenter will share a strategy or tool during a 10-minute presentation and delegates will rotate around the room.

Workshop Abstracts

Session 1

1.1 TRANSITION FROM PROVISIONAL TO FULL REGISTRATION

Adrian Dilger, Catholic Education South Australia

Teaching is a dynamic and challenging profession. Teachers have a professional obligation to develop and maintain professional relationships with a diverse range of learners, communicate with parents, act ethically, promote positive values and maintain and raise professional standards. Moving to (full) registration is a continuum of professional growth for a teacher as they transition from the Graduate level of the Australian Professional Standards for Teachers to the Proficient career stage. During this session you will learn about the process to transition to (full) registration, gathering evidence and the role of the evaluator.

1.2 WOW TO PURPOSEFUL LEARNING: SUPPORTING LEARNERS TO MOVE FROM WATCHING TO WONDERING TO WORKING SCIENTIFICALLY

Denise Rule and Anthea Ponte, Department for Education

Looking for ways to approach science that are engaging and curriculum-connected? This practical workshop invites early career R-10 teachers to explore a series of short, fun, low-prep science experiments designed to spark a sense of discovery and deepen conceptual understanding.

You'll actively trial a set of hands-on experiences and discover how each one aligns with the Science Curriculum, with a focus on thinking and working scientifically and making real-world connections. Together, we'll unpack how these 'tiny sparks' can be used to prompt rich learner thinking, check for understanding, and build your confidence in engaging learners through science.

1.3 RUNNING THE ROOM - HOW TO MANAGE BEHAVIOUR IN THE LABS

Oliwia Derda, Daniel Mawhinney, St Columba College

Creating a calm, respectful, and productive learning environment is essential for every classroom, but in the science lab, where safety and engagement go hand in hand, managing behaviour becomes even more critical.

In this workshop, we draw on our collective experiences to explore how effective behaviour management underpins great science learning. Labs present unique challenges and opportunities, and we will explore how consistent routines, clear expectations, and proactive teacher presence support both safety and student engagement.

We will unpack the idea that "behaviour is a curriculum", something that must be explicitly taught, reinforced, and modelled, and examine how this concept plays out in a science classroom. From the first moment students enter the lab, how we establish norms, respond to disruption, and maintain focus has a direct impact on learning outcomes.

Together, we will explore ready-to-implement strategies, setting up lab expectations, and de-escalation tools and techniques for resetting class culture. This session offers practical tools, shared expertise, and the opportunity to refine your approach to managing behaviours in the labs.

1.4 USING A DISPOSITIONAL TEACHING APPROACH TO BROADEN STUDENT OPPORTUNITIES FOR GROWTH

Abby Macpherson, Seaview High School

This practical and research-informed workshop introduces early career teachers to dispositional teaching—a powerful approach that strengthens student agency and develops effective learners. Drawing on Ron Ritchhart's Cultures of Thinking in Action and the OECD's Future of Education and Skills 2023, the session explores how cultivating productive learner dispositions can be embedded into everyday teaching and assessment practices. Aligned with the South Australian Curriculum, participants will engage in collaborative activities to identify key learner dispositions, design learning opportunities that foster growth, and build reflective classroom cultures. The workshop also models strategies to create a safe, supportive space for professional dialogue and reflection, empowering teachers to confidently implement dispositional thinking in their own classrooms.

Workshop Abstracts

Session 2

2.1 MODERATING WITH ACARA 101

Dina Matheson, Specialised Assistance School for Youth

So you've recently graduated, landed a job, and are now immersed in the chaos that is teaching. At least it's fun, because you can "blow stuff up"! Right?

As you dish out the tasks, the marking begins to pile up. What do you do with it all? How do you know you're being fair? Does that incident with Mike still play on your mind?

This workshop introduces those teaching the Australian Curriculum V9 Science to the process of moderation and design of quality assessment tasks. There will be an opportunity for some low-stakes peer moderation. To truly get the most out of this, please bring along a copy of any Science task that you have, de-identified.

