

# Sydney Science Trail



15 August —  
15 September  
2020



## Program Schedule

#SydneyScienceTrail  
#NationalScienceWeek

[sydneysciencetrail.net.au](http://sydneysciencetrail.net.au)

## PLANTS

### Royal Botanic Garden Sydney

#### The Living Laboratory

Go for a virtual stroll through the Royal Botanic Garden Sydney to discover its beautiful treasures – and its deadly threats.

Virtual Walk 360

#### I Spy a Wollemi

There are living dinosaurs amongst us! Help our scientists to find Wollemi Pines that have been planted all around the world. How many can you spy?

Citizen Science Project

#### Bush Food Experience

Explore the world of bush tucker in the saltwater country around Sydney, and learn how it defines Aboriginal life.

Video

#### Nature Explorer

Explore the beauty of urban nature in our beautiful parklands and garden – meet the people who make the green heart of the city beat! Read about the passionate people who are keeping our urban green spaces alive, as horticulturalists, arborists, rangers, and educators share their knowledge. See your neighbourhood park through their eyes.

Blog

### Department of Primary Industries

Biosecurity & Food Safety

#### Biosecurity Warrior

Plants can get sick, just like people. Healthy plants are important for the Environment and Agriculture. Good biosecurity protects our plants from unwanted pests and diseases. Become a Biosecurity Warrior and learn how you can help keep our plants healthy

Game

### Eaton Gorge Theatre Production

#### Get Growing – A Story of Adaptation

Follow four little seedlings in a puppet play adventure through the Royal Botanic Garden Sydney, and learn how they have cleverly adapted to different environments.

Video

### Bush Blitz

#### Bush Blitz

Join the Bush Blitz team on a scavenger hunt across Australia to discover our native species. You might even find a new one.

Citizen Science Project

### UNSW Sydney

Centre for Ecosystem Science, School of Biological, Earth & Environmental Sciences

#### Environment Recovery Project

Take a look at the gradual reappearance of all the different plant and animal species emerging after this year's mega-bushfires.

Citizen Science Project

### Sydney Institute of Marine Science

#### Operation Crayweed

Help the 'Operation Crayweed' team restore Sydney's missing underwater forests through a choose-your-own-adventure game!

Game & Video

### Inner West Library

#### Tree Walk

Listen in on expert tree-readers, Katrina Ross and Darren Charwood, as they share how to identify tree species that live in your backyard.

Podcast



## ANIMALS

### **Australian Museum**

#### **FrogID**

There's a way you can help identify where our native frogs are thriving and where they aren't, and track the distribution of the cane toad in Australia – and it starts on your smartphone.

Citizen Science Project

#### **Marine Invertebrate Collection**

Learn about boneless sea-dwelling creatures, many you've probably never seen before, which contribute to over 90% of the animals living on earth.

Blog

#### **Why Museum Collections? The Malacology Collection**

Find out why having a collection of molluscs like snails, slugs and squid is just as important as having a local library.

Blog

### **Royal Botanic Garden Sydney**

#### **Let's BEE Scientists**

Go on a musical adventure into the fascinating world of Australian native bees, and learn how to make a bee hotel and spot pollinators in your garden.

Game

### **Taronga Zoo Sydney**

#### **360 Koala Precinct**

Get up close and personal with Australia's most unique (and sleepest) marsupial, the Koala, at Taronga Zoo Sydney.

Virtual Walk 360

### **Frog and Tadpole Study Group of NSW**

Leap into the world of frogs! Play the 'Frog or Toad' game to learn how to tell the difference between Cane Toads and Australian native frogs.

#### **How to make a Climbing Frog**

Activity

#### **Meet the Frog and Tadpole Society Group**

Video

#### **Frog or Toad**

Game



### **Creative Science**

#### **Extreme Adaptations with Creative Science**

Plants and animals take adaptation to a whole new level! Grab a front row seat to a science show that shares how they've been doing it for thousands of years.

Science Show

### **Macquarie University**

#### **Virtual Tour - Living Seawalls**

Go on a field tour along the shoreline of Sydney Harbour to see how a team of scientists and designers are creating 'seawalls' that are alive with native marine life.

Video

#### **A Day in the Life of Professor Ken Cheng**

Put your lab coats on and follow the exciting day in the life of Professor Ken Cheng, a biological sciences professor who studies the quirky behaviours in monkeys, bees, ants and even humans.

