

# A nationwide STEM outreach program for year 9 and 10 students in 2020







### Australian National University, Canberra

### 23 - 25 September 2020

18 - 20 January 2021

Explore the forensic techniques of DNA fingerprinting, fly model rockets, stargaze the night sky, learn about geological mapping and take a tour of the Tsunami Early Warning Centre. Measure gamma-ray radioactivity, tour a particle accelerator, design a self-drive robotic car, test sustainable water filters and other cutting edge science activities.

### NSW

### Macquarie University, Sydney

Discover 3D printing and a virtual reality during our science expo, meet passionate scientists at our career speed dating, participate in a chemistry and physics magic show, learn more about our solar system and the world beyond earth, explore the world of Indigenous science and much much more!

### University of New England, Armidale 12 – 14 January 2021

Hands-on interactive sessions in chemistry, immunobiology, coding, meat and animal science, insect ecology, DNA and forensic techniques and neuroscience. As part of the program you will get a rare glimpse into the workings of our precision agriculture research group at the University's SMART farm at Kirby, one of UNE's rural properties, and experience the Centre for Animal Research and Teaching on campus. Professional scientists will be on board throughout the experience and also for a career panel and discussion to help you clarify your thoughts on pursuing science at a University level and into the future.









### University of Sydney, Sydney

Grab your keep cups, your canvas bags and tree planting kits – we are on a mission! Become climate change scientists for three days by learning about current global challenges we face and the technologies in place that enact real change. Each day will feature interactive labs and workshops which will detail a global challenge, what is currently being done about it, and together perform one positive action to combat the challenge. From biology to psychology to mathematics to chemistry... all our sciences are getting their hands dirty to save the world!

### University of Technology, Sydney

Various hands-on and fun science, maths and technology activities. Explore some of the hottest topics in forensic science, physics, microbiology, physiology and chemistry.

### NT

### Charles Darwin University, Casuarina Campus

Activities in exercises sports science, IT, NT Medical Program, environment science, virtual 360 bush tour, engineering, primary industries, career investigations, CPA LNG plant seminar and excursion.



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20 - 22 October 2020

6 - 8 October 2020

### Griffith University, Gold Coast

### Refer to website

Designed to provide students who have an interest in science with an opportunity to engage in a wide range of fascinating science activities under the guidance of scientists who love their work.

Queensland University of Technology, Gardens Point The University of Queensland, St Lucia Griffith University, Nathan 19 – 22 January 2021

Treble your science experience by attending three of the largest universities in Queensland during the four days. Visit QUT, UQ and Griffith-Nathan. You will tour scientific facilities, hear from some of Queensland's leading scientists, participate in hands-on workshops, explore science based careers. Areas covered include forensic and biological science, chemistry, physics, mathematics, astronomy, environmental sciences and engineering.





### The University of Queensland

During this three day program you will visit scientific facilities and participate in workshops in a range of disciplines such as maths, physics, genetics, marine science, astrophysics, chemistry, neuroscience, health and safety science, agriculture or nanotechnology. •••

### University of Southern Queensland, Toowoomba

The program is designed to engage students who are interested in science, engineering and technology with the opportunity to gain knowledge about careers and participate in a wide range of hands-on activities, under the guidance of experts from USQ and the Department of Agriculture and Forestry (DAF). USQ's program offers a wide range of activities such as: biomedical science, agricultural science, food science, engineering, chemistry, biology and physics.

### **CQUniversity Gladstone Marina**

CQUniversity Gladstone Marina campus is in the heart of Gladstone Harbour and the southern end of the Great Barrier Reef. Students will participate in innovative STEM experiences, including virtual and mixed reality technology, robotics, immersive marine science including Quoin Island Turtle Rehabilitation Centre visit, entrepreneurial programs and sessions in the state-of-the-art Australia Pacific LNG STEM Research Central facility.

### **CQUniversity Rockhampton**

Rotational sessions for the two days, including a day with an agricultural focus on research and technology. Third day students solve a real world problem with the information and experience they have had over the previous two days. Areas: chemistry, engineering, technology, agricultural science.

### 27 – 29 October 2020

### Refer to website



### 20 - 22 January 2021

22 - 24 September 2020



### CQUniversity Bundaberg

Discovering world class industry on our door step. Students will be immersed in the world of agriculture using food technology to create innovative solutions to a real world problem faced by our local farming community.

