CONNECTED TO SCIENCE

CONQUEST 23

JUNE 26 + JUNE 27

FORTITUDE VALLEY STATE SECONDARY COLLEGE

QUEENSLAND EDUCATION
SCIENCE TECHNICIANS

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ABOUT QEST

QEST is the professional association of Queensland Education Science Technicians. The association has membership across the state in both metropolitan and rural areas, with diverse experience and needs. With few laboratory support staff in each school, staff filling these roles often feel isolated and challenged. QEST aims to connect laboratory staff through encouraging regional and state networks to share ideas, information and experiences.

QEST produces a quarterly newsletter, maintains a website with relevant links and downloadable resources, facilitates training through other organisations and organises an annual conference focused on professional development, specific to members' roles in schools.

Become a member of QEST today by visiting our website https://qest.org.au/join-qest/. Any new membership applications received from 1 February have automatic renewal into the following financial year May-April, giving new members up to three months membership FREE! Current Fees:

- Individual membership: $40
- Corporate membership (up to 4 members): $80

Find QEST at our website, on YouTube, on Instagram and on Facebook to join the conversation with colleagues across the state. Volunteers for QEST are always welcome, email qest@qest.org.au to find out more.

ABOUT CONQEST

As an Australian not for profit professional organisation, QEST aims to support science laboratory staff in Queensland schools, through the facilitation of networking and provision of job specific professional development.

The CONQEST 2023 theme, "Connected to Science" encourages participants to explore the unique and dynamic interconnectivity that inextricable links science, education and the community.

The conference provides invaluable opportunities for Science Technicians to participate in practical workshops, presentations and discussions, with a focus on:

- Preparation for V9 of the Australian Curriculum;
- Exploring student investigation options in the Australian senior science curriculum;
- Inclusion of Aboriginal and Torres Strait Islander science elaborations, and sustainable practices across the science curriculum;
- Exposure to latest laboratory management practices, science curriculum inclusions and current technologies;
- Building relationships with industry professionals, to maximise resource efficiency and improve equipment expertise.

QEST ANNUAL GENERAL MEETING

All delegates are invited and encouraged to attend the QEST AGM, held as part of the conference program on Monday. The success of our association is directly related to the active contributions of the membership. All positions will be declared vacant to allow for new goals and new direction from the membership. Nominations close 4 weeks prior to the AGM - the nomination form is available at qest.org.au It is expected that discussions from the preceding FORUM and WORKSHOP at CONQEST23, will inspire motions to be put forward for consideration, to promote the growth of our association in line with a positive and contemporary Australian culture.

ACKNOWLEDGMENT TO COUNTRY

In the spirit of reconciliation, QEST acknowledges the Yuggera Ugarapul people, the Traditional Custodians of the land on which CONQEST23 is held. We honour and celebrate their connections to country, to the health of the land, water and community, and encourage the inclusion of their culture in science education.

We pay our respect to their Elders past, present and emerging, and extend that respect to all Aboriginal and Torres Strait Islander peoples attending and contributing to CONQEST23.

ABOUT THE VENUE

Located in the heart of the Brisbane Valley at 585 Saint Pauls Terrace, Fortitude Valley State Secondary College is a relatively new multilevel school.

Be prepared to get your steps up as we move from the Junior Building's Auditorium to the Senior Science facilities. Lifts are available for those with mobility impediments.

In the sound proofed climate controlled rooms with a view of the oval, you may soon forget that you are in the city. Priding themselves on wellness and sustainability, there are breakaway hubs attached to each room and drinking water stations throughout the school. Bring your refillable drink bottle and add to the school's count of single use plastic bottles reduced!

GETTING THERE - PUBLIC TRANSPORT & PARKING

Information about getting to Fortitude Valley State Secondary College can be found at *https://fortitudevalleyssc.eq.edu.au/our-school/maps-and-transport*

As there is no parking on the conference site, we recommend delegates use public transport where possible. The Fortitude Valley train station is a mere 10 minute walk from the venue.

