

# NEW ZEALAND INTERNATIONAL SCIENCE FESTIVAL

8 - 16 JULY 2016, DUNEDIN



# #BE CURIOUS

Rediscover your inner science!



[www.scifest.org.nz](http://www.scifest.org.nz)



/nzscifest

MAJOR PARTNERS:



**dunedin**  
[www.DunedinNZ.com](http://www.DunedinNZ.com)





## Welcome from Mayor Dave Cull

In 1996, the Dunedin City Council was presented with an opportunity by a group of people that had a vision to inspire the next generation of science leaders by holding a unique event – an event that would bring the city’s schools, businesses, tertiary institutions and individuals together to promote science and learning, and to position Dunedin as a city of science and a city of education. They saw the value in a community based festival of science, and in a week of hands-on science based activities for all ages.

Fast forward 20 years, and the NZ International Science Festival celebrates its 10th event. It has grown into one of the city’s premier events, with local, national and international scientists working together with groups from around the city to hold an event that we are all proud to be associated with. The festival is still the only one of its kind in New Zealand, and is a testament to the way in which our community comes together to develop a collection of activities that celebrate science and innovation in Dunedin, and challenge us to think more about the world around us.

I look forward to being involved in this year’s festival, and on behalf of the Council and of the many sponsors, volunteers and organisations involved in this year’s event, I encourage you to participate in some of the many events on offer. There is something for everyone, from science demonstrations through to discussions on some of the issues facing our society. So take some time to go through the programme, and challenge yourself to “be curious” this July.

Dave Cull  
Mayor of Dunedin



## Welcome from President Michele Coleman

The New Zealand International Science Festival is a community celebration of global and local science, technology and innovation. With an eagerly awaited line-up of over 170 engaging events and activities throughout the week, there’s something for all of the family. This year we are encouraging you to be curious about the world; to ask questions; to challenge and get excited about science in its many forms.

The festival is about promoting interesting, important and relevant science and highlighting the countless ways in which it affects our lives through inspiring activities, tours, talks, films, music, food and much more. The 2016 offering is set to be our most impressive yet as we celebrate our 10th festival, giving us all an opportunity to look back at the developments and discoveries within science since the festival began in 1997, and to look forward to the future. We are also thrilled to be hosting the very first Otago Daily Times Community Science Awards where we will be showcasing local science heroes and celebrating Otago’s incredible and diverse talent.

On behalf of the Executive, I offer our sincere thanks to our core funders, the Dunedin City Council, the Otago Community Trust and the University of Otago. Without your support this festival will not be possible. Our thanks also to the many organisations that have provided grants and sponsorships - your generous contributions are gratefully acknowledged. Thank you also to our international embassy supporters for your contribution; The British High Commission, the US Embassy and the Australian High Commission. A special thanks and acknowledgement should also go to our presenters and contributing organisations that collectively make up an exciting programme of events; and to our volunteers who have donated their time to help make the festival happen.

On a personal note, I would like to thank the members of the Executive for their passion, ideas, advice and encouragement. It has been a great pleasure to work with you and be an ambassador for such an inspiring landmark in New Zealand’s calendar.

Finally, a very special thank you to our Festival Director, Chris Green and to Associate Director Jen Smith for their outstanding efforts in putting together such a diverse and interesting programme of events - a programme that reflects the outstanding science that is taking place within our community. A warm welcome to both locals and those who have travelled far to be here and celebrate with us, including our special guests. I encourage you all to get involved, learn something new – and find something that captures your curiosity.

Michele Coleman  
President, NZ International Science Festival

## The biggest thank you to:

Our major partners:



Major funding partner:



Grants:



Gold sponsors:



Otago Daily Times

Silver sponsors:



Bronze sponsors:



Business support partners: Gallaway Cook Allan | AD Instruments | Vodafone | Australian High Commission



# 5 THINGS YOU NEED TO KNOW

TICKETS ON SALE  
9TH JUNE!

## 1 Don't miss out - book your tickets now

Some events need booking - go to [www.scifest.org.nz](http://www.scifest.org.nz) and make sure you don't miss out!

## 2 It doesn't cost the earth

Over 90% of our events are free! That's your week sorted.

## 3 There's a huge variety of events for all ages

Science demonstrations, talks, tours, films, music, food nights, comedy. There are over 170 events on throughout the week!

## 4 Follow us online

Find out about upcoming events as well as photos & behind the scenes shots - find us on Facebook, Twitter and Instagram /nzscifest

## 5 Tell your friends & family

There's something for everyone - from kindy to ninety!



