Quantum Victoria STEM Conference

STEM – Authentic Learning in the 21st Century

A Conference for Primary and Secondary Science, Maths and STEM Teachers, Lab Techs and Pre-Service Teachers

Friday 19th November 2021

Quantum Victoria, 235 Kingsbury Drive, Macleod West

Quantum
VICTORIA

STEM Authentic Learning in the 21st Century

The 4th Industrial Revolution (the Internet of things, devices, data and digital), COVID (remote learning) and the commencement of the 5th Industrial Revolution (human-machine collaboration), have disrupted traditional pedagogies, presenting both challenges and opportunities on how best to prepare our students for the world that awaits them.

This conference brings together a community of practice comprised of primary and secondary science, mathematics and STEM teachers, Lab Techs and Pre-Service Teachers, to explore and share strategies and best practice in STEM.

The conference program provides an opportunity to hear from a global industry leader on the importance of increasing data literacy capabilities for educators and students and for delegates to engage in professional conversations and workshops.

I invite you to join us as we explore ideas and strategies that will inform our practice and build our STEM capabilities and those of our students.

Soula Bennett
Conference Convenor and Director, Quantum Victoria

KEYNOTE SPEAKER

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Karthik Venkatasubramanian
Global Vice President, Data Strategy and Development

Karthik is currently the Global Vice President for data strategy and product development within Oracle's Construction and Engineering Business Unit.

In a career spanning 21 years across 4 continents, Karthik has successfully built many high performing teams and delivered several large-scale digitization initiatives that have been featured in case studies, patent applications and industry journals.

Named as one of Australia's Top 10 Analytics Leaders for 2021, Karthik is a passionate believer in the disruptive power of technology and data. More recently, he led the launch of Oracle's Construction Intelligence Cloud Services, an AI powered industry solution that helps customers accelerate capital project delivery.

Karthik is also part of the Industry Advisory Board within the Department of Information Systems and Business Analytics at Deakin Business School and regularly presents at leading industry events and conferences globally on the use of data and analytics to drive meaningful change.

'Using data to inform learning and to solve real-world, complex problems'

The rapid digitization and datafication in the industries across the world is fuelling never-before seen innovation especially through the use of technologies like artificial intelligence and machine learning. Companies are trying to differentiate their offering by crafting creative solutions for the new normal and rethinking the status quo.

Education is no different. As classes go digital and physical classrooms begin to adopt newer technologies, the opportunity to use data to make a meaningful change in education is more relevant today than ever before. My presentation will allow you to discover how data is being used in several industries and how some of the ideas and concepts can be applied to education to improve learning outcomes, inform pedagogical practices and build the skills that the industry needs from the next generation of budding scientists, engineers and entrepreneurs.

Maria James

Maria James is the Science Curriculum Manager with the Victorian Curriculum and Assessment Authority, having previously held school positions including Head of Science, Dean of Students and Head of Senior College. Maria holds a Masters degree in Education and has written junior science and senior chemistry textbooks. She is passionate about motivating and engaging students with science. A particular interest for Maria is encouraging students to apply their knowledge and skills in science and in other areas to take action in local and global contexts.

Erin Wilson

Erin Wilson is the Curriculum Manager, STEM for the VCAA. With responsibilities for VCE Biology, VCE Psychology and the Victorian Curriculum F-10 Science, she has a keen interest in engaging students in science and education and developing quality science and STEM curriculum for all learners.

SPONSORS

Gold

NEURODIVERSITY HUB - https://www.neurodiversityhub.org

A community of practice amongst universities, employers and service providers to assist autists, and neurodivergent individuals generally, with the transition to college and university, success in their courses and assistance in increasing their chances of securing a job and commencing a career.

The link to extensive resources for students, employers, universities, COVID19 remote study and work, mental health, entrepreneurship, inclusive building design and primary school teachers can be found here.

GENIUS ARMOURY - https://geniusarmoury.com

A platform to attract and identify a **cybersecurity talent pool within the autistic community** and provide them with some fundamentals training in cyber security. This project is supported by a consortium including BHP, DXC, Splunk, La Trobe University, Curtin University and AustCyber.

