MONDAY 17/11	Topic and Presenter	Description		Location
8.30-8.45	Welcome and Housekeeping	Associate Professor Cathy Gorrie : Director, Learning, Innovation and Strategy & Head of the Neural Injury Research Unit in the Faculty of Science at UTS, will open ASETNSW conference 2025.		Guthrie theatre CB06.03.028
8.55-9.55	**SESSION A**			
8.55-9.55	Preventative Maintenance for Microscopes **Rod Aggett /Aaron Taplin from Edu Supplies**	Learn how to keep your school lab gear in top shape! Join us for a presentation on microscope maintenance and care. Gain invaluable insights and practical tips for general use and troubleshooting issues; as well as a step by step guide on how to get your equipment back up and running!	A1	Classroom CB06.03.051
8.55-9.55	Learn more about STELR STEM renewable energy kits **Graham Stock** **Australian Academy of Technological Sciences and Engineering (ATSE)**	In this workshop, learn how to boost STEM learning in schools with STELR, a program from the Academy of Technological Sciences and Engineering (ATSE) providing educational equipment and resources. Explore the high-impact STEM instructional practices you can employ in your classroom to improve student engagement and academic outcomes, including practical and hands-on approaches in renewable energy and sustainable engineering design using STELR equipment. The STELR program is a hands-on inquiry approach to STEM education which for the last 15 years has supported over 1000 schools across Australia to deliver high-quality STEM education resulting more students enrolled in STEM, higher STEM literacy levels, higher engagement rates, and greater awareness about STEM career opportunities.	A2	Classroom CB06.03.052
8.55-9.55	Get Hands-On with 3D Printing for Your Lab! **Make it Jack &** **Jeffrey Keck from MTA**	Ever wondered what 3D printing could do for you in the science lab & classroom? This hands-on session is designed for science teachers & lab techs keen to explore how this simple, powerful tool can cut costs and provide practical solutions in the lab. **Watch a 3D printer in action** – see how it works from start to finish **Get hands-on with real 3D printed items** – from learning resources to clever storage hacks **Learn the whole process** – from finding ready-to-go templates online to hitting 'print' **Discover how easy it is to learn**, with no prior experience required	A3	Laboratory CB04.03.520

		Save money – print your own learning resources and storage solutions that fit your space perfectly **Learn from each other** – those already using 3D printing will be invited to share their experiences, tips, and creative ideas		
8.55-9.55	How to test your equipment and do any minor repairs if needed **Bob Death**	Bring along any equipment that you are having trouble with and Bob will endeavour to show you how to repair.	A4	Classroom CB06.03.053
8.55-9.55	Risk Assess: New features, best practices & tips + upcoming Chemical Inventory/Register **James Crisp from RiskAssess**	Get the most out of Risk Assess with the latest features and a discussion of best practices. Save time with tips and tricks. We will cover new help and resources, more blocked out days, new links for label printing, lesser known but very useful tools, borax hazards update and more. Student Risk Assess has also been upgraded with a classroom video and quizzes. We'll show a preview of the upcoming Chemical Inventory / Register which we expect to be available next year. There will be time for questions/discussion and feedback.	A5	Lecture Theatre CB06.03.022
8.55-9.55	Physics Magic! **Dr Thomas Dixon, Lecturer** **Tom Nyland, Technical Officer** **School of Physics at UNSW**	Get ready for a hands-on physics adventure! In this session, we'll show you how to build some key practical demonstrations – a resonance tube, a 3d printed motor and more! We'll cover the little details that make a demo work every time and share tips for using them to explain physics concepts clearly. There'll be plenty of time to handle the equipment, try things out yourself, and pick up tricks to make running demos in your own lab easier and more reliable.	A6	Laboratory CB04.03.430
8.55-11.05	**SESSION AB**			
8.55-11.05	Waves, Waves, Waves **Matt Dodds from Science with Matt**	Explore a variety of was to explore waves, from Ripple Tanks to noise cancelling sound waves. From resonance to how sound waves can be stopped in a vacuum. This is a hands-on workshop with participants getting hands on with a variety of equipment.	AB1	Laboratory CB04.03.541
10.05-11.05	**SESSION B**			
10.05-11.05	**Session 1 Making a Standard Solution**	You will be introduced to equipment used to prepare a primary standard solution of sodium carbonate. You will then prepare a standard solution and perform the necessary calculations to determine concentration of sodium carbonate you prepared. This session will also cover the correct	B1	Laboratory CB04.03.520

