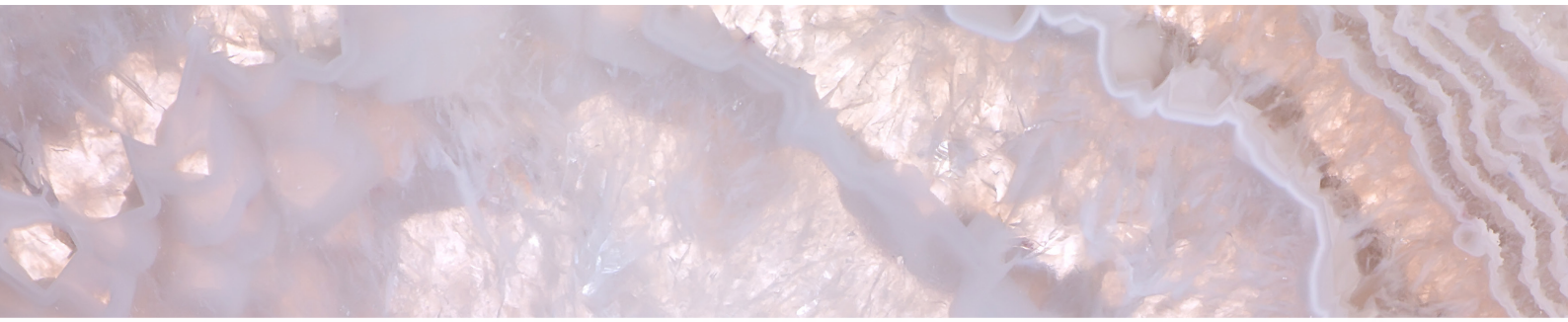
SASTA
South Australian Science Teachers Association



ANNUAL CONFERENCE

13 & 14 April 2026
Morialta Secondary College

CULTIVATING CURIOSITY

PROGRAM

sponsored by

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THINKING MODE

Program subject to change. Current at 24 February.

PROGRAM OVERVIEW

MONDAY 13 APRIL	
8.00am	Registration & light breakfast
8.50 am	Welcome & Awards Presentation
9.30 am	Keynote Presentation
10.35 am	Morning Tea & Exhibition
11.15 am	Workshop Session 1
12.20 pm	Workshop Session 2
1.20 pm	Lunch & Exhibition
2.15 pm	Workshop Session 3
3.20 pm	Workshop Session 4
4.20 pm	Happy Hour

TUESDAY 14 APRIL	
8.30 am	Registration
8.50 am	Welcome & Awards Presentation
9.10 am	Keynote Presentation
10.10 am	SASTA Annual General Meeting
10.40 am	Morning Tea & Exhibition
11.15 am	Cutting Edge Session 1
12.20 pm	Cutting Edge Session 2
1.20 pm	Lunch & Exhibition
2.10 pm	Workshop Session 5
3.15 pm	Workshop Session 6
4.15 pm	Happy Hour

KEYNOTE PRESENTATION

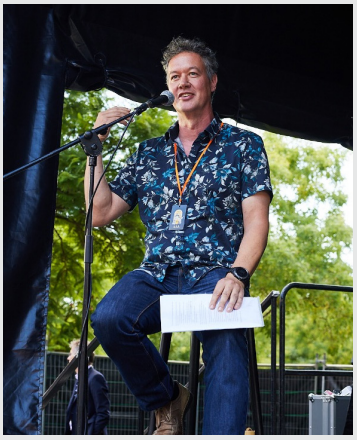
DNA tools to identify and help eliminate illegally logged timber from global supply chains

Professor Andy Lowe, Environment Institute, The University of Adelaide

Illegal logging drives a range of environmental and societal problems including greenhouse gas emissions, biodiversity displacement, tax evasion and forest community displacement and ranks up there with illegal arms, drugs and people trafficking in terms of economic impact. But new scientific methods can be used to identify the species and region of origin of timber products and can now be applied to police global timber supply chains. Prof Lowe will give an accessible talk on the problems behind illegal logging and how science can and is helping to control and reduce one of the world's wicked problems.

Prof Andy Lowe is Executive Director of the Environment Institute at the University of Adelaide in Australia. He is an expert in plants and trees, particularly the management of genetic, biological and ecosystem resources. Andy has discovered lost forests, championed to eliminate illegally logged timber in global supply chains, served the United Nation's Office of Drugs and Crime and is a lead author of the Intergovernmental Platform for Biodiversity and Ecosystem Services – Land Degradation and Restoration report. The work of his group solves some of the most pressing global resource, production and landscape sustainability challenges through the application of technology innovations delivered in a responsible and economically realistic framework.

Andy has published over 300 scientific articles and books and is an experienced and respected executive leader, board member, as well as mid-career mentor. He is a passionate science communicator, speaker, writer and podcast host, and has served as Scientist in Residence at The Australian Financial Review and The Advertiser.



KEYNOTE PRESENTATION

More information to come!

Professor Kishan Dholakia, Adelaide University

Kishan Dholakia is an ARC Laureate Fellow and Director of the Centre of Light for Life at the University of Adelaide. He is an internationally recognised research scientist, leader and mentor, known for major advances in the science of light, particularly photonics and biophotonics. His work spans fundamental physics through to interdisciplinary research with real-world impact.

Professor Dholakia has published more than 380 peer-reviewed research papers, including over 30 in Nature and Science journals. His work has attracted more than 46,000 citations and he has delivered over 350 invited, plenary and keynote presentations at leading national and international conferences. He has led over $62 million AUD in competitive research funding and secured more than $3 million in industry contracts with partners including Boeing USA and Elliot Scientific.

His research has resulted in 27 patent families, most of which are licensed, and the successful translation of photonics technologies into high-value light sheet microscopes and optical trapping instruments now used globally. His achievements have been recognised through numerous international awards, including the SPIE Dennis Gabor Award, the Institute of Physics Thomas Young Medal, Optica's R W Wood Prize, and a Royal Society Wolfson Merit Award. His work is also cited in the Guinness Book of World Records for the fastest man-made rotation.

Professor Dholakia is Professor at the University of St Andrews in Scotland, where he founded the internationally renowned Centre of Biophotonics and played a key role in establishing the James Mackenzie Institute for Early Diagnosis. In 2023, he founded the Centre of Light for Life at the University of Adelaide, strengthening South Australia's leadership in photonics research. In 2025, he was named South Australian Scientist of the Year. He currently serves as an elected SPIE Director and as an international committee member for the Novo Nordisk Foundation in Denmark.