The materials provide an introductory cyber security syllabus that is accessible and understandable by autists with minimal or no prior knowledge of cybersecurity. It is geared towards people who may be interested in further learning or commencing a career in cybersecurity and ethical hacking. The course provides a foundation syllabus in an inspirational and understandable manner that is intended to spark interest and the pursuit of further learning.

Genius Armoury is looking to partner with educational institutions (to create pathways to their cybersecurity courses) and with employers (to assist in developing their cybersecurity talent acquisition strategies).

Silver

EDUCATION PERFECT - https://www.educationperfect.com/

Curriculum aligned teaching & learning.
For Secondary & Primary and all subjects.

CONFERENCE PROGRAM

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8.30am - 8.55 am	**Registration & Exhibitors - Gallery**
9.00 am - 9.05 am	Welcome – **Soula Bennett**, Director, Quantum Victoria
9.05 am – 9.10 am	Welcome – **Penny Addison**, Director, Curriculum and Assessment Branch at Department of Education and Training, Victoria
9.10am - 9.55am	Keynote – **Karthik Venkatasubramanian**, Global Vice President Data Analytics
10.00am - 10.30am	**Morning Tea & Exhibitors – PD Suite, Gallery & STEM Garden**

10.35am - 11.30 am **Session 1 Workshops (1A – 1F)**	**1A VCAA Update How can authentic learning experiences be mapped to STEM curriculum?** **Maria James**, Science Curriculum Manager, VCAA - **QV Theatre** **1B Using educational escape rooms to unlock learning** **Dr. Robert Ross**, Senior Lecturer, Engineering, La Trobe University – **SLS Lab** **1C Planning your Future - a 3 day integrated STEAM project to build a suburb** **Diana Gilbert**, Science Domain Leader & STEAM Learning Specialist, Mentone Girls Secondary College, **Lauren Caridi**, Teacher, Mentone Girls Secondary College – **QV Boardroom** **1D CREATE, CODE, INNOVATE with LEGO Education Learning System** **Libby Moore**, Director, Moore Educational – **Game Break Out Space** **1E Creativity begins with Collaboration** **Cressida Byrne**, Program Delivery Lead/Senior Project Manager, Cambridge Education – **Game Development Suite** **1F Applications of 3D Printing & Modelling in Science & Maths** **Scott Mclean**, Learning Specialist, Quantum Victoria, **Carlie Alexander** Teaching and Learning, Quantum Victoria – **Wet Lab**
11.35 am - 12.30 pm **Session 2 Workshops (2A – 2F)**	**2A Integrating ethical capability into the STEM Classroom for authentic 21st Century learning** **Erin Wilson**, Curriculum Manager, STEM VCAA – **QV Theatre** **2B Using educational escape rooms to unlock learning** **Dr. Robert Ross**, Senior Lecturer, Engineering, La Trobe University – **SLS Lab** **2C Picture Book STEM Design Engineering Challenge** **Trish Dower**, Leading Teacher, Earth Ed, **Rosie Williams**, Educator, Earth Ed **Stephen Eichler**, Educator, Earth Ed –**QV Boardroom** **2D Learning to Code, Coding to Learn** **Doug Bail**, Director, Cider House Tech – **Game Break Out Space** **2E Design Thinking in the Primary STEM classroom** **Nicole Mason**, Education Officer, Ecolinc, **Natasha Mary Ward**, Education Officer, Ecolinc – **Wet Lab** **2F STEM Project Based Learning (PBL) - An Authentic Approach to 21st Century Learning in the Primary Classroom** **Soula Bennett**, Director, Quantum Victoria, **Latha Shivasubramanian**, Data Analytics Manager, Quantum Victoria – **Game Development Suite**
12.35 pm - 1.30 pm	**Lunch & Exhibitors – PD Suite, Gallery & STEM Garden**
1.35 pm - 2.30 pm **Session 3 Workshops (3A – 3E)**	**3A VCAA Update How can authentic learning experiences be mapped to STEM curriculum?** **Maria James**, Science Curriculum Manager, VCAA – **QV Theatre** **3B Using technologies to control an outbreak of disease** **CANCELLED** **Jacinta Duncan**, Director, GTAC, **Stacey Jamieson**, Education Officer, GTAC – **SLS Lab** **3C Coding with Arduinos** **Anthony Simcox**, Teaching and Learning, Quantum Victoria **Campbell Wiggins**, Teaching and Learning, Quantum Victoria - **Game Development Suite** **3D Girls in STEAM Electric Car Project** **Graeme Wiggins**, Director, Bendigo Tech School, **Dave Budge**, CEO, Jaunt Motors, **Marteen Burger**, Director, Jaunt Motors – **SLS Lab** **3E Online learning beyond the screen: using EP as a pedagogical toolkit** **Page Dosen**, Teacher Consultant, Science Specialist Education Perfect **Anna Barnes**, Specialist Science Teacher Consultant, Education Perfect – **Game Break Out Space** **3F Regional education and Dark Matter** **Carlos Lopez**, Principal, Stawell Secondary College **Jackie Bondell**, Education Project Officer, Centre for Dark Matter Particle and Particle Physics – **Wet Lab**
2.35 pm - 3.30 pm **Session 4 Workshops (4A – 4F)**	**4A Integrating ethical capability into the STEM Classroom for authentic 21st Century learning** **Erin Wilson**, Curriculum Manager, STEM VCAA – **QV Theatre** **4B Mobile App Development** **S M Abdullah**, STEAM Technician, Casey Tech School – **SLS Lab** **4C Embedding and Assessing General Capabilities in Project Based Learning** **Elizabeth Cain**, Engagement & Micro-credentials Coordinator, Beaumaris Secondary College **Amanda Jacobs**, Head of House, Beaumaris Secondary College – **QV Boardroom** **4D Engaging Fun Science Ideas!** **Daniela Migliorati**, General Manager, Science Supply Australia – **Game Break Out Space** **4E Minecraft - Incorporating a First Nations Peoples Perspective** **Mahaelia Thavarajah**, Teaching and Learning, Quantum Victoria, **Jakin Stasce**, Teaching and Learning, Quantum Victoria – **Game Development Suite** **4F Design Thinking as an Inquiry Framework** **Elissa Michell**, STEM Communication Officer, **Anne Jessup**, STEM Communication Officer, Whittlesea Tech School – **Wet Lab**
3.30 pm	**Close of Conference – Soula Bennett, Director Quantum Victoria , QV Theatre**