The RNA Brisbane Show Grounds are extending the Fortitude Valley Secondary College staff discount parking rates of $13 for the day to delegates and presenters. Participants wishing to take up this discount offer must park in the open air carpark where the attendant is present and show their CONQEST23 ticket. https://www.brisbaneshowgrounds.com.au/home/visit/parking/

CONFERENCE GALA DINNER

Monday night's conference Gala dinner, with special guest speaker, is being held at the beautiful Cloudland's Rose Room - 641 Ann Street, Fortitude Valley. The cost of dinner is included in the delegate conference ticket. Please indicate your intention to attend and any personal dietary requirements when you register for conference via Eventbrite. Cash bar available. Dress code Semi-formal

TEMPORARY QEST PHONE NUMBER:

0448 500 968

HAVE YOU BEEN LOCKED OUT OF THE BUILDING?

ARE YOU A PRESENTER AND YOU ARE RUNING LATE?

USE THIS NUMBER TO CONTACT QEST DURING CONQEST23

CONQEST23

PRESIDENTS WELCOME - SAM GODWIN

On behalf of QEST, I welcome you to our annual conference – CONQEST23: Connected to Science.

The organising committee has taken inspiration from my birth place and the British Science Week 2023 theme "Connections". As a new member of QEST, this is my first time being involved in organising CONQEST, and I have formed many connections with my peers and corporate partners this past year. I encourage you to take advantage of opportunities to strengthen your connections with other Science Technicians, professional presenters and trade hall participants.

We have been very fortunate this year to have the continued support of several organisations:

HOST SCHOOL:
We are grateful to Fortitude Valley State Secondary College for supporting our association's annual event and hosting us in their fabulous modern facilities, including their brand new Senior science rooms that are yet to be used by students. A special mention must go to new QEST member and FVSSC Science Technician Gulumser Mutuloglu, for the preparation on site for this event.

PLATINUM SPONSOR:
QEST is generously sponsored by our website host – Ciderhouse Tech. Thank you to Doug Bail and his team for their technical assistance with our membership portal and website.

CORPORATE PARTNERS:
We thank the businesses who have supported our event by presenting workshops and participating in the Trade Hall. Please acknowledge their support by taking the time to visit their Trade Hall displays and personally thanking them.

PEER PRESENTERS:
Each year we put the call out for EOI within our peer network. This year five peers answered that call. Thank you to QEST members Dana Hallet, Hilary Maloney, Natalii Paczkowski, Jacinta Hodnett, and Marina Kezilas for sharing their knowledge with delegates through their workshops. These members are now in the running for the SLAA next year and qualify for leadership recognition in their roles.

QEST REPRESENTATIVES:
Special mention must be made of those members who have worked voluntarily to manage QEST, maintain QEST member services, organise CONQEST and represent QEST this year:
Annette Parkes, Margot Lloyd, Jennifer Walters, Jacqui Burton, Amber Wilson, Nikki Bradford, Sharon O'Keeffe, Helen Mead, Christine Forrestal, Naomi Radke, Cheryl Tsan, Dana Hallet, Paul Evans, Kym Hunt, Olivia Frost, Sandra Lewis, Gulumser Mutuloglu, Wendy Shearer, Vicki Jordan, Megan Seymour, Karen Timms, and Linda Adamson. On behalf of QEST members, I thank for your contributions to our association.

Sam Godwin, QEST President 2022-23

MEET OUR KEYNOTE PRESENTERS

CATH MENZLER, QCAA PRINCIPAL PROJECT OFFICER

Cath Menzler has been teaching Science for over 30 years and, as a teacher and Head of Department, knows the value of working in a team to support students to be successful learners.
She is now with the Queensland Curriculum and Assessment Authority supporting Science teachers from Prep to Year 10 across Queensland as they plan for and deliver the Australian Curriculum.

The review and release of the Australian Curriculum Version 9.0 (v9.0) delivers an opportunity to evaluate how we engage our Year 7 to 10 students with Science, in our classrooms and laboratories. This presentation provides an overview of the changes from v8.4 to v9.0 with a focus on the role of the general capabilities to enhance learning through practical activities. Participants will be invited to share ideas on the implications of the changes to the curriculum on their current programs.

PROFESSOR JAMES HUDSON, QIMR BERGHOFER

James completed a Bachelor of Chemical and Biological Engineering, a PhD in Biotechnology at the University of Queensland followed by a postdoc in Goettingen, Germany. James' lab has brought together engineering and cell biology disciplines to develop human cardiac organoid screening platforms. He is now generating a 'Cardiopedia' aiming to provide a comprehensive map of the molecular processes governing cardiac function. James regularly publishes in top journals in his field and is an inaugural recipient of the Snow Medical Fellowship in 2021.

