



DEADLY
science



OUR PROGRAMS GUIDE 2024

AA

YOUR DONATION
OUR STORY
THEIR FUTURE



DEADLY science

OUR VISION

Create STEM equity for Aboriginal and Torres Strait Islander Learners

WHAT WE DO

We are Australia's leading STEM charity working with over 800 schools and community organisations across Australia.

WHAT IS STEM

STEM is Science, Technology, Engineering and Maths. STEM education is an interdisciplinary approach to improve problem solving and analytical skills.

W: www.deadlyscience.org.au

E: admin@deadlyscience.org.au

PO Box 244

Port Macquarie NSW 2444

ABN: 71 640 734 390



Scan here for
more information

OUR VALUES



INSPIRE

We celebrate our First Scientists and INSPIRE future generations of Indigenous people to continue this tradition



EMPOWER

We EMPOWER and encourage learners to take charge of their lifelong learning



INNOVATE

We INNOVATE and lead in STEM education for Indigenous people.



COMMUNITY

We work together with COMMUNITY; they provide a connection between STEM, culture, education and beyond.



INTEGRITY

We act with INTEGRITY and honesty.



CULTURE

We are influenced and informed by our Indigenous CULTURE in all that we do.



SCHOOL PROGRAMS



Learner Journey

OUR APPROACH

The DeadlyScience® approach is designed to improve STEM equity outcomes for Aboriginal and Torres Strait Islander learners. Our approach takes learners on a journey with STEM education through their schooling life and beyond. The journey begins with engagement and educational experiences in the DeadlyScience Club® then moves to encouraging enrolment in STEM subjects and employment in the sector with DeadlyScience Pathways®.

ENGAGEMENT

Through our DeadlyScience Club® programs we provide Indigenous knowledge based STEM resources for learners from Foundation through to Year 10.

EDUCATION

Through our DeadlyScience Club® programs we provide Indigenous STEM educational experiences for learners from Foundation through to Year 10.

ENROLMENT

Through our DeadlyScience Pathways® program we encourage learners to enrol in STEM subjects in Years 10, 11 and 12 by providing rich STEM career immersion opportunities.

EMPLOYMENT

Through our DeadlyScience Pathways® program we increase employment opportunities in STEM fields and contribute to the growth and prosperity of individuals and communities through industry exposure, networks and other opportunities.

DEADLYSCIENCE PROGRAMS

DeadlyScience® programs are aimed to support STEM education with a focus on empowering and inspiring Aboriginal and Torres Strait Islander learners. Our programs are designed to eliminate STEM poverty and create STEM equity for these learners.

Our programs include:

- **DeadlyScience Club®**
 - Deadly Learners
 - Deadly Labs
 - Deadly STEM in Schools
 - School of the Month
 - Resource Development and Distribution
 - Deadly STEM Awards
- **DeadlyScience Pathways®**
 - Walter and Eliza Hall Institute of Medical Research Immersion

8000+
boxes of books &
STEM resources

800+
schools &
communities
across Australia

Donate



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DEADLY STEM IN SCHOOLS



First Scientists strengthening STEM knowledge in the classroom

THE ISSUE

Aboriginal and Torres Strait Islander people are Australia's first scientists, and their scientific discoveries and innovations go back over 65,000 years. However, according to the Programme for International Student Assessment (PISA)*, only 29% of Indigenous learners have been meeting the National Standard for scientific literacy since 2006 compared to 58% of non-Indigenous learners.

The PISA 2022 highlights a number of indicators leading to Indigenous learners being left behind such as geographical isolation as well as cultural, economic, language and literacy barriers. STEM in Schools actively encourages Indigenous learners to become interested in STEM and supports closing this gap by addressing issues raised in the PISA 2022.

OUR SOLUTION

Our STEM in Schools sessions are delivered in classrooms in schools across Australia. The sessions focus on highlighting Indigenous STEM knowledge with a two-way approach to learning and sharing. These workshops are tailored to the interests and year level of the class and are designed to have practical and real-world applications. Sessions are designed to spark an interest in STEM, so they consider further engagement and careers in STEM. Designed and delivered by our deadly team, these sessions are an introduction to thinking about problem solving. All activities during the session allow learners to experiment using a hands-on, minds-on approach, while empowering and inspiring learners through the sharing of STEM knowledge. The STEM in Schools sessions get your learners thinking, inspired and empowered to pursue a future in STEM.