### **CQUniversity Townsville**

Forensic science, coding, robotics, nursing, paramedics as well as working with engineers at the Energy Queenslands Innovation hub to solve a community problem.

### SA

### University of Adelaide, Adelaide

Discover the diverse and amazing career opportunities in both science and engineering whilst undertaking a wide range of hands-on activities over three fun-filled days. Experience interactive workshops in animal science, chemistry, physics, biology, food science, agriculture, engineering and many more. Come see how much fun STEM can be.

### Flinders University, Adelaide

Flinders University welcomes Science Experience students to two and a half days of interactive, fun activities on campus. The program consists of hands-on workshops in our labs, thought-provoking lectures by academic staff as well as a fun activities such as quizzes and competitions. Regional student groups have the opportunity to stay on campus over the three days.







## 22 – 24 September 2020

21 – 23 September 2020



### 8 - 10 December 2020

2 – 4 December 2020

### University of South Australia (year 10 only)

At the University of South Australia, UniSA Connect will provide an immersive STEM inquiry based learning program. Students will work as scientists to learn skills and knowledge to be able to identify solutions to a big question proposed to them. The program in a passive solar engineering context provides an immersive, inquiry based learning integrated STEM approach to design a sustainable energy house for a developing country. At the conclusion of the program, students will communicate their analysis to the group. The underlying emphasis is to encourage STEM careers and to build peer networks with like-minded STEM students.

### University of South Australia, Mount Gambier (year 10 only)

12 – 14 August 2020

24 – 26 November 2020

At the University of South Australia, UniSA Connect will provide an immersive STEM inquiry based learning program. Students will work as scientists to learn skills and knowledge to be able to identify solutions to a big question proposed to them. The program in a passive solar engineering context provides an immersive, inquiry based learning integrated STEM approach to design a sustainable energy house for a developing country. At the conclusion of the program, students will communicate their analysis to the group. The underlying emphasis is to encourage STEM careers and to build peer networks with like-minded STEM students.



### University of South Australia, 22 – 24 September 2020 Whyalla (year 10 only)

At the University of South Australia, UniSA Connect will provide an immersive STEM inquiry based learning program. Students will work as scientists to learn skills and knowledge to be able to identify solutions to a big question proposed to them. The program in a passive solar engineering context provides an immersive, inquiry based learning integrated STEM approach to design a sustainable energy house for a developing country. At the conclusion of the program, students will communicate their analysis to the group. The underlying emphasis is to encourage STEM careers and to build peer networks with like-minded STEM students.



### Federation University, Berwick

### 28 - 30 September 2020

Hands on activities in animal and environmental sciences, biomedical science, IT and engineering will keep you busy. A field trip will get you thinking about exciting career opportunities. Get ready to make new friends, ask lots of questions and make new discoveries when you take part in our program this year.

### Marine and Freshwater Discovery Centre, Queenscliff

19 – 21 January 2021

More than just marine biology – investigate all options linked to aquatic ecology – both marine and freshwater, as well as expanding experiences beyond science into other areas such as law enforcement e.g. Fisheries Officers.

### **RMIT University**

### 19 – 21 January 2021

Budding scientists entering Year 10 or 11 in 2020 will work together to problem solve real world challenges in laboratories and state-of-the-art facilities in disciplines such as space science, nanotechnology, biomedical science, sensory science and engineering, and participate in excursions off-campus. Interactive activities and guest lectures will provide attending students with an invaluable opportunity to learn from academic experts, and friendly RMIT student mentors will be their guides throughout the program. The RMIT University Science Experience gives students the opportunity to explore career paths in STEM, make like-minded new friends, and see what university is all about in a supportive and exciting environment.











### Swinburn University of Technology, Hawthorn

With a focus on industry and real world applications, you will meet leaders from the scientific community, work with innovative technologies in our specialized labs and facilities, watch out-of-thisworld science demonstrations and participate in hands-on workshops that will challenge and excite.

### Federation University, Ballarat

Whether it's an activity in exercise and sport science, forensic chemistry, geospatial science, botany, robotics, engineering or computer graphics, you will use your knowledge, curiosity, ingenuity, team-work, communication and planning skills to think, act and explore the world as a STEM professional. What more could a keen scientist want?