	Session 1 and 2 which is run over both days of the conference would be a great benefit for newer Lab technicians as you will be introduced to equipment used in a senior chemistry classroom in preparing and making a Primary Standard (Yr 11) and carrying out a Titration (Yr 12). Alternatively, you could attend one of the two sessions as each session are run as a separate entity. **Darryl Hearsch**	way to dry solids, errors in reading a meniscus, how to work with a very hygroscopic Sodium hydroxide and several ways to prepare standard solutions.		
10.05-11.05	Glass bending **Samantha Matveev**	Laboratory glass tubing is used in many laboratories to connect other items of glassware or equipment and to convey or deliver chemicals, solvents, liquids, gases and other products. Lab glass tubing is normally manufactured from borosilicate glass for the most demanding applications. As a lab technician within the school system we need to create S bends and U bends for many experiments within Science. Learn how to create these bends in glass tubing to reduce the cost outlay of buying the tubing already made.	B2	Laboratory CB04.03.510
10.05-11.05	Fundamentals of radioactivity and radiation safety for science laboratory technicians **Bridget Murphy from ANSTO**	ANSTO has 70 years of experience in nuclear science and operates Australia's only nuclear reactor. The ANSTO Discovery Centre develops free education resources for schools, runs tours of our Lucas Heights campus, and delivers professional development for teachers. In this workshop, we will explain fundamental concepts of nuclear science, including radioactive decay, half-life, measuring radiation and radiation safety. We will also do some demonstrations using radioactive sources and scintillation counters.	**B3**	Classroom CB06.03.056

10.05-11.05	Chemical handling and preparation for disposal **Greg Laurence (Technical Manager) from Evoro**	**Preparation :** What can be disposed of, how much and in what vessel **Labelling :** What is required and what good labelling looks like **Segregation :** How to properly segregate waste **Inspection :** How often to inspect waste and what to look for Evoro will assist schools with options upon their first contact with our team. A representative will attend and review the waste to determine the requirements due to the volume and packaging needed for transport and disposal of waste. This will also determine at what point a chemist may be needed. A quote will be provided after a site inspection is completed.	B4	Lecture theatre CB06.03.022
10.05-11.05	Chemistry Capers - Exploring High School Chemistry **Stuart Lewis from Scientrific**	Are you looking for ways of collecting data related to experiments in the Australian Curriculum - Chemistry (Especially when experimenting at home)? This workshop explores Chemistry using a variety of Vernier Dataloggers and probes. Multiple workstations will be used for participants to experiment with support from our presenter. Some of the topics covered will be: • Chemistry at home • pH and household chemicals • Boyle's Law • Guy-Lussac's Law • Beer's Law	B5	Classroom CB06.03.052
10.05-11.05	Microbiology in Schools **Jeanette Tran from Stem Reactor**	With the new HSC syllabus there is an opportunity to conduct a range of independent learning projects in Biology. Microbiology offers a rich array of meaningful learning experiences. This session utilises a combination of discussion and hands-on. We will be exploring the ways you can use microbiology to bring biology practical teaching to life. This session will also address: • The ABC of media: preparation, sterilization and storage. • Characteristics of selected low risk organisms. • Pure culture techniques, subculturing and preservation. • Control of microbial growth- physical and chemical methods. As well as practical components associated with: • Serial Dilutions & Enumeration. • Bacterial Transformation • Safe investigation and characterising of soil bacteria. • Water quality testing- chromogenic analysis. • Bioremediation by oil eating bacteria.	B6	Laboratory CB04.03.430

