Workshop Outline - Monday 10 July

1.30PM - 2.30PM

PAGES 25 - 28

		Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)	Lab Officers	Tertiary	Theme
1.1	A Model for Engaging STEM Tasks	●	●	●			
1.2	Exploring the ethics of animal dissection			●	●		
1.3	Future Proof with EES			●			
1.4	Study skills to set your students up for success in senior school			●			
1.5	Breeding Bunnies to learn Genetics		●	●			
1.6	Exploring STEM Careers through the Excitement of Space		●				
1.7	STEM for Humanity		●	●			
1.8	Inquiry approaches using Vernier Data loggers in High School Biology		●	●	●		
1.9	Barbies, Balconies & Bungees		●				
1.10	Food and fibre teaching programs of Primary Industries Education Foundation Australia	●	●				
1.11	Questacon's Cyber Castle Challenge: Using Minecraft Education to teach digital technologies	●	●				
1.12	Using the Engineering Design Process to Solve Real-World Problems	●	●				
1.13	Discovery tour: science teaching resources design and features	●					
1.14	Earth Science activities for Foundation to Year 6	●					
1.15D	Accessing and analysing real Earth science data - **DOUBLE PART 1**		●	●		●	
1.16D	Differentiation of Tasks in AC 7-10 Science - **DOUBLE PART 1**		●				

2.40PM - 3.40PM

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2.1	A Place for Space: Using modern space applications to inspire your students	●	●	●			
2.2	Taking Chemistry Lightly: Using Spectroscopy in Your Classroom			●	●	●	
2.3	Space Careers Wayfinder			●			
2.4	Microbiology: A School Perspective		●	●	●		
2.5	Bringing Science to Life with Virtual and Augmented Reality		●	●			
2.6	Getting Ahead of the Australian Curriculum		●	●			
2.7	Supporting young Indigenous women to succeed in STEM		●	●			
2.8	The Australian Science Olympiad Program - supporting academically gifted students		●	●			
2.9	Using planetarium software to enhance trigonometric analysis		●	●			
2.10	Handy Earth Science		●				
2.11	Real research data to get students thinking, testing and innovating in the classroom		●				
2.12	The Science of Us - Measuring humans using Vernier Data Loggers		●		●		
2.13	Hands-on High School Electricity with Tiny Science Lab		●	●			
2.14	Return to 1616 Free Education Resource	●					
2.15D	Accessing and analysing real Earth science data - **DOUBLE PART 2**		●	●		●	
2.16D	Differentiation of Tasks in AC 7-10 Science - **DOUBLE PART 2**		●				

Environment Geoscience Numeracy Space

Workshop Outline - Tuesday 11 July

OFFSITE EXCURSIONS & WORKSHOPS

Delegates will have the opportunity to explore a range of cultural, scientific and health organisations along North Terrace with our offsite excursions & workshops. The close proximity of venues to the Conference venue and the free tram will make it easy for delegates to access these sessions, with a couple of sessions still held on the University of Adelaide Campus.

10.40AM - 1.10PM

PAGES 33 - 35

OW1	Investigating Earth Systems Interactions in the First Creek Wetlands	Adelaide Botanic High School
OW2	Life by a Whisker – Implementing Citizen Science into the Australian Conservation in the Classroom	Adelaide Zoo
OW3	Critical and Creative thinking - where art and science overlap	Art Gallery of South Australia
OW4	Visit the Australian Space Discovery Centre	Australian Space Discovery Centre
OW5	Project Space Botany & Gamifying a Botanic Gardens Collection	Botanic Gardens and State Herbarium
OW6	"It's the small things", with Charles Darwin	HeapsGood Productions
OW7	Bringing Science to Life with Virtual and Augmented Reality	Lumination
OW8	Introducing FLEX	MOD.
OW9	Future of Food Deep Dive: What might we be eating in 2050?	Post Dining
OW10	Using the 'e' in STEM to bridge key learnings in Science, Technology and Maths	Questacon
OW11	SA Museum Science Research Tour	South Australian Museum
OW12	360° Flinders Ranges: fossils, landscapes, climate change and Earth history revealed through an immersive VR experience in support of World Heritage	University of South Australia, ProjectLIVE
OW13	Wine Discovery Centre ***additional cost involved**	National Wine Centre
OW14	Discover Adelaide's BioMedical Precinct	Fusetec & SAHMRI
OW15	Mind-Bending Light	The University of Adelaide
OW16	Innovation and future thinking at SA Water	SA Water