YOUR SCHOOL

Register your interest for a Deadly STEM in Schools visit by emailing:
programs@deadlyscience.org.au

*<https://research.acer.edu.au/cgi/viewcontent.cgi?article=1057&context=ozpisa>

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Over 440
learners inspired
and engaged

Over 22 schools
provided
in-classroom
sessions

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DEADLY LEARNERS



STEM Legends share different ways of knowing and thinking with learners

THE ISSUE

Teachers in regional and remote schools often do not have access to expertise and resources to support STEM education compared to city-based schools. This leaves Indigenous learners at a significant disadvantage with the school retention rate being only 55.9% according to the Australian Bureau of Statistics 2023 Schools* data. Furthermore, according to the Report of Government Services 2023**, Indigenous learner attendance at regional and remote schools was 69% compared to 87% attendance by non-Indigenous learners.

To support retention and attendance of learners in regional and remote schools, DeadlyScience® is improving access to expertise and resources for rural and remote schools by providing free Deadly Learner sessions.

1800+
Deadly Learners
inspired
and engaged

**With some
schools coming
back more than
5 times!**

OUR SOLUTION

Deadly Learner sessions support closing the gap of disadvantage for learners in Years 3 - 9 by providing a platform where STEM Legends bring STEM to the teacher's classroom. Together, the learners, teacher, STEM Legend and DeadlyScience® staff meet virtually to share both Western and Indigenous Science Knowledge about the class's current investigation topic. Deadly Learner sessions enhance STEM learning programs by bringing these guest speakers, often Indigenous themselves, to classrooms to inspire and empower Indigenous learners.

STEM Legends are professionals in their field of science, technology, engineering and maths. They are passionate about sharing enthusiasm and knowledge in their area of expertise with Aboriginal and Torres Strait Islander learners.

SIGN UP YOUR CLASS

Or you can book a Deadly Learners session here:

<https://calendly.com/deadly-learners>



*<https://www.abs.gov.au/statistics/people/education/schools/latest-release>

#aboriginal-and-torres-strait-islander-students

**<https://www.pc.gov.au/ongoing/report-on-government-services/2023>

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DEADLY LABS



Preserving the Indigenous Science Knowledge of Elders to share and pass down

THE ISSUE

Indigenous Science Knowledge (ISK) has been growing for over 65,000 years. The knowledge belongs to some of the oldest living cultures of the world - Aboriginal and Torres Strait Islander cultures.

Often it is Elders who hold and pass down this knowledge. However, it can be difficult for Elders to engage the younger generations and pass on this knowledge in these modern times.

With Indigenous learner attendance rates in some schools being as low as 48%, according to the Australian Bureau of Statistics 2023 Schools data*, we believe it is important to show learners the value of the Indigenous Science Knowledge held by Elders. Our solution is to bring the community and education together to improve attendance by revitalising this important Indigenous Science Knowledge and empower cultural learning through Deadly Labs.

OUR SOLUTION

DeadlyScience® works with communities to identify scientific knowledge they would like to preserve, knowledge which supports the community and can be woven into education at the local school. Deadly Labs develops community-based STEM 'solutions' in conjunction with local schools and elders to solve a current problem.

To support the long-time tradition of passing on and preserving ISK, we work with Elders and communities to identify how ISK is relevant to today's problems. Then together we revitalise this knowledge. We do science with the learners, develop a video of the community doing this science together, write a teacher guide and share this with the broader Australian education community.

Working with Elders and STEM experts in the field of the problem being addressed we re-engage learners, improve attendance and celebrate the importance of their cultural and Indigenous Science Knowledge.

YOUR SCHOOL

We would love for your school to be involved. You can be involved in the creation of a Deadly Labs kit by emailing:
programs@deadlyscience.org.au

*<https://www.abs.gov.au/statistics/people/education/schools/latest-release>
#aboriginal-and-torres-strait-islander-students

Distribution of
each kit impacts
over 5000
learners lives

Preserving
Indigenous STEM
knowledge of
today for
tomorrow

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SCHOOL OF THE MONTH



Showcasing STEM engagement and education in regional and remote schools

THE ISSUE

Awards programs in STEM generally reward high achieving learners in the areas of Science, Technology, Engineering and Mathematics. However, due to the gap between Indigenous learners and their non-Indigenous peers of up to two and a half years, according to the Programme for International Student Assessment (PISA)*, it can be approaching impossible for Indigenous learners to attain high achievement awards.

Awarding educators and learners with culturally appropriate and relevant resources and equipment is a well-documented way to increase student access and engagement with STEM. The issue of awarding only high achieving learners and not highly engaged learners is one that DeadlyScience® is solving.