11.15-11.45	**MORNING TEA**			Universal Café L4
11.50-12.35	Keynote Address The Sydney Seahorse Program **Mitchell Brennan** **School of Life Sciences, the University of Technology Sydney**	The White's seahorse (also known as the Sydney Seahorse) is one of two Endangered seahorse species in the world. Endemic to the east coast of Australia, White's seahorse populations have declined dramatically due to the loss or degradation of their important habitats, including seagrasses, soft corals and macroalgae. My research aims to determine appropriate conservation methods to protect and restore White's seahorse populations. For this, we take a multi-faceted approach to conserving the species, including a world-leading conservation-stocking (captive-breeding) program, the provision of artificial habitats named "seahorse hotels", and the restoration of natural habitats. This talk will give an overview of our conservation efforts, identify successes and limitations, and discuss how our research may be used for other threatened marine species.		Guthrie theatre CB06.03.028
12.35 - 13.10	ASETNSW AGM and a special announcement			
13.15 – 14.05	**LUNCH**			Universal Café L4
14.15-15.15	**SESSION C**			
14.15-15.15	Chemwatch **Shell Chilcott**	Learn more about how to use Chemwatch • Labelling chemicals • Using QR codes • Automatic updating of SDS in your manifest • Q&A	C1	Lecture theatre CB06.03.022
14.15-15.15	Make and keep a Microbe Movie Theatre **Jacob Strickling from Tiny Science Lab**	Participants will make their very own laser powered cardboard microscope which will be used to view the various microbes in pondwater. At the end of the session, participants will be able to take the apparatus home.	C2	Classroom CB06.03.053

14.15-15.15	Engaging Science with Origami models - Interactive Fish Dissection! **Daniela Migliorati from Science Supply**	In this hands-on workshop we will discover an alternative to real life fish dissection with our engaging Origami model! There has been much concern about the ethical considerations of using animals in teaching. In this workshop we move away from "live experimentation" to an interactive workshop. Learning through fun is the key to students retaining information as all students learn differently! Origami models are a diverse and interesting way to teach topics in the classroom All material will be provided in the session.	C3	Classroom CB06.03.051
14.15-15.15	The best tool for measuring pH since litmus paper! - PASCO pH sensor **Megan Simkin from Ciderhouse Tech**	A hands on introduction to the PASCO Wireless pH Sensor, demonstrating its ease of use, large range of applications, storage, and troubleshooting. The Wireless pH Sensor is a must-have for any chemistry, biology, or environmental science course, enhancing numerous activities (both in the lab and field), including acid-base titrations, investigations into household chemicals, analyses of chemical reactions, water quality studies, and more.	C4	Laboratory CB04.03.510
14.15-15.15	Agarose gel Electrophoresis – dye, DNA and protein separation **Jeanette Tran from Stem Reactor**	In biotechnology, agarose gel electrophoresis is the cornerstone DNA separation technique. More recently, exciting innovations in the use of agarose gel electrophoresis are now enabling students to also engage with and explore both native and denatured protein separations using the same equipment previously used for DNA separation. This has significant implications for the classroom. This 'nuts and bolts' hands-on workshop explores the fundamental concepts and principles of agarose gel electrophoresis and its basic application in DNA and protein separation, as well as introducing more advanced applications. Participants will be exposed to a range of cost effective equipment, from home-made through to cutting edge and learn how to: • Prepare, set up and manage classroom activities • Prepare and run dye, DNA, RNA and protein samples • Visualise, record and analyse results • Troubleshoot The workshop is structured to allow continuous opportunities for discussion, to enable participants to explore the options that best address their needs. Participants will leave the session with the knowledge, practical skills and confidence to enable them to manage their students' use of the technology in routine DNA and protein	C5	Laboratory CB04.03.430

		separations as well as for experimental investigations. Written resources are provided.		
14.15-15.15	Curious Minds - Encouraging girls in STEM education **Kelsie Dadds**	Curious Minds is an innovative program that sparks curiosity and inspires young students in STEM through hands-on activities, immersive camps, and guidance from industry mentors. By encouraging problem-solving, experimentation, and practical exploration, the program provides students and the educators supporting them with opportunities to see science in action, explore creative approaches, and connect STEM concepts to real-world applications. Come and see what we do and what we can offer some of our ideas may suit your school and inspire teachers to adapt or create similar opportunities for their own students.	C6	Classroom CB06.03.052
14.15-15.15	Laboratory Design & Optimisation in Schools **Josh Aldridge**	In many schools, the functional, logistical, and WHS requirements of science laboratories are often overlooked or misunderstood by school leadership. As a result, it frequently falls to Science teachers and lab technicians to advocate for the resources and design features essential to safe and effective lab operations. This practical workshop is designed to equip you with the knowledge, tools, and confidence to: • Advocate for better lab design and infrastructure • Communicate the "why and how" of laboratory requirements • Highlight the critical role of WHS compliance and workflow efficiency in lab environments We'll also explore some simple, actionable ideas you can implement right away to: • Improve your daily workflows • Enhance the services you provide to teachers • Make the most of your existing lab space and resources Whether you're planning a new build, a renovation, or just looking to improve your current setup, this session will be a good source of information.	C7	Classroom CB06.03.056