# Be Curious

Otago School of Medical Sciences Photo Exhibition

Otago Art Society | Dunedin Railway Station  
10 am to 4 pm 12-17 July | Free Entry



UC03863





**Name:** Peter FitzSimons  
**Occupation:** Guest Speaker  
**Country:** Australia

Almost as well known in New Zealand as across the ditch, Peter FitzSimons is a well-respected columnist for The Sydney Morning Herald and Sun-Herald, speaks 4 languages, has played test rugby for Australia and written 25 best-selling books. He is also Australia's most popular after-dinner speaker, and his interview credits include ex-president George Bush, Sir Edmund Hillary, Jodie Foster, Nicki Lauda, Joe Montana and Carl Lewis as well as all major Australian sporting figures. At the moment Peter FitzSimons is championing the cause of head injuries and the effects they have in the long term. "It only takes one knock to damage a brain. We accepted the risks of getting knocked out on a field in the days I played because we didn't know any better. We do now, and we need to educate, starting at junior level, the effects of concussion." Peter is coming to the festival to share his insights into this growing issue of the impacts of contact sport on the brain, together with Prof Damian Bailey and Dr John Sullivan. Peter FitzSimons is proudly sponsored by ADInstruments.



Book tickets to 'Sport and Concussion – Big Issue or Should We Just Shake it Off?' on Wednesday July 13 at 7.30pm. Go to page 16



**Name:** Albert Manero  
**Occupation:** Executive Director, Limbitless Solutions  
**Country:** USA

Coming to NZ from the USA, Limbitless Solutions is a non-profit organization devoted to building a generation of innovators who use their skills and passion to improve the world around them. "We use additive manufacturing to advance personalized bionics and solutions for disabilities. We believe that no family should have to pay for their child to receive an arm. Now we want to lead by example and encourage communities to innovate with compassion." Limbitless Solutions are proudly sponsored by the Otago Polytechnic. Funding support from the US Embassy is also appreciated.



Come and hear their inspirational story of their focus and vision to help others and how we can play our part in making a difference in our local, national and global community at their event 'Making a Difference - Using 3D Technology to Change Lives' on Friday July 15 at 7:30pm. Go to page 20



**Name:** Lucy Collins  
**Occupation:** Naval Architect, University College London  
**Country:** UK

Lucy studied maths, physics, chemistry and history at A-Level before attending the University of Sheffield, where she obtained a first class Masters degree in Civil and Structural Engineering. Lucy was subsequently employed by the Ministry of Defence as a Naval Architect (a designer of ships and submarines for the Royal Navy). For 2.5 years, Lucy worked all over the UK and overseas and completed a second Masters degree in Naval Architecture at University College London, graduating with distinction and the award for Best Ship Design. Lucy is currently on secondment to University College London where she helps to run the MSc in Naval Architecture, manages the experimental tank facilities and is also undertaking a PhD in the field of submarine design. As part of her role within the Ministry of Defence, Lucy is a Lieutenant in the Royal Corps of Naval Constructors and was the first female civilian to do time at sea in a submarine. Lucy is also a member of the inaugural Women in Science and Engineering's (WISE) Young Women's Board, one of ten young professionals helping to bridge the gap between classroom and boardroom.

Book tickets to see Lucy at:

- 'Women in Science Breakfast' on Tuesday July 12 - go to page 14
- 'What Inspires Me' - 2 Minute Talks from our local, national and international science community on Wednesday July 13 - go to page 17
- 'How Unique is My Job' on Monday July 11 - go to page 11



**Name:** David Rattenborough  
**Occupation:** ZooMooologist, NHNZ Kids  
**Country:** New Zealand

ZooMoo Live brings the spirit of the ZooMoo television channel to the stage for a one off Live puppet show extravaganza! David Rattenborough goes on safari looking for the world's cuddliest, craziest animals from ZooMoo - an international children's television channel filmed right here in Dunedin and broadcast in over 20 countries all around the world. He meets an enormous Gorilla with unique ninja skills; a dog who's an intrepid wildlife photographer, a piggie inventor, an artistic lemur, and many more animals from the zany cast of ZooMoo! Come along for this unique opportunity to meet the loveable characters, as they take us on amazing journey around the animal kingdom.

Book tickets to 'ZooMoo Live' on Saturday July 16 at 3.30pm. Go to page 22



**Name:** Professor Corey J. A. Bradshaw  
**Occupation:** Sir Hubert Chair Of Climate Change, University Of Adelaide  
**Country:** Australia

Corey's raison d'être is to demonstrate to human society that we can no longer ignore the impacts of deforestation, pollution, disease, habitat loss, extinctions, over-grazing, over-fishing or warming climates on human wealth, health and wellbeing. Scientists must not only present the empirical evidence underlying these relationships, they should also excel in telling their stories and advocating for positive change. Corey's aim is to provide irrefutable evidence to influence government policy and private behaviour for the preservation of our planet's biowealth. Corey has published over 250 articles, 9 book chapters and 2 books. He is a member of the Faculty of 1000 and Fellow of the Royal Society of South Australia. He is regularly featured in Australian and international media for his research. His blog, ConservationBytes.com, has been visited over 1.5 million times. Corey Bradshaw is proudly sponsored by the Centre for Science Communication at the University of Otago.