EXHIBITORS

ciderhouse tech

NEURODIVERSITY**HUB**

ep Education Perfect

SSa
Science Supply Australia
Chemistry with Clients

GENIUS ARMOURY
CYBER SECURITY GUARDIANS

westlab

HAINES
EDUCATIONAL

WILTRONICS

Moore
Educational
- Supplier of serious fun -

PRESENTERS

S M Abdullah, STEAM Technician, Casey Tech School

Carlie Alexander, Teaching and Learning, Quantum Victoria

Doug Bail, Director Cider House

Anna Barnes, Specialist Science Teacher Consultant, Education Perfect

Soula Bennett, Director, Quantum Victoria

Jackie Bondell, Education Project Officer, Centre for Dark Matter Particle and Particle Physics

Dave Budge, CEO, Jaunt Motors

Marteen Burger, Director, Jaunt Motors

Cressida Byrne, Program Delivery Lead/Senior Project Manager, Cambridge Education

Elizabeth Cain, Engagement & Micro-credentials Coordinator, Beaumaris Secondary College

Lauren Caridi, Teacher, Mentone Girls Secondary College

Page Dosen, Teacher Consultant, Science Specialist Education Perfect

Trish Dower, Leading Teacher, Earth Ed

Stephen Eichler, Educators, Earth Ed

Diana Gilbert, Science Domain Leader & STEAM Learning Specialist, Mentone Girls Secondary College