TUESDAY 18/11	Topic and Presenter			
8.30-8.40	Welcome and Housekeeping	ASET Committee		Guthrie Lecture Theatre CB06.03.028
8.45-9.45	**SESSION D**			
8.45-9.45	Disposal of Chemical Wastes: Specific Chemical Advice and Money-Saving Tricks **Phillip and Eva Crisp from RiskAssess**	Find out what you can safely throw into the garbage or pour down the drain. More importantly, find out what you should not! RiskAssess provides advice on the disposal of 3000 chemicals and solutions, based on their ecotoxicity in sewage systems and in garbage sent to landfill. The advice considers holistically the issues of toxicity, transport, biodegradability, flammability, volatility, solubility etc, providing recommended maximum daily quantities for disposal. We will offer ideas to simplify collection and storage of wastes, plus simple methods for dealing with them. Save money on waste disposal!	D1	Lecture theatre CB06.03.022
8.45-9.45	Get the best results from your pH meters! **Rod Aggett and Aaron from EDU Supplies**	Join us for a practical session on pH meter care and calibration. Learn the step-by-step process for accurate calibration, the do's and don'ts of proper storage, and easy troubleshooting tips to avoid common issues. Walk away with the knowledge you need to keep your meters reliable and ready for every experiment!	D2	Classroom CB06.03.051
8.45-9.45	Heat and liquid nitrogen **Ben Newsome from Fizzics Education**	Learn ways to help students understand heat transfer and changes of state of matter using liquid nitrogen	D3	Laboratory CB04.03.520
8.45-9.45	Genetic Technologies : Understanding PCR (Polymerase Chain Reaction) **Jeanette Tran from Stem Reactor**	Hear about how this important technology has become integral to understanding and fighting disease. Learn how a PCR test works, mRNA vaccines and how to demonstrate these in the classroom. Polymerase Chain Reaction (PCR) is the technique that underpins almost all genetic technologies. The technology was the key to giving us the means of analysing and understanding DNA- the blueprint of life. This method of amplifying DNA has given humans insight into genetic traits, means of diagnosing disease and a range of applications like forensic science.	D4	Laboratory CB04.03.430

		This workshop will: - Provide activities and resources for teaching PCR in the classroom. - Breakdown of the key components of the PCR reaction and how it replicates DNA. - Discuss the newest developments in the technology for analysing DNA and RNA.		
8.45-9.45	Could data save Humpty? A new approach to the classic egg drop **Stuart Lewis from Scientrific**	The key element of STEM is form and functional design in a problem-solving context. If you are looking for ways to engage your students in real world problem solving that incorporates design and testing regimes in an integrated cross-curricular approach, then this workshop is for you. The workshop challenges participants to design and test a device to prevent the fracturing of an egg when dropped. This will involve a functional engineering design, principles of science supported by data (Mathematics) to provide a solution (Technology). Don't worry about the mess! We will clean it up if your design doesn't "work".	D5	Classroom CB06.03.052
8.45-10.50	**SESSION DE**			
8.45-10.50	Starting in STEM **Shelley Wilson from Questacon**	*Starting in STEM* is a dynamic workshop, delivered through the lens of a design-thinking process. The experience equips participants with the confidence to foster a learning culture rich in STEM dispositions, and provides practical tools for planning, contextualising and implementing STEM teaching and learning.	DE1	Classroom CB06.03.053
8.45-10.50	Magnetism and motors **Matt Dodds from Science with Matt**	Participants will get hands on building DC motors as well as simple and fun homopolar motors. We will then explore magnetic fields and the easiest and cleanest ways to demonstrate these. From the magnetic fields around permanent magnetic, to the magnetic fields around solenoids.	DE2	Laboratory CB04.03.541
9.50-10.50	**SESSION E**			
9.50-10.50	Fume hood safety **Hugh Clifford from Conditionaire**	Do you know how to use your fume hood safely and effectively? Hugh is here to answer all your questions about proper usage, safety tips, and common mistakes to avoid when working with fume hoods and chemical extraction fans.	E1	Lecture theatre CB06.03.022

