






X²STEM@CGGS

An exploration of how
symposiums and
workshops could boost
enrollments in STEM



The Current Story

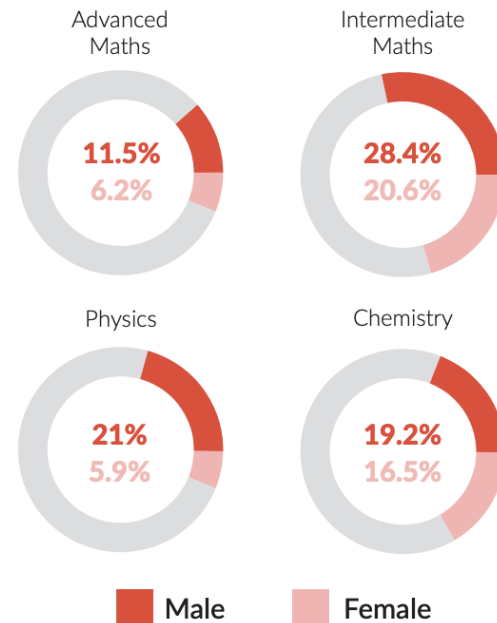
7 Participation in key Year 12 STEM subjects shows a clear gender imbalance

PHYSICS	3:1 
ADVANCED MATHS	1.9:1 
INTERMEDIATE MATHS	1.3:1 
ENTRY MATHS	1:1.1 
BIOLOGY	1:1.9 

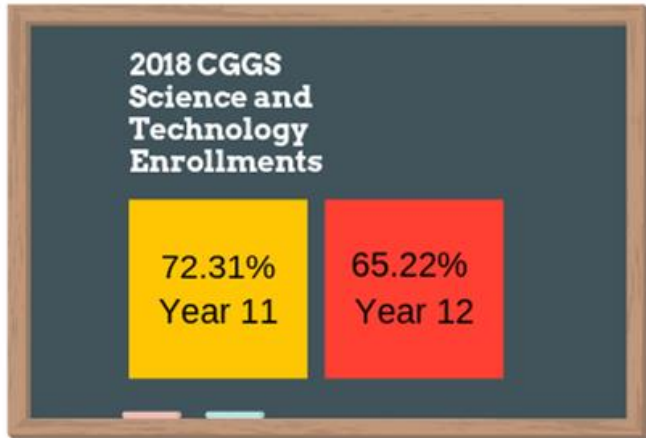
Source: Australian Government, Australia's Chief Scientist, Datasheet Nov 2016

Source: Engineering Australia, Women in STEM Strategy; Response to the discussion paper, July 2018

Student at year 12 in each subject (2015)

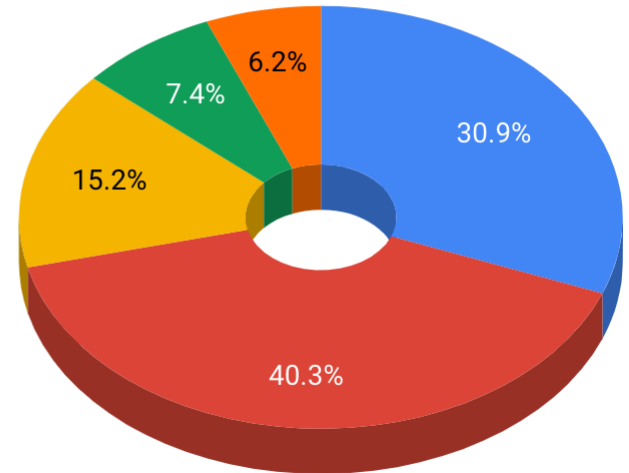


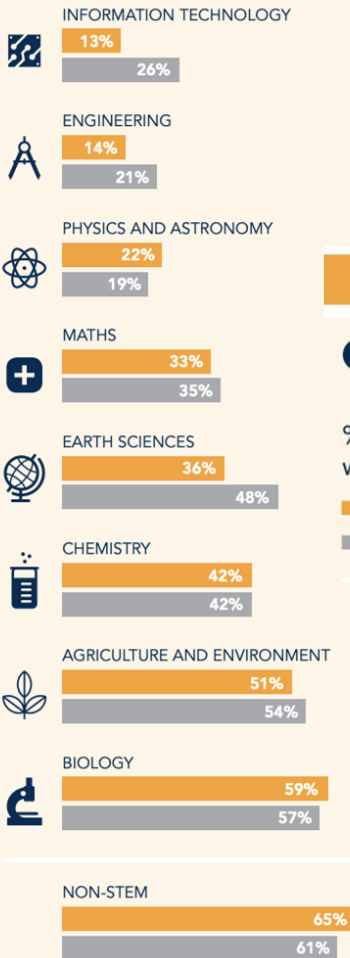
The Current Story



Percentage of Enrolled CGGS Senior Students

- Biology
- Chemistry
- Physics
- Earth and Enviro
- IT





UNIVERSITY EDUCATION

8 Female graduates are scarce in many STEM disciplines

% of domestic completing graduates who were female (2015)

■ Bachelor
■ Postgraduate

What about in University and the Workforce?

