



national SCIENCE WEEK 2020

NT SCIENCE WEEK 15-23 August 2020

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NATIONAL SCIENCE WEEK

National Science Week 2020 - 15 To 23 August

National Science Week celebrates science, technology and innovation in everyday life and our future. It is a time to celebrate the contributions of Australian scientists to the world of exciting and evidence-based knowledge. In the NT, events will be delivered by universities, schools, research institutions, indigenous ranger groups, libraries and community organisations. Science Week inspires a variety of groups from children to adults, and science amateurs and professionals, with an aim to encourage an interest in science pursuits among the general public.

Online Community Grants

Amidst the isolation and hardship caused by the COVID 19 pandemic, our 2020 Science Week online community grants aimed to provide fascinating and inspiring learning material for Territorians to access online, while supporting their favourite local artists and STEM providers. This collaboration developed a series of original, exciting and engaging online video posts about Science, Technology, Engineering and Maths through the creative mediums of circus, theatre, storytelling, dance, poetry, music and visual arts. This series of short videos will be launched online during National Science Week 2020 on our:

Facebook page: <https://www.facebook.com/NationalScienceWeekNT/>

YouTube Channel: <https://www.youtube.com/channel/UCfIMzCV35DczboL0S5gFqQA>

Webpage: <https://www.inspirednt.net/>



A Journey to the Borneo Rainforest

Location: Charles Darwin University, Casuarina Campus, Mal Nairn Auditorium

Date: 12 August 2020 (Wednesday)

Time: 19:30 to 21:30

By: Northern Territory Field Naturalists' Club Inc.

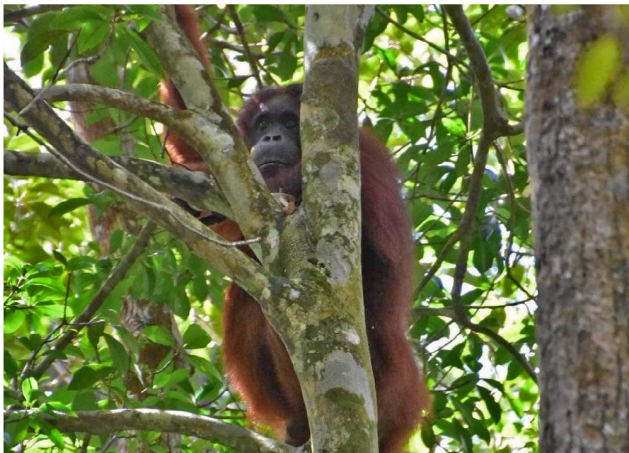
Key speakers: Stephen Reynolds, David Young, Janet Marles, Carla Eisemberg

Entry fee: Free

This NT Field Naturalists' Club special event will launch the 2020 NT Science Week. During these hard times of closed borders, immerse yourself in the heart of the Bornean jungle to learn about this biodiverse, endangered environment, with its unique flora and fauna. This session of amazing photos and stories will follow the discoveries made by a group of 12 CDU students who travelled to the World Heritage Mulu National Park (Sarawak, Malaysia) and the pristine Ulu Temburong National Park (Brunei Darussalam) in February 2020. Learn about the bearded pigs that swim across oceans when migrating for food and the Bornean Keeled Pit Viper that often stays in the same tree for months at a time, gives birth to live young, and can even bite through their own jaw to inject their prey. The talk will be followed by free drinks and nibbles to celebrate our amazing Environmental Science discoveries in the NT and beyond.

Audience: 11 years and above. Children aged below 16 years must be accompanied by an adult.

Number of participants: 80



Cinema under the stars

Location: Charles Darwin University, Casuarina Campus, Strand (Grassy area next to the Library)

Date: 14 August 2020 (Friday)

Time: 19:30 to 21:30

By: NT Online Community Grant recipients.