9.50-10.50	Engaging Science with Origami Models - Making Bacteria Rings and Glitterbug Demonstration **Daniela Migliorati from Science Supply**	In this hands-on workshop we will learn that bacteria come in all shapes and sizes and were one of the earliest forms of life on our planet. You will enjoy learning about different types of bacteria - both the good and the bad - with our bacteria rings model! A fun and engaging way to learn! We will also use a glitterbug potion to show the importance of hand washing in a fun, interactive and informative way. We will see how dirt and bacteria linger after handwashing, making it an engaging way to demonstrate poor hand hygiene practices! All material will be provided in the session. **Learning through fun!**	E2	Classroom CB06.03.051
9.50-10.50	Heat and liquid nitrogen **Ben Newsome from Fizzics Education**	Learn ways to help students understand heat transfer and changes of state of matter using liquid nitrogen	E3	Laboratory CB04.03.520
9.50-10.50	Chemical Handling **David and Henry from Environmental Treatment Services**	Identifying and storing chemicals. Understanding Dangerous Goods classes. Q&A session for all your chemical handling needs.	E4	Guthrie theatre CB06.03.028
9.50-10.50	Something Old, Something New, Something Borrowed, Something Glowing, Something yellow and Blue **Jasmina Hazrolaj and Lisa Chan**	This session has the full set: trusty old favourites, brand new surprises, clever borrowed tricks, a splash of blue, and yes even something glowing. (Is it fluorescence? Chemiluminescence? You'll have to come and see.) Expect a lively mix of practical demos, playful twists, and plenty you'll want to take straight back to your lab. First-timers or regulars, you're in for a session that won't let you sit still or switch off.	E5	Laboratory CB04.03.430
10.55-11.30	**MORNING TEA**			Universal Cafe Level 4
11.35-12.35	**SESSION F**			
11.35-12.35	Glass bending **Samantha Matveev**	Laboratory glass tubing is used in many laboratories to connect other items of glassware or equipment and to convey or deliver chemicals, solvents, liquids, gases and other products. Lab glass tubing is normally manufactured from borosilicate glass for the most demanding applications. As a lab technician within the school system we need to create S bends and U bends for many experiments within Science. Learn	F1	Laboratory CB04.03.520

		how to create these bends in glass tubing to reduce the cost outlay of buying the tubing already made.		
11.35-12.35	**Session 2 Carry out a Titration** Session 1 and 2 which is run over both days of the conference would be a great benefit for newer Lab technicians as you will be introduced to equipment used in a senior chemistry classroom in preparing and making a Primary Standard (Yr 11) and carrying out a Titration (Yr 12). Alternatively, you could attend one of the two sessions as each session are run as a separate entity. **Darryl Hearsch**	You will be introduced to all the equipment needed to carry out a titration and then it will be demonstrated how to carry out a titration between a standard solution of Sodium carbonate (Na_2CO_3) and Hydrochloric acid (HCl). You will then carry out a titration and perform the necessary calculations to determine an unknown concentration of HCl used.	F2	Laboratory CB04.03.541
11.35-12.35	How to test your equipment and do any minor repairs if needed - **Bob Death**	Bring along any equipment that you are having trouble with and Bob will endeavour to show you how to repair.	F3	Classroom CB06.03.051
11.35-12.35	Phenomenal Physics: Fun, Focused, and Fantastic **Jeffrey Keck from MTA**	Make physics approachable and exciting through simple, engaging experiments aligned with Years 7-10 curriculum. Teachers will design and test energy-efficient houses, simulate motion with rollercoasters, and explore forces with slingshots and catapults. Educators will leave with fresh ideas and classroom-ready resources.	F4	Laboratory CB04.03.430
11.35-12.35	Tips, Tricks, and Techniques with Your PASCO Sensors: Problem Solving **Megan Simkin from Ciderhouse Tech**	An introduction or refresher on PASCO's SPARKvue software, with a focus on maximizing the benefits of digital data acquisition in schools. This workshop will include hands-on resources, guided experiments, and discussion of helpful tips, maintenance, calibration, and data analysis —	F5	Classroom CB06.03.053