Book tickets to see him talk on 'How Climate Change is Degrading My Daughter's Future: From Epidemiology to Economics' on Tuesday July 12 at 7.30pm. Go to page 15



## OTAGO MUSEUM IS PROUD TO SPONSOR THE NEW ZEALAND INTERNATIONAL SCIENCE FESTIVAL.

Discover hands-on science and experience a living, tropical habitat in Otago Museum's Discovery World Tropical Forest.

Join in experiments, demonstrations or a science show, or help release exotic butterflies into the forest.

Visit our website for tickets and more information.

FREE WI-FI, OPEN DAILY, 10am-5pm  
419 Great King Street, Dunedin  
PH 03 474 7474  
www.otagomuseum.nz







**Name:** Dr Graham Walker and DJ Sixfootsix  
**Occupation:** Science Communicators  
**Country:** Australia

It all started late one night in the garage-lab... Sounds Like Science is the mutant probably-cloned offspring of science communicator Dr Graham Walker and DJ Chris Foster, aka. Sixfootsix. Dr Graham from Science ShowOffs and the Australian National University has been performing science shows for 16 years. He's one of two people in the world with a PhD in science show performance. His unique brand of enthusiastic delivery and amazing science regularly thrills audiences around the world. Armed with more digital wizardry than Merlin's finger, Sixfootsix's box of bells and whistles provides a dynamic, DJ mixed soundtrack of songs that hint and giggle towards the science. From explosive funky hip hop, to fiery psychadelic 60s rock, and even the nitrogen-cool Frozen theme song, DJ Sixfootix will prove that sounds do indeed like science. Dr Graham Walker and DJ Sixfootsix are proudly sponsored by The Hits.



Book tickets to 'Sounds like Science with Dr Graham Walker and DJ Sixfootsix' on Saturday July 9 at 7.30pm. Go to page 8



**Name:** Professor Damian Bailey  
**Occupation:** Physiologist, University Of South Wales  
**Country:** UK

Former international sportsman, freediver and Everest mountaineer Professor Damian Bailey is drawing upon his love of high performance and endurance sports to help the rest of us with every day life. As a physiologist at the University of South Wales, Pontypridd, in the United Kingdom, Bailey's research has led to insights into how the brain ages as well as practical changes in the management of concussion for rugby players and boxers. Professor Damian Bailey is proudly sponsored by ADInstruments.



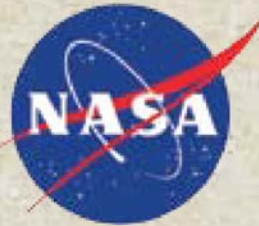
Book tickets to see Professor Bailey at 'Sport and Concussion – Big Issue or Should We Just Shake it Off?' on Wednesday July 13 at 7.30pm. Go to page 16



PHOTO: NASA

**Name:** Dr Dava Newman  
**Occupation:** Deputy Administrator, NASA  
**Country:** USA

Dr. Dava Newman will share NASA's vision for space exploration and climate change research, and discuss progress in the Journey to Mars. Encouraging women and girls to play a central role in this journey is vital to NASA's mission – Dr. Newman will discuss ways that the agency is promoting STEM careers for women. Join us to hear more about Where to From Here?



Come and see 'Exploring Together - with NASA Deputy Administrator Dr Dava Newman' on Thursday July 14 at 7:30pm. Go to page 18



**Name:** Nigel Latta ONZM  
**Occupation:** Psychologist & Author  
**Country:** NZ

Born and raised in Oamaru, Nigel first attended Otago University, where he completed an MSc in Marine Science. He then moved to Auckland where he trained as a Clinical Psychologist and graduated with a Master of Philosophy with 1st class honors in Psychology and a Postgraduate Diploma in Clinical Psychology. In 2012 Nigel was made an Officer of the New Zealand Order of Merit (ONZM) for services to Psychology as part of the Diamond Jubilee Queen's Birthday Honours List. Well known to Kiwi audiences, his most recent project, a six part popular science primetime series titled 'Nigel Latta Blows Stuff Up', was screened in 2015 by TVNZ. This year, he brings his humour and real world pragmatism to the festival with his special one-off 'Why Science is Cool' with the Otago Museum team. This show is perfect for families, as Nigel shows everyone why science is the coolest thing going in the world right now. Nigel Latta is proudly sponsored by Otago Museum.