9

16%
OF UNIVERSITY AND VET STEM GRADUATES ARE FEMALE

12 Females make up fewer than one third of total STEM academic and research staff



Only 17% of STEM professors are female, even though around 40% of junior STEM academics are female

Female academics at:

■ Junior levels ■ Senior levels

ENGINEERING

22%
9%

INFORMATION TECHNOLOGY

29%
19%

MATHS

36%
14%

SCIENCE

52%
17%

AGRICULTURE AND ENVIRONMENT

53%
15%

**KEY STEPS
TOWARDS
GENDER
EQUALITY
IN STEM**

>

ELIMINATE
stereotypes
and bias



EMPHASISE
real-life STEM
applications
in teaching



REWARD
hard work and
build confidence –
it's okay if you
don't understand
it straight away



ENCOURAGE
organisations to
create supportive
and inclusive
workplaces, and
monitor progress
towards equality



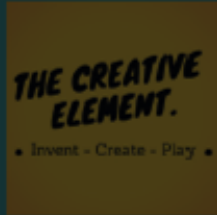
Source: Australian Government, Australia's Chief Scientist, Datasheet Nov 2016

What could we do about it?

Photosynthesis, Michelle Melbourne (Intellebox) and Ingrid McCarthy (Inspiring Australia ACT).

A number of organisations will be working with the students on the day including Questacon, Tesla Owners Club of Australia, Mt Stromlo Outreach, Woodlands and Wetlands Trust and ANU Research School of Physics and Engineering.

X²STEM Symposium @ CGGS



An Australian Government Initiative



CANBERRA GIRLS
GRAMMAR SCHOOL

Celebrating Girls' Participation in STEM

IN 2018

STEM



STEAM

Canberra Girls Grammar School
is proud to present

X² STEM Symposium

– Celebrating Girls'
Participation in STEM

DATE: Wednesday, 22 August 2018
TIME: 9.00am – 1pm (Year 5 students) and
8.50am – 3pm (Year 8 students)
VENUE: Canberra Girls Grammar School,
Melbourne Avenue, Deakin ACT

In celebration of National Science Week, X²STEM is an exciting day of workshops and activities recognising the achievements of women in the field of STEM. The event is aimed at inspiring young female scientists to be innovative thinkers and ethical problem solvers.

A number of organisations will be working with the students on the day including STEMSells, Mt Stromlo Outreach, ASTRO 3D, Woodlands and Wetlands Trust, ANU Research School of Physics and Engineering, ShirtyScience, Dream Pieces, Cheeky Neurons and NatureArtLab.

In the afternoon the students will hear inspiring stories from a panel of experts, including key note speaker Dr Rose Ahlefeldt who was recently awarded ACT Scientist of the Year as well as Erica Hediger (Creative Element and STEMSells), Ingrid McCarthy (ASTRO 3D), Madison Hartill-Law (ShirtyScience) plus more to be confirmed.