		all aimed at supporting effective use of PASCO equipment in the classroom. There will also be an opportunity to ask questions in a collaborative, forum-style setting		
11.35-12.35	Physics Playground - Exploring High School Physics **Stuart Lewis from Scientrific**	"Physics is science where you think with your hands" Are you looking for ways of collecting data related to experiments in the Australian Curriculum – Physics (Especially when inertia keeps you at home)? This workshop explores Physics using Vernier Dataloggers. With multiple workstations, and support from our presenter, participants will use dataloggers to explore different physics experiments. Topics will include: • Examining motion using a Motion Probe, Photogate and Video Analysis • Investigating electrical induction using magnets • Magnetic fields in a coil • Newton's Laws of Motion	F6	Classroom CB06.03.052
11.35-12.35	Using Generative AI at work **Dr Madhushi Bandara from UTS School of Computer Science**	Generative AI tools such as ChatGPT or Microsoft Copilot are excellent tools to help us with our day-to-day work. In this session we will discuss some examples of how we can use these AI tools at workplace, to assist us with writing, planning and more. But most importantly, we will discuss responsible use of AI tools that ensure safe and accurate outcomes for everyone.	F7	Lecture theatre CB06.03.022
12.40 - 13.40	**LUNCH**			Universal Café L4

13.45 – 14.45	SESSION G			
13.45 – 14.45	Chemwatch **Shell Chilcott**	Learn more about how to use Chemwatch • Labelling chemicals • Using QR codes • Automatic updating of SDSs in your manifest • Q&A	G1	Classroom CB06.03.056
13.45 – 14.45	Genetic Engineering **Jeanette Tran from Stem Reactor**	Learn about genetic engineering but modifying E.Coli bacteria to express Jellyfish protein! Join our engaging workshop centered and conduct a real-world bacterial transformation experiment, introducing the Green Fluorescent Protein (GFP) gene into E. coli bacteria and witnessing the power of DNA manipulation firsthand. Through practical application and guided instruction, attendees will gain a solid understanding of core molecular biology concepts. You will learn: • The fundamental principles of bacterial genetic transformation and how bacteria can take up foreign DNA. • The role of plasmids as vectors for introducing new genes into cells. • How antibiotic selection is used to identify genetically modified organisms. • The process of gene expression and how genes like GFP lead to observable traits. Practical techniques for handling bacteria and performing basic molecular biology procedures.	G2	Laboratory CB04.03.430
13.45 – 14.45	Welcome to the microcosm! **Matt Dodds from Science with Matt**	Tardigrades! Yes you heard it correctly. In this quick lab we will isolate and examine Tardigrades under the microscope and project them onto the big screen. We will also discuss where the best place to find these amazing little creatures at your school. We will also examine a range of other slides, from red blood cells to intestinal villi and more.	G3	Laboratory CB04.03.541

13.45 – 14.45	Running a hands-on practical assessment task where students work individually **Jacob Strickling from Tiny Science Lab**	This is a hands-on practical based workshop where each participant will be individually carrying out a sample practical based assessment task. The task is designed to be Lab technician friendly, student centred and both formative and valid.	G4	Laboratory CB04.03.520
13.45 – 14.45	ASTA's Science Assist Learn about how ASTA's Science Assist can help you with your lab safety concerns and how to master Science Assist with this interactive session. **Dr Pat Stamford** **Science Assist Advisor**	We will cover different aspects of school and classroom laboratory safety including our most popular resources that can help you to prepare for your next science lesson. The session will explore examples of real-life questions on chemical management, handling, storage and disposal that have been answered by our expert science advisory team and how Science Assist can help you to make science education safer and more enjoyable.	G5	Lecture theatre CB06.03.022
14.55 – 15.05	Evaluations and return lanyards			Guthrie theatre CB06.03.028
15.05 – 15.20	Lucky Door Prize draw			Guthrie theatre CB06.03.028
15.30	Conference Close			