

# THE STEMABLE PROJECT INC. INNOVATION GIRLS

WORKSHOP DAY 2019 REPORT



# THE MISSION

STEM stands for Science, Technology, Engineering and Maths. STEM fields are key in innovation, entrepreneurship, and in economies in the future of work.

However, only 16% of University and VET graduates in STEM fields are female. In Australia, only 9% of engineering graduates are female\*.

While this 'leaky pipeline' continues from primary school through to the workforce, our mission is focussed on the key age of 15 years old. At this age, students are making critical choices about their future subjects in school, which impacts the beginning of their pathways in STEM. If students do not choose STEM subjects at this age, it is highly unlikely they will continue in STEM in post-secondary studies, or beyond in the workforce. A lack of females in STEM fields impacts on the economy, the workforce, on equality, and in surprising ways such as in data bias.

The STEMable Project Inc. was founded in 2017 to enable the founders, two STEM teachers in Adelaide, to go beyond the classroom in their impact of passionately promoting girls in STEM.

STEMable Project student events aim to inspire, encourage, give confidence, bust misconceptions, provide role models, and connect young females - for the purpose of promoting more young females in STEM study.

As per the Chief Scientist's report, these events aim to address BIAS in challenging stereotypes around what successful female STEM professionals look like. Events EMPHASISE real-life STEM applications and problem solving through the workshop activities. Our squad of volunteers REWARD hard work, persistence, and boost confidence.

\* Statistics from the Chief Scientists report  
Prinsley, R., Smith, P., Baranyai, K. and Ladewig, M. (2016) Women in STEM: A story of attrition. [online]  
[https://www.chiefscientist.gov.au/wp-content/uploads/OCS\\_Women\\_in\\_STEM\\_datasheet.pdf](https://www.chiefscientist.gov.au/wp-content/uploads/OCS_Women_in_STEM_datasheet.pdf)

# THE DAY

With support from the City of Marion Youth Development Grants, The STEMable Project Inc. hosted 'Innovation Girls'. The one-day event was held on the 2nd May 2019 at Flinders University in the Tonsley Innovation Precinct.

Key supporters and guest speakers included:

- Wendy Perry, Entrepreneur Facilitator for Adelaide
- Dr Ysabella Van Sebille, Program Facilitator for Health Sciences at UniSA
- Fi Nguyen, founder of GirlFriday IP
- Cass Gannon, Innovation Leader City of Marion
- Anmarie Mabarrack, Project Manager City of Marion

Drawing on research\*, evidence-based practices were included in the program for the day.

Positive role models are important for inspiring girls to continue in STEM. The day included 5 female STEM industry guest speakers who shared their STEM journeys and what they do to impact the world. Our STEMable Squad volunteers were also chosen to provide positive encouragement reinforce this message.

Hands-on experiences are important for developing confidence for girls in STEM subjects. Research also shows that girls prefer problem solving with a social context, so our activities all linked in with an empathetic mission aimed at improving society. Backed by research, we aimed for challenge, relevance to the real world, creativity and collaboration as key skills during the day.



\* Research around female representation in STEM at school include papers such as:

Brown, M., Brown, P., and Bibby, T. (2008). *"I would rather die": reasons given by 16 year olds for not continuing their study of mathematics.* Research in Mathematics Education, 10(1), p3-18.

Buschor, C., Kapplet, C., Berweger, S. (2004). *I want to be a scientist/a teacher: students' perceptions of career decision-making in gender-typed, non-traditional areas of work.* Gender and Education, 26(7), p743-758.

Hatchell, H. (1998). *Girls' Entry into Higher Secondary Sciences.* Gender and Education, 10(4), p375-386.



# BIG NUMBERS

94%

OF GIRLS

THINK STEM  
JOBS CAN  
SOLVE  
PROBLEMS AND  
MAKE A  
DIFFERENCE

3 IN  
4

ARE MORE  
INTERESTED IN  
SCIENCE, MATHS  
OR TECHNOLOGY  
AFTER THE  
EVENT

93

PERCENT

ARE MORE  
AWARE OF THE  
OPTIONS IN  
JOBS



# THE IMPACT

Over two thirds of students attending the event are more likely to choose a STEM job.

## PARTICIPATION

Over 50 students were registered by their schools. Students came from Year 9 and 10, a critical age in school when future subjects pathways are being considered.

## REACH

Multiple schools attended, including Hallett Cove School and Westminster College, allowing students to collaborate across diverse sites and spreading the message.

## RESPONSE

Students responded positively to the event, with a majority saying they were now more likely to choose a STEM subject at school.





# STUDENT FEEDBACK

## "10 out of 10"

Students gave anonymous feedback on the event. Their responses were overwhelmingly positive and reinforce the importance of these events in connecting and inspiring young people.

"Excellent day of experience and examples improving our innovative skills and inspiring us."

"This was amazing. I learnt so much. I hope I can attend next year!"

"I really enjoyed using the lily pad (textile embedded lights) and putting them in the fashion. It is something I'd like to try again."

"I had a great time and would like to come again. I also liked getting to meet new people."

"A really fun day which I would love to do again. It was really well organised."

"I learnt a lot about failure and that it's ok – it helps us grow. I also learnt about many different careers and possibilities for the future."

"It was really inspiring hearing all the women's journeys to get to where they are now."

"It got us to be creative."

"I enjoyed the day as it was hands-on, interesting and I learnt something. The activity was very hands on and it made me think outside the square."

"It was fun to be able to apply STEM skills and thinking to a real world problem. I enjoyed communicating with my group and creating an innovative house."

"Great advice from the industry rapid-fire talks."

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