Amanda Jacobs, Head of House, Beaumaris Secondary College

Maria James, Science Curriculum Manager, VCAA

Anne Jessup, STEM Communication Officer, Whittlesea Tech School

Carlos Lopez, Principal, Stawell Secondary College

Nicole Mason, Education Officer, Ecolinc

Scott Mclean, Learning Specialist, Quantum Victoria

Elissa Michell, STEM Communication Officer, Whittlesea Tech School

Daniela Migliorati, General Manager, Science Supply Australia

Libby Moore, Director, Moore Education

Robert Ross, Senior Lecturer, Engineering, La Trobe University

Latha Shivasubramanina, Data Analytics Manager, Quantum Victoria

Anthony Simcox, Teaching and Learning, Quantum Victoria

Jakin Stasce, Teaching and Learning, Quantum Victoria

Mahaelia Thavarajah, Teaching and Learning, Quantum Victoria

Natasha Mary Ward, Education Officer, Ecolinc

Campbell Wiggins, Teaching and Learning, Quantum Victoria

Graeme Wiggins, Director, Bendigo Tech School

Rosie Williams, Educators, Earth Ed

Erin Wilson, Curriculum Manager, STEM VCAA

Session 1 Workshops

1A

QV THEATRE
VCAA Update - How can authentic learning experiences be mapped to STEM curriculum? (Years F-12, Pre-Service Teacher)

Maria James, Science Curriculum Manager, VCAA

Authentic learning is often facilitated in STEM delivery by using active, student-centred approaches such as project-based learning and problem-based learning (PBL).

1B

SLS LAB
Using educational escape rooms to unlock learning (Years 5-9, Pre-Service Teacher, Lab Tech)

Dr. Robert Ross, Senior Lecturer, Engineering, La Trobe University

Educational escape rooms are the latest in team-based, highly engaging pedagogical practice. Educational escape rooms draw on the ideas of recreational escape rooms (time-limited, team-based, narrative infused problem-solving exercises) to create game-based learning activities. In this hands-on workshop participants will learn the what, why and how of educational escape rooms before having a chance to experience an educational escape room first-hand.

1C

QV BOARDROOM
Planning your Future - A 3 day integrated STEAM project to build a suburb
(Year 9, Pre-Service Teacher, Lab Tech)

Diana Gilbert, Science Domain Leader & STEAM Learning Specialist, Mentone Girls Secondary College
Lauren Caridi, Teacher, Mentone Girls Secondary College

This workshop will describe how we developed and implemented a 3-day authentic learning experience for Yr 9 students where, in class groups they have to plan, design and construct to-scale a mini suburb to meet the criteria and needs of the local council and the community, as well as specified technological requirements. The focus is on the development of the enterprise skills essential for successful participation in the 21st workforce, collaboration, critical thinking, communication and creativity. Each class mimics a building team with a project manager coordinating all roles and tasks, and working groups responsible for different parts of the project such as residential housing, commercial buildings, roads and transport, parks and gardens and marketing as well as the technological components of 3D printing, electronic sensors, robotics, VR and energy efficient housing. This is a fully integrated STEAM project with pre-work on demographics and working to scale integrated into humanities and maths classes and technology masterclasses held during the project.

1D

GAME BREAK OUT SPACE
CREATE, CODE, INNOVATE with LEGO Education Learning System
Commercial (Years 5-10, Pre-Service Teacher, Lab Tech)

Libby Moore, Director, Moore Educational

Accelerate STEM learning across your school with a Robotics solution for all levels from LEGO Education. Explore the easy entry lessons and the design challenges that will engage your students to think critically and collaborate to create simple to complex robotic solutions with real world relevance. Find out how to build confidence in teachers and students to code with the progression from simple block sequencing to Scratch based icon programming through to text-based coding with Micro Python."

1E

GAME DEVELOPMENT SUITE
Creativity begins with Collaboration (Primary, Pre-Service Teacher)

Cressida Byrne, Program Delivery Lead/Senior Project Manager, Cambridge Education

Validation Project examined the human capabilities most in demand in the 21st Century vocational landscape with collaboration, critical thinking, communication and leadership at the top of the list. This workshop explores the concept that creativity and critical thinking begins with collaboration and provides tools and STEM activities teachers can begin using tomorrow in their classrooms.