Entry fee: Free

Bring your picnic blanket and a thermos (temperatures might go below 20 °C!) and enjoy a series of short films that have been created especially for National Science Week NT 2020 and will be screened by the Darwin-based Solar Cinema. Learn about the science and technology behind sports, drumming and beer, and discover fascinating facts about our native animals through the lens of our local artists and researchers. A screening of the family friendly movie "Paper Planes" (2015 – Australia) will follow.

Audience: Family friendly.

Number of participants: 150



At yeast there'll be beer

Location: Charles Darwin University, Casuarina Campus, Mal Nairn Auditorium

Date: 15 August 2020 (Saturday)

Time: 19:30 to 21:30

By: Matt Elvey, Jon Clark and Chris Martin - Darwin and NT Homebrewers

Entry fee: Free

Without yeast, beer would just be bitter, sugary water. This talk is all about what different yeasts do, where they come from and our misadventures trying to make beer with a wild yeast we captured in our Darwin backyards. Afterwards, we will have some tastings of the same beer made with different yeasts and hopefully showcase a truly local Darwin beer.

Audience: 18 years and above

Number of participants: 80



Science Week @ CDU

All Science Week @ CDU Events are free, but **participants must register** to attend any event on <https://www.eventbrite.com/o/nt-national-science-week-25374775709>. Rooms have strict maximum participant numbers. Please bring your ticket printed or on your phone on the day of the event.

Know more about Nuclear!

A workshop on nuclear radiation (with demos and freebies!).

Location: Charles Darwin University, Casuarina Campus, Building: Red 6, Room: Red 6.1.04
Date: 16 August 2020 (Saturday) **Time:** 10:30 to 11:30
By: Adam Turley – The Essington School **Entry fee:** Free



When you think of nuclear radiation what words come to your mind? Bombs? Waste? Chernobyl? 5G? The truth is we're surrounded by radiation all the time; we live our whole lives being exposed to it. Australia has whole industries devoted to the scientific application of nuclear radiation for economic, medical and research benefits. A more rational understanding of radiation helps to dispel the fear.

Come along to get a hands on education about nuclear radiation and radiation in general; the dangers, the benefits and how radiation is used in Australia. The workshop includes several demonstrations normally only available in a senior school physics classroom. You'll leave the workshop with a kit of things to share with your parents, friends and family so everyone can learn more about radiation and its place in everyday life.

Audience: Children from years 4 to 12. Children must be accompanied by an adult. **Number of participants:** 20

Science Week Special Build It Up Workshops

Location: Charles Darwin University, Casuarina Campus, Building: Blue 2A, Room: Blue 2A.1.01
Date: 16 August 2020 (Sunday)
Time: Various one hour workshops – 10:00 to 11:00, 11:00 to 12:15, 12:30 to 14:00, and 14:00 to 15:00 **By:** Gargee Lad – Build IT Up **Entry fee:** Free



Get started with an introduction to the thrilling world of electronics! Come and solidify your STEM foundation – one kit at a time!!! No skills in technology needed. This workshop involve basics of handling of electronic tools and components, assembly of cool techno- projects, and testing and troubleshooting. For more information and workshops, check out Build IT Up on Facebook: <https://www.facebook.com/BuildITUpAu/>

Audience: 11 years and above. Children aged below 16 years must be accompanied by an adult. **Number of participants:** 20

Let's go fishing

Location: Charles Darwin University, Casuarina Campus, Building: Red 6, Room: Red 6.1.04

Date: 16 August 2020 (Sunday) **Time:** 15:30 to 17:30

By: Amy Kate Kirke and Jenny House – PhD students, Charles Darwin University **Entry fee:** Free



This interactive game simulates fishing and commercial fishing and its potential impact. Come fishing with us and learn a little about how we can use information to manage our fisheries!

Audience: 10 years and above. Children aged below 16 years must be accompanied by an adult. **Number of participants:** 20

Meet the Barra and the Turtles!

Location: Charles Darwin University, Casuarina Campus, Building: Pink 3 (Parking at Car Park Pink A).