2.2 LOW-PREP, HIGH-IMPACT: DIGITAL TOOLS TO ENGAGE THE MODERN LEARNER (MATHEMATICS AND SCIENCE FOCUSED)

Jakob Roth, Mercedes College

Discover several free and simple digital tools that require minimal preparation time which can be used to supplement existing lessons which engage students and offer unique insights. OneNote as a learner management tool will be shared to showcase how it can be used to streamline lessons and help students stay organised. Several Lesson Starters for Mathematics will be shared that motivate students and practice fundamental skills. To generate interest and spark curiosity, Desmos Classroom can be used to guide students in all key concept areas in Mathematics. Formative assessment tools using Quizizz will be shared and how best to manage these tools effectively for improved student learning outcomes.

2.3 TRACKER SOFTWARE IN SCIENCE

Paul Gavini, Modbury High School

Tracker Video Analysis and Modeling Tool is a free, open-source software that empowers science educators and students to explore real-world phenomena through video analysis and dynamic modeling. Widely adopted across secondary and tertiary education, Tracker supports inquiry-based learning and fosters deep engagement with scientific concepts. Its versatility across disciplines makes it a STEM-rich technology that should be considered part of every science teacher's foundational skill set.

In physics, Tracker enables precise analysis of motion, forces, energy, and momentum. Students can track objects, generate graphs, and overlay models to compare theory with experimental data-making abstract principles tangible and measurable.

In chemistry, Tracker supports the study of physical systems, reaction rates, and absorption phenomena such as Beer's Law. By extracting data from video experiments, students can quantify changes and visualize chemical processes in action.

In biology, Tracker facilitates the analysis of cellular movement, biomechanics, and behavioral studies. It allows for accurate measurement and modeling of biological motion, from microscopic organisms to human gait.

Tracker promotes scientific thinking, data literacy, and modeling skills-core competencies in STEM education. Its integration into teaching practice enhances curriculum delivery, supports cross-disciplinary learning, and equips students with tools to observe, analyze, and understand the natural world through evidence-based inquiry.

2.4 PREPARING STUDENTS FOR ONLINE EXAMS

Sarah Shoobridge, Scotch College, Adelaide

As online assessments become increasingly common in schools, early career teachers play a crucial role in helping students navigate this shift with confidence. This practical session will explore strategies for preparing students for online exams, focusing on both technical readiness and cognitive skills. We'll cover how to build familiarity with digital platforms, manage time effectively in an online environment, and support students in developing typing stamina, digital literacy, and exam mindset. The session will also include tips for designing formative tasks that mirror online exam conditions, and how to reduce anxiety by embedding small habits into everyday learning. Whether you're supporting students through high-stakes assessments or low-pressure practice, this workshop will equip you with tools and approaches to set them-and yourself-up for success.

Workshop Abstracts

Session 3

3.1 SKILLS WITH CHILL

Karina Darling, St Mark's College, Port Pirie

Trying to get your students to have better lab skills? Silently panicking each time they leave a teat pipette sticking out of a beaker? Then this session is for you!

Walk through how to teach junior secondary students (7-9) lab skills that will last. From counting drops to lighting a Bunsen burner, you will both do and learn how to teach a range of basic lab skills needed for High School science.

A hands-on session for all science teachers that you'll leave feeling confident and ready to teach. There will also be a range of resources available for you to take with you to help you plan, teach and assess Years 7-9 science.

3.2 PBL - WHAT DOES THIS EVEN MEAN?

Jarrod Johnson, Pulteney Grammar School

Dive into the world of PBL-whether it's problem-based, project-based, or practical-based learning-and discover how these approaches can transform your science classroom into a hub of creativity and curiosity. This workshop begins by exploring opportunities to design integrated learning experiences across curriculum areas, year levels, and topics, all while building key student competencies. Learn how to craft engaging, hands-on challenges that spark inquiry and make science meaningful. You'll explore strategies to design your own activities, adapt existing resources, and tap into videos, real-world problems, and student interests to drive learning. Whether you're just starting out or looking to reinvigorate your approach, this session will provide the tools and inspiration to make PBL a powerful part of your teaching practice.

3.3 TIPS FOR INCREASING ENGAGEMENT AND SAFETY IN SCIENCE

Lara Golding, Marryatville High School

There are things experienced teachers say and do in the classroom (and laboratory) to increase student engagement and decrease the chances that students will misbehave â€“ it's not as magic as it may seem. In this workshop I will discuss and model strategies for gaining students' attention, managing student movement, asking whole class questions and group work. Using these strategies we can increase the likelihood students will be on task and thinking about Science and we can better manage safety risks in the laboratory. These skills are backed by recent research and AITSL papers but the workshop will focus on learning and using practical classroom management and engagement skills, not listening to research. This workshop is aligned with AITSL Standard 4: Create and Maintain Supportive and Safe Learning Environments, HITS 5: Collaborative Learning and HITS 7: Questioning.