1F

WET LAB
Applications of 3D Printing & Modelling in Science & Maths (Secondary, Pre-Service Teacher)

Scott Mclean, Learning Specialist, Quantum Victoria
Carlie Alexander, Teaching and Learning, Quantum Victoria

In this hands-on workshop, delegates will have an opportunity to participate as students and will gain a deeper understanding of real-world applications of 3D printing and modelling and how these can be incorporated into the teaching of science and mathematics in Primary and Secondary classrooms. No prior 3D modelling/printing experience is required for this session.

Session 2 Workshops

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2A

QV THEATRE
Integrating ethical capability into the STEM Classroom for authentic 21st Century learning (Years F-10, Pre-Service Teacher)
Erin Wilson, Curriculum Manager, STEM VCAA

Applying the knowledge and skills of ethical capability can support students to identify and engage in contemporary STEM-related issues that they hear and read about in their everyday lives. This workshop will demonstrate ways that teachers can implement ethical capability in the STEM classroom, including different approaches to ethics and ethical concepts that can support the investigation of STEM-related ethical issues. Examples of how students can be supported to consider different perspectives in STEM decision making and as well as choosing a particular position or course of action based on reasoning and reflection will also be shared.

2B

SLS LAB
Using educational escape rooms to unlock learning (Years 5-9, Pre-Service Teacher, Lab Tech)
Dr. Robert Ross, Senior Lecturer, Engineering, La Trobe University

Educational escape rooms are the latest in team-based, highly engaging pedagogical practice. Educational escape rooms draw on the ideas of recreational escape rooms (time-limited, team-based, narrative infused problem-solving exercises) to create game-based learning activities. In this hands-on workshop participants will learn the what, why and how of educational escape rooms before having a chance to experience an educational escape room first-hand.

2C

QV BOARDROOM
Picture Book STEM Design Engineering Challenge (F - 3, Pre-Service Teacher)
Trish Dower, Leading Teacher, Earth Ed, **Rosie Williams,** Educator, Earth Ed
Stephen Eichler, Educator, Earth Ed

Picture Book STEM Design Challenge is designed to promote opportunities for students to develop STEM skills such as collaboration, problem-solving, creative thinking and effective communication as they work through a simplified design process model to imagine, design, test and refine a solution to a problem.

2D

GAME BREAK OUT SPACE
Learning to Code, Coding to Learn Commercial (Years 5-10, Pre-Service Teacher, Lab Tech)
Doug Bail, Director, Cider House Tech

The integration of Blockly into SPARKvue and Capstone gives students unparalleled control over their experiments and the opportunity not only to learn to code, but code for deeper learning of key scientific ideas. For example, a student could use an understanding of the pH of different liquids to code automatic identification of each liquid. Start with the science of the difference in pH and better understand the implications by coding to create a sorting machine. The potential examples are endless, the value to the science classroom in adding immediate applications to student measurements and an understanding of coding bringing.

2E

WET LAB
Design Thinking in the Primary STEM classroom (Years 3-6,Pre-Service Teacher)
Nicole Mason, Education Officer, Ecolinc, **Natasha Mary Ward**, Education Officer, Ecolinc

We will explore the Design Thinking method, and how this can be applied to primary school classrooms to explore STEM with students. Design Thinking promotes interdisciplinary skills, collaboration and human centred design to explore real world problems.

2F

GAME DEVELOPMENT SUITE
STEM Project Based Learning (PBL)- An Authentic Approach to 21st Century Learning in the Primary Classroom (Primary, Pre-Service Teacher, Lab Tech)
Soula Bennett, Director, Quantum Victoria
Latha Shivasubramanian, Data Analytics Manager, Quantum Victoria

Delegates attending this session will develop an understanding of STEM PBL, its applications in the Primary classroom and will participate in a hands-on activity that models a **STEM PBL approach using the QV Design Thinking Framework** to create a Robotic Arm. Delegates will also be provided with templates that will assist in the planning and implementation of STEM PBL in their classrooms

Session 3 Workshops

Quantum VICTORIA

3A
QV THEATRE
VCAA Update - How can authentic learning experiences be mapped to STEM curriculum? (Years F-12, Pre-Service Teacher)
Maria James, Science Curriculum Manager, VCAA

Authentic learning is often facilitated in STEM delivery by using active, student-centred approaches such as project-based learning and problem-based learning (PBL).