Date: 17 to 21 of August 2020 (Monday to Friday) **Times:** 15:30pm to 16:30pm

By: Dan and Kathy **Entry fee:** Free



Meet the sea turtles and the barramundi at the Turtle Rehabilitation Center and learn about their stories and biology.

Audience: 3 years and above. Children aged below 16 years must be accompanied by an adult.

Number of participants: 12 per session

Using your senses to identify native plants.

A sensory experience.

Location: Charles Darwin University, Casuarina Campus, Building: Yellow 2, Room: Yellow 2.1.32

Date: 17 August 2020 (Monday) **Time:** 15:30 to 17:30 **By:** Stephen Reynolds (CDU)

Entry fee: Free



Botanists use various techniques to assign plants to families and then to species. In addition to the usual taxonomic features such as floral structures, the texture of leaves, arrangement of veins, smell of leaves and flowers, and the overall appearance of the plant can provide useful hints. This workshop will investigate a selection of native plants from the Top End using touch, smell, sight and sound.

Audience: For the inquisitive mind, 10 years and above. Children aged below 16 years must be accompanied by an adult.

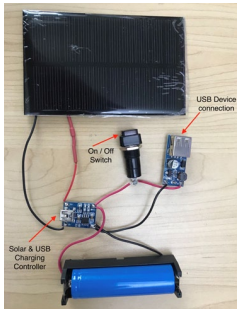
Number of participants: 20

How to Build Your Own Solar Powerbank Workshop

Location: Charles Darwin University, Casuarina Campus, Building: Purple 12, Room: Purple 12.2.17

Date: 18 August 2020 (Tuesday) **Time:** 15:30 to 17:30

By: Christian George –Science Week NT Chair. **Entry fee:** Free



Charge your electronic devices on the go using a power banks you made yourself! In this workshop participants will learn about the basic electronics behind a power bank and how it all works together. A large portion of the workshop is to finally build your own power bank. The participants will learn how to use a soldering iron and to make basic solder joints.

Audience: 13 years and above. Children aged below 16 years must be accompanied by an adult.

Number of participants: 15

The science of art from Nature - Natural Inks

Location: Charles Darwin University, Casuarina Campus, Building: Red 6, Room: Red 6.1.04

Date: 19 August 2020 (Wednesday) **Time:** 15:30 to 17:30

By: Emma Lupin – Taste of the Top End and GULP NT **Entry fee:** Free



This workshop will provide an introduction to using kitchen scraps and foraged flowers to make ink. Embark on a micro journey together into the surrounds and how this environment still holds pockets of nature and inspiration to observe and find materials from, with a focus on inks and colour. We will look at kitchen scraps and everyday items used that make ink and colour and then learn how to make ink and experiment to make colour.

Audience: 10 and above. Children aged below 16 years must be accompanied by an adult.

Number of participants: 20

Feeling Hot? Make your own Temperature Gun

Location: Charles Darwin University, Casuarina Campus, Building: Purple 12, Room: Purple 12.2.17

Date: 20 August 2020 (Thursday) **Time:** 15:30 to 17:30

By: Zachariah Thorbjornsen – Bachelor of Engineering Honours (Mechanical Engineering) student at Charles Darwin University. **Entry fee:** Free



You will build your own temperature gun and understand the mechanics and basic theory behind this technology. Given the current situation, this is a useful example of obtaining surface temperature through a non-contact method. You will build and take home your temperature apparatus. This workshop is for middle and high students interested in coding, electronics, software development, engineering or science.

Audience: 13 years and above. Children aged below 16 years must be accompanied by an adult.

Number of participants: 15

Chemistry Spectacular

Location: Charles Darwin University, Casuarina Campus, Building: Yellow 2, Room: Yellow 2.1.32

Date: 21 August 2020 (Friday) **Time:** 15:30 to 17:30

By: CDU Chemistry Outreach team – Dr Vinuthaa Murthy, Axel Milne, Elnaz Saki, Daniel Brummitt and Syed Mahmood **Entry fee:** Free



Be ready to be amazed by a series of NT-inspired chemistry experiments! Grow a super colourful crystal garden, distil your own essential oils and extract copper metal from ore during this two hour family friendly workshop that will give you a taste of how it feels to be a real scientist in the Northern Territory!