35000+
learners inspired
and engaged

**Rewarding our
network of 800+
DeadlyScience®
Schools**

OUR SOLUTION

We are celebrating schools who have engaged on a deeper level by actively participating in programs we offer at DeadlyScience® and showing a keen interest in STEM.

The School of the Month will receive;

- \$2,000 in total to spend at Modern Teaching Aids on any STEM equipment, and a
- Questacon gift box valued at \$440.

NOMINATE YOUR SCHOOL

To become a School of the Month, your school must meet two of the following support criteria:

- Have at least 15% Indigenous learners, according to MySchools
- Be classed as 'Outer Regional', 'Remote' or 'Very Remote', according to MySchools
- Have an Index of Community Socio-Educational Advantage (ICSEA) score of less than 1000, according to MySchools

To find out more, email:
admin@deadlyscience.org.au

*<https://research.acer.edu.au/cgi/viewcontent.cgi?article=1057&context=ozpisa>

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RESOURCE DEVELOPMENT AND DISTRIBUTION



Putting resources in the hands of our next generation of Deadly Scientists

THE ISSUE

Schools in regional, remote and very remote locations often are under-resourced. Due to their location, there can be many logistical issues to get resources to their school, which can make the delivery of resources take longer and cost more than expected. Some locations even rely on barges for the final step in their delivery of resources. Indigenous learners can miss out on simple resources such as STEM textbooks, and basic STEM materials such as microscopes, drones and trail cameras due to these logistical issues.

Supporting teachers with culturally appropriate and relevant resources and equipment is a well-documented way to increase learner access to STEM. Learner engagement in STEM is an issue that belongs to everyone. DeadlyScience® is improving access to expertise and resources for schools that meet our support criteria.

**25000+ resources
delivered to
schools Australia-
wide**

**800+ schools
provided with
STEM learning
resources**

OUR SOLUTION

DeadlyScience® wants to ensure all schools have access to the STEM knowledge of the world's oldest continuing cultures by providing resources that connect schools to the First Scientists of Australia, Aboriginal and Torres Strait Islander people.

Our partnerships to date have delivered 25,000 STEM related books, 700 telescopes, and other STEM resources to over 180 communities. Additionally, we are writing Teacher Guides to better support the inclusion of Indigenous Science Knowledge in the classroom.

RESOURCES FOR YOUR SCHOOL

Does your school need some STEM resources for a unit of work? If your school has more than 15% Indigenous learners and/or is regional, remote or very remote then you might qualify to receive up to \$1000 of free resources to support your unit. Email: admin@deadlyscience.org.au to find out more.

Access our teacher guides
and classroom resources here:



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DEADLYSCIENCE PATHWAYS®



Enabling employment pathways for the
next generation of deadly STEM professionals

THE ISSUE

Aboriginal and Torres Strait Islanders peoples are Australia's First Scientists and their STEM knowledge is part of the world's oldest continuing cultures. However, the 2020 Australia's STEM Workforce Report* highlighted that the percentage of the Australian non-indigenous population with a University STEM qualification is 5.2% compared to Aboriginal and Torres Strait Islander people with a STEM qualification being only 0.5% (or one tenth of the non-indigenous rate).

Furthermore, Indigenous Australians make up just 1.6% of the STEM workforce in Australia. Combined with the fact that employment in STEM occupations is projected to grow by 12.9%, well above the average of all occupations (of 7.8%) and more than twice as fast as non-STEM occupations, DeadlyScience® views these facts as an opportunity that is not being considered appropriately.

**24 learners
empowered
through our week
intensive program**

**Learners inspired to
pursue scholarships
and further study in
STEM**

OUR SOLUTION

DeadlyScience® wants to ensure all Aboriginal and Torres Strait Islander learners interested in STEM have access to education and employment pathways by connecting schools with employers in the science, technology, engineering and maths fields and providing current information about vocational and University pathways and offerings.

The DeadlyScience Pathways® program provides STEM career-based opportunities such as career information days, workshops, work placements, training, internships, traineeships and scholarships to enable Aboriginal and Torres Strait Islander learners to discover and connect with more opportunities in STEM fields.

ENROL YOUR LEARNERS

We would love your secondary learners from Years 10-12 to come along to our week-long work experience and immersion pathways programs.

Please email: programs@deadlyscience.org.au
for more information.

*<https://www.chiefscientist.gov.au/news-and-media/2020-australias-stem-workforce-report>

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