Workshop Outline - Tuesday 11 July

2.20PM - 3.20PM

PAGES 36 - 40

		Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)	Lab Officers	Tertiary	Theme
3.1	Future of Food: What might we be eating in 2050?	●	●	●			
3.2	Inspired by their Gift - Innovating the Curriculum for our Exceptional Learners... and how to survive it?	●	●	●			
3.3	Gel Electrophoresis for separation of DNA, Protein and dyes			●	●	●	
3.4	Bridging the gap between high school and research			●		●	
3.5	Physics Playground - Exploring High School Physics		●	●	●		
3.6	Innovation in Australian astronomy		●	●			
3.7	Using real-world science to spark inquiry learning		●	●			
3.8	Ediacara as a resource in secondary education		●	●		●	
3.9	Score the trifecta! Skills, content and outcomes in secondary Science		●				
3.10	Student agency and information reports - from regurgitation to creation	●	●				
3.11	Developing Spatial Reasoning in 3D	●	●				
3.12	The science of storytelling... And the storytelling of science	●	●				
3.13	Forest Science Explorers Teacher toolkit - A Virtual Field Experience bringing EdTech to primary science		●				
3.14	What's next for Primary Connections: new digital design and embedded just-in-time professional learning	●					
3.15D	Constructing Communities with Architecture and Civil Engineering - **DOUBLE SESSION PART 1**	●	●	●			
3.16D	Gamification - the solution to engaging STEM teaching and learning! - **DOUBLE SESSION PART 1**	●	●				

3.30PM - 4.30PM

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		Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)	Lab Officers	Tertiary	Theme
4.1	Citizen Science in the Classroom: Engaging Students with Real-World Projects	●	●	●	●		
4.2	Partnerships that Innovate - STEM Professionals in Schools in action	●	●	●			
4.3	The evolution of disaster resilience education	●	●	●		●	
4.4	Microbiology for Independent Learning Projects			●		●	
4.5	Middle Years Science Data Logging - It's fun & easy!		●	●	●		
4.6	Get your students into Space...Space Schools in Australia		●	●			
4.7	Hydrogen Racecars: A Roadmap to Decarbonisation		●	●			
4.8	Quantum for educators		●	●			
4.9	Keeping the Humanity in Technology		●	●		●	
4.10	Self-paced, mastery based learning in a blended environment		●	●		●	
4.11	Collaborative Creative Practices		●				
4.12	Creating a quantum spark. A hands-on guide for primary-lower secondary teachers to have the confidence to teach quantum physics.	●	●				
4.13	Fun with energy	●					
4.14	Hands-on High School Chemistry with Tiny Science Lab		●	●			
4.15D	Constructing Communities with Architecture and Civil Engineering - **DOUBLE SESSION PART 2**	●	●	●			
4.16D	Gamification - the solution to engaging STEM teaching and learning! - **DOUBLE SESSION PART 2**	●	●				
4.17	**SETA Forum**						

Environment Geoscience Numeracy Space

Workshop Outline - Wednesday 12 July

10.40AM - 11.40AM

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		Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)	Lab Officers	Tertiary	Theme
5.1	Creating a class full of scientists in 10 minutes	●	●	●			
5.2	Supporting student agency through Socratic Seminars	●	●	●			
5.3	Balancing the Equation: Gender Representation in Science			●			
5.4	Microscale chemistry		●	●	●		
5.5	10 strategies to find space to move and learn in science		●	●			
5.6	Engaging Students Through Real Astronomical Data		●	●			
5.7	A CubeSAT's Eye View of the Australian Space Industry - Exploring Opportunity through SHE Tasks		●	●		●	
5.8	"I hate science"... constructing new epistemic journeys in science education in schools		●	●		●	
5.9	Dark Matter Detection: From the Lab to the Classroom		●	●		●	
5.10	Ediacaran Fossils		●				
5.11	Practical Science - Achieving the best outcome		●		●		
5.12	Teaching the language of Climate Change Science	●	●				
5.13	Ensnaring Everyday Events: Identifying Authentic STEAM in Daily Activities	●					
5.14	Meeting your students where they are: adaptive teaching and learning for access and equity	●					
5.15D	Teaching Science through the creation of interactive VR inquiries - **DOUBLE SESSION PART 1**			●		●	
5.16D	How to Develop Integrated Hands-on STEM Primary Programs - **DOUBLE SESSION PART 1**	●					