The way we find new drugs is changing. New technologies in stem cell biology, tissue engineering and devices have now made it possible to create human heart tissue in the lab. While useful for implantation to fix the failing heart, it has even greater utility as a new model to find new drugs without using animal models. To create 'disease', heart tissues can be genetically identical to donors with familial heart disease, or specific environments created to mimic disease such as diabetes. Then new drugs are screened, and the outcome better drugs

MEET OUR KEYNOTE PRESENTERS

SARA ELLIS, EDUCATION QUEENSLAND SENIOR WELLBEING CONSULTANT

Sara is a Senior Wellbeing Consultant with the Department of Education where she supports staff with their wellbeing needs and promotes wellbeing initiatives. She has a background in biomedical science and public health which she utilises to support and empower staff to adopt healthy behaviours and help create work environments that support health and wellbeing.

Wellbeing is a state in which every individual realizes their own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to their community (WHO, 2016). In this session you will learn about the importance of staff wellbeing. Sara will speak to known challenges experienced by science technicians and provide wellbeing strategies that are aligned with the DoE Staff Wellbeing Framework which can be implemented into day to day work and home life.

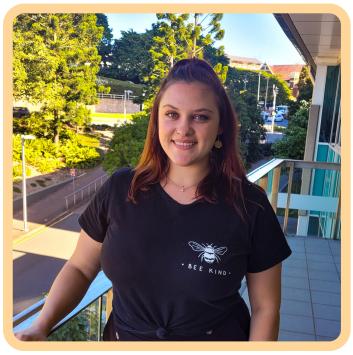
HUGH KEARNS, FLINDERS UNIVERSITY, ADELAIDE

Hugh Kearns is recognised internationally as a public speaker, educator and researcher. He regularly lectures at universities across the world including lectures at Oxford, Cambridge, Harvard, Berkeley, Stanford, ETH Zurich and the Max Planck Group.
His areas of expertise include self-management, positive psychology, work-life balance, learning and creativity. He has coached individuals, teams and executives in a wide range of organisations in the public and private sectors.
Hugh lectures and researches at Flinders University, Adelaide.

How can it be that so many clever, competent and capable people feel that they are just one step away from being exposed as a fraud? Despite evidence that they are performing well they can still have that lurking fear that at any moment someone is going to tap them on the shoulder and say "We need to have a chat".
The session will explain why people often doubt their abilities and find it hard to enjoy their successes. It will show the links to perfectionism and self-handicapping strategies such as procrastination, avoidance and over commitment.

MEET OUR FORUM MODERATOR

FELICITY BRADFORD, GRIFFITH UNIVERSITY



Felicity Bradford is a research assistant for the cities research institute at Griffith University, and is currently working on projects related to disaster management and resilience with the indigenous communities of Minjerribah. Previously, Felicity has worked on projects related to equity, gender equality, intergenerational justice, energy economics, water security and climate change adaptation mitigation. Having worked in two schools as a Science Technician, Felicity has a personal understanding of the challenges faced in schools by Science Technicians .

MEET OUR FORUM PANELISTS

DR TROY MESTON, GRIFFITH CENTRE FOR SOCIAL AND CULTURAL RESEARCH

Dr Troy Meston is a Gamilleroi Senior Research Fellow in the Griffith Centre for Social and Culture Research. His work employs critical Indigenous studies and decolonial praxis to investigate the intersections between education, technology & Indigenous studies. He has amassed a diversified body of work, constructed curriculum, and industry outputs across the areas of Indigenous sport, financial literacy, cognitive science, Indigenous health, and education.

Troy applies national research acumen from roles with peak bodies, such as the Australian Sports Commission and Australian Institute of Sport, where he developed the 'Yulunga: Indigenous Games' publication, and managed Indigenous athletes in a program which led toward the Bejing and London Olympic games. He is a former Research Fellow with the Australian Council for Educational Research, where as part of an Indigenous team, he produced outputs for the Prime Minister and Cabinet, ASIC, and the ARC Science of Learning Research Centre.
Troy is currently the Indigenous pedagogy leader on the 'Digitising the deep past: Machine learning, rock art and Indigenous engagements with 21st century technology' project, working with Indigenous learners in Laura.