3B
GAME DEVELOPMENT SUITE
Using technologies to control an outbreak of disease (Years 5-8, Pre-Service Teacher, Lab Tech)
Jacinta Duncan, Director, GTAC, **Stacey Jamieson**, Education Officer, GTAC

Step into the shoes of a disease detective ~~as you follow the signs of an outbreak of disease at an airport. Make a~~ timeline of the disease based on first disease cases. Experiment with technologies to test how they can be used to detect symptoms of disease and if a person is infectious. Investigate airport operations to identify and map the key locations for implementing a testing and quarantine plan. Learn about emerging research in robotics and imagine how robots can be used in your quarantine plan.

CANCELLED

3C
GAME DEVELOPMENT SUITE
Coding with Arduinos (Secondary, Pre-Service Teacher, Lab Tech)
Anthony Simcox, Teaching and Learning, Quantum Victoria,
Campbell Wiggins, Teaching and Learning, Quantum Victoria

Delegates attending this workshop will be introduced to Arduinos and their applications, including programming, and how they can enhance learning in the STEM classroom. Delegates will have an opportunity to program and test Arduinos through hands-on activities. No prior programming knowledge is required.

3D
SLS LAB
Girls in STEAM Electric Car Project (Primary, Secondary, Pre-Service Teacher, Lab Tech)
Graeme Wiggins, Director, Bendigo Tech School, **Dave Budge**, CEO, Jaunt Motors
Marteen Burger, Director, Jaunt Motors

Bendigo Tech School is building an electric car in partnership with industry and young women from local schools. Join us for this exciting forum on future transport solutions, new energies, sustainability and Girls in STEAM career pathways. We will share insights into establishing and leveraging industry partnerships to create authentic and impactful community enterprise projects. We will be joined by industry partners Jaunt Motors, a leading tech startup that is revolutionising the Australian EV industry.

3E
GAME BREAK OUT SPACE
Online learning beyond the screen: using EP as a pedagogical toolkit
(Secondary, Pre-Service Teachers)
Page Dosen,Teacher Consultant, Science Specialist
Education Perfect nna Barnes, Specialist Science Teacher Consultant, Education Perfect

Education Perfect is a learning platform that provides an effective solution for anyone looking for a supportive digital resource. Think of it as a flexible classroom toolkit that happens to be online. This session will explore how EP can support authentic learning throughout a unit of work. We will start with how pre-testing can determine an appropriate learning entry point for each student, then look at examples of our ready-to-go content, which includes contextual lessons. We'll explore customising content to suit your needs and look at embedding creative, interactive and collaborative tools. Finally, we will outline how to use post-testing to measure student growth across key learning areas.

3F
WET LAB
Regional education and Dark Matter (Years 7 -12, Pre-Service Teacher, Lab Tech)
Carlos Lopez, Principal, Stawell Secondary College
Jackie Bondell, Education Project Officer, Centre for Dark Matter Particle and Particle Physics

This workshop will present a novel collaboration between scientists from the Centre for Dark Matter Particle Physics/Stawell Underground Physics Lab, and students and teachers from Stawell Secondary College, bringing cutting-edge scientific discoveries to the classroom. Presenters will outline the development, from concept to implementation, of a pilot education program with resources aligned with the Australian and Victorian Curriculum, enabling students to gain an understanding that real-life scientific endeavour is a process of learning about our Universe.

Session 4 Workshops

4A
QV THEATRE
Integrating ethical capability into the STEM Classroom for authentic 21st Century learning (Years F-10, Pre-Service Teacher)
Erin Wilson, Curriculum Manager, STEM VCAA

Applying the knowledge and skills of ethical capability can support students to identify and engage in contemporary STEM-related issues that they hear and read about in their everyday lives. This workshop will demonstrate ways that teachers can implement ethical capability in the STEM classroom, including different approaches to ethics and ethical concepts that can support the investigation of STEM-related ethical issues. Examples of how students can be supported to consider different perspectives in STEM decision making and as well as choosing a particular position or course of action based on reasoning and reflection will also be shared.

