



**GIRLS' TECH DAY
2023**



Inspiring the Future Australia (ITF) aims to broaden the horizons and raise the aspirations of all young people, from primary school students to tertiary students.

ITF coordinates and runs a variety of events, from small school-based talks, to industry exhibitions, to full-on day events to inspire young people to pursue STEAM careers.

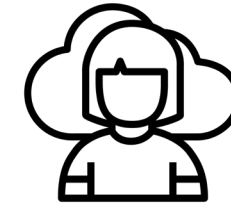
Girls' Tech Day, partnering with AWS and Amazon, gives students hands-on experiences in the world of STEAM.

ITF also runs an online resource to match schools and industry volunteers, who then engage in a variety of face to face events and share their experiences with students and encourage them to follow their dreams in the world of work.

ITF is a part of Schools Industry Partnership (SIP), who works with schools and businesses to find jobs for 15 to 24 year olds across Western Sydney, the Blue Mountains and Hawkesbury regions.



Girls' Tech Day



Welcome to GIRLS' TECH DAY 2023

Get ready to be inspired, engaged and motivated!

We're excited to welcome you to a fun and interactive day to learn about cutting edge technologies shaping the way we all live and work.

The day's activities and speaking sessions are led by inspiring and trailblazing women from AWS and Amazon.

ENGAGE | CONNECT | ACTIVATE



Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud.

Amazon Web Services (AWS) is committed to making a positive difference around the world. Whether it's using technology to solve the world's most pressing issues, or through our employees donating their time to support causes they care about, AWS is dedicated to building a world where every person has the opportunity to live a life of dignity on a healthy planet.

To make a positive impact, specifically in the regions where we build and operate our global infrastructure, we established a program called **AWS InCommunities**. AWS InCommunities launches long-term, innovative programs that will have a lasting impact in our regions around the world where we work, live, and raise our families. AWS InCommunities is obsessed with being good neighbours, and we start with the community and work backwards to represent infrastructure communities inside AWS.

AWS is dedicated to inspiring future builders, especially those from underrepresented and underserved communities who reside in areas where we have a physical presence. Through our Signature Programs, we help increase thousands of students' access to STEAM education opportunities in fun and imaginative ways. We are intentional about adding the "A" to "STEM" because we know that the arts help build future-ready students who develop into well-rounded and creative problem solvers.



Amazon is guided by four principles: customer obsession rather than competitor focus, passion for invention, commitment to operational excellence, and long-term thinking. We are driven by the excitement of building technologies, inventing products, and providing services that change lives.

We embrace new ways of doing things, make decisions quickly, and are not afraid to fail. We have the scope and capabilities of a large company, and the spirit and heart of a small one.

What unites all Amazonians (across teams and locations) is that we are all striving to delight our customers and make their lives easier—whoever that customer may be (e.g., consumers, business owners, content creators, employees, etc.).

In pursuit of delighting customers, Amazonians have developed many products and services that have transformed the way our customers live their lives and run their businesses

You'll also hear us say that at Amazon, it's always "Day 1." What do we mean? That our approach remains the same as it was on Amazon's very first day - to make smart, fast decisions, stay nimble, invent, and focus on delighting our customers.



For 25 years, the **Academy of Interactive Technology (AIT)** has delivered progressive education in interactive media, animation, film, gaming, design and information technology. Some of the most respected professional studios have had a hand in designing our programs so they're as authentic as possible.

We replicate the studio and cloud work environments of your favourite creative tech makers so the transition from studying to employment is as smooth as possible.

Many of our teachers are currently working in the industry and working on their own creative projects. They're not only passionate about educating you, they'll also assess your portfolio items and provide robust, industry-grade feedback, work with you on securing the most appropriate internship and share their experience with you so you can confidently step out into the professional world.



If you're dreaming of a creative career in animation, come visit AIT's booth to immerse yourself in 3D Sculpting, guided by a talented student of the art form. You will have the opportunity to participate in a 15-minute taster activity where you begin to sculpt the shape of a face, see a talented student in action and ask any questions about studying at AIT.



Over 45 years the **Alliance SI** team have become trusted network infrastructure partners with many world-leading network operators across Australia. Where network performance is mission-critical, Alliance SI have the

experience, know-how and processes needed to deliver world-class uptime reliability, project cost minimisation and pain-free IT issue management.