MEET OUR FORUM PANELISTS

DEE SPINK, TOGETHER ASSISTANT SECTRETARY

Dee Spink is the Assistant Branch Secretary of Together, which represents over 28,000 members across the state. Dee also represents Together members on the National Executive of the Australian Services Union. As Assistant Branch Secretary, Dee has overarching responsibility for organising and industrial strategies and campaigns to build members' strength to improve employment security, wages and conditions.

For many years, Dee has worked with Together members in education, child protection and youth justice – campaigning around not only industrial issues but matters such as fair resourcing, safety and recognition. She has a deep commitment to working with members to address fundamental issues like gender equity, equal rights and safe workplaces.

AARON WATSON, QIEU GROWTH ORGANISER

Aaron Watson is a Growth Organiser with the IEU and travels across the state meeting with members and non-members discussing the importance of union membership and how we can all make a difference. He is also a member of the ACTU International Committee and the Committee of Management for the Industrial Relations Society of Queensland.

The Independent Education Union – Queensland and Northern Territory Branch (IEU-QNT) is the only organisation that provides a strong voice for employees in the non-government education sector. The IEU represent 17,000 teachers, pre-service teachers, school support staff, principals, kindergarten teachers and assistants, as well as RTO and ELICOS trainers and employees. The IEU was founded more than 100 years ago and has an enduring legacy of fighting for better workplaces and standing by our members when they need support.

DAY 1	MONDAY 26TH JUNE	LOCATION
7:45 - 8:20 AM	Registration	The Hub - side entry off St Paul's Terrace
8:30 - 9:00 AM	Conference Open	Auditorium
9:00 - 10:30 AM	Keynote Address **Science Curriculum V9** Cath Menzler, QCAA	Auditorium
10:30 - 11:00 AM	MORNING TEA	S Block Terrace Level 2
11:00 AM - 12N	**Workshop Electives - Session A**	Various
12N - 1:00 PM	LUNCH	S Block Terrace Level 2
1:00 - 3:00 PM	Science Technician Forum: **Embedding Inclusion and Diversity into Contemporary Science Education** GUEST PANELISTS followed by QEST Workshop	Auditorium
3:00 - 3:15 PM	Brain Break	Auditorium
3:15 - 4:00 PM	QEST Annual General Meeting	Auditorium
6:00 - 10:00PM	Conference Dinner **Guest Speaker: Professor James Hudson**, QIMR Berghofer **Creating Human Heart Tissue for Drug Discovery**	Rose Room Cloudland 641 Ann St, Fortitude Valley

WORKSHOP SESSION A
MONDAY 11:00 - 12:00PM

SESSION CODE	WORKSHOP TITLE	LOCATION
A1	**Quartzy Lab Management** Dana Hallett, Laidley SHS	Barrambin Building, Level 2, B238
A2	**Round We Go: Ways to Measure Centripetal Forces** Hilary Maloney, Proserpine SHS	Sports Centre, Level 2, S227
A3	**Understanding and Troubleshooting pH Sensors** Ben McColl, TPS Precision Measurement	Sports Centre, Level 2, S219
A4	**Hands-On Investigation of Energy Transfers** Doug Bail and Megan Simkin, Ciderhouse Tech	Sports Centre, Level 2, S222
A5	**STEM Approaches Using Dataloggers** Stuart Lewis, Scientrific	Barrambin Building, Level 2, B217
A6	**Introduction to RiskAssess** James Crisp, Ecosolve Australia	Barrambin Building, Level 2, B239
A7	**Origami Earth Science** Daniella Migliorati, Science Supply Australia	Barrambin Building, Level 2, B237

DAY 2	TUESDAY 27TH JUNE	LOCATION
8:15 AM	Registration	The Hub - side entry off St Paul's Terrace
8:45 - 9:00 AM	Day Two Welcome and Housekeeping	Auditorium
9:00 - 10:00 AM	Keynote Address **Science Technician Wellbeing** Sara Ellis, Education Queensland	Auditorium
10:00 - 10:30 AM	MORNING TEA	S Block Terrace Level 2
10:30 AM - 12N	**Workshop Electives - Session B**	Various
12N - 1:00 PM	LUNCH	S Block Terrace Level 2
1:00 - 2:45 PM	Keynote Address **Imposter Syndrome** Hugh Kearns, Flinders University Adelaide	Auditorium
2:45PM-3:00PM	Brain Break	Auditorium
3:00 - 4:00 PM	Conference Close	Auditorium