3.4 AGRICULTURE, THE ULTIMATE STEM SUBJECT

Sue Pratt, AgCommunicators

If you are looking for a real-world STEM context, agriculture is the perfect match. SA's Lead Agriculture Teacher Sue Pratt will take you through an interactive workshop where she will showcase how food and fibre production utilises key STEM skills for problem solving and innovation. Ag is a great way to excite your students when we connect the plate to the paddock. No previous experience or school farm needed!

Session 4

4.1 RUNNING PRACTICAL WORK EFFICIENTLY

Jason Greenslade, Westminster School

The secondary science lab can be busy; when you fill it with 20-30 adolescents, it needs to be organised. This workshop is designed to discuss how to organise yourself and the practical environment to ensure it is a safe space where work gets done efficiently. Jason will use several practical examples plus provide resources on how to accomplish this.

Workshop Abstracts

4.2 STRATEGIES FOR METACOGNITIVE THINKING

Renee Rees, Cardijn College

This interactive professional development session explores how explicit teaching of metacognitive strategies can enhance student learning, engagement, and independence. Participants will unpack what metacognition looks like in practice and learn how to embed it within existing routines and curriculum. Drawing on high-impact teaching strategies and cognitive load theory, the session models a range of classroom-ready approaches that help students plan, monitor, and evaluate their thinking. Educators will engage in hands-on activities, collaborative discussion, and structured reflection, leaving with practical tools and strategies to implement immediately. Follow-up opportunities allow teachers to share implementation experiences and deepen their understanding of metacognitive instruction.

4.3 DEALING WITH AI IN SCIENCE

Jarrod Johnson, Pulteney Grammar School

An open, collaborative space designed specifically for early career teachers to explore how AI can support and enhance their teaching practice. This session will focus on practical ways to reduce workload, create engaging learning experiences, and streamline tasks such as planning and administration using tools like ChatGPT. Whether you're just beginning to explore AI or seeking new ways to integrate it into your classroom, you'll gain actionable ideas, shared experiences, and hands-on examples to help make your teaching journey more efficient, impactful, and inspiring.

4.4 LEARNING OUTSIDE THE CLASSROOM: MAKING THE MOST OUT OF A VISIT TO THE ZOO

Ellie Carless, Zoos South Australia

Transform your school's zoo excursion into a rich educational experience with this guide to the programs offered at Monarto Safari Park and Adelaide Zoo. Learn how to align your visit with curriculum objectives, engage students in pre-visit inquiry, and leverage post-visit projects to deepen understanding. This session provides tips for creating interdisciplinary links and maximising the educational impact, along with downloadable resources to enrich your next zoo visit.

Session 5

5.1 TEACHING EARTH'S MOVEMENTS: TOOLS & TECTONICS

Kieran Meaney, SA Museum

Explore how to bring the wonders of Earth science into the classroom with engaging, curriculum aligned strategies, with this workshop designed to help explore Earth's powerful processes. We will demonstrate how online platforms can support interactive learning, helping students visualise tectonic plate boundaries, subduction zones, and how geological evidence across continents helps us predict Earth's dynamic activity. You will also have an opportunity to explore earth science concepts through hands on learning, using accessible materials to engage students in modelling natural processes.

5.2 MAKING PHYSICS SIMPLE

Daniel Rabbett, Sacred Heart College

This workshop is designed to give teachers a number of classroom activities that explore complex physics concepts as simple classroom activities and discussions. This workshop is designed for all teachers of Physics, whether this be as a Middle School Science teacher or Stage 2 teacher.

5.3 OUTREACH INSPIRATION FOR THE CIRCULAR ECONOMY

Jo Hendrikx, KESAB environmental solutions

Learn a little about what the Circular Economy is, KESAB incursion and excursion options, how to use bins (and where they then go), and make something for yourself that you can also do with students!

Share-a-thon

An informal setting for multiple presenters to share innovative teaching ideas. Each presenter will share a strategy or tool during a 10-minute presentation and delegates will rotate around the room.

DETAILS TO BE CONFIRMED!