Book tickets to 'Why Science is Cool' on Friday July 15 at 1:00pm. Go to page 20



**Name:** Claire Beynon  
**Occupation:** Artist  
**Country:** South Africa/ New Zealand

Born and educated in South Africa, Claire Beynon is a writer, artist and independent researcher who immigrated to Dunedin from Cape Town in November 1994. Two research seasons in Antarctica (2005 & 2008) led to a period of intensive interdisciplinary work and the establishment of valued collaborative partnerships in NZ and abroad. Claire continues to draw inspiration from her time 'on ice'. Her painting - Song for a Unified World - was prompted by the DNA sequences of uni-cellular aquatic organisms encountered whilst in Antarctica and will be on exhibition during the Festival. Claire will be inviting the Dunedin public to contribute to a collaborative honeycomb artwork titled 'The Hum of the Parts', a cross-section of life as observed and experienced in countries around the globe. The honeycomb weaves together diverse languages, disciplines and ways of seeing. It celebrates science alongside poetry, places the UN's Goals for Sustainable Living beside amoebas and octopi, sets music in dialogue with mathematical theorems. Join Claire at the Community Gallery during your lunch break, after school, before going home from work Saturday July 9 - Friday July 15 at 11:00am - 3:00pm. Go to page 6



wallstreetmall.nz

211 George St, Dunedin







## BEST BITS!

### Science and Superfoods: An Evening at Technique Restaurant

Technique Restaurant, Otago Polytechnic, Harbour Terrace

→ 7:30pm - 9:30pm

Superfoods. Fact or fiction? Enjoy a meal made up of superfoods and be challenged by Food Science's Phil Bremer and the team at Technique as to what super foods really are and what really can make a difference to our brain and body. This 3 course meal includes a glass of beer, wine or juice. Cash bar also available. Be part of another unique "science of" event that have fast become festival favorites.

Adults only \$50 | Booking essential  
www.ticketdirect.co.nz  
0800 TICKETDIRECT & at outlets

Have you signed up  
to our mailing list yet?  
Go to [www.scifest.org.nz](http://www.scifest.org.nz)



### University of Otago Science Festival Expo

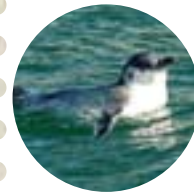
St David Complex, St David Street

→ 9:00am - 4:00pm

The SciFest Expo grabs the best, quirkiest, coolest, weirdest and most helpful science from around the university and packs it all into the ground floor of the St David Complex.

Free | Booking not required

ALL AGES



### Tracking Blue Penguins Pukekura Exhibit

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

→ 11:00am - 5:00pm

The exhibit will highlight the Tracking Pukekura Blue Penguin project and how the community can get involved with the penguin monitoring and research programme planned for 2016.

Free | Booking not required

ALL AGES



### Forest Forensics: Who Killed The Kiwi?

Lab in a Box @ Science Festival Expo,  
St David Complex, St David Street

→ 10:00am - 11:30am

Super sleuth scientists at Orokonui Ecosanctuary need you! Help us solve a murder mystery using cutting edge genetic analysis technology! Learn how scientists use animal DNA to make sense of patterns in nature and protect endangered species.

Free | Booking not required

ALL AGES



### Cautious Curiosity; Sea Lions in the Mall

Wall Street Mall, 211 George St

→ 12:00noon - 1:00pm

When does curiosity become risky? Sea lions and humans; when do two curious species meet. Examining the interactions between sea lions and humans from the perspective of a curious sea lion.

Free | Booking not required

ALL AGES



### Orokonui at the Science Expo

St David Complex, St David Street

→ 10:00am - 4:00pm

Orokonui Ecosanctuary is an amazing living laboratory! Come and learn all about the fascinating research going on inside the fence!

Free | Booking essential  
secretary@orokonui.nz 03 4821755

ALL AGES



### Creatures of the Night

Dunedin Botanic Garden, 12 Opoho Road

→ 5:00pm - 7:00pm

Night-time guided walking tours around the Botanic Gardens and moth trap workshops where you might just catch a glimpse of Dunedin's nocturnal wildlife. You'll be amazed at the critters that live in our own back yard!

Free | Booking essential library@dcc.govt.nz 03 4743690

ALL AGES



### A Science Festival Experiment

Dunedin Public Art Gallery, 30 The Octagon

→ 10:00am - 5:00pm

Come in to the Yayoi Kusama exhibition 'The Obliteration Room' and see how many coloured dots are in the room (and add some yourself). Visit as often as you can and see how the room changes over the week of the NZ International Science Festival.

