



### About STEM X Academy

- The STEM X Academy is a science, technology, engineering and mathematics teacher professional learning experience run in partnership by ASTA, CSIRO and Questacon
- The event is run over 5 days in Canberra, with teachers working alongside scientists, researchers and STEM education experts at Questacon and CSIRO across the program.
- Now in its third year STEM X Academy has inspired and challenged more than 280 Australian teachers. By the end of 2018 these numbers will have increased by more than 160, taking the total number of Australian teachers impacted by this program to 440.
- By focussing on empowering and upskilling teachers with inquiry-based capabilities, STEM X Academy has the potential to impact much greater numbers of students as the teachers are equipped to develop their own resources for each schooling year of their careers.
- Previous participants have also gone on to develop their own teaching workshops in their home communities based on their learnings from STEM X Academy
- **What is inquiry-learning?** Inquiry-learning is an open-ended approach to learning that is guided by students through questions, research, and/or curiosity. This approach encourages students to pursue projects of their own choosing, resulting in increased engagement and equipping them with the critical thinking and problem-solving skills using STEM disciplines that will be needed for the jobs of the future.
- At STEM X Academy, teachers work alongside scientists and researchers to undertake their own inquiry-based projects based on real-world science challenges and then learn the tools to foster an inquiry-based learning approach in their own classrooms.
- Due to the success and demand for STEM X Academy in Canberra, a number of regional STEM X events have been piloted, in areas such as Townsville, Condobolin, Darwin and Alice Springs.

### 2018 STEM X Academy program and visual opportunities:

MON 8 <sup>th</sup> JAN & TUES 9 <sup>th</sup> JAN <i>(teachers rotate each day)</i>	AT CSIRO	AT QUESTACON
<b>Morning</b>	<ul style="list-style-type: none"> <li>• Teachers are taken through <b>CSIRO's Futures Roadmaps</b> – what's coming for Australian industries and how do we</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Hands-on activities – protostroming and trigger track</b></li> </ul>

	prepare our students for them? <ul style="list-style-type: none"> <li>Followed by <b>Skill-set sessions</b> from CSIRO STEM education experts</li> </ul>	<ul style="list-style-type: none"> <li>STEM discussions – transferring ideas in STEM</li> </ul>
<b>Afternoon</b>	<ul style="list-style-type: none"> <li><b>Teachers and scientists work in teams</b> together, <b>developing their own science projects</b> based on tackling future industry challenges.</li> <li>Teachers <b>tour the Discovery Centre</b></li> </ul>	<ul style="list-style-type: none"> <li>Discussions on <b>how to create makerspaces</b> at schools</li> <li>Teachers working on STEM Project</li> </ul>

<b>WED 10<sup>th</sup> JAN &amp; THUR 11<sup>th</sup> JAN</b> <i>(teachers rotate each day)</i>	<b>AT CSIRO</b>	<b>AT QUESTACON</b>
<b>Morning</b>	<ul style="list-style-type: none"> <li><b>VR and AR Experience</b> with CSIRO's DATA61</li> <li><b>Scientist keynote</b> – CSIRO scientists share their work</li> </ul>	<ul style="list-style-type: none"> <li>Solving problems</li> <li>Teachers working on STEM Project</li> </ul>
<b>Afternoon</b>	<ul style="list-style-type: none"> <li><b>Teachers and scientists work in teams</b> together, <b>developing their own science projects</b> based on tackling future industry challenges.</li> <li>Teachers <b>tour Phytotron (Thursday only)</b></li> </ul>	<ul style="list-style-type: none"> <li>STEMX Alumni visit</li> <li>2pm <b>Geoscience tour (Wed only)</b></li> </ul>

<b>FRI 12<sup>th</sup> JAN</b>	<b>AT CSIRO</b>
<b>Morning</b>	<b>Expo and Teacher group presentations</b>

#### Experiences from previous participants:

*“It has influenced the way I am going to teach in a lot of ways, but what I have particularly enjoyed is hearing the scientists’ perspectives on the critical research areas, the science that needs to happen and how we can influence students in terms of opening up their view of what is possible within science,”* Sue Monteath of Wavell State High School, Brisbane.

*“I have gained a willingness to let students explore ideas and experiment for themselves, the way scientists do, rather than presenting concepts and asking the questions that I want answered,”* Rosie Watkins of Yankalilla Area School, South Australia.

*“At one stage I stepped back and watched while we were at Questacon’s Maker Space. The buzz of interactions with the scientists and the conversation among the teachers who were exchanging ideas was amazing.”* Kathryn Newton of Lake Macquarie High School, New South Wales.

*“Replacing dry theory with so many interesting ways for students to explore concepts that relate both to their course work and to real-world science [is] the biggest thing I got out of STEM X.” Matt Titmanis of Ashdale Secondary College, Perth*

*“This workshop changes you as a teacher, changes your teaching, and puts you in touch with people who can help you throughout your teaching.” Rosemary Anderson from New Norfolk High School, Tasmania*

**STEM X 2017 Participant video** – for further quotes and footage:

<https://www.youtube.com/watch?v=7ZMML3SrqEk>

For more information please contact:

- Louise Monge, Communications & Events Manager, ASTA: 02 6282 9377, 0423 970 127, [communications@asta.edu.au](mailto:communications@asta.edu.au)
- Ashleigh Fortington, Communication Manager, CSIRO: 02 4960 6142, 0472840155, [ashleigh.fortington@csiro.au](mailto:ashleigh.fortington@csiro.au)
- Jared Wilkins, Senior Manager Learning Programs: 02 6270 2848, [jared.wilkins@questacon.edu.au](mailto:jared.wilkins@questacon.edu.au)