WORKSHOP OUTLINE

SESSION 1
11.15am - 12.15pm

		Room	Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)
1.01	R-3 Science: Little Scientists, Big Questions		●		
1.02	Electrifying Primary STEM - Delivering High-Impact Electricity Education to primary students with STELR		●		
1.03	Utilising Excel for Digital Proficiency			●	
1.04	Cultivating Curiosity through STEM Scholarships: Inspiring Student Pathways			●	●
1.05	Making Physics simple			●	●
1.06	Using KUD to support learning in STEM classrooms for all students			●	●
1.07	Getting Real with STEM in a Category 3 School			●	●
1.08D	Citizen Science in the class-room: opportunities and challenges **- DOUBLE SESSION Part 1**		●	●	●

SESSION 2
12.20pm - 1.20pm

		Room			
2.01	Astronomy across the Curriculum for Primary Students		●		
2.02	Making Energy Visible: Using Models, data and context to teach the complex science behind Australia's Energy Transition		●	●	
2.03	Biodiversity through multiple lenses- Integrating Western and Indigenous Knowledge in year 7 classroom			●	
2.04	Literacy development in the middle years to support student engagement.			●	
2.05	The Science of the Ridiculous			●	●
2.06	Phage Hunters				●
2.07	Making Mini Museums		●	●	●
2.08D	Citizen Science in the class-room: opportunities and challenges **- DOUBLE SESSION Part 2**		●	●	●

SESSION 3
2.10pm - 3.10pm

		Room	Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)
3.01	Using the Big Idea of Patterns to pique curiosity in science		●	●	
3.02	Using the Natural Environment to Teach Deep Science Concepts		●	●	
3.03	Astronomy, a Gateway Science into STEM using Real Data			●	●
3.04	Cultivating Curiosity within the Earth and Environmental Science Space			●	●
3.05	Nuclear-powered submarines: A deep dive into the fundamentals of radioactivity, fission and radiation safety			●	●
3.06	Starting with What Students Wonder: Using Question Boards in Science				●
3.07	Connections, context and curiosity through food and fibre.		●	●	●
3.08D	Practical Lessons: Using Dataloggers + The Wonder of Chemical Demonstrations to aid learning **- DOUBLE SESSION Part 1**			●	●

SESSION 4
3.20pm - 4.20pm

		Room			
4.01	Cultivating Curiosity Through Design: A Whole-School Primary STEM Framework (R- 6)		●		
4.02	Advanced microscopy in your classroom - Enhancing curiosity, connecting concepts, improving outcomes.		●	●	
4.03	Barbies, Balconies & Bungees			●	
4.04	Real radiation experiments and radioisotope data for the classroom			●	●
4.05	The Science of Us - Measuring humans using Vernier Data Loggers			●	●
4.06	Ediacara in the Classroom: Bringing Fossils to Life		●	●	●
4.07	Sustainability & Real-World Problem Solving		●	●	●
4.08D	Practical Lessons: Using Dataloggers + The Wonder of Chemical Demonstrations to aid learning **- DOUBLE SESSION Part 2**			●	●

SESSION 5
2.10pm - 3.10pm

		Room	Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)
5.01	Curiosity Through Forces and Motion: A Hands-On Approach to Science		●	●	
5.02	Kits, Loans and Lives - Oh My!		●	●	
5.03	Starting in STEM: Designing Impactful STEM Projects Using Design Thinking		●	●	
5.04	Can a Computer Make Medical Decisions? Exploring Ethics and AI in Contemporary Science			●	●
5.05	Aboriginal Contexts - Fire Starting		●	●	●
5.06	Bringing Birds Around Your School Into The Curriculum		●	●	●
5.07	From Prompt to Pedagogical Superpowers!		●	●	●

SESSION 6
12.20pm - 1.20pm

		Room			
6.01	From Earth to Orbit: The Science of Plants for Space and Sustainability		●	●	
6.02	Making Robotics Cross-Disciplinary		●	●	
6.03	The Art of the Question		●	●	
6.04	A Healthy Land - Measuring the environment with Vernier dataloggers			●	●
6.05	Explicit Instruction in Science: Making Daily Review Work			●	
6.06	Digital Storage Oscilloscopes and some cheaper options			●	●
6.07	Using space and astronomy to engage students with Science			●	●

CUTTING EDGE SESSIONS

11.15 AM
CUTTING EDGE SESSION 1

1A Drugs and Bugs: How Chemotherapy Disrupts the Gut Microbiome to Cause Side Effects

Associate Professor Hannah Wardill, Adelaide University

People with cancer are often treated with a cocktail of highly toxic chemotherapy drugs for weeks, and sometimes months, at a time. While these treatments are critical for slowing disease progression and, in some cases, eradicating cancer, they are associated with a wide range of debilitating side effects. These toxicities affect almost every aspect of daily life, making even simple tasks unbearable. For some, this means being unable to work or care for their children; for others, losing the ability to engage in hobbies or maintain independence. In severe cases, side effects become so intolerable that life-saving treatment must be reduced or discontinued, ultimately compromising survival.

The Supportive Oncology Research Group is a multidisciplinary research team dedicated to understanding the biological drivers of treatment-related side effects and developing novel strategies that help people with cancer not only survive, but live well. A central focus of this work is the gut microbiome — the complex ecosystem of bacteria that resides within the gastrointestinal tract. Like a fingerprint, each person's microbiome is unique, shaped by genetics, early life exposures, medications, diet, and environment. It is also highly dynamic, changing from day to day.

This plasticity makes the gut microbiome particularly vulnerable to damage during cancer therapy. Disruption of this ecosystem can promote inflammation, infection, and altered gut-brain signalling, contributing to many of the toxicities experienced during treatment. This presentation will explore:

- (i) how inter-individual differences in the gut microbiome influence responses to cancer therapy;
- (ii) how chemotherapy-induced injury disrupts the microbiome to drive side effects; and
- (iii) emerging microbiome-directed interventions, including faecal microbiota transplantation, that aim to protect and restore gut health during chemotherapy.

1B A holistic approach to understanding Australian climate and how it is changing

Dr Georgy Falster, Adelaide University

We know that Earth's climate is warming due to human activities. What is still much less clear is how aspects of Earth's climate other than temperature are changing. This includes the sort of things that strongly affect our daily lives-like when and how much it rains throughout the year, as well as extreme events like droughts. This lack of clarity can be a source of anxiety in young people facing an uncertain climate future.

This session focuses particularly on droughts. Droughts are and have always been a part of Australia's climate. But there have only been a handful of major droughts in the past century or so when we have rainfall data. This makes it difficult to understand both the full natural range of drought lengths and severities we could experience, as well as how droughts are changing because of climate change.

CUTTING EDGE SESSIONS

This session will provide a state-of-the-art overview of our understanding of what controls Australian rainfall and droughts, and how those things might be changing with climate change. You will also learn about a new 'holistic' approach to understanding droughts that combines information from weather observations, climate model simulations, and natural archives of long-term climate variability such as tree rings and ice cores-known as 'palaeoclimate proxies'. The session will include some examples of how to present climate change data that is accessible and relatable.