Free | Booking not required

ALL AGES



### 'Sonic Sea' Exclusive Film Screening

University of Otago College of Education  
Auditorium, 145 Union St

→ 7:00pm - 9:00pm

Oceans are a sonic symphony. Sound is essential to the prosperity of marine life, but man-made ocean noise is threatening this fragile world. Dive deep to listen to the symphony and find out how to protect life in our waters.

Free | Booking essential library@dcc.govt.nz 03 4743690

ALL AGES



### W.D. Trotter Anatomy Museum: Guided Tours

Lindo Ferguson Building,  
270 Great King Street

→ 10:30am - 12:00noon and  
1:00pm - 2:30pm

Have you ever seen the smallest bone in the human body? A tour around the W.D. Trotter Anatomy Museum brings to life the wonders of the human body...

Free | Booking essential  
chris.smith@anatomy.otago.ac.nz 03 4797361

ALL AGES



### Green Bike Discovery Ride

Glenfalloch Garden, 430 Portobello Rd,  
Otago Peninsula

→ 9:00am - 3:30pm

Take a ride on the wild side and discover nature on our green bikes. Cycle famous wildlife sanctuary Otago Peninsula, spot shoreside birds on our list and enter a prize draw.

Adults from \$20 | Booking essential 03 4761775  
for one hour | www.glenfalloch.co.nz/green-bikes

ADULTS



### The Hum of the Parts | A Global Honeycomb Artwork

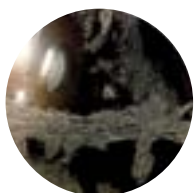
Community Gallery, 20 Princes Street

→ 11:00am - 3:00pm

Bee architecture is at once simple and sophisticated. We have much to learn from these industrious creatures. They are a model for successful collaborative community. Join me in the creation of a giant communal honeycomb. Draw. Stitch. Hum while you work!

Free | Booking not required

ALL AGES



### Art Exhibition 'Bone of our Bones'

Robert Piggott Gallery, 8 Jetty Street

→ 11:00am - 2:00pm

Join us for the opening of an art exhibition exploring ideas around cloning, seeds and 'other worlds'. Visitors can produce their own art-print and add it to the artwork. Exhibition continues through the week.

Free | Booking not required

ALL AGES



### Super Inventions Discovery Trail

All Dunedin Public Libraries

→ 9:30am - 8:00pm

Uncover the story of New Zealand's science heroes. Pick up a trail guide any time during NZ International Science Festival week and follow the clues in your local library.

Free | Booking not required

8+ YEARS



### Great Big Dino Hunt

All Dunedin Public Libraries

→ 9:30am - 8:00pm

Help! There are dinosaurs on the loose. Join the hunt by following their tracks, then discover the science in a dinosaur footprint.

Free | Booking not required

4+ YEARS



### Hackathon for Charity

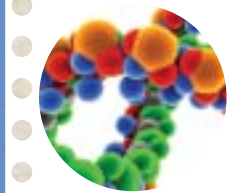
Hatch Education, 291 King Edward Court,  
Stuart St

→ 10:00am - 3:00pm

The Hatch Hackathon offers an opportunity for talented teens to work in teams to create software and/or hardware solutions for charities. The solutions will be presented to charity representatives on Thursday July 14th in combination with a presentation from Limbless Solutions.

FREE | Booking essential 021 259 6971

14-18 YEARS



### A Science Festival Activity in Playspace

Dunedin Public Art Gallery Playspace,  
30 The Octagon

→ 10:00am - 4:30pm

Using the template provided, create a fun 'DNA' profile for yourself. There are some samples for you to look at, so that you can make up a profile that you would like for yourself!

Free | Booking not required

4+ YEARS



## BEST BITS!

### Sounds like Science with Dr Graham Walker and DJ Sixfootsix

St David Lecture Theatre, St David Street

→ 7:30pm - 8:30pm

A strange experiment is afoot in Dunedin... DJs and science performers are hybridising to let music enlighten science, and science light up song. Combining Dr Graham's thrilling science with DJ Sixfootsix's tunes, this show will amuse, intrigue and astonish as fireballs, explosions, marshmallow cannons, massive liquid nitrogen clouds and more get mashed-up to music.

