

NEW ZEALAND INTERNATIONAL SCIENCE FESTIVAL

04-12 JULY 2020



NANO EDITION



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DUNEDIN CITY COUNCIL | kaunihera
a-rohe o Ōtepoti



 **BIG** 
SCIENCE!
SHOW!



Explosive Science with Amadeo

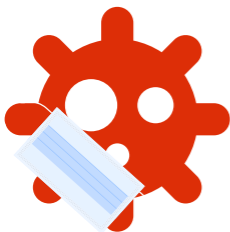


Our Universe started with a big bang, and since then explosions have shaped our history. From the Cambrian explosion that gave Earth all its life to the industrial revolution and the creation of the combustion engine. Come and enjoy this explosive show that will blow your mind with lights, lasers, fire and ice!

14:00 Sat 4 & Sun 5 July 2020

Teachers College Auditorium,
145 Union St East, Dunedin

Children \$12, Adults \$14, Family Passes \$40 (4 people)



NZISF 2020 and University of Otago presents

Covid-19 Unmasked

Understanding the outbreak



Join us in a discussion among New Zealand's top experts on COVID-19 and how our country has approached the global pandemic. Experts will give insight into the situation from the viewpoint of scientists involved with the Ministry of Health, from the biomedical makeup of the virus, to its evolution, the clinical approach, and how to better prepare for the next public health emergency.

Saturday 4th July, 18:00
Teacher's College Auditorium
145 Union St East, Dunedin
General Admission \$12, 1hr 30min
Booking required



3-5 years

Workshop

DREAMERSPACE - JET PACKS

7 July, 10:00, 10:45, 13:00 & 13:45 at Dunedin Public Library

\$7 per child. Very limited space, booking essential. 1.5hr.

Welcome to the DreamerSpace - a magical land of pretend where we'll don our jet packs and blast off to the moon! Join us for a space themed story time and the chance to make your very own jet pack to take home. Come dream with us...



5-8 years

Workshop

SQUISHY CIRCUITS

10 July, 10:00 & 13:00 at Dunedin Public Library

\$5 per child. Very limited space, booking essential. 2hr.

It's never too early to start learning the basics of electricity! In this workshop, kids will use conductive and non-conductive play dough to learn about electrical circuits. After learning the basics, they will have a chance to create a sculpture that lights up or moves.



All ages

Workshop • Tech • Hands On

COLLECTIVE CHAIN REACTIONS

11-12 July, 10:00 & 13:00 at Meridian Mall

\$10 per group of up to 5 people. Limited space, booking essential.

Grab your family and friends, and help us create Dunedin's longest chain reaction! Each team will be responsible for designing a chain reaction that will carry across their designated area and connect to the next. Don't forget to incorporate your mystery object! In the end, we'll set it all off in style, and cheer as the dominoes fall and balls roll toward an exciting finale.

DAILY EVENTS DAILY EVENTS DAILY EVENTS



SCIENCE SHORT FILMS 10:00-16:00 at Public Library

Nature • Environment • Art | Free • All ages

Drop into the library and enjoy some short science films created by students and staff at the University of Otago's Centre for Science Communication. A mix of documentaries and DIY science experiments will be screened on the Cube.



OUR OCEANS various times at Forrester Gallery, Oamaru

Nature • Exhibition | Free • All ages

Tackling the complexities of our changing marine environments, 29 artists and 20 scientists collaborate to bring you artworks exploring research about Our Oceans. This continues to be a long rich journey in helping to solve the huge challenges our vital marine world faces.



FIRST FLIGHT 11:00 at Otago Museum

Drop-in • Nature • Environment | \$10-\$15 • All ages

Be there for that special moment and help our newly-emerged butterflies take flight in the Tropical Forest. Join us every day to learn about the amazing transformation butterflies go through before they take wing for the very first time.



HUMPBACK WHALES 11:30 & 13:30 at Otago Museum

Film • Nature • Sustainability | \$7-\$12 • All ages

Narrated by Ewan McGregor, 'Humpback Whales' is an extraordinary journey into the mysterious world of one of nature's most awe-inspiring marine mammals. Set in the spectacular waters of Alaska, Hawaii, and Tonga, this ocean adventure offers audiences an up-close look at how these whales communicate, sing, feed, play, and take care of their young.



FUN SCIENCE AT MOANA POOL 16:00 at Moana Pool

Nature • Hands On | \$3, booking required • Kids

Enjoy some Fun Science at Moana Pool! Physics, chemistry, biology, geology, astronomy... We will enjoy all areas of science in the pool. Each day features a different activity that will focus on a particular area of science. See website for timetable.



STAR TOUR AT THE OBSERVATORY!