12.20 PM
CUTTING EDGE SESSION 2

2A A deep dive into pain and its wonderful (but awful) complexity

Professor Tasha Stanton, Adelaide University

While tempting to think about pain as a simple experience – i.e., merely a read-out of how badly we are injured – contemporary pain science suggests that this experience is much more complex than we might realise. In this lecture, I will discuss experimental and clinical findings that support the presence of numerous, and varied, contributors to the experience of pain. I will also specifically discuss the physiological spinal and supraspinal processes and adaptations that occur when pain persists. Together, I will use this new knowledge to explore how we may be able to treat pain in ways that have less to do with the body part that hurts and more to do with the processes that occur above the neck.

Learning objectives:

1. To have an increased understanding of the various contributors to the experience of pain
2. To be able to explain to a family member the different physiological adaptations that occur in persistent pain states.
3. To have an increased understanding of brain-based strategies that can be used to reduce the experience of pain.

2B The beginning of animal evolution: Ediacaran & Cambrian fossils of South Australia

Associate Professor, Diego C. García-Bellido, Adelaide University & SA Museum

South Australia holds what is considered by many the best record of early animals in the world, represented by the Ediacara Biota of the Flinders Ranges and the Cambrian fauna from Emu Bay Shale in Kangaroo Island. These sites are, respectively, just before and just after the Cambrian "explosion", the biggest radiation of animal groups the planet has witnessed, including most of those we see around us today: arthropods, molluscs, annelids, echinoderms, even our group, the chordates. These half-a-billion year old fossils show exceptional preservation of the soft parts of those first complex life forms, which are normally lost soon after burial, and contain dozens of species and complete ecosystems. Recent research on both regions by Adelaide University and the SA Museum has uncovered extensive new material and led to several outstanding discoveries. This research and material will be presented at the 2026 SASTA conference, so that our state's primary and secondary teachers discover the potential for these unique fossils to engage our youngest generations while making them proud of their palaeontological heritage.

WORKSHOP DESCRIPTIONS

11.15 AM
WORKSHOP SESSION 1

1.01 R-3 Science: Little Scientists, Big Questions

Laura Brace, Mitcham Primary School JP Science teacher

primary (R-3) teachers

This workshop is designed for junior primary teachers who want to bring learning to life through engaging, hands-on experiences and simple classroom experiments. Participants will explore how thoughtfully chosen props, displays and investigations can spark curiosity, inspire wonder and encourage meaningful questioning among young learners. The session will model strategies that help children observe closely, notice important details and confidently name and describe their findings using specific purposeful language. Teachers will leave with fun, curiosity- driven strategies to inspire and teach young learners.

1.02 Electrifying Primary STEM - Delivering High-Impact Electricity Education to primary students with STELR

Graham Stock & Damian Woods, Australian Academy of Technological Sciences and Engineering

primary (R-6) teachers

In this workshop, participants will be among the first to experience STELR's new range of Primary STEM education resources, exploring how to deliver high-impact learning for primary students on the topic of Electricity. In this workshop, learn how to deliver hands-on experiences to improve your students understanding of electricity concepts for the 5/6 Science and Technologies curriculum.

STELR is a national education initiative from Australia's Academy of Technological Sciences and Engineering, providing high-impact STEM education equipment and resources to Australian schools for more than 15 years.

1.03 Utilising Excel for Digital Proficiency

John Drew, Department for Education

junior secondary (7-10) teachers

This workshop will review the use of screenshot supported Excel workbooks to enhance student engagement with the many (underutilised?) built-in features of Excel. Workshop participants will have the opportunity to use provided student data to test drive each task. These Excel workbooks are grounded in authentic science tasks that benefit from variation of graphical representations embedded in Excel for data evaluation. Each workbook is structured as a Beginners Guide with:

- Each task starts with opening an Excel app and finishes with saving it to a student file.
- Every keystroke touch having an accompanying screenshot with simple sentence annotations.
- Each keystroke sequence (with accompanying screenshots and annotations) has a clearly expressed labelling system connecting the sequence, screenshots and annotations.
- Each task generating whole class data to be incorporated into analysis for error evaluation.

The range of tasks presented at this workshop include:

- Year 7 Lung Capacity Investigation by comparing column graphs with scatterplots.
- Year 8 Pendulum Factor Investigation by specifying scatterplot types for different factors.
- Year 9 Radioactive Decay Modelling by exploring scatterplot choices.
- Year 10 Chemical reaction rate analysis to evaluate a variety of competing scientific models.

This is an all-expenses-spared approach to STEM that provides a pathway to engage underrepresented groups, and leverage existing platforms wherever possible, as stated in Optimising STEM Industry-School Partnerships Recommendation #8 (Education Council, 2018, p. 15).

1.04 Cultivating Curiosity through STEM Scholarships: Inspiring Student Pathways

Denise Rule & Robyn Hansen, SA Department for Education, Curriculum Programs

junior secondary (7-10) teachers, senior secondary (11-12) teachers

The STEM Scholarship program, supported by the South Australian Department for Education, is transforming the futures of public high school students by providing financial support and mentorship in the fields of science, technology, engineering, and mathematics (STEM). This program empowers students from underrepresented backgrounds, such as those from low socioeconomic status, girls, and Aboriginal learners, by helping them access and complete SACE and VET subjects and pursue exciting careers in STEM.

This session will showcase how the STEM Scholarship program sparks curiosity by offering vital resources for success: financial support, mentorship, and direct connections to real-world STEM opportunities. Attendees will discover how the scholarship's application process works, the crucial role of teacher mentors, and how the program helps students build the skills needed to contribute to South Australia's growing STEM workforce.

The information shared in this session relates to students enrolled in South Australian public high schools.

1.05 Making Physics simple

Daniel Rabbett, Sacred Heart College

junior secondary (7-10) teachers, senior secondary (11-12) teachers

This workshop is designed to provide both Middle School Science teachers, and Senior Physics teachers with a variety of tools to help make teaching Physics simpler.

The presentation includes a number of key activities such as, using a story-telling approach in Physics, utilising Simulators and Technology and the importance of Open-ended/Multiple Solution style problems in the classroom.