All ages | Booking essential  
Kids \$5 | www.ticketdirect.co.nz  
Adults \$10 | 0800 TICKETDIRECT / at outlets  
Family (2+2) \$20 | Limited door sales may be available





# University of Otago Science Expo

St David Complex  
corner of St David Street and Cumberland Street  
9 July 10.00am – 4.00pm | 10 July 9.00am – 12.00pm  
All welcome, entry is free

## Anatomy

Anatomy @ the University Expo

Come along to our interactive display and discover just how fascinating anatomy is! Witness dissections of a deer heart and lamb's brain, paint your "insides" onto a t-shirt, and see how your bones, muscles and organs all fit together.  
Heart dissections: Saturday 11am/Sunday 10am  
Brain dissections: Saturday 2pm/Sunday 11am

W.D. Trotter Anatomy Museum: Guided Tours

Have you ever seen the smallest bone in the human body? A tour around the W.D. Trotter Anatomy Museum brings to life the wonders of the human body. Bookings are essential (maximum 40 participants per tour). Please no food or drink or cameras and other visual recording devices are permitted in the museum.  
Saturday 9 July: 10:30am - 12noon & 1:00 - 2:30pm  
Sunday 10 July: 10:30am - 12noon & 1:00 - 2:30pm  
To book a place on one of the above tours please contact the Museum Curator: 479 7361 or email [chris.smith@anatomy.otago.ac.nz](mailto:chris.smith@anatomy.otago.ac.nz)

## Biochemistry

Solving the molecular mysteries of our cells  
The Māori name of the Biochemistry department, Te Tari Matu Koiora, translates to *The Quintessence of Life* - this shows how central biochemistry is in explaining concepts in the biological sciences. Come and explore some of the hands-on child-friendly techniques used by biochemists to investigate the molecular details of life.

## Brain Health Research Centre

Inflatable brain walk through  
At over 3 metres tall, the Brain Health Research Centre's MEGA Brain is quite a sight. Walk through and learn more about the central nervous system's most critical organ, and why things can go so wrong in the brain. A team of neuroscientists will be there to answer questions. While you're there, try our mind control ball game.

## Computer Science

3D Printing  
A 3D printer makes things by 'printing' layers of plastic to build anything we can design. Come and see this happening. We can print visitors' designs too.

Cooperative Virtual Sculpture

Learn to create sculpture in a virtual world. You can work together on the same piece from different computers.

Seeing Yourself

How well you know your own face? Come and see your face made from photos of other visitors. How soon can you recognise yourself?

Games from Students

As part of their studies in Computer Science, our students can write their own computer games. Can Frankenstein's monster escape the angry mob? Can you infiltrate the evil megacorporation? Come along and give them a go!

Control a drone with your mind

Wearing a headband you can control a drone to take off and land. This is not science fiction but real. Come to have a try to show your mind power.

Embodied Earth III

The Earth is continuously being struck by lightning. What does that feel like? Come along and experience virtual lightning, driven by the electromagnetic activity in the Earth's atmosphere.

## Dentistry

Making a good impression: from fossils to false teeth  
Why are animal teeth the shapes they are? Can you identify animal teeth from their shapes? Does their shape relate to what they eat? Why do dentists take dental impressions? In this hands-on activity you will be able to take an impression of an animal tooth, just like a dentist does, and make a plaster copy of the tooth. Find out why teeth are the shapes they are and take your model tooth home.

## Food Science

Packing in the proteins - 39 facts

Food Science presents 39 facts about meats, pulses and food quality perceptions: How are proteins packed into beef, cheese and pulses like beans and peas, even soymilk, tofu and tempeh? Find out why meat can be tough or tender, and why pulses are perfect partners in many food dishes.

Waste Warriors!

We've got fun activities and we'll also talk about some of the research we do, ranging from ways to reduce food waste at home to how to process food more efficiently, increasing process yields and enhancing nutritional value. We're sure you'll enjoy a taste of our science, we look forward to seeing you there.

## Genetics

Genetics Jedi!

If the skills of a geneticist were strong in you, how would you use your powers? Prevent disease? Save animals from extinction? Feed the malnourished? Before this, understand life you must! DNA. You must understand DNA. Learn how to extract it, learn how to analyse it. Only then, a geneticist will you be!

## Geology

Where does this rock come from?

Different kinds of rock are formed by different processes, working on different 'raw' material ... so can you find the right home for our different rock samples? Is it possible to have the same rock type from two different places?

## Human Nutrition

Feeding our minds

Sugar and fat have received a lot of recent media attention in relation to obesity and heart disease. At Human Nutrition you'll have the opportunity to guess the fat and sugar contents of some common foods and drinks. For the interested - and brave - we'll have an analyser which will calculate their percent body fat. Calculate your body mass index (BMI) and compare this to some of the All Blacks.

## Information Science

Immersive Virtual Reality Photo Booth

Put on a head-mounted display, see yourself in a virtual mirror, and take a photo of yourself with real or virtual props. The latest in science and technology is used to make this immersive experience happen.

Experience 4-Dimensionality: Virtual Reality Hypercube

True four-dimensionality exists, and we are not talking about "3D + time" here, but it is hard for us to think of a cube where four axes are perpendicular to each other, isn't it? Rotate a 4D hypercube around its faces with your bare hands and watch the hypercube in 3D space with a Virtual Reality head-mounted display.