11.50AM - 12.50PM

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		Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)	Lab Officers	Tertiary	Theme
6.1	Identifying risks in popular laboratory experiments	●	●	●	●	●	
6.2	Using The Oliphant Science Awards to Teach Quality Science	●	●	●			
6.3	Car safety: Collisions and crumple zones			●			
6.4	Modelling STEM through Earth and Environmental Science			●			
6.5	Hands-on Chromatography		●	●	●		
6.6	(Outer) Space in Your Curriculum: Building Science Inquiry skills with data from space		●	●			
6.7	Being Curious: Bridging Gaps Between Numeracy and Science		●	●			
6.8	Flippin' Booklets - Flipped Learning and Assessment		●	●			
6.9	Hands-on Science Activities for Lab Managers				●		
6.10	Educational satellites - Assembling and using CubeSats in class		●				
6.11	How to use iNaturalist to engage your students in nature and citizen science	●	●				
6.12	Teaching Chemistry through Minecraft	●	●				
6.13	Extending STEAM through helicopters	●					
6.14	On the Shoulders of Giants. Linking innovation and S.H.E.	●					
6.15D	Teaching Science through the creation of interactive VR inquiries - **DOUBLE SESSION PART 2**			●		●	
6.16D	How to Develop Integrated Hands-on STEM Primary Programs - **DOUBLE SESSION PART 2**	●					

Environment Geoscience Numeracy Space

Workshop Outline - Wednesday 12 July

2.10PM - 3.10PM

		Primary (R-6)	Junior Secondary (7-10)	Senior Secondary (10-12)	Lab Officers	Tertiary	Theme
7.1	How to invent stuff without becoming the evil genius type: Innovating responsibly	●	●	●			
7.2	Black Holes and Gravitational Waves: Contemporary Topics, Innovative Classroom Ideas			●		●	
7.3	A Healthy Land - Measuring the environment with Vernier dataloggers		●	●	●		
7.4	Chlorophyll Determination via Spectrophotometry		●	●	●		
7.5	Our place in space: connecting science to local communities and inclusive pedagogies		●	●			
7.6	UniSA STEM Innovation Experience (STEMIE)		●	●			
7.7	Writing Online Tests with AssessPrep		●	●			
7.8	Space Education in Australia - Building Capacity		●	●		●	
7.9	The data doesn't lie - or does it?		●	●		●	
7.10	Kids Teaching Kids: Peer learning to drive local action on environmental issues	●	●				
7.11	How to avoid injury and have a lot of fun with Primary STEM activities!	●			●		
7.12	When the Pedagogy of Play meets Ambitious Science Teaching	●					
7.13	SHARE-A-THON: *An informal setting for multiple presenters to share innovative teaching ideas. Each presenter will share a strategy or tool during a 10-minute presentation and delegates will rotate around the room.*						
	Science Energisers	●	●	●	●	●	
	Change the World with Chemical Engineering	●	●	●	●		
	Harnessing the Power of Technology in the Science Classroom	●	●	●			
	The Science of Aboriginal Technologies	●	●	●			
	Electromagnetism teaching hacks			●			
	Health & Safety in the Lab				●		
	Favourite pracs		●		●		
	Soda water - Particle Theory and Gas Pressure		●				
	Creating a successful primary science learning community	●	●				
	Exploring Whiteboard	●	●				
	Future You - Science as a Human Endeavour embedded into teaching	●	●				
	Primary Science & Technology Integration in Nature Space Education	●					

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