1.06 Using KUD to support learning in STEM classrooms for all students

Stefania Pulford, Shadae James, Amelia Broadbent, Thebarton Senior College

junior secondary (7-10) teachers, senior secondary (11-12) teachers

All of us learn differently. These differences have specifically to do with how individual brains process information because different people do this differently. Interestingly, educators don't necessarily get to learn that much about how different brains process information and what it means for learning if specific areas of the brain are being utilised in different ways. According to ACARA, in 2024, 25.7% of school students received an educational adjustment due to additional learning needs. What does it mean if we are to provide Quality Differentiated Teaching Adjustments so that we can better support every student in our class? A lot of our teaching in maths and science is very content focused but there a number of simple strategies that can assist us in transferring learning to our students. This session has practical, hands-on strategies, through both demonstrating and doing, that highlight the importance of knowing what we want our students to Know, Understand and Do (Carol Ann Tomlinson, 2010) when we are trying to differentiate for all students.

1.07 Getting Real with STEM in a Category 3 School

Sharon Kent, Parafield Gardens High School

junior secondary (7-10) teachers, senior secondary (11-12) teachers, tertiary educators

"When STEM was first introduced, it was hailed as the gold standard in education across these subjects. We saw the construction of state-of-the-art facilities, updated laboratories, and an abundance of professional development focused on integrating STEM into our teaching practices. However, key considerations were overlooked: many students weren't interested in STEM, and how timetables could be structured in a way that allowed for meaningful collaboration across faculties. At our school, we've developed a tailored solution that aligns with our students' needs, and it's sparking growing interest across our school." Students feel like they belong in STEM spaces and are gaining meaninful work experience in STEM industries.

1.08D Citizen Science in the classroom: opportunities and challenges - DOUBLE SESSION

Frank Grutzner, Adelaide University and Katie Irvine, Rosalie Lawrence, Robert Lawrence, Craig Hughes, Steve Walker, Sylvia Clarke

primary (R-6) teachers, junior secondary (7-10) teachers, senior secondary (11-12) teachers, tertiary educators

In citizen science, members of the community (e.g. students, teachers, volunteer groups) work, often together with professional scientists, to collect data and samples and to perform analysis which can lead to new discoveries, and real-world outcomes like policy change and on-ground action. This approach is increasingly used to tackle major research questions and challenges we face in different disciplines including biodiversity, climate, pollution, physics, health and architecture. The rise of community-based research in schools is also reflected by the inclusion of a citizen science category in the Oliphant Science awards. In this workshop we aim to bring together experienced practitioners and leaders in citizen science, and teachers to introduce the fundamentals of citizen science and discuss the opportunities and challenges of doing citizen in the classroom. Topics for discussion include:

- Alignment of projects with curriculum
- Establishing new projects versus participating in existing projects
- Data collection, sharing, management and analysis

We will also showcase successful projects (e.g. Wild Orchid Watch, EchidnaCSI, Soil your Undies, 1 Million Turtles) and useful resources (e.g. iNaturalist, SciStarter) and share our experience from judging Oliphant Science award submissions in the citizen science category. We would also like to hear from teachers that have run projects or are considering using citizen science in the classroom.

12.20 PM
WORKSHOP SESSION 2

2.01 Astronomy across the Curriculum for Primary Students

Robert Hollow, CSIRO, Space and Astronomy

primary (R-6) teachers

Astronomy is a topic that engages many students but sometimes poses challenges to teach. Whilst there is a wealth of resources and activities available it is often difficult to know which ones are best or most effective. Participants will be introduced to freely available , tested resources aimed at Primary-level students from programs including UNAWE and AstroEdu. Ways of implementing these to address the requirements of the Australian Curriculum are discussed. Activities provide scope for creativity, literacy, cross-curriculum and cross-cultural perspectives. Examples will be modelled.

Universe Awareness (UNAWE) is a thriving global project with a vision to educate children aged 4-10 years (especially those from underprivileged communities) about astronomy, using a unique combination of scientific and cultural aspects. This hands-on workshop introduces you to a range of freely available UNAWE resources and the ethos behind the project. We will model a range of activities and discuss how they can be implemented in the primary classroom and link to the South Australian Curriculum.

2.02 Making Energy Visible: Using Models, data and context to teach the complex science behind Australia's Energy Transition

Erica Gibbs, Snowy Hydro - Snowy STEM Academy

primary (R-6) teachers, junior secondary (7-10) teachers

Teachers are always striving to engage students with modern science and highlight its role in Australian life and their future. We also know that means more than just introducing new content; it requires anchoring them in meaningful contexts that relate to students and building core ideas carefully over time. The question remains "how do we make sense of foundational but complex science ideas without overwhelming them (or their teachers)"?

This session showcases how Snowy STEM Academy's Energy Literacy Syllabus supports the development of big science ideas using shared language, visual models and real-world decision-making. With free AC Curriculum aligned resources, explore contemporary energy challenges such as Australia's energy transition and projects like Snowy 2.0, with an approach that makes abstract concepts like energy transfer, efficiency, systems and trade-offs concrete and memorable.

Participants in this session will explore how an interactive simulation allows students to test ideas, make decisions and generate authentic datasets. These datasets become the basis for teaching core data skills: collecting, interpreting and presenting evidence, identifying patterns, and justifying decisions using scientific reasoning. Teachers will see how student-generated data can reveal misconceptions, prompt rich discussion and support explicit teaching of difficult concepts. Structured around a five-level learning progression, the syllabus shows how the same core ideas can be revisited and deepened over time, reducing cognitive overload while strengthening conceptual understanding.

Strong links to students' lives and to the science shaping Australia's energy future, with ready-to-use lessons and teacher guidance will reduce planning time and support confident implementation using real contexts, real data and shared language to build confident, curious and scientifically literate students.

2.03 Biodiversity through multiple lenses- Integrating Western and Indigenous Knowledge in year 7 classroom

Swati Salvi

junior secondary (7-10) teachers

This session explores an inquiry-driven approach to teaching Biodiversity in Year 7 Science, with a focus on classification, food webs, and energy flow within ecosystems. Participants will be guided through a newly developed unit of work, successfully implemented over a full term last year.

The unit intentionally integrates Western scientific frameworks with Indigenous knowledge systems, supporting students to understand biodiversity through multiple lenses. Students investigate how ecosystems function, how species are interconnected, and how human actions can disrupt or restore balance. Indigenous perspectives are embedded through seasonal knowledge, land management practices, and "Caring for Country"principles, encouraging respectful, place-based learning.

This presentation will share the term overview and formative and summative assessments that promote systems thinking, collaboration, and environmental stewardship. We shall discuss practical resources, assessment ideas, and adaptable strategies for you to confidently implement this unit in your own classrooms.

2.04 Literacy development in the middle years to support student engagement.

Danielle Pedler, St Columba College

junior secondary (7-10) teachers

Research indicates that student engagement and curiosity are closely linked to their ability to access learning, especially in middle school. Students who face challenges with vocabulary, comprehension, and scientific texts often disengage due to difficulties in accessing and learning from these resources. Conversely, higher engagement fosters improved literacy outcomes.