Blog

## EARTH

### **Australian Museum**

#### **What Does Climate Change Mean to You?**

Learn about all the ways the world's ecosystems are being impacted by climate change and what that means for the people living in those environments.

Video Series

#### **Treasures of the Earth: Mineralogy Collection**

Embark on a special tour through the Australian Museum's collection of glittering crystals and colourful minerals.

Blog

### **Department of Planning, Industry and Environment**

Saving our Species

#### **Save the World with your Family**

Want to help our planet? Learn the simple steps you and your family can take to help Australia's plants and animals survive.

Blog

### **Joint Academic Microbiology Seminars**

#### **Welcome to the Microverse**

Listen to five fascinating stories about the hidden universe of microorganisms and learn about the massive role microscopic lifeforms play everyday.

Visual Audiobook

### **UTS**

#### **A Day in the Life of Dr Katherina Petrou**

Ever wanted to venture to Antarctica? Take a virtual trip with UTS Scientist Dr Katerina Petrou, as she conducts research into marine phytoplankton and bacteria, and their effect on ocean productivity.

Blog

### **PANELS**

#### **The Big Questions of Science**

Science is great at giving us answers, but even better at giving us questions! Join in to tackle some of science's biggest questions in 2020.

18 August 2020 | Video

#### **Australian Fires - Impacts and Opportunities**

Did you know that ecosystems and wildfires are friends and foes? Discover why and explore one of the hottest topics in Australia right now.

19 August 2020 | Video

#### **Climate Science in 2020**

The impact of climate change is too big to ignore. Learn how climate change started and the startling ways it will impact our future.

20 August 2020 | Video

#### **Women in STEM**

Listen to the panel of incredible women scientists and discover their journey into STEM.

21 August 2020 | Video

#### **Why Science and Art Can't Live Without Each Other**

Science and art are connected in more ways than you might think. Hear from scientists and artists who rely on both to produce amazing work.

22 August 2020 | Video

### **Fizzics Education**

#### **The Deep Blue**

Dive into the science of the sea and explore the weird and wonderful ways life underwater works.

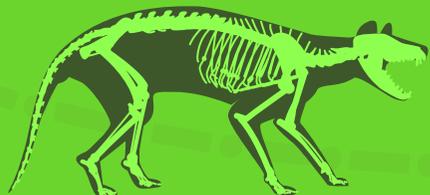
Science Show

### **ANSTO**

#### **Meet the Scientist - Dr Tom Cresswell**

Discover the ingenious ways nuclear science is being used to understand the effects of pollution in our waterways with radioecologist, Dr Tom Cresswell.

Video



## SPACE

### Sydney Observatory

#### Mars 2020

In 2020, NASA launched the Mars 2020 Mission and sends the newest rover, Perseverance, on her journey to explore Mars. Hear from Australian Astrobiologist Bonnie Teece, as she talks about Australia's leading role and the search for life in the ancient lake Jezero Crater.

**Video**

#### What's in the Sky?

Whether you live in the city, or have access to the pristine dark skies of regional Australia, there's a lot you can see at night. Learn what stars and constellations are visible in the Southern Sky and where to find the planets all from your own backyard.

**Blogs**

#### Winning Sky Photos: The David Malin Award

The David Malin Awards celebrates some of Australia's most talented photographers. But these photographers capture images worlds away, literally. Check out some of the winning astrophotography images from the 2019 David Malin Awards.

**Video**

### Australian Space Icons

Did you know that Australians are leading the search for extraterrestrial life on Mars? This is your chance to learn about the leading Australian scientists who are exploring the universe in search for Martian life.

**Blog**

#### Live from the Sydney Observatory

Join Karlie Noon to see the planets, stars and highlights of the Southern Sky like never before as you travel light-years into the deep sky live from the Sydney Observatory.

**Livestream**

#### A Day in the Life of ISS Flight Controller Andrea Boyd

Meet the Australian Flight Controller, Andrea Boyd, who takes you through her day working with astronauts to conduct science experiments aboard the International Space Station.

**Blog**



## TECHNOLOGY

### Australian Museum

#### Behind the Scenes: Collection Care & Conservation

Conservation is an important part of any museum. Find out how the Australian Museum's conservators take on the mammoth task of conserving the museum's important scientific, natural history and cultural collections.