### University of Melbourne, Parkville

There's more to science than biology, chemistry and physics. We want to show you just how broad it can be! Whether you want to fix your cracked phone screen, adapt to a changing climate or invent technology to change the world, science is where it starts. At the University of Melbourne, your program is supported by dedicated student mentors who study across a range of disciplines – including IT and data science, chemistry, health sciences, environmental science and engineering. You'll get to see inside our laboratories, museums and classrooms, and you'll meet leading researchers in different fields .



18 - 20 January 2021











21 – 23 September 2020

### University of Melbourne – Dookie campus

Dookie campus is a working farm – a centre of agricultural research and teaching. You will join scientists and agricultural student mentors in hands-on activities in the laboratory and paddock investigating real world issues. Activities include biodiversity, sheep science, plant science, protein content of milk, cheese making and robotic dairy

### Swinburne University – KIOSC, Wantirna

### 15 – 17 September 2020

25 – 27 November 2020

Over three days, students will experience STEM through forensic science to analyse evidence to solve a real cold case, mission to Mars to engineer robots, experience the red planet in VR, and colonise it and design thinking to follow a human-centred process to prototype a product for specific users.





### Curtin University , Perth 30 September – 2 October 2020

Three days of engaging, hands-on lab sessions and expert speaker presentations, along with information on studying at university and the many rewarding careers in STEM. Our program is delivered by a team of friendly STEM-passionate people, from student leaders to our expert staff, and gives you the chance to meet a Curtin innovator and get an insight into their research. Have fun with us whilst exploring the fields that are important to the State of WA: mining and energy; health and medical science; agriculture and environment; space and technology.

### Edith Cowan University, Joondalup 19 - 22 January 2021

Come and join us for four days of hands-on labs, and presentations. Participate in inspiring and fascinating science and mathematics activities and workshops including: chemistry, physics, biological and environmental science, freshwater and marine biology, mathematics, data-science, cyber security and computer science, all facilitated by our friendly team of ECU scientists and current students. You will explore what science looks like at a University level, hear from our scientists about their ground breaking research and where science can take you as a future career. New for 2021 is the opportunity to experience first hand our new state-of-the-art Science Super Labs. We will ensure there is time for you to chill at our beautiful campus, with the new friends that you will make, enjoying the many cafes and restaurants, or maybe even take quick snooze in our 'sleep-pods.' And finally, we will whisk you away for a one-day science focused excursion, to explore our beautiful WA environments.



### The University of Western Australia, 12 – 14 January 2021 Perth

Explore the world of science, technology, engineering and maths through a series of hands-on workshops, laboratory experiments and interactive presentations. Experience what it's like to be a university student, and discover the rich variety of careers that can come from having a degree in science or engineering. Interact with our expert staff and student leaders as they help you to develop your passion and explore the amazing possibilities of science at UWA.

### **Murdoch University**

### 7 - 10 December 2020

Engage in a wide range of fascinating science activities under the guidance of scientists who love their work. Students will be able to broaden their experience across fields such as physics, chemistry, nanotechnology, engineering, information technology, mathematics, forensics, agricultural science, marine biology, ecology, wildlife biology and vet.



UNIVERSITIES & TERTIARY INSTITUTIONS	PROGRAM DATES
Australian Capital Territory	
Australian National University, Canberra	23 – 25 September 2020
New South Wales	· ·
Macquarie University, Sydney	18 – 20 January 2021
University of New England, Armidale	12 – 14 January 2021
University of Sydney, Sydney	13 – 15 January 2021
University of Technology, Sydney	6 – 8 October 2020
Northern Territory	
Charles Darwin University, Casuarina Campus	20 – 22 October 2020
Queensland	
Griffith University, Gold Coast	Refer to website for new date
Queensland University of Technology, Gardens Point University of Queensland, St Lucia Griffith University, Nathan	19 – 22 January 2021
University of Queensland, St Lucia	20 – 22 January 2021
University of Southern Queensland, Toowoomba	22 – 24 September 2020
Central Queensland University, Gladstone Marina	27 – 29 October 2020
Central Queensland University, Rockhampton	Refer to website for new date
Central Queensland University, Bundaberg	22 – 24 September 2020
Central Queensland University, Townsville	21 – 23 September 2020
South Australia	
University of Adelaide, Adelaide	8 – 10 December 2020
Flinders University, Adelaide	2 – 4 December 2020
University of South Australia, Adelaide year 10 only	24 – 26 November 2020
University of South Australia,Mount Gambier year 10 only	12 – 14 August 2020
University of South Australia, Whyallla year 10 only	22 – 24 September 2020