WORKSHOP SESSION B
TUESDAY 10:30 - 12:00PM

SESSION CODE	WORKSHOP TITLE	LOCATION
B1	**Using Enzymes in Senior Biology** Natalii Paczkowski, Assumption College Warwick	Sports Centre, Level 2, S227
B2	**Fun with Physics** Jacinta Hodnett, Redcliffe SHS	Barrambin Building, Level 2, B217
B3	**Skills for the new Queensland Titration Competition** Elaine Bergman, RACI	Sports Centre, Level 2, S222
B4	**Measuring the Environment with Vernier Dataloggers** Stuart Lewis, Scientrific	Barrambin Building, Level 2, B238
B5	**Virtual and Hands-On Investigation of Body Systems** Doug Bail and Megan Simkin, Ciderhouse Tech	Barrambin Building, Level 2, B237
B6	**RiskAssess for Experienced Users: Latest Features, Tips, and Tricks** James Crisp, Ecosolve Australia	Barrambin Building, Level 2, B239
B7	**Microbiology Basics and Bacterial Transformation** Marina Kezilas, Assisi Catholic College	Sports Centre, Level 2, S219

WORKSHOP ELECTIVES - SESSION A MONDAY:

Delegates will choose one elective from the following workshops - continued over page

A1
Inventory Management with Quartzy
Dana Hallett, Laidley SHS

Dana has worked across an number of industries and contract positions across QLD science departments taking with her lessons from each preparatory space to develop systems for successful inventory management.

This workshop explores inventory management using Quartzy. From managing purchases, storage locations, printable barcodes, stocktake and disposal, explore the various functions and benefits of this online system to help keep track of your Science Department's extensive items.

Delegates - BYO Device

A2
Round we go!
Ways to measure Centripetal forces
Hilary Maloney, Proserpine SHS

Hilary works as a Science Technician at Proserpine State High School, specialising in supporting senior science subjects for yrs 10 -12. In addition to 10 years work experience, Hilary holds a Diploma in Applied Science Chemistry.

Looking at Unit 3 Physics, QCAA suggested practical "Conduct an experiment to investigate the net forces acting on an object undergoing horizontal circular motion on a string." A series of experiments to measure the forces involved in the circular motion of an object. From basic equipment set ups to using sensors and datalogging programs.

Delegates - BYO Safety Glasses

A3
Understanding & Troubleshooting pH sensors
Ben McColl, TPS Precision Measurement

Ben McColl provides support and service to technicians around the country in relation to lab and field water quality equipment. He works to break down confusion around types of sensors and options for equipment.

This workshop will address the following

- The basic science of measuring pH in liquids
- Tips for troubleshooting a faulty pH sensor
- The advantages of Intermediate Junction sensors for difficult samples

Delegates - nil requirements

A4
STEM Approaches using Dataloggers
Stuart Lewis, Scientrific

Stuart is a Science Communicator for Scientrific. He presents content that focus on Science literacy outcomes through innovative and engaging activities that involve the integration of new technologies. He has also developed and conducted outreach programs for QUESTACON, NRMA and the Australian Trucking Association.

“STEM is science where you think with your hands” Are you looking for ways of imbedding STEM activities into the Australian Curriculum? Are you looking for a way to revive and extend your existing science equipment. This workshop will use Vernier dataloggers to explore different STEM experiments. Topics will include:

- A reimagining of the classic Egg Drop experiment to include data and tie it to the Curriculum;
- Using Vernier probes with Arduino and Scratch;
- A look at how to build the Microsoft robotic hand challenge.

Delegates - BYO Safety Glasses

WORKSHOP ELECTIVES - SESSION A MONDAY:

A5
Hands on Investigation of Energy Transfers
Doug Bail & Megan Simkin, CiderhouseTech
Both Megan and Doug have extensive real world experience of classrooms and science departments, Megan as a lab technician for more than 15 years and Doug as a teacher, Head of Science and curriculum co-ordinator. They bring ideas and expertise from not only their own experiences but also from visiting schools and Universities In Queensland, around Australia and overseas.