18:00-21:00 at Beverly-Begg Observatory

Tour • Nature • Hands On | \$6, booking required • 8-18 Years

Join us for a fun, safe, and educational night out! Book in for a 30-minute tour and get an introduction to astronomy, do hands-on experiments with light, and see our scientific work up close! If the weather cooperates you'll get to go outside with our telescopes to view constellations, planets, and galaxies.



HAND SANITISER - KNOW IT AND USE IT

5 & 6 July, 11:00, 13:00, 15:00 at School of Pharmacy

Talk • Tech • Health | Free • 10-16 Years

Good hand hygiene is essential to prevent the spread of microorganisms. In the weeks before the COVID-19 lockdown, New Zealand experienced a scarcity of hand sanitizer. Dr Shyamal Das and his students at the University of Otago's School of Pharmacy prepared the World Health Organization's recommended hand sanitizer to serve the local community.



ENGINEERING CHALLENGE

8-9 July, 10:00-14:00 at Meridian Mall

Workshop | Free, booking required • Family

Think you can build the tallest marshmallow tower? The strongest straw well? The tallest cup tower? Put your engineering skills to the test at our engineering challenge. Prizes will be awarded to the families whose structures outperform all the others at the end of the day.



WHAT MAKES OUR HEART TICK?

8 July, 10:00 & 11:30 at Dunedin Public Library

Workshop • Health • Hands-on | Free • 6-12 years

Learn how your heart works and why it sometimes beats slow and other times feels like it is going to burst out of your chest! Did you know it can still beat outside your body? Through a hands-on interactive session, we'll learn all about hearts and answer questions such as: How does the heart work? What makes the heart beat? Is a mouse heart the same as a whale heart?



WHALE OF A WEEKEND

4-5 July, 10:30-16:00 at Otago Museum

Talk • Nature • Demonstration | Family Friendly

Otago Museum is celebrating the relaunch of the award-winning documentary Humpback Whales in the planetarium, where the domed-ceiling screen immerses you in the deep ocean. We have eight incredible, family-friendly events to celebrate the return to our big screen. See website for timetable.



PAKAKE, NEW ZEALAND SEA LION

ADVENTURE

4 July, 10:30 & 11:30 at Toitū

Workshop • Nature • Hands On | \$3 • 4-9 Years

The New Zealand Sea Lion Trust joins forces with local storyteller and artist, Allie Simpson to present a day in the life of a sea lion pup, told through movements. At this event, children will get to learn about the amazing life of pakake. This will be a relaxing break in an otherwise fast moving world. Children must be accompanied by an adult.



KĀKĀ KAITIAKI!

4 July, 13:00 at Orokonui Ecosanctuary

Workshop | \$10 - booking required • All ages

Learn how we care for the rare and endangered South Island Kaka at Orokonui and how we aim to track them with the help of the whole community as part of the "Kei hea nga Kākā" project! Introduction to tracking technology included.

Ticket price includes entry into Orokonui. Registration required for all participants. Accompanying adults and children under 4 free.



WET AND WILD WALKS

5-8 July, various time and location - see website

Walk • Nature • Environment | \$10-\$15 • Family friendly

Join us for walks along a range of Dunedin seashores and learn about the diversity and adaptation of the marine critters that live between the tides. If you don't want to leave home, or get wet, these field trips will be live streamed to your living room! Participants will have lots of opportunity to ask questions, share their observations and learn how to contribute to a range of citizen science projects.

CHAIN REACTIONS

6-7 July, 10:00-14:00 at Meridian Mall

Drop-in • Workshop | Free • Family Friendly

Drop in for a fantastic programme all about chain reactions! We'll make a chain reaction with popsicle sticks, learn about energy transfer with dominos, and explore popsicle stick bombs.

SNACKABLE SCIENCE

6-10 July, 12:00 at Otago Museum

Talk • Science Demonstration | Free • All ages

We've all been there: It's coming up on 12 noon, and while you don't want to miss a minute in Tūhura, the borborygmi (your tummy growls) are getting louder. What's a person to do? Pay a visit to Lab-in-a-Box on the Museum Reserve, where we'll be serving up some snackable science demonstrations. Enjoy some experimental entrees before refuelling in our café, then on to more Museum exploration!

MAKE A BUG HOTEL & BADGE

6 & 8 July, 15:00 at Dunedin Public Library

Workshop • Nature • Environment | Free • 5-12 years

Make a bug hotel for beneficial garden insects like ladybugs, slaters and hoverflies using recycled materials, then have fun making a badge with your favourite insect on it! Materials will be provided.