Audience: 10 and above. Children aged below 16 years must be accompanied by an adult.

Number of participants: 30

Shoot for the stars - make and launch your own model rocket!

Location: Charles Darwin University, Casuarina Campus, Building: Yellow 1, Room: Yellow 1.1.39

Date: This workshop will run twice in two consecutive Saturdays – 15 and 22 of August 2020

Time: 15:30 to 17:30 **By:** The Essington School **Entry fee:** Free

Due to popular demand one extra workshop will run on Sunday 23rd from 10:30 to 12:30



If it wasn't for chemical reactions astronauts wouldn't be able to escape Earth's gravity and get to the International Space Station. Make your own model rocket (with a real explosive chemical black powder engine) and experience a bit of gravity defying rocketry. This fun chemical STEM experience is sure to be a blast! You get to keep your rocket at the end too.

Audience: Children from years 1 to 12. Children must be accompanied by an adult.

Satellite Selfie NT

Location: Darwin; Pine Creek; Batchelor; Adelaide River; Katherine; Jabiru; Gunbalanya; Nhulunbuy; Ngukurr; Jukmingan; Mataranka; Raminginig; Alice Springs; Barunga; Beswick; Manyallaluk; Tennant Creek.

Date and time: This event will happen during Science Week (15-23 August). The exact day and time for your location will be defined in the first week of August. To not miss this fantastic opportunity, keep an eye on our webpage: <https://www.inspirednt.net/> and Facebook: <https://www.facebook.com/NationalScienceWeekNT/>

By: Charles Darwin University **Entry fee:** Free

A high-resolution MAXAR satellite taking images of the NT will pass over our communities during Science Week. This means we will be able to create art and messages at our backyards, schools, footy fields, and parks that can be seen from space! Your message could be something very simple (like a heart or smiley face) or complicated (like an artwork made of different colour cars). You could also collaborate with others in your region to spell a word, where each person/school/group is responsible for one letter. We recommend that each dot of your image to be 1 meter by 1 meter to be sure that the image will be visible from space! This pixel size protects students and community members privacy (it is not possible to identify people at this resolution).

Audience: Any Age



MAXAR



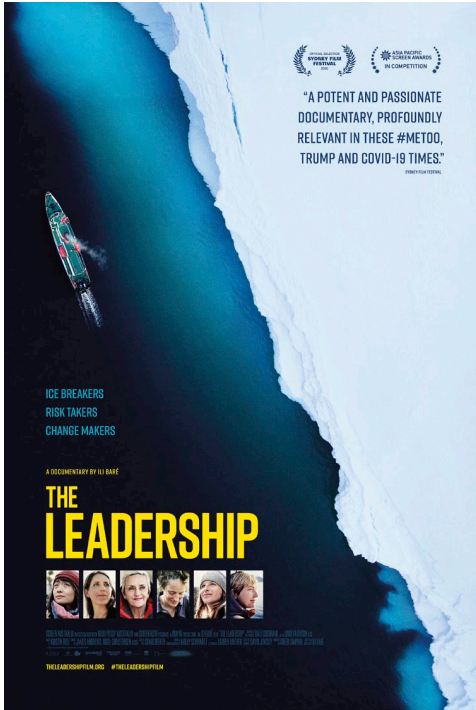
national science week 2020

The Leadership

Location: BCC Cinemas Casuarina (Casuarina Square Shopping Centre, 247 Trower Rd, Casuarina)

Date: 22 August 2020 (Saturday) **By:** National Science Week Committee

Time: 15.00 **Entry fee:** Free



The world is crying out for a new model of leadership, but what is it? One woman thinks she has the answer. Australian CEO and 'dreamer' Fabian Dattner, leads an international group of 76 female scientists on an Antarctic voyage designed to transform them "into the sort of leaders they want to be." Her hope is that once these women are primed to lead in science, they will be able to make meaningful change around the world. But on board, as the women's deeply personal stories of workplace gender biases and more are revealed, Dattner's own leadership style and philosophy is severely tested. Set against the planet's last untouched wilderness, The Leadership unearths the profoundly troubling systemic obstacles to women's advancement in science and beyond.