INVITATION

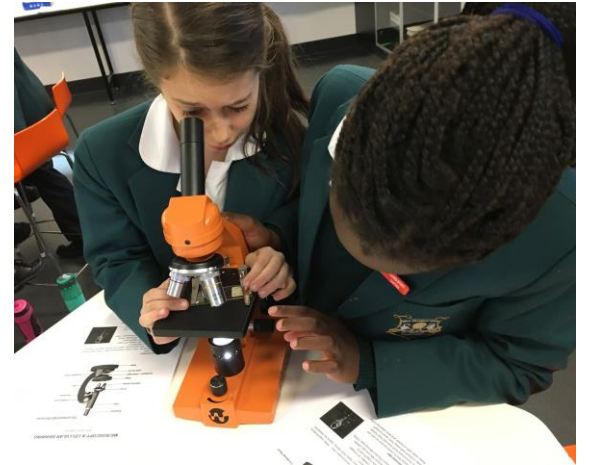
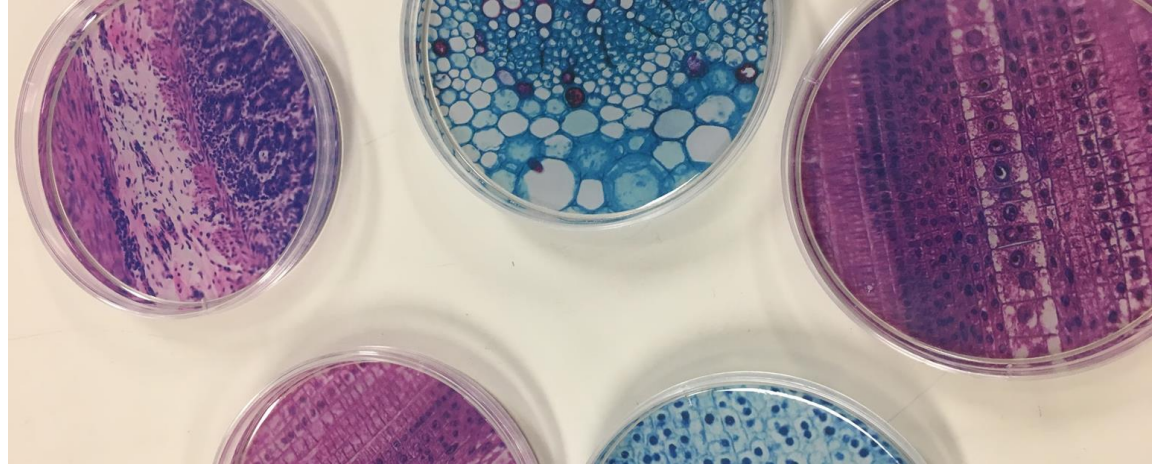


CANBERRA GIRLS
GRAMMAR SCHOOL

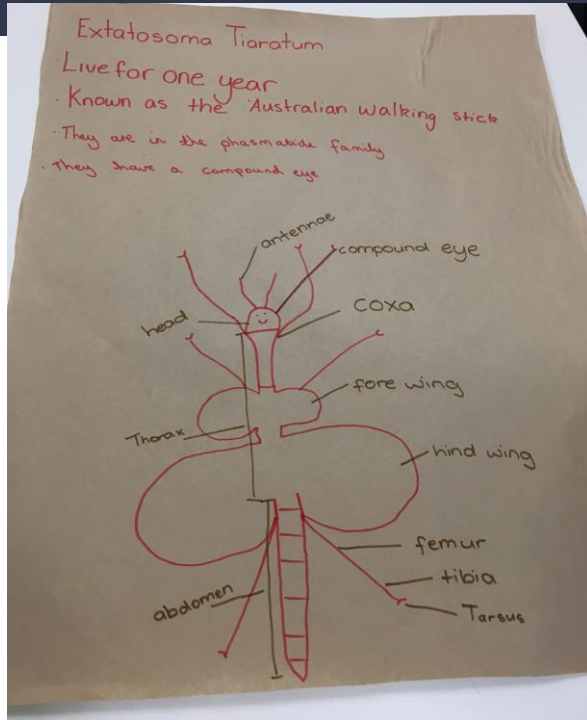
Be yourself.