When you join Alliance SI, you'll join a team where you feel respected and valued as a central team member, not just as a worker:

- * Thrive in a role that best suits your talents and interests
- * Be supported with tools, knowledge, processes and systems to help you perform at your best
- * Get the flexibility and personal support for life outside of work
- * Receive industry leading rates and benefit from a range of employee well-being programs
- * Support and mentoring for career advancement and team growth

Come along and see the Alliance SI team show how fibre optic connections work using a visual light to display the signal. You'll also learn about FOBOTs and see the terminator in action.

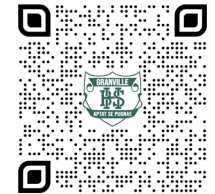


Granville High School Robotics Programs

An iSTEM Robotics elective subject is offered to Stage 5 students in Years 9 and 10 at Granville Boys High School. This program provides a cross-curricular educational experience and gives students the opportunity to develop their 21st century learning skills including communication, teamwork, problem solving, leadership, and initiative, while having fun pursuing their passion for robotics. Students follow a process of designing, constructing, programming, and testing their robot to complete tasks and goals.

Granville Boys High School students are the only students studying the TAFE Launch Pad Electrotechnology Robotics Course as part of their HSC. The school competes on a regular basis in Robotics competitions against private schools with a vastly different budget and have been highly competitive. The boys are focussed on careers in the tech world and have had some great contact with AWS, Lincoln Electric and Omron getting to know the world of Robotics.

Two dedicated robotics labs have been created which facilitate students functioning in a team-orientated environment. Our students work with a range of robotics technology including SPIKE Prime and FIRST Robotics Competition (FRC) components. One robotics lab is equipped with a full VEX Robotics Competition (VRC) field and a comprehensive Vex V5 (fifth generation of education robotics systems) workshop.



Fulton Hogan (Industries)

is a leading asphalt supplier in the industry. We offer services from design to construction, including

surfacing, maintenance and operation. Fulton Hogan delivers high quality infrastructure and has been doing so for 90 years. Fulton Hogan started on roads, and for the last 88 years we have gained a vast range of skills and experience, across a range of sectors including roads and maintenance, transport infrastructure, and more.

You are an engineer for the day, helping to save a remote village impacted by a flash flood. You only have 10 minutes to build a floating home using paper cups, foil, string, straws and empty coke cans. Your new floating home will be tested using marbles until it sinks. Whoever gets the most marbles wins!

This activity helps to raise awareness that engineering requires critical thinking, strategic planning and budgeting, as well as making a huge impact for a better society.



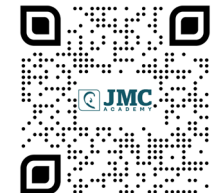
Explore the CREATIVE INDUSTRIES with **JMC ACADEMY**, and visit our interactive space focusing on GAMES + ANIMATION.

Celebrating 40 years in education, JMC Academy remains Australia's leading Creative Industries institution, offering

Degrees and Diplomas in Music, Acting, Songwriting, Audio Engineering, Film and Television Production, Entertainment Business Management, Visual Communication (Design), Animation, Game Design and Music Production.

With advanced-design campuses, ongoing technology upgrades, a dedicated team of academics and industry professionals, and a network of international masterclass lecturers, JMC Academy is committed to ensuring our graduates make their own indelible mark on industry.

JMC Academy's ultimate focus is to deliver inspiring and technologically sophisticated programs, which cater to the global needs of the Creative industries. By nurturing, supporting and mentoring students who share a true passion and dedication for these industries, we are able to guide them into rewarding careers.





Lincoln Electric is the world leader in the engineering, design, and manufacturing of advanced arc welding solutions, automated joining, assembly and cutting systems, plasma and oxy-fuel cutting equipment, and has a leading global position in brazing and soldering alloys.

Lincoln is recognized as the Welding Expert for its leading material science, software development, automation engineering, and application expertise, which advance customers' fabrication capabilities to help them build a better world.

Headquartered in Cleveland, Ohio, Lincoln has 56 manufacturing locations in 19 countries and a worldwide network of distributors and sales offices serving customers in over 160 countries.



Neuranext A.I. Education is Australia's only face to face Incursion teaching students about the science and technology of Artificial Intelligence.