THROUGH THE LENS

5 July, 10:00 at Orokonui Ecosanctuary

Walk • Nature • Meet an expert | \$10 - booking required • All ages

See the beauty of Orokonui from another angle! Learn tips and tricks about wildlife and nature photography. Take home wonderful memories of Orokonui for the family. Includes instruction from our resident photographer. Ticket price includes entry into Orokonui. Registration required for all participants. Accompanying adults and children under 4 free.

OTAGO MUSEUM AFTER DARK

10 July, 19:00-22:00 at Otago Museum

Exhibition • Party | \$20-\$25 • R18

Join us for another amazing After Dark where Otago Museum opens at night for drinks, dancing, desserts, and a DJ. Help release butterflies for their first flight or bring out the big kid in you at Tūhura, New Zealand's biggest science centre. Kick back in Dunedin's most cushy seating in our Perpetual Guardian Planetarium, as we're on the hunt for a new set of stars tonight! Sing like nobody's listening with karaoke under the planetarium stars, give your vocal chords a work out under the Insta-worthy backdrops of its 360° dome screen. Get creative with the gourmet toppings at the liquid nitrogen ice cream bar, or try out the designer desserts specially curated for After Dark.

THE POWER OF POO!

6 July, 10:00 at Orokonui Ecosanctuary

Walk • Nature • Hands-on | \$10 - booking required • All ages

How does POO make life POOSible for us and all life on our POOrecious POOlanet? Why does every species POOduce different faeces? Learn how to POOlant a tree like the birds do and make your own POOtent poo bomb with clay and native seeds to take home! Ticket price includes entry into Orokonui. Registration required for all participants. Accompanying adults and children under 4 free.

SCIENCE STORYTIME

8 July, 10:30 at Dunedin Public Library

A special preschool Storytime to celebrate the NZ International Science Festival. Join us for stories and songs about bees, bugs and other critters which live in our gardens and help with pests, pollination and recycling!

OROKONUI ODYSSEY

10 July, 10:00-14:00 at Meridian Mall

Nature • Drop-in • Environment | Gold coin • All ages

Join passionate scientists and science communicators from our Orokonui Dream Team to celebrate the many endangered species we work with at Orokonui Ecosanctuary! Learn how you can make your own backyard even safer for our precious native animals and create some treasures to take home! Includes live animal interactions, TREEasure hunts, face painting and much much more! Gold coin donation to Orokonui Ecosanctuary much appreciated!

BRAIN BOGGLING BUGS

11 July, 10:00 at Orokonui Ecosanctuary

Workshop • Nature • Environment | \$10 • All ages

Meet our beautiful native bugs including spectacular spiders and stick insects! How can we help our native invertebrates in our own backyards? Ticket price includes entry into Orokonui. Registration required for all participants. Accompanying adults and children under 4 free.

LITTER FREE OCEAN

12 July, 13:30 at Royal Albatross Centre

Environment • Sustainability | \$5 • Family friendly

Join the education team at the Royal Albatross Centre to tackle the issue of ocean litter. We will carry out a marine debris survey at Pilots Beach, contribute to a national citizen science project, and take action for our local wildlife. The discussion will centre around the source of the rubbish, and how we can be part of the solution.

GENERAL INFORMATION

Each event on the Science Festival's website scifest.org.nz has a link directly to the online point of purchase. Tickets for all ticketed events are available at eventbrite.co.nz. Some free events may still require booking. Check website for details. All attendees over the age of 4 require a ticket. All attendees under the age of 14 must be accompanied by an adult unless stated otherwise. Events will go ahead in most weather conditions. The NZ International Science Festival is taking all precautions necessary to ensure our events run safely and within guidelines set by the government. If you are not feeling well on the day of the programme, stay home. Refunds will not be issued for cancellation due to illness but tickets are transferable.

VENUES

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| 🚫 Beverly Begg Observatory | 1A City Road, Dunedin |
| 🚫 Dunedin Public Library | 230 Moray Place, Dunedin |
| Forrester Gallery, Oamaru | 9 Thames Street, Oamaru |
| 🚫 Meridian Mall | 285 George Street, Dunedin |
| 🚫 Moana Pool | 60 Littlebourne Road, Dunedin |
| NZ Marine Studies Centre | 185 Hatchery Road, Dunedin |
| 🚫 Orokonui Ecosanctuary | 600 Blueskin Road, Dunedin |
| 🚫 Otago Museum | 419 Great King Street, Dunedin |
| 🚫 Royal Albatross Centre | 1260 Harington Point Road, Dunedin |
| School of Pharmacy | 18 Frederick Street, Dunedin |
| St Kilda Surf Life Saving Club | John Wilson Ocean Drive |
| 🚫 Teacher's College Auditorium | 143 Union Street East, Dunedin |
| 🚫 Toitū Otago Settlers Museum | 31 Queens Gardens, Dunedin |

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