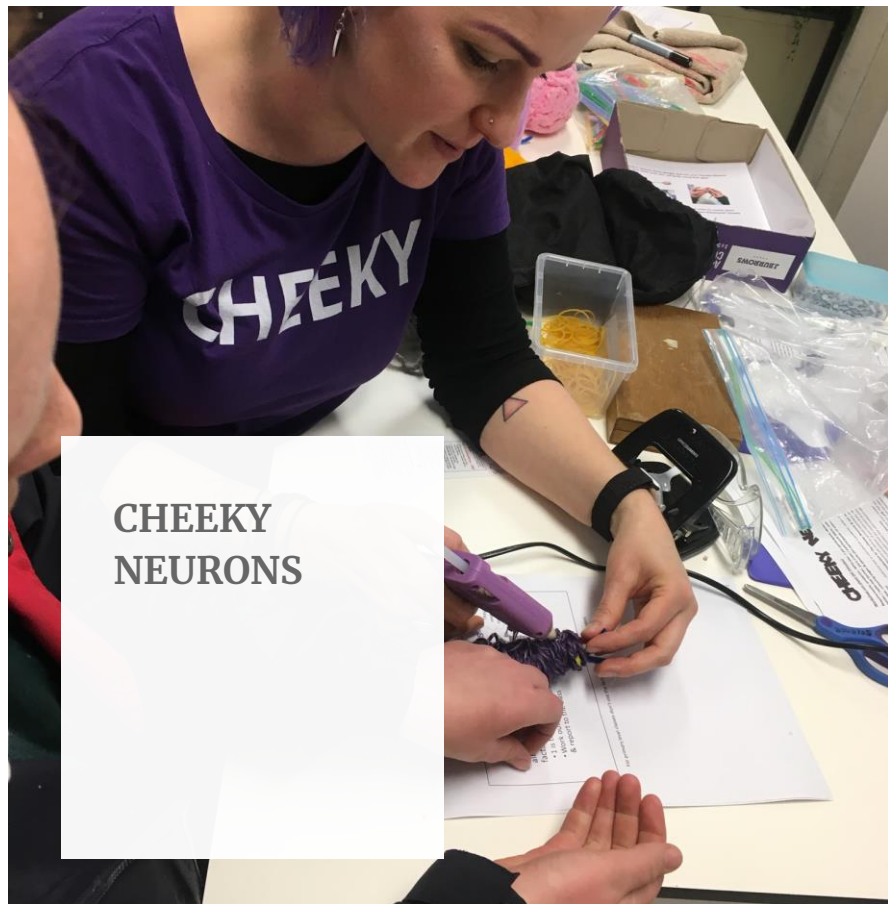
CGGS.ACT.EDU.AU

DREAMPIECES



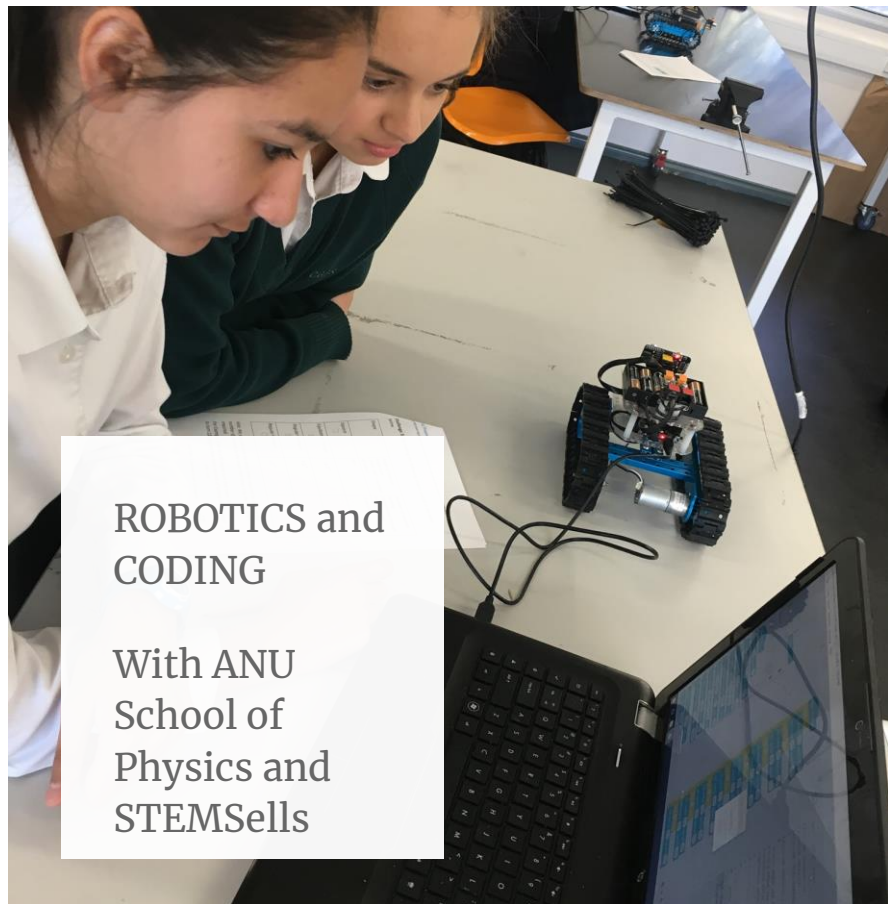
NATURE ART LAB





SHIRTY SCIENCE





ROBOTICS and
CODING

With ANU
School of
Physics and
STEMSells





A Panel of Female STEM Experts

Keynote Speakers including

Dr Rose Ahlefeldt (2018 Scientist of the Year) from ANU
Research School of Physics and Engineering

Kylie Walker, Chief Executive of Science and Technology
Australia

What were
the benefits?

What were
the
obstacles?

What would
we do
differently?



Questions?

Thankyou