

Program Update: December 2019

## PROGRAM VISION

To encourage curiosity for year 2 students in all schools across Australia by providing adaptable, practical and skills-based STEM related activities within their curriculum to raise awareness around future career pathways in STEM.

## WHY THIS IS IMPORTANT

Recent research supports starting career awareness conversations at age 8\*. As such, this program was established to better equip the next generation with key skills to build and sustain Australia's future prosperity, living standards, performance, and economic and social wellbeing at an early age.

## PROGRAM GOALS

Encourage curiosity in the STEM disciplines with year 2 students using their daily routine to promote awareness of how STEM careers impact the world immediately around a child's day to day life.

Support teaching and learning in the Australian Curriculum around Science, Mathematics and Technologies by embedding this program as in curriculum activities that have a Design and Technology focus and are easy to use.

Focus on developing students 21st Century skills aligned with the general capabilities – Critical & Creative Thinking and Personal & Social Capability including collaboration, innovation and entrepreneurship.

Promote a common understanding of STEM amongst students, teachers and parents and the significance of this for future employability.

## PROGRAM DESIGN FEATURES

Collaborating with key stakeholders from industry and education, the program has been designed to align and integrate with the Australian curriculum around Science, Math and Technologies, as well as the general capabilities, with flexibility for schools to align program outcomes with school STEM agenda. The program has also been designed to allow teachers to be able to fully adapt modules to a schedule that suits their teaching styles/timeline best.

The design creates an environment for curiosity and increases awareness of possibilities through incorporating research information and practical activities that are completed at school and home based on the child's daily routine, to develop skills and capabilities, reinforce learning and create curiosity towards the future.

## PROOF OF CONCEPT TRIAL 2018

Following the 2018 trial, teachers reported a shift in student learning awareness around STEM careers, teamwork, and 'design thinking' during and after the program.

Teachers from the schools provided feedback that the focus on "science as a human endeavour" and "inquiry skills" rather than specific content was a refreshing perspective.

Both participating schools advised that the program resources were easy to use and flexible in meeting the requirements of their schools. The schools did provide feedback for improvement and program designers have evolved the program in an effort to improve the resources further. Both schools advised that they would participate in the program again.

## INSPIRING A NEW GENERATION

API Bursary Holders are university undergraduate students studying Engineering (majority from electrical, mechanical and sustainable/renewable systems). These students have applied for the annual API Bursary Scholarship and were hand selected by a panel of industry representatives, therefore making them the high achievers of engineering undergraduate programs across the nation.



Engineering Undergraduates Kate Watson and Steve Bickley visit Goodna State School (QLD) to share their passions and experiences in what inspired them to study engineering before assisting them during their team building workshops.

Head of Science at Goodna State School, Gerard Salmon said "Kate and Steve were charming, smart and engaging and were a big hit with the kids who wanted them to stay and become teachers at Goodna State School. It has made a real difference to the lives of our children here."



## PILOT 2019 UNDERWAY

Following our successful proof of concept trial in 2018, 25 schools nationally joined our 2019 Pilot, with the program reaching 1060 students this year. Our participating schools are located in both cities and regionally across Queensland, New South Wales, Victoria, South Australia, Western Australia, Tasmania and the ACT. We have private schools, public schools and one independent school participating. Our 2019 pilot concludes at the end of term 4. Outcomes from the 2019 pilot will be available in early 2020.

## FUTURE

API's CEO, David Pointing states that *"Australia's energy industry is undergoing significant transformation. Over the next 5 years, the industry will experience an accelerated and unprecedented rate of change when compared to the rate of change over the previous 20 years. Fast evolving technologies continue to challenge existing energy infrastructure and power system design. Now, more than ever, energy businesses are needing to attract, develop and retain a consistent pipeline of power engineering and technology talent coupled with innovative thinking to guide Australia's energy industry through this time of critical change."*

Following our 2019 pilot we will review and refine the program with the view to offer this program again in 2020. We are currently working with key industry partners for feedback on the program to ensure that it is also aligned with helping industry with its future needs in STEM.

## PROGRAM PARTNERS

The Day in the Life of a 7-Year Old Program is key initiative sponsored by the Australian Power Institute (API) and the Australian Academy of Technology and Engineering (ATSE) to encourage curiosity in STEM for primary schools students.

API's vision is to be the leading national organisation in Australia's energy sector facilitating the delivery of high quality industry professionals.

To achieve its vision, API is actively involved with education and industry, sponsoring programs such as the Science and Technology Education Leveraging Relevance (STELR) Solar Car Challenge and UQ Women in Engineering, as well as supporting work placement for graduates in industry.

For this program, API has engaged with The Australian Academy of Technology and Engineering (ATSE) as a key sponsor partner for this program, leveraging ATSE's capabilities, knowledge and experience in the education sector with the Science and Technology Education Leveraging Relevance (STELR) Solar Car Challenge Program.

The STELR Program aims to increase participation rates in STEM subjects, making STEM relevant to students' lives and raise awareness of opportunities in technology-related careers. STELR also aims to improve the quality of science classroom teaching practice and the level of science literacy and understanding in the community. STELR is currently in over 720 schools across Australia engaging with over 137,400 high school students in years 7 to 10.

## POST PILOT TEACHER FEEDBACK

*"Having a STEM program that had structure and purpose was a refreshing change to just completing challenges. The students really enjoyed the hands-on activities and incorporation of iPads. Students loved the visitors who came in and talked about their jobs and activities they complete on a daily basis. Real-world context gave the students an understanding of how STEM is connected to our everyday lives."*

*"This program is easy to use and not only stimulating for the kids but also for the teachers. It helps support teachers as innovators themselves, ultimately increasing my confidence to deliver STEM concepts to further develop the science culture at our school."*

**7**

STATES



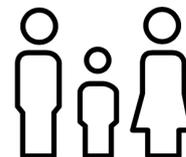
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SCHOOLS



**1,060**

STUDENTS



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**API** The Australian Power Institute