This hands-on workshop will explore how literacy development tools and scaffolded supports can enhance students' access to learning. By implementing these strategies, we aim to demonstrate significant improvements in literacy outcomes. Participants will gain insights into fostering student engagement, thereby enabling students to fully engage in the learning process.

2.05 The Science of the Ridiculous

Stuart Lewis, Scientrific Pty Ltd

junior secondary (7-10) teachers, senior secondary (11-12) teachers

The everyday, all around us, is filled with so much wonder that we are flooded by it. We make the extraordinary normal. We forget to take time to play, to be silly, and to find the little sparks that turn it into back into the extraordinary, the ridiculous.

In this workshop we will start playing with science (if necessary, applying it to the curriculum). Fun will be had with (but potentially not limited to):

- People and their reactions
- The mind and what it can hold
- Colours
- And Food

2.06 Phage Hunters

Andy Stone, Australian Science and Maths School & Professor Rob Edwards, Flinders University

senior secondary (11-12) teachers

Phages are viruses that infect and kill bacteria, with potential for use in phage therapy, where they are used to combat human bacterial infections. This year, students at the ASMS had the opportunity to collaborate with the Edwards lab of Flinders University to conduct a real-world hunt for new phages, with some great success. This involved a series of pracs run in our school lab and excursions to the Flinders Lab. This session would be suitable for senior science teachers, and an excellent fit for the Stage 1 Infectious Diseases topic in Biology. We will share the context of the unit, our results so far, as well as resources and activities.

2.07 Making Mini Museums

Alexandra Fowler, Woomera Area School

primary (R-6) teachers, junior secondary (7-10) teachers, senior secondary (11-12) teachers

Have you ever had some cool specimens or a small, themed collection that you just don't know how to display or use with students? I have! From preserved biological specimens through to models that look as if they break physics, there are so many little things that can be used to explore concepts and bring about thinking. How do you make a mini museum? What should you include? How much information should you present? How can you make a museum display without wasting too much time? What about involving the students in making the museums?

This session will explore the value of diverse collections and focuses on approaches to student access and display. You will be equipped with actionable ideas to build, manage, and utilise mini museums. You will also explore how to use Mini Museums to support the science curriculum while engaging students in the wider aspects of science.

2.15 PM
WORKSHOP SESSION 3

3.01 Using the Big Idea of Patterns to pique curiosity in science

Jenny Woodcock , Gawler and District College B-12 and Dr Katrina Elliott, Department for Education

primary (R-6) teachers, junior secondary (7-10) teachers

Understanding patterns is central to how scientists make sense of the natural world-recognising regularities, identifying uncertainties, predicting phenomena, and constructing explanations. This workshop invites teachers to explore the "big idea" of patterns in science while cultivating students' natural curiosity. Through hands on tasks, examples from classroom practice, and collaborative planning time, participants will examine ways to structure learning so that students notice, describe, and interpret patterns in the sciences. We will unpack strategies that position pattern-seeking as both a scientific habit of mind and a driver of inquiry, including approaches that prompt students to ask deeper questions, make connections, and engage in evidence based reasoning. By the end of the session, teachers will leave with practices, and a clearer vision for how to create rich learning experiences that spark curiosity and strengthen conceptual understanding of patterns as a unifying theme in science.

3.02 Using the Natural Environment to Teach Deep Science Concepts

Kathleen Best, Clarendon Primary School

primary (R-6) teachers, junior secondary (7-10) teachers

The natural environment is a vital tool to help students undertsand and connect to their world. This workshop will explore how to use the natural environment to teach deep scientific concepts to students. Participants will leave the session with a plan that uses integrated learning to use what is available to create deep learning for students. Participants will also develop a deeper understanding on how to assess science while teaching integrated studies in an outdoor environment.

3.03 Astronomy, a Gateway Science into STEM using Real Data

Robert Hollow, CSIRO, Space and Astronomy

junior secondary (7-10) teachers, senior secondary (11-12) teachers

Astronomy can be regarded as a Gateway Science that inspires students and the public into STEM pathways. A strength is that it is a discipline in which real scientific data is freely and easily accessible, making it an ideal area for first-hand and second-hand student investigations. This workshop introduces participants to a range of Australian and international datasets, where to access and how to use them to engage and challenge students. Topics from exoplanets, pulsars and galaxy classification are explored, with key databases and science tools being identified. Participants will work through examples of some datasets and use online tools for data analysis that they can readily implement in their classrooms. Participants will need to bring a device to work on.

3.04 Cultivating Curiosity within the Earth and Environmental Science Space

Kelly Sharrad, Geoscience Pathways Project

junior secondary (7-10) teachers, senior secondary (11-12) teachers

This workshop explores practical strategies to cultivate curiosity when teaching climate change and sustainability in your classroom. Curiosity begins with a question, and these complex topics offer rich opportunities for students to ask meaningful questions about the world around them. Teachers will experience a range of strategies to generate curiosity at the start of the lesson using hooks. These hooks can be images, graphs, scenarios or stories, and are designed to prompt students to think about the causes, consequences and possible solutions associated with climate change and sustainability. This workshop is aligned with themes explored in Year 10 Earth and Space strand of the SA curriculum and the SACE subject Earth and Environmental Science.

3.05 Nuclear-powered submarines: A deep dive into the fundamentals of radioactivity, fission and radiation safety

Bridget Murphy, ANSTO

junior secondary (7-10) teachers, senior secondary (11-12) teachers

South Australia's Submarine Construction Yard at Osbourne will build Australia's next-generation of nuclear-powered submarines. The AUKUS program will require many professionals trained in managing radioactivity, fission and radiation safety to ensure the success of this endeavour. The nuclear workforce of the future is sitting in your classroom now!

ANSTO has over 70 years of experience in nuclear science and operates Australia's only nuclear reactor in Lucas Heights in southern Sydney. In this workshop, teachers will deep dive into concepts such as fission, binding energy and uranium enrichment. We will also demonstrate some of our free student activities that teach these concepts in a real-world context; 1) Using magnets and velcro to explain binding energy; 2) Using models to understand the dynamics and requirements of fission chain reactions.

3.06 Starting with What Students Wonder: Using Question Boards in Science

Chloe Marie, Stile Education

senior secondary (11-12) teachers

When students' questions shape the direction of learning, engagement extends beyond individual lessons and builds across a unit. In this session, you will explore how Question Boards can anchor instruction in student thinking, replacing short-term engagement loops and one-off investigations with deliberate, sustained learning.