Utilising a series of hands on activities including computer vision powered self driving cars, live interactive computer vision tasks and A.I. powered robotics, students learn the key concepts of A.I. and see them implemented live.

Students explore how A.I. is already deeply ingrained in their everyday life and how it will change our future going forward.

Learning about the scientific concepts of computer vision and applying it to the self driving problem and the concepts of smart cameras and devices forms the basis of the incursion.

Students from years 3 through to 12 leave with a clear understanding of A.I. and its capabilities as well as knowledge to get creating immediately with generative A.I. after the incursion.



[national electrical and communications association](http://national-electrical-and-communications-association.com.au)

NECA Training and Apprenticeships specialise in Electrical and Telecommunications training.

NECA Training and Apprenticeships was founded to promote the employment of young people into the Electrical trade.

Apprentices are employed by NECA, with training being provided by host employers. NECA has a long history in the electrical industry and has trained thousands of apprentices.

NECA Electrical Apprenticeships is a not-for-profit group training company that employs over 750 apprentices in NSW, QLD and the ACT. NECA EA is owned by the National and Electrical Communications Association (NECA), providing apprentices with the full range of work available in the electrical industry. This ensures that the apprentices receive the broad experience needed to complete their trade and pursue careers that align with their areas of interest.

NECA Electrical Apprenticeships is part of a national network of NECA businesses that supports the electrical industry in all Australian states and territories.



The **One Giant Leap Australia Foundation** is a Not For Profit Organisation whose purpose is to advance STEM education and careers.

We provide life changing opportunities for students and educators to develop and build their knowledge and understanding of Science, Technology, Engineering and Mathematics.

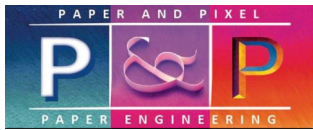
Our vastly engaging educational programs about space science, technology and exploration are unique, equitable and diverse.

The Foundation is an agile and flexible organisation that connects government with industry, innovation and the community.

We are making the impossible possible.

By using Virtual Reality, students are able to get an idea of what it is like to navigate the International Space Station. Students will have an opportunity to move around the ISS, collect resources and might even be able to go on a space walk!





Embark on a thrilling adventure with **Paper and Pixel** in our exhilarating paper engineering workshop! Prepare to be astounded by the magical world you'll bring to life through the art of pop-up books and paper engineering.

Unleash your creativity as you delve into a captivating mix of imaginative concepts, masterful drawing, and the hands-on craft of crafting your very own enchanting storybook.

Our workshops are a whirlwind of entertainment and enlightenment, leaving participants with newfound creative prowess to weave their own captivating tales.

Don't miss out on this opportunity to unlock the boundless potential of your imagination!



The **Sign & Graphics Education Initiative** is a collaborative venture between two industry associations representing the sign, display, wide-format print and graphics sector. Its purpose is to connect talented, future-focused young people with career opportunities in our diverse and exciting sector.

Visual Connections represents the industry's suppliers, with members including some of the leading names in the design and manufacture of print and graphics systems, equipment, software and consumables. The Australian Sign & Graphics Association (ASGA) represents businesses which design, create, manufacture and install a wide range of signage, display, print, promotional and graphics products for industries from advertising and retail, to construction and events. Together, we represent one of the most vibrant, creative and technologically advanced sectors in Australia...one which is always looking for new talent.



The skills required are diverse. Creative design. Computer aided design and manufacture. Metal and plastics fabrication. Print production. Laser cutting and engraving. Electrical and lighting.

Automation and robotics. Planning and production scheduling. Sales and marketing. Fulfilment and logistics.

This is your chance to work on projects that create real visual impact, connect with people wherever they are, and play a vital and irreplaceable role in the lives of every Australian, every day.



PwC Australia is part of a global professional services brand of firms. From accounting and tax to digital transformation, technology consulting, cybersecurity and digital trust – we do it all.

Our 'She's Here in Cybersecurity and Technology' program, which we bring to the AWS Girls' Tech Day, is redefining the narrative around women in the cybersecurity and technology workforce. It brings together a collective of incredible cybersecurity and technology professionals who are dedicated to discovering, inspiring and developing female leaders in the industry, as well as closing the technology recruitment gap by opening new career pathways for women in cybersecurity, digital, data and technology.