### UNIVERSITIES & TERTIARY INSTITUTIONS

PROGRAM DATES

### Victoria

Federation University, Berwick	28 – 30 September 2020	
Marine and Freshwater Discovery Centre, Queenscliff	19 – 21 January 2021	
RMIT University, Melbourne	19 – 21 January 2021	
Swinburne University of Technology, Hawthorn	Refer to website for new date	
Federation University, Ballarat	21 – 23 September 2020	
University of Melbourne, Parkville	18 – 20 January 2021	
Melbourne University – Dookie campus	25 – 27 November 2020	
Swinburne University KIOSC, Wantirna	15 – 17 September 2020	
Western Australia		
Curtin University, Perth	30 September – 2 October 2020	
Murdoch University	7 – 10 December 2020	
Edith Cowan University, Joondalup	19 – 22 January 2021	
The University of Western Australia, Perth	12 – 14 January 2021 🛛 🔊	



Student Application Form

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Name:	
Parent's email address:	
Student's email:	
Address:	
Suburb/Postcode:	
Phone:	
Date of Birth: //	Sex M / F
School:	Phone:
Suburb/Postcode:	
Year Level in 2020: Name of Science	e Teacher:
Choice of program:	
First:	Second:
PAYMENT METHOD BY CHEQUE OR CR \$190 inc GST (3 day program) or \$260 inc ( application A) Cheque/Money order made payable to B) Credit Card	GST (4 day program) included with this
Card No:	🗆 Visa 🛛 Mastercard
Expiry Date / Amount: \$	
Cardholder's Signature:	
Cardholder's Name:	
Rotary Sponsorship if applicable (to be completed by Rotary representative) The Rotary Club of : District: This club will offer financial sponsorship to Student contribution (if applicable): \$	the amount of: \$
Contact address:	
	Suburb
Post to: The Science Experience PO Box 158, Monbulk, Vic 3793 Email to: admin@scienceexperience.com	
Please note: Refunds are available (minu	xperience.com.au or (03) 9756 7534 Is \$35 administration fee) up until 4 weeks program commences.

### **Registration Fees**

- 3 day program \$190 (includes GST)
- 4 day program \$260 (includes GST) Edith Cowan Joondalup, Murdoch, and the Brisbane combined Universities
- please note these fees do not cover any transport, meals or accommodation costs
- refunds are available (minus \$35 administration fee) until 4 weeks before a particular program commences

### How do I enrol ?

Send your completed application form to: The Science Experience PO Box 158 , Monbulk, Vic 3793 Email your completed application form to admin@scienceexperience.com.au



Enrol online at www.scienceexperience.com.au Please note: Applications are accepted immediately online at any time if a place is available

Send your application form to a local Rotary Club if you're seeking Rotary financial support. Your local club may consider full or part sponsorship of the \$190/\$260 fee. Please follow through with the club to check they have submitted your application.

### Accommodation

Most programs are non-residential. At an extra cost, accommodation is available at the following programs:

- University of New England, Armidale
- Melbourne University, Dookie campus







### Who We Represent



### science schools foundation

The Science Experience is a Nationwide STEM outreach program established, managed and conducted by the *The Science Schools Foundation Incorporated* an independent non-profit association of educationalists, Rotarians and industrialists.

**Our Supporters** 

ConocoPhillips explores for and produces oil and gas around the world. They operate in 17 countries with about Australia 10,400 employees, including major operations in Australia. To find out more visit www.conocophillips.com.au

**Santos** A proudly Australian company, **Santos** is a leading supplier of natural gas, a fuel for the future providing cleaner energy to improve the lives of people in Australia and Asia. To find out more, go to **www.santos.com** 



### Australian Science Teacher Association (ASTA) promotes the program to schools and teacher members



### Rotary Clubs

- sponsor many students to attend,
- promotes the program to schools,
- participates actively in organising programs and provides social activities.



### Young Scientist of Australia (YSA)

several hundred YSA members voluntarily assist the universities and tertiary institutions in conducting the program

### Universities and Tertiary Institutions

- organize and conduct the programs on their campuses,
- provide a director and presenters
- provide laboratories and other resources

www.scienceexperience.com.au PO Box 158, Monbulk, Vic 3793 admin@scienceexperience.com.au