Voyage participant and NT Science Week committee member, Marianne Harvey, will be available for Q and A after the film.

Audience: 16 years and above (Rate M – Mature themes and coarse language).

Number of participants: 100



Remote Community Grant Recipients

What Happens to Rubbish in Hunting Places

Location: Raminging School **Date:** 19 Aug 2020 **Time:** 10:00 to 12:00
By: Arafura Swamp Rangers **Entry fee:** Free

The Arafura Swamp Rangers will launch their video, 'What happens to Rubbish in Hunting Places' at Raminging School. The video teaches the community what happens to rubbish and how it effects the environment, animals and people. Rangers will then take questions and share knowledge on environmental science projects they are involved in.

Audience: Children



Traditional knowledge and Science – sit side-by-side to understand and manage country

Location: Gunbalanya **Date:** 15 to 23 of August-2020
Time: multiple activities **By:** Njanjma Rangers **Entry fee:** Free

Traditional knowledge and science can sit side-by-side to understand and manage country. The Njanjma Aboriginal Corporation will showcase this theme - encouraging participation of indigenous rangers and school age children in cultural and investigative activities which aim to explore the fields of knowledge and methods of knowledge building held by traditional owners and that held by research organisations / scientific expertise.

Audience: Any age



Remote Community Grant Recipients

A study of Palm Valley

Location: Hermannsburg **Date:** 17 to 20 of August 2020
Time: multiple activities **By:** Ntaria School **Entry fee:** Free



Ntaria School middle and senior years students will travel and camp at Palm Valley along with local rangers and community elders. During this study trip, the students will learn about the historical background of the valley and the Dreamtime stories related to the valley. They will survey local plants and animals and test the soil and the water quality during their stay at Palm Valley. At night, students and community members will be enjoying star gazing at Palm Valley with a telescope.

Audience: Any age

The maths of motion with STEMfit

Location: Ngukurr **Date:** 20 to 21 of August 2020
Time: multiple activities **By:** STEMfit **Entry fee:** Free



An action-packed day at Ngukurr School with sport activities using gadgets such as smart wearable technology, radar gun, speed timing gates, and much more. To see how well kids can run, jump, and throw. The activities will flow into the Ngukurr School's evening garden fete where the adults can have fun too.

Audience: Any age

Remote Community Grant Recipients

3D Printing Workshop

Location: Katherine **Date:** 22 August 2020
Time: 10:30 to 11:30 **By:** Katherine Public Library **Entry fee:** Free



This introductory session provides an overview of printing technologies - software, hardware and applications. You will have the chance to turn your creativity into reality. Students will be taught to create a 3D model from scratch and use Inventor Series II printer, to print out the model, and take it home as a souvenir.

Audience: Children

The Sensible Sawfish: Book Reading

Location: Darwin region **Date:** 17 to 20 of August 2020 **Time:** 08:00 to 14:00
By: Amy Kirke and the Malak Malak Rangers **Entry fee:** Free



Doctoral candidate Amy Kirke and the Malak Malak Rangers of the Daly River region have written a book about sawfish and sharks in the NT with the theme of sustainable fishing and sharing. The book has been illustrated by children in schools of the Daly River region and will be distributed to communities around the NT for National Science Week.

Audience: Children

Major Events - Darwin Festival

I See Dead People

Location: Darwin Railway Club **Date:** 11 and 12 of August 2020

Time: 18:30 and 21:00 **By:** Darwin Festival **Entry fee:** \$25



Whether you're scared of death or fascinated by your own mortality, Australia's premier archaeologist-comedian KC Martin-Stone will answer all of your questions – busting taboos and cracking jokes along the way. The hit show *I See Dead People* puts the 'ick' in 'sick and twisted', and KC's inimitable brand of gallows humour mixes stand-up with storytelling, personal anecdotes, hilarious musings and facts garnered from years of research and experience.