Rather than treating scientific inquiry as a repeated re-engagement or expecting students to independently uncover key ideas, Question Boards provide a structured way to build on what students are already thinking about. Used effectively, they allow you to:

- assess prior knowledge before teaching begins
- surface misconceptions early and revisit them deliberately
- maintain student motivation by making student thinking visible and consequential
- teach inquiry skills explicitly, using student questions as the context for modelling, practice and feedback (Australian Curriculum v9.0)
- keep students intellectually active without sacrificing clarity or pace
- use student questions to make informed decisions about what to teach next

Using a Years 7 to 10 biology unit aligned to Australian Curriculum Science v9.0, you will see how a Question Board can be launched, organised and revisited across a sequence of lessons. Real student questions will be used to show how learning can be driven forward by what students notice, question and refine over time.

The session will model practical routines for generating and improving questions, deciding which questions to address explicitly, which to investigate, and which to hold for later, so learning builds coherently rather than resetting each lesson.

By the end of the workshop, you will have clear strategies for using Question Boards to support learning that accumulates across a unit, without relying on vague inquiry prompts or repeated novelty.

3.07 Connections, context and curiosity through food and fibre.

Sue Pratt, AgCommunicators

primary (R-6) teachers, junior secondary (7-10) teachers, senior secondary (11-12) teachers

This workshop will support science teachers to connect classroom learning with real-world science through agriculture and food and fibre production. Using South Australian case studies, participants will explore how farmers, agronomists, animal scientists and researchers apply biology, chemistry and physics every day to solve practical problems. The session will showcase effective partnerships with local producers, industry bodies and scientists, including strategies for guest speakers, farm visits and virtual connections. Teachers will leave with practical ideas, curriculum-aligned examples and contacts that help students see science as relevant, applied and central to future careers in food security, sustainability and agricultural innovation

3.08D Practical Lessons: Using Dataloggers + The Wonder of Chemical Demonstrations to aid learning - DOUBLE SESSION

Jason Greenslade & Amanda Salha, Westminster School

junior secondary (7-10) teachers, senior secondary (11-12) teachers

This workshop will involve rotations through 2 different areas of practical science teaching to maximise your learning and time!

Electronic datalogging is becoming evermore present in the science classroom; during this workshop we will aim to (via a range of practical demos and hands on stations) show you how you might use these devices in your classroom to build skills with your students and allow different ways of recording and processing data.

Additionally; chemical demonstrations are a fantastic way to introduce, explain and show application of concepts in various chemical units within the Australian Curriculum. During this workshop we will have a variety to show you and provide you with teaching ideas to help engage and drive learning in your classrooms - especially for learners who need to see it to learn it!

3.20 PM
WORKSHOP SESSION 4

4.01 Cultivating Curiosity Through Design: A Whole-School Primary STEM Framework (R- 6)

Russell Thompson, Prince Alfred College

primary (R-6) teachers

At Prince Alfred College, curiosity is not left to chance- it is intentionally cultivated through a vertically aligned STEM challenge framework from Reception to Year 6. This session will explore how design thinking, scientific inquiry and digital technologies are integrated to build deep conceptual understanding over time.

Rather than treating science as isolated units, our program revisits big ideas such as systems, energy, change, environment and sustainability across year levels, increasing cognitive demand and student agency each year. Students move from observing and describing in the early years to designing investigations, analysing data and creating complex solutions in upper primary. Authentic challenges- rescuing an astronaut through robotics, designing habitats for introduced species, modelling energy transfer, or creating sustainable housing systems- serve as vehicles for curiosity, not end products.

Participants will see how inquiry skills are progressively embedded, how abstract concepts are made visible through models and prototyping, and how real-world contexts sustain engagement. Practical structures, curriculum mapping strategies and classroom examples will be shared to support schools seeking a coherent, curiosity-driven primary science pathway.

This session offers a scalable framework for cultivating curiosity from the first question to the final reflection.

4.02 Advanced microscopy in your classroom - Enhancing curiosity, connecting concepts, improving outcomes

Jessica Jones, Inspire STEM Education

primary (R-6) teachers, junior secondary (7-10) teachers, lab officers

Creating opportunities for inquiry and discovery, where the unseen is revealed and the abstract is made concrete can offer huge benefits in connecting students with science and STEM related subjects as well as curriculum objectives. We have been installing industry grade scanning electron microscopes in Kindergarten to year 12 Australian and New Zealand classrooms since 2018. The engagement, excitement and connection with content that we have witnessed in this time has been revelatory. Experiential, flexible learning formats solving real world problems and authentically connecting to industry, community and making sense of the world around us is a head start that every student and teacher should have at their fingertips. Inspire STEM Education makes this possible. Students can collect, interpret and present data as well as using their findings in creative “out of the box”ways. Come and experience how we cultivate curiosity and connection in the classroom in this hands on workshop, we’d love to share it with you!

4.03 Barbies, Balconies & Bungees

Karina Darling, St Mark’s College, Port Pirie

junior secondary (7-10) teachers, lab officers

It’s back! The super popular Barbies, Balconies & Bungees Physics unit for Year 7s. I revamped the assessment and “scienced” it up a bit, and it made an already super engaging unit even better.

Attendees will get the opportunity to test out a Barbie Bungy jump and take home a copy of the assessment booklet and unit plan. Don’t miss this one - it filled up quickly last time.

4.04 Real radiation experiments and radioisotope data for the classroom

Bridget Murphy, ANSTO

junior secondary (7-10) teachers, senior secondary (11-12) teachers

Join us to see real dosimeters and radiation monitors in action, and learn how they are used to work safely with radiation. Perform radiation experiments safely to learn about alpha, beta and gamma radiation and the effects of shielding. We will also demonstrate our free student-friendly data resource and worksheet about naturally-occurring isotopes of the first twenty elements.

4.05 The Science of Us - Measuring humans using Vernier Data Loggers

Stuart Lewis, Scientrific Pty Ltd

junior secondary (7-10) teachers, senior secondary (11-12) teachers

Humans are not simple. We are a series of complex systems streamed through a conscious brain. This means that there is a lot that can be measured, from bioelectric impulses required to move muscles to an analysis of touch.

This workshop will use Vernier datalogging equipment to explore topics such as:

- EKG and heart analysis
- Muscle analysis and strength
- Wavelengths of light that fool the eye
- How to tell if a room is well ventilated
- Which feels warmer? tactile illusions
- How much dye is in foods?

4.06 Ediacara in the Classroom: Bringing Fossils to Life

Miriam Doull, Mitcham Primary School; Melissa Lavender, Scotch College; Danielle Katsivas, Bridgewater Primary School & Sarah Todd, Coromandel Valley Primary School

primary (R-6) teachers, junior secondary (7-10) teachers, senior secondary (11-12) teachers

The Flinders Ranges of South Australia contain some of the world's most significant Ediacaran fossil sites and visible geological record from the Ediacaran to the Cambrian, providing a powerful context for teaching deep time, early life, and Australia's contribution to global science.