**Video**

#### Behind the Scenes: Australian Centre for Wildlife Genomics

Step into the wildlife forensics laboratories at the Australian Centre for Wildlife Genomics to discover how DNA is being used to conserve Australia's unique wildlife and fight wildlife crime

**Video**

### Macquarie University

#### A Day in the Life of Dr Andrew Care

Take a closer look at nanomedicine as Dr Andrew Care demonstrates how the smallest tools are used to fix the biggest diseases!

**Blog**

#### A Day in the Life of Dr Devika Kamath

Join Dr Devika Kamath, an astrophysicist and lecturer, as she explores our universe with the incredible telescopes available in Australia.

**Video**

#### Virtual Lab Tour - School of Engineering

Take a virtual tour of Macquarie University's engineering labs to get a 360° view of the hi-tech equipment they use to conduct groundbreaking research

**360 Video**

### ANSTO

#### Meet the Scientist - Dr Helen Maynard-Casely

Ever wondered what lies on the surface of other planets? Follow instrument scientist, Dr Helen Maynard-Casely, as she scratches the surface of faraway planets.

**Video**

### UTS

#### A Day in the Life of Dr Annette Dowd

Follow a day in the life of UTS physicist Dr Annette Dowd, including a visit to the Specialised Optics Lab.

**Video**

#### A Day in the Life of Dr Matt Padula

From putting a Mass Spectrometer back together to performing protein extractions on microalgae, gain insight into Dr Matt Padula's very busy and crucial role in the UTS Science labs.

**Blog**

#### Behind the Scenes - Tour - Dr Maiken Ueland

Go behind the scenes with Dr Maiken Ueland as she takes you through the unique Australian Facility for Taphonomic Experimental Research facility and shows how she analyses the scent of human victims in mass disasters.

**Video**

#### Behind the Scenes - Dr Irina Kabakova & Dr Josh Chou

Explore the state-of-the-art technologies used to artificially replace unhealthy tissues and trigger bone regeneration in the human body.

**Video**

### Jackson Eather

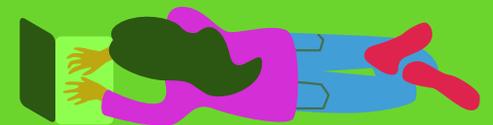
Join Jackson and his archaeopteryx Archie on a high-flying adventure to learn how dinosaurs evolved into modern birds and how flying works!

#### Dinosaurs in the Sky

#### Why do planes fly?

#### How to make a dinosaur?

**Video Series**



## Live Event

### **Australian National Maritime Museum**

#### Exploring Unseen Oceans

1.30pm 19 August

#### Underwater Robotics

1.30pm 21 August

### **Sydney Observatory**

#### Live from the Sydney Observatory

6.30pm 22 August

### **ANSTO**

#### Behind the Scenes of Big Science

7pm 19 August

### **Crawford Fund**

#### Science for Food Security: Making a Global, Professional and Personal Difference

10am 18 August

### **Soapbox Science**

#### Training your immune system to work smarter not harder with Hannah Law

7pm 18 August

#### BryoFight Club how mosses can live in Antarctica with Dr Melinda Waterman

9pm 18 August

#### Solar Energy: photon pokemon, gotta catch em all with Dr Siobhan Bradley

8pm 19 August

#### Preschoolers views on technology design: thinking like a child with Dr Holly Tootell

9pm 19 August

#### Coral matchmaking for a resilient reef with Dr Jennifer Matthews

7pm 20 August

#### Fitbits for Sharks: How do we study sharks in the ocean?

9pm 20 August

#### Kings of slime and grime: why maggots are our new best friends with Assoc. Prof. Michelle Harvey

8pm 20 August

### **UNSW**

#### Life Among the Stars

6.30pm 17 August

#### Eating for the Planet

6.30pm 18 August

#### We Still Need to Talk About Climate Change

6.30pm 19 August

#### The World According to Physics

6.30pm 20 August

The Sydney Science Trail is proudly supported by: ANSTO, ABC Radio Sydney, Macquarie University, University of Technology Sydney (UTS), NSW Government (Department of Education – DART Connections) and Inspiring Australia as part of National Science Week.

**#australianmuseum #RBGSydney**

This program schedule is current at time of production and may be subject to change.