4B
SLS LAB
Mobile App Development (Years 7-12, Pre-Service Teacher, Lab Tech)
S M Abdullah, STEAM Technician, Casey Tech School

A mobile application is a great tool not only to communicate with people but also to communicate with different devices. In this workshop, participants will develop a mobile app to control a Lego EV3 robot car using the Bluetooth communication protocol. Participants will be led through a hands-on demonstration of the different steps of app development and will have the opportunity to test the build application on a physical robot car.

4C
QV BOARDROOM
Embedding and Assessing General Capabilities in Project Based Learning
(Years 7-10, Pre-Service Teacher)
Elizabeth Cain, Engagement & Micro-credentials Coordinator, Beaumaris Secondary College
Amanda Jacobs, Head of House, Beaumaris Secondary College

The workshop will discuss the use of capability elaborations to plan Project Based Learning assessments that authentically embed Ethical and Personal & Social capabilities in STEM. Attendees will be walked through the planning process, student activities and teacher assessment rubrics of 4 different Project Based Learning assessments delivered to students by OneNote.

4D
GAME BREAK OUT SPACE
Engaging Fun Science Ideas! Commercial (Years F-8, Pre-Service Teacher, Lab Tech)
Daniela Migliorati, General Manager, Science Supply Australia

This workshop will touch on a number of various fun science demonstrations to use in Science club, open days or science week! We will look at making a fruit clock, solar energy activity, little bits circuits, interactive AR merge cube demo and more! We will have various stations set up to give a taste of collaborative learning.

4E
GAME DEVELOPMENT SUITE
Minecraft- Incorporating a First Nations Peoples Perspective
(Primary, Pre-Service Teacher, Lab Tech)
Mahaelia Thavarajah, Teaching and Learning, Quantum Victoria
Jakin Stasce, Teaching and Learning, Quantum Victoria

In this session we will explain our journey towards authentically and respectfully Incorporating Indigenous perspectives into the curriculum, using a game-based program- Minecraft. Delegates will have an opportunity to participate in a select group of activities based on the program theme of sustainability, that highlight the resource types used and the STEM knowledge of our First Nations People.

4F
WET LAB
Design Thinking as an Inquiry Framework (Primary, Secondary, Pre-Service Teacher, Lab Tech)
Elissa Michell, STEM Communication Officer, Whittlesea Tech School
Anne Jessup, STEM Communication Officer, Whittlesea Tech School

Design Thinking is a method of inquiry-based learning that can bring authentic real-world learning to the classroom. By connecting with local industries that are predicted to experience strong economic and employment growth, students utilise the Tech Schools Innovation framework to engage meaningfully to solve local challenges, while developing highly sought 21st century and entrepreneurial skills.

Conference Venue

Quantum Victoria
235 Kingsbury Drive, Macleod West
Victoria, Australia, 3085
Google Maps

Contact Details
Phone: 03 9223 1460
Email: admin@quantumvictoria.vic.edu.au
ABN 65 029 766 137

Parking

Free Parking onsite, entry to Quantum Victoria can only be accessed via Kingsbury Drive eastbound. There will be a left turning lane into the car park which has a sign: **CHARLES LATROBE COLLEGE & QUANTUM VICTORIA** car park.

Please park in non designated parking bays.

Registration

To register please visit the registration page here or scan the QR Code

Conference Cost

Primary/Secondary Teachers	$165.00 (Inc.GST)
Lab Technicians	$100.00 (Inc.GST)
Pre-Service Teachers	$75.00 (Inc.GST)

Morning tea and lunch are provided in the cost of registration.

Refund and Attendance

Notice of cancellation is required Prior to Friday, 5th November 2021 for a full refund. Cancellation after this date will incur the full attendance cost. Due to current COVID-19 restrictions, Quantum Victoria is required to enforce set limits on the number of attendees for this event based on social distancing and maximum density rules. To Secure your place please follow the link to register or scan the QR Code. Attendance at the QV STEM Conference without a confirmed place will result in you being turned away.