At our booth, we will give Girls' Tech Day participants an opportunity to undertake a hands-on experience with VR headsets.

In this VR demo, students must take on an official role in an organisation that has just been subjected a data breach / cyber incident, and decide what the best steps forward will be to mitigate the risk of that incident. After the demo, PwC employees will then hold a discussion with the students and talk through learnings.



Starry Arts School, established in 2015, is a renowned children's art school committed to nurturing young artistic talents and revolutionising conventional classrooms into interactive, immersive learning spaces. We offer in-person and online art and animation classes designed to inspire creativity in the next generation.

Operating seamlessly throughout the school term and holidays, our dynamic curriculum spans various artistic disciplines, from painting, drawing, sketching, and crafting to animation, drama, and school incursion services. We empower young minds with artistic skills, art theory, and the integration of HEALS (History, Ecology, Arts, and Learning Skills) alongside STEM (Science, Technology, Engineering, and Mathematics).

One standout program, "EmojiQuest: Unleash Creativity through Tech," challenges children to craft captivating emoji animations using mini discs and marble watercolour techniques. These emojis merge into animated storylines on our motion capture app, enabling students to control character actions through body language, resulting in engaging 3D animations. Explore art with Starry Arts School, where imagination knows no bounds in interactive, immersive learning environments.





TAFE NSW is one of the leading providers of education and training in Australia. TAFE NSW has industry qualified and experienced teachers bringing up-to-date, real-world skills directly to the classroom.

Whatever you're interested in, TAFE NSW has a pathway to help you get the job you want. TAFE NSW offer vocational education courses to complete whilst at high school. You can choose to complete this either at school or online, or earn while you learn with a school-based apprenticeship or traineeship.

You can also do your post-school studies and choose from a diploma, degree or other pathway to university. This means you'll be taught by expert teachers with strong industry connections, as well as have access to mentorships, internships and work placements in a real world environment, giving you invaluable experience and a great head start on your career.



Our courses and degrees can change lives and open opportunities through learning.

The activity that TAFE NSW will be providing is exposure in robotics, cybersecurity as well as drone technology.



Unity Grammar is an independent Islamic school situated in Austral, founded on the commitment of providing the highest quality of education for children in Kindergarten to Year 12.

The school offers a comprehensive curriculum and an exciting and unique co-curricular and extra-curricular program.

One of those extra-curricular programs is Robotics. The school has participated in various robotics competitions in Australia and around the world for the past 8 years. This also includes representing Australia as "Team Australia" at FIRST Global in Geneva 2022.

The robotics team is running a drones challenge at Girls' Tech Day, that involves students navigating a Space-themed course.

They will also code a drone to put out a bushfire in Sydney.



Combining a unique diversity of expertise, talents and cultures, our architects design and deliver extraordinary high technology solutions. From the bottom of the oceans to the depth of space and cyberspace, we help our customers think smarter and act faster - mastering ever greater complexity and every decisive moment along the way.

Thales Australia's company structure comprises the following five Country Domains: Digital Systems Above Water Systems Underwater Systems Airspace Mobility Solutions Vehicles and Tactical Systems

The activities we have on display showcase engineering from a range of different disciplines, from mechanical, mechatronics, electronics, robotics and software.



- * BlueRov Underwater Robot - An underwater robot equipped with thrusters, sensors, sonars and other pieces of equipment.
- * Robotic Manipulator - A small robotic manipulator will be controlled to pick up and place objects.
- * Sonar Sound Guessing Game - A PowerPoint slide will play a sound which has been recorded by actual underwater sonars. Try to guess the sound!
- * SeaPerch Underwater Robot - A small underwater robot controlled via a simple remote.



West Region Delivery Team is a joint venture comprised of 5 parent companies that deliver work for Sydney Water. The parent companies involved are: Fulton Hogan, Abergeldie, Stantec, Atlas and Programmed.

As part of Sydney Waters Partnering for Success program, WRDT are in charge of the Design, Construction and Maintenance of Sydney Water's assets in the Western Sydney Region.

We will be showcasing some piping equipment, with one of our fitters demonstrating. We will also have VR headsets that display our design drawings and will be running activities and quizzes.





GIRLS' TECH DAY