With a focus on the outcomes of the new V9 Junior curriculum, this session will explore ways of measuring energy transfers through heat, electricity and light. The workshop will utilise dataloggers as a means of electronic measure, to provide data rich, engaging outcomes for students. Delegates will be presented with examples of implementing investigations for a hands-on, investigative approach.
Delegates - BYO Labcoat & Safety Glasses

A6
Introduction to RiskAssess
James Crisp, Ecosolve Australia
James co-founded RiskAssess 15 years ago and looks after the technical side of things. He designs and writes all the software and servers that make up RiskAssess, and works out new features to build based on suggestions and feedback from lab techs and teachers. He can answer any questions you may have about the software.

See how easy it is to carry out mandatory risk assessments of science experiments using RiskAssess!
RiskAssess leads you through the identification, assessment and control of risks, documenting the process, and providing safety information on chemicals, equipment and biologicals to help you understand risks and thereby reduce the chance of injury. A prac ordering and scheduling system is included in RiskAssess to save you time. You can also create GHS labels in seconds. RiskAssess is used by over 80% of schools in Queensland, and over 2,000 schools in Australia.
Delegates - BYO Device optional

A7
Engaging Science with Origami Models - Fracking
Daniella Migliorati, Science Supply Australia
Daniela has more than 18 years experience in the Education and Industrial sector, in particular offering teaching solutions to secondary, primary and early learning teachers. Daniela works at Science Supply Australia, an Australian owned and managed family business which has been operating for over 37 years! Daniella in STEAM integration in the classroom and product development workshops. She is passionate about learning through fun and offering innovative and diverse products to assist with 21st century learning**.**

In this hands-on workshop we will explore how the mining of ores and minerals impacts on local environments (V9 Year 8 Earth Science).
Fracking (hydraulic fracturing) has vastly increased the availability of natural gas all over the world.
However, this has come at an environmental cost. We will show how fracking is carried out with our hands on paper origami models. Learning through fun will teach students in a simple way to ensure students retain information and understand this complex topic. All material will be provided in the session.
Delegates - nil requirements

WORKSHOP ELECTIVES - SESSION B TUESDAY:

Delegates will choose one elective from the following workshops - continued over page

B1

Using Enzymes in the Senior Biology Curriculum

Natalii Paczkowski, Assumption College

Natalii has been working as a solo school lab technician for 7 years. It's important to her that practical activities give reliable results for students, and that pracs are easy to prepare and run. Natalii holds a science degree (BSc Hons with majors in pharmacology and physiology) and worked in drug discovery research and educating General Practitioners about Quality Use of Medicines. Natalii believes hands-on activities with meaningful data analysis is essential in science education.

Participants will conduct an enzyme activity investigation using catalase from different sources with simple and routine laboratory equipment. We will discuss how these initial experiments can be modified by students and consider tips and tricks to increase the likelihood of success. A demonstration of the Vernier Gas Pressure Sensor for this experiment will be conducted. There are many different enzymes that can be used to investigate enzyme activity within senior biology and we will discuss some of these.

Delegates - BYO Labcoat & Safety Glasses

B2

Fun with Physics

Jacinta Hodnett, Redcliffe SHS

With a background in scientific research and education Jacinta joined the Department of Education in 2015. When looking at professional development Jacinta realized that there was a shortage on workshops that engage and inspire interest in physics. This is the workshop that addresses that shortage.

A fast-paced look at some fun physics for the curriuculum and open day activies. Demonstrations in

- Electromagnetism – plasma ball demonstration
- Electostatic repulsion- fun fly stick
- Electricity and circuits – brainbox Conservation of energy – potential and kinetic energy simplified using a ruler and marble
- Laser lights with prisms and mirrors Ripple tank - wave motion

Delegates - BYO safety glasses

B3

Skills for the Queensland Titration Competition

Elaine Bergmann, Royal Australian Chemical Institute

Elaine is a retired Science and Chemistry teacher who has coordinated the National Titration Competition since 2013. During the last 3 years, she has initiated and managed changes to the Queensland competition that allow students from any school in the State to compete without the need to travel to a university venue. This has led to a significant increase in student participation.

Participants will be given tips to improve performance in the new analysis, including preparation of a standard solution of potassium hydrogen phthalate (KHP), and the actual titration. This analysis requires a greater level of skill than the previous one using 0.1 mol/L solutions of HCl, NaOH and acetic acid, as students must make their own 0.02 mol/L KHP solutions. Titration of these more dilute solutions is more challenging than with 0.1 mol/L. The focus will be on the finer detail needed to obtain accurate results.