Audience: Adults

Avoidable Perils

Location: Festival Park **Date:** 6 to 16 August 2020 (excluding 10 August)

Time: 17:00 to 20:00 **By:** Darwin Festival **Entry fee:** Free



Bad things are happening and our heroes are at risk! Will you help save them? From techno-troublemakers Counterpilot comes *Avoidable Perils*, a new dubious social experiment developed in collaboration with Optikal Bloc. A game for the masses, *Avoidable Perils* explores activism in the attention economy and the need for social cooperation towards a greater good. These ideas are particularly poignant during the COVID-19 pandemic, where individual choices have a significant impact on our collective wellbeing.

Audience: Any age

Major Events - Museum and Art Gallery of the NT

The Collection

Location: magnt.net.au/thecollection or wherever you get your podcasts

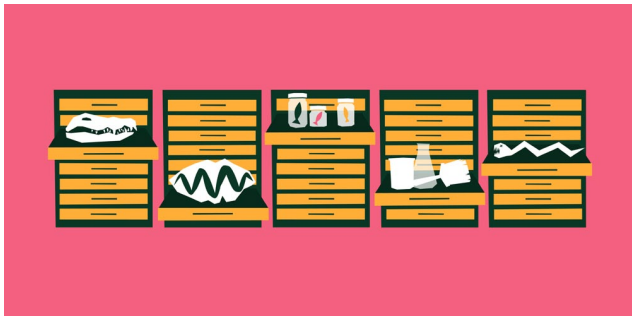
Date: Listen the trailer on Wednesday 5 August! All episodes available from Thursday 20 August

By: Museum and Art Gallery of the Northern Territory **Entry fee:** Free

Introducing "The Collection", a podcast that takes you back of house at the Museum and Art Gallery of the Northern Territory. Step inside the dry stores, lift the lid on strange specimen jars and peek inside the deep freeze as we reveal a world of fascinating objects and the stories behind them.

Jared Archibald, MAGNT's Curator of Territory History says that "Museums collect objects, and objects tell stories", and there's no shortage of stories in the back of house stores at MAGNT. Illegal hauls on the high seas, near misses during Cyclone Tracy and the accidental discovery of a strange new species are just some of the stories unearthed in The Collection.

Over five episodes, The Collection blends science and storytelling to showcase the rare, wonderful and unexpected objects in Australia's Northern Territory museum.



Participate in this annual celebration of science in Australia with the City of Darwin Libraries. Tickets will be available at the library 30 minutes prior to all sessions starting. One ticket per family.

Special Science Week storytime sessions

Our regular Story Time sessions will be followed by fun activities and experiments. The hands-on activities allow children to learn by discovering at their own speed.

Casuarina Library – Monday 17 August at 10.00

Nightcliff Library – Tuesday 18 August at 10.00

City Library – Wednesday 19 August at 10.00

Karama Library – Thursday 20 August at 10.00



STEAM Zone

Steam Zone encourages children of all ages to enjoy STEAM based activities. This week's activity is LEGO Engineering!

Karama Library - Wednesday 19 August 15.30 to 16.30



Lego Club

Join our LEGO CLUB and hone your building skills with fun activities. Create your own masterpiece and display them in our Library for everyone to see.

City Library - Friday 21 August 15.30 to 16.30



Tech Girls STEM Entrepreneurship Workshop

This STEM Entrepreneurship Workshop works with students to identify issues that are important to young people of today, and determines how technology can be used to help solve these issues, learning skills around app development, problem solving, and idea presentation.

The two workshops are for girls aged 7-12, and 13-17. Book now via Eventbrite at: codlibrary.eventbrite.com.au

Casuarina Library - Saturday 22 August 12:30 – 14:30 (ages 7 to 12) and then 15:00 – 17:00 (ages 13 to 17)





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