This presentation showcases teaching resources developed by South Australian primary and secondary educators who participated in the SASTA scholarship program to visit the active research site, supported by the Flinders Ranges Ediacara Foundation. Ranging from Years R- 10, the resources include hands-on fossil simulations, visual reconstructions of Ediacaran organisms, interactive timelines, and place-based learning materials linked to the Flinders Ranges and Nilpena Ediacara National Park.

Approaches for differentiating content across primary and secondary settings are highlighted, as well as Science as a Human Endeavour in action at Nilpena. The resources can support teachers to make concepts such as deep time, fossilisation processes, adaptations of living things, and early ecosystems accessible and engaging.

By empowering teachers through professional learning grounded in a globally significant local site, this work demonstrates how place-based education can foster curiosity, scientific literacy, and stewardship of Australia's unique geological and palaeontological heritage.

4.07 Sustainability & Real-World Problem Solving

Teresa Janowski, Stem Fasttrack

primary (R-6) teachers, junior secondary (7-10) teachers, senior secondary (11-12) teachers

This hands-on workshop explores how global challenges such as climate change and sustainability can be authentically embedded into STEM learning- making classroom experiences meaningful, practical, and directly connected to future career pathways.

Using the Design Thinking methodology as the backbone, participants will engage in three highly transferable, real-world projects:

- Sustainable gardening
- Sustainable clothing re-production
- Food preservation through pickling

Each example demonstrates how STEM concepts can be taught through problem-solving, creativity, and systems thinking- without requiring expensive resources or specialist facilities.

Teachers will leave with three classroom-ready project models, clear implementation steps, and the confidence to adapt these approaches across year levels and curriculum areas.

2.10 PM
WORKSHOP SESSION 5

5.01 Curiosity Through Forces and Motion: A Hands-On Approach to Science

Andrew Tadros, G.a.t.e.ways

primary (R-6) teachers, junior secondary (7-10) teachers

In this interactive workshop, teachers explore how to design science lessons that spark curiosity. Using a physics lesson as an example, participants step into the students' shoes and try a simple ping pong challenge: 2-3 volunteers will attempt to land a ball in a cup by applying their knowledge in forces. From observing the demonstration, educators discuss (with peers) possible strategies to succeed in the ping pong challenge.

By withholding possible solutions, the workshop appeals to participants' sense of curiosity. It will show how curiosity is sparked when students are encouraged to problem-solve and collaborate without immediate solutions. Teachers will experience firsthand how this fosters critical thinking and collaboration.

Differentiation is another strategy to create curious learners. Specifically, educators will list strategies that reduce barriers to learning for ping pong task. Additionally, the following will be considered: how will your strategies create curiosity in our learners? Thus, educators consider the effects of their strategies on engagement.

Evidently, teachers will be actively involved in the learning process. They will engage with each other, providing suggestions to address misconceptions, such as the relationship between velocity and acceleration. Educators will also undertake a graphing activity (requiring only pen/paper) that assists in addressing acceleration/velocity misconception. This brief activity introduces a possible framework that can be used for misconceptions. Unfortunately, misconceptions may be a source of confusion and disengagement for students. Thus, educators learn to address misconceptions in a way that optimizes engagement and curiosity.

By the end of the session, educators will leave with a transferable instructional model for cultivating curiosity in science - one that moves intentionally from experiential challenge to conceptual clarity through deliberate pedagogical design.

5.02 Kits, Loans and Lives - Oh My!

Gen Hart and Marie Newcombe, Nature Education Centre

primary (R-6) teachers, junior secondary (7-10) teachers

Curiosity starts in the classroom and the natural world is at your fingertips thanks to the Nature Education Centre!

We put specimens, preserves and things that wriggle into your classroom. Keeper Gen is here with our native animal ambassadors (including our largest python!) and special guest Marie Newcombe to show you how these resources will inspire your student to protect, respect and admire our natural world.

5.03 Starting in STEM: Designing Impactful STEM Projects Using Design Thinking

AJ Fairey, Questacon

primary (R-6) teachers, junior secondary (7-10) teachers, lab officers

STEM education is more than just science, technology, engineering and maths- it's about fostering critical thinking, creativity, and problem-solving in students.

In this hands-on workshop, educators will explore how to design and implement meaningful STEM projects using Questacon's Starting in STEM framework. Learn how to create sustainable, place-based, real-world learning experiences that engage students and transform classrooms.

You will gain:

- Practical strategies for integrating STEM- no matter your background
- Tools for engaging students in problem-based learning
- Access to Questacon's virtual Community of Practice for ongoing support

Ideal for educators at any stage - whether you're just starting out or looking to deepen your practice and expand your professional network.

5.04 Can a Computer Make Medical Decisions? Exploring Ethics and AI in Contemporary Science

Daniella Edward, Flinders University

junior secondary (7-10) teachers, senior secondary (11-12) teachers, lab officers, tertiary educators

Artificial Intelligence is increasingly used in medical research to support decision making, including predicting adverse reactions to medicines used in cancer treatment. While these tools offer powerful possibilities, they also raise important ethical questions about trust, responsibility, bias, and human judgement.

This interactive workshop uses a real-world health science scenario to explore how ethics and AI can be used to cultivate curiosity in science classrooms. Participants will engage in a structured discussion activity that models how students can examine evidence, consider multiple perspectives, and grapple with the uncertainty when science intersects with human decision-making. The workshop will demonstrate how complex and contemporary science topics can be made accessible without requiring technical knowledge of AI or coding.

Teachers will leave with a classroom-ready ethics scenario, discussion prompts and practical strategies for embedding ethical thinking into science lessons across upper primary and secondary year levels. The session links strongly to Science as a Human Endeavour and supports the development of critical and creative thinking, ethical understanding and student engagement with the science of now.

5.05 Aboriginal Contexts - Fire Starting

Caroline Dean, Department for Education

primary (R-6) teachers, junior secondary (7-10) teachers, senior secondary (11-12) teachers

How long would it take you to light a fire using traditional fire-starting methods of First Nations' Peoples - 10 minutes, 3 minutes, or 30 seconds?

Make your prediction, then put it to the test.

In this hands-on session, you'll experience traditional fire-starting techniques and explore energy transfer and transformation, learning about Kaurna fire-starting technologies. Through active investigation, we unpack key ideas about matter and energy in ways that are concrete, memorable and engaging.

This workshop showcases the diversity of First Nations' Peoples Knowledges and ways of knowing of fire-starting, embedding conceptual understanding through doing.

Come ready to think, move and spark curiosity.