Delegates - BYO Labcoat & Safety Glasses

B4

Measuring the environment with Vernier dataloggers

Stuart Lewis, Scientrific

Stuart is a Science Communicator for Scientrific. He presents content that focus on Science literacy outcomes through innovative and engaging activities that involve the integration of new technologies. He has also developed and conducted outreach programs for QUESTACON, NRMA and the Australian Trucking Association.

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 chlorophyll in plants
- Investigating plant photosynthesis
- Investigating respiration
- Abiotic conditions
- Water & Soil analysis

Delegates - BYO Labcoat & Safety Glasses

WORKSHOP ELECTIVES - SESSION B TUESDAY:

B5
Virtual & Hands-on Investigation of Body Systems
Doug Bail & Megan Simkin, CiderhouseTech
Both Megan and Doug have extensive real world experience of classrooms and science departments, Megan as a lab technician for more than 15 years and Doug as a teacher, Head of Science and curriculum co-ordinator. They bring ideas and expertise from not only their own experiences but also from visiting schools and Universities In Queensland, around Australia and overseas.

In this session delegates will explore a combination of real and virtual experiments that can be used to engage students and provide better, deeper understanding, real data and virtual experiences for investigating V9 Junior Curriculum biological systems. "ROQED science" virtual dissections and animations will be used to explore body systems and data collection to demonstrate how a unit can be developed, implemented and resourced.
Delegates - nil requirements

B6
RiskAssess for experienced users: Latest features, tips, and tricks
James Crisp, Ecosolve Australia
James co-founded RiskAssess 15 years ago and looks after the technical side of things. He designs and writes all the software and servers that make up RiskAssess, and works out new features to build based on suggestions and feedback from lab techs and teachers. He can answer any questions you may have about the software.

Get the most out of RiskAssess with the latest features, and save time with tips and tricks. We will cover the brand new booking warning system for short notice pracs, new number of groups box, disposal advice for all of the 3,000 chemicals and solutions in the database, BEST / Starred risk assessments, scheduling search and more. A multiple prac management system has also been added to Student RiskAssess to make it easier to handle large numbers of student risk assessments. And a new version for Food Tech is now available! There will be time for questions/discussion.
Delegates - BYO Device optional

B7
Microbiology basics and Bacterial Transformation, hands on workshop for beginners:
Marina Kezilas, Assisi Catholic College
Marina is the Science technician at Assisi Catholic College in Upper Coomera and she also works after hours as a science tutor for high school and university students specialising in Chemistry and Biology. Marina has completed a Bachelor in Health Science (Honours) (major in Nutrition), and two graduate diplomas, one in Molecular Biology and one in Education. She has a soft spot for research (medical or laboratory) and loves helping students develop confidence in science.

Tips on how to prepare, run and clean up microbiology experiments. In this particular experiment we will investigate how to conduct a bacterial transformation. During this demonstration we will look at how to set up this experiments, but also some basic techniques and rules of microbiology, with more emphasis on how to work with low-risk microorganisms and how to create bacterial lawns, isolate bacterial cultures, biological waste management, and aseptic technique.
Delegates - BYO Labcoat & Safety Glasses

THANKYOU TO THE TRADEHALL PARTICIPANTS

THANK YOU TO THE CONQEST23 SPONSOR

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THANK YOU TO THE CONQEST23 ORGANISING COMMITTEE

QEST President & Keynote Liaison: Sam Godwin, Gordonvale SHS

CONQEST23 Coordinator & Social Media: Nikki Bradford, Pittsworth SHS

Graphic Designer: Christine Forrestal, Springfield Central SHS

Corporate Workshop Liaison: Naomi Ranke, Stretton State College

Peer Workshop Liaison: Cheryl Tsan, Redeemer Lutheran College

Trade hall Coordinator: Margot Lloyd, St Teresa's Catholic College

Venue & Catering Liaison: Sharon O'Keeffe, Lockyer District SHS

FVSSC Science Technician: Gulumser Mutluoglu, Fortitude Valley SSC

Merchandise and Electronic aids: Dana Hallett, Laidley SHS

Welcome Desk Leaders: Paul Evans, Kawana SHS; Kym Hunt and Olivia Frost, Caloundra SHS

Committee Volunteers: Jacqui Burton, Cavendish SHS; Sandra Lewis, Bell Park SSC; Megan Seymour, Bremer SHS.

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