Look Inside! - Virtual Slicing through Three-dimensional Data

How does a brain look like? How does an arm look like inside? Before you start cutting yourself to find out we give you the tool to do this virtually: use our tablet computer system to slice through volumetric datasets and learn about anatomy.

Look Around! - Being Inside a Virtual Environment

Immerse yourself in a virtual environment by simply looking around with a smart phone in front of your eyes. You might be surprised how rather simple technology can make you feel being part of a virtual reality.

Augmented Reality Sandbox

(joint project with Surveying, Computer Science, and others)  
Use your hands or a shovel to play with sand to make virtual mountains, valleys, and lakes. See how a landscape is changing to the input of your hands. An interactive experience for the whole family.

## Marine Science

A Changing Ocean

Learn more about the ocean and the unique life that lives above and below the surface. Find out how scientists are trying to understand more about human impacts on this environment. Join the team at Lab-in-a-Box on Saturday at 12 noon for a closer look at the marine food chain, from plankton to top predators, when we will dissect a shark.

## Materials Science and Technology

Be curious about materials

Materials of today are used to create everything; from the simple to the complex, the nano to the giga, from life saving to life enhancing. Come and explore the material world with us.

## Mathematics & Statistics

From Einstein to epidemics

How do you detect gravitational waves? How do light waves travel in curved spacetime? How can we predict the next wave of an infectious disease? What do earthquakes and epidemics have in common? Explore how mathematics and statistics are used everyday ... and see if you can also win some candy!

Travel through Tübingen at the speed of light

What happens when you travel at nearly the speed of light? Step up to the relativist's bike and see!

## Microbiology & Immunology

You're more bacterial than human!

In the human body, bacterial cells can outnumber human cells by as much as ten to one. Your body contains over a kilogram of bacteria, and you need them for your survival as much as they need you for theirs. Our tiny companions affect our bodies a lot more than you might realise. Come and learn about our personal microscopic ecosystem, the human microbiome.

## Pharmacy

Oral Medicines

Medicines are most commonly taken by mouth. We'll present some of the many different kinds of medicines that might be found in your home. We'll explain the science behind the medication and its formulation and then relate this to its delivery in the body.

## Physics

Seeing is Believing

Hands on activities and demonstrations for you to investigate light. Talk to physicists about how we use light in research and why it is important in technology. See quantum effects in action.

## Physiology

The physiology of sensation, perception and reaction

Have you ever wondered what the difference is between sensation and perception? Or why our reactions to stimuli around us change depending upon whether we are distracted or not? The Physiology Department will host a booth at the International Science Festival that will allow you test how good your senses are and to explore how your reactions can change depending on where your attention is focused.

## Physiotherapy

Movement and the brain

Can you recognise left from right? How quick are your reaction times? Come and learn about mirror therapy and how it can be used to reduce pain and improve movement.

## Psychology

Everyday Psychology

How can optical illusions make you heavier? Can personality tests really reveal something true about ourselves? What sorts of things around us do we miss when our attention is focussed somewhere else? Come and see us to find out more about Everyday Psychology!

Further information can be found at  
[otago.ac.nz/scifest](http://otago.ac.nz/scifest)





## BEST BITS!

### Our Living World

Dunedin Botanic Garden, 12 Opoho Rd

→ 1:00pm - 4:00pm

A family day packed with fun activities exploring the world around us!

- A Walk on the Wild Side • Bird Watching Walks
- Dunnock Diaries • Mysterious Mistletoes
- Pop-up Library • Shedding Light on the Night Display
- Stream Health • Weedy Dunedin
- Wild Nightlife in the Garden

All ages | Booking essential  
Free | [library@dcc.govt.nz](mailto:library@dcc.govt.nz)



### University of Otago Science Festival Expo

St David Complex, St David Street

→ 9:00am - 4:00pm

The SciFest Expo grabs the best, quirkiest, coolest, weirdest and most helpful science from around the university and packs it all into the ground floor of the St David Complex.

Free | Booking not required

ALL AGES

### Tracking Blue Penguins Pukekura Exhibit

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

→ 11:00am - 5:00pm

Free | Booking not required

See page 6

ALL AGES



### Meet the Wild Things on Your Local Shore

Deborah Bay, Port Chalmers

→ 1:00pm - 3:00pm

Join a Marine Scientist for a walk on your local shore to discover and record what lives there. Find out about issues that may put it under threat. Park near the orange flag at Deborah Bay, just past Carey's Bay.