5.06 Bringing Birds Around Your School Into The Curriculum

Bruce Baker, Australian Association for Environmental Education

primary (R-6) teachers, junior secondary (7-10) teachers,senior secondary (11-12) teachers, lab officers, tertiary educators

Students care about the environment. Cultivate their curiosity. Develop their Curiosity in Science Understanding through Linking Science to Students' Worlds. Give your students the opportunity to contribute to some real scientific environmental monitoring, get outside, and engage with nature. Learn some tips for bird identification and learn about making your school area a bird-friendly area. Find out about bird related programs that your school can get involved in. Don't get in a flap. Come along and have a stickybeak.

5.07 From Prompt to Pedagogical Superpowers!

Penny Collins, Reynella East College

primary (R-6) teachers, junior secondary (7-10) teachers, senior secondary (11-12) teachers, tertiary educators

Stop waiting for the perfect resource. Build it.

Engage your students in ways you haven't even imagined yet and extend your pedagogical toolkit using AI.

Have you heard of Claude? Whether it's new to you or something you've experimented with, this session will expand what you thought was possible.

In this hands-on session, you'll see how activities, interactives and classroom tools can be created across Physics, Chemistry, Biology, Psychology or any subject you teach, without any coding experience. You'll explore a collection of ready-to-use resources, then get hands-on and build something you can use in your very next lesson. Claude does the heavy lifting. You bring the ideas.

Every participant will leave with:

• A digital swag bag of pre-made apps

• Practical prompt strategies

• A web app built during the session

Designed for teachers new to Claude, with depth and challenge for experienced users ready to push further.

Bring your laptop. Bring your phone. Bring your imagination.

3.15 PM
WORKSHOP SESSION 6

6.01 From Earth to Orbit: The Science of Plants for Space and Sustainability

Maddy Parks, ARC Centre of Excellence in Plants for Space (P4S)

primary (R-6) teachers, junior secondary (7-10) teachers

How do we grow food on a spaceship? And what can that teach us about farming sustainably on Earth? This session draws on the work of the ARC Centre of Excellence in Plants for Space (P4S), where researchers are tackling the challenge of helping humans survive and thrive during long-term space exploration. You'll learn about exciting Australian research projects at the forefront of food and agricultural science, guided through the four Plants for Space research missions:

- Zero-waste plants
- Complete plant-based nutrition
- On-demand bioresource production
- A future-ready workforce and society

In this crash-course presentation, we will use the lens of space to transform the way we think about sustainable food and bioresource production on Earth. You'll also explore a selection of open source, curriculum-aligned P4S classroom resources and opportunities on offer for 2026.

You'll leave the session ready to *grow* your students' curiosity about our relationship with plants, and how we use them to support life on (and off) Earth...

6.02 Making Robotics Cross-Disciplinary

Ben Kelly, Futureneers Adelaide

primary (R-6) teachers, junior secondary (7-10) teachers

At Futureneers Adelaide, we are super passionate about all children having access to quality STEM education, an appreciate that robotics and coding can be challenging and even overwhelming for teachers to begin program. We deliver PD sessions on where to start programs to ease teacher workload and particularly on how we can use robotics to make other lessons fun and deeply engaging, many examples we use in the presentation cover key Physics, Environmental Sciences and Biology concepts and can extend into further areas!

6.03 The Art of the Question

John Darrell, Blackwood PS

primary (R-6) teachers, junior secondary (7-10) teachers

"Sometimes the question is more important than the answer!"Nancy Willard.

This workshop will focus on; fostering curiosity, encouraging questioning, how to work from students' questions and how to get kids to create non-googleable open ended questions. We want our young scientists to question things around them and not to seek the simple answer, but to prove it and understand it. We want students to transfer their curiosity, their knowledge and instill ownership over their learning. Hopefully by the end of this workshop you will come away with some practical ideas for developing students' questions.

6.04 A Healthy Land - Measuring the environment with Vernier dataloggers

Stuart Lewis, Scientrific Pty Ltd

junior secondary (7-10) teachers, senior secondary (11-12) teachers

The natural world is made-up of many complex systems that connect together.

This workshop will look at using datalogging to measure various environmental conditions in plants, the soil and water.

- Looking at chlorophyl in plants
- Investigating plant photosynthesis
- Investigating respiration
- Abiotic conditions
- Water analysis

6.05 Explicit Instruction in Science: Making Daily Review Work

Renee Rees & Alexia Little, Cardijn College

junior secondary (7-10) teachers

This interactive seminar explores how Explicit Instruction can be used in science classrooms to build strong foundations, improve retention, and support all learners through purposeful daily review. Participants will examine the structure and intent of effective daily review, see concrete science-based examples, and unpack how short, well-designed routines can revisit prior knowledge, address misconceptions, and prepare students for new learning.

The session will model daily review strategies in action, giving participants the opportunity to experience them from a learner's perspective. Attendees will leave with ready-to-use resources, practical templates, and adaptable examples that can be implemented immediately across a range of science contexts and year levels.

Ideal for educators seeking high-impact, low-load approaches that strengthen consistency, clarity, and cumulative learning in science classrooms.

6.06 Digital Storage Oscilloscopes and some cheaper options

Stuart Williams, Urrbrae Agricultural High School

junior secondary (7-10) teachers, senior secondary (11-12) teachers

Squiggly lines on a computer screen ? This workshop looks into the many applications available for smart phones and computers, some online, that provide a way of recording a signal over a time base. These are called oscilloscopes and dedicated digital storage oscilloscopes are the bomb. We can visualise sound waves, electrical waves, microwaves and conduct a whole range of analyses using such tools. This workshop is intended to provide an introduction to oscilloscopes, suitable for middle school teachers and then examine the use of dedicated Digital Storage Oscilloscopes (DSO). I will briefly share some of my student designed investigations at stage one and two.

A laptop with USB interface will be needed to use the DSOs (pico2205A) that will be provided and if you have the chance, please download the picoscope software beforehand (https://www.picotech.com/downloads/_lightbox/picoscope-7-stable-for-windows). Please also bring your smartphones. Anyone bringing an acoustic instrument will get my undying appreciation and a virtual hug!

6.07 Using space and astronomy to engage students with Science

Kathy Coombs, Kapunda High School

junior secondary (7-10) teachers, senior secondary (11-12) teachers

Astronomy has long been recognised as one of the earliest sciences and it is in astronomy and space exploration that some of the most complex and technologically advanced equipment is now being used. The whole array of this ancienct to furturistic technology is available to engage students with science and understanding the universe. From using shadows to explain lattitude and curvature of the Earth to school and student accessible radio telescopes to understand the electromagnetic spectrum; from indigenous stories of asterisms to convey changing seasons, to identifying potential career paths in the space industry I will present an outline of the elective space and astronomy course and the individual units and tasks that can be incorporated into any middle school science curriculum.

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