Free | Booking essential  
[marine-studies@otago.ac.nz](mailto:marine-studies@otago.ac.nz) 03 4795826

ALL AGES

### A Science Festival Experiment

Dunedin Public Art Gallery, 30 The Octagon

→ 10:00am - 5:00pm

Free | Booking not required

See page 6

ALL AGES



### W.D. Trotter Anatomy Museum: Guided Tours

Lindo Ferguson Building, 270 Great King Street

→ 10:30am - 12:00noon and 1:00pm - 2:30pm

Have you ever seen the smallest bone in the human body? A tour around the W.D. Trotter Anatomy Museum brings to life the wonders of the human body...

Free | Booking essential  
[chris.smith@anatomy.otago.ac.nz](mailto:chris.smith@anatomy.otago.ac.nz) 03 4797361

ALL AGES



## BEST BITS!

### The Science of Wall Street Mall

Wall Street Mall, 211 George Street, Dunedin

→ 11:00am - 3:00pm

Join us on the hour by LOL Cafe for live interactive demos from stores within Wall Street Mall including the science of cheese, how LUSH products are made, jewellery making & the science behind running.

All ages | Booking not required  
Free

### Super Inventions Discovery Trail

All Dunedin Public Libraries

→ 9:30am - 8:00pm

Free | Booking not required

See page 6

8+ YEARS

### Great Big Dino Hunt

All Dunedin Public Libraries

→ 9:30am - 8:00pm

Free | Booking not required

See page 6

4+ YEARS

### A Science Festival Activity in Playspace

Dunedin Public Art Gallery Playspace, 30 The Octagon

→ 10:00am - 4:30pm

Free | Booking not required

See page 6

4+ YEARS

### The Hum of the Parts | A Global Honeycomb

Community Gallery, 20 Princes Street

→ 11:00am - 3:00pm

Free | Booking not required

See page 6

ALL AGES

### Art Exhibition 'Bone of our Bones'

Robert Piggott Gallery, 8 Jetty Street

→ 11:00am - 3:00pm

Free | Booking not required

See page 6

ALL AGES



## THE CENTRE FOR SCIENCE COMMUNICATION

University of Otago, Dunedin, New Zealand

Offering Postgraduate Certificates, Diplomas, Masters and PhD qualifications in Science Communication

### Available in three flavours:

- Science and Natural History Filmmaking
- Science in Society
- Creative Nonfiction Writing in Science

NOTE: International PhD students pay fees at domestic levels; eligible to apply for Otago Scholarships.

Email: [sciencecommunication@otago.ac.nz](mailto:sciencecommunication@otago.ac.nz)





**'Seabird Genius – The Life and Legacy of Dr Lance Richdale'**  
Talk by Neville Peat

Dunningham Suite, Dunedin City Library, 230 Moray Place

➔ 2:00pm - 3:00pm

Dunedin biographer Neville Peat will present an illustrated talk about the life of the science teacher who established Dunedin's royal albatross colony and became a world authority on albatrosses and penguins.

Free | Booking not required

ALL AGES

**Green Bike Discovery Ride**

Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula

➔ 9:00am - 3:30pm

Adults from \$20 for one hour | Booking essential 03 4761775  
www.glenfalloch.co.nz/green-bikes See page 6

ADULTS



**Nature at Night**

Orokonui Ecosanctuary, 600 Blueskin Rd

➔ 4:00pm - 6:00pm

Breakfast at midnight? Dinner at dawn? Why does that seem wrong to most human brains? Learn about different animals that have very strange bedtimes! Workshop includes twilight walk to viewing platform inside Orokonui Ecosanctuary.

Kids \$5 Adults \$10 | Bookings essential secretary@orokonui.nz

ALL AGES



**World Premiere of Science Films by Queen's High School**

St David Lecture Theatre, St David Street

➔ 7:30pm - 9:00pm

The premiere of short films on climate change and conservation made by Year 10 Queen's High School students in association with the University of Otago's Centre for Science Communication. Includes a presentation for the best film, a talk from one of the girls, and a special piece of entertainment.

Free | Booking not required

ALL AGES



**COFFEE + CAKE JUST \$8!**

\*Offer valid only during New Zealand International Science Week 2016

**Marbecks Foodstore | Wall Street Mall**



**BEST BITS!**

**Super Science Mash Up Family Quiz Night**

University Union Hall, 640 Cumberland Street (through archway)

➔ 7:00pm - 9:00pm

Join the festival team and festival guests Dr Graham Walker and Chris Foster in a science game show mash up where Family Feud meets Iron Chef meets Face Off. A good old fashioned slice of science fun for the whole family to get into.

Gold coin donation | Booking not required

F T I @NZscifest



**INSPIRING A NATION OF CURIOUS MINDS**

Get along to the New Zealand International Science Festival with all the family!

The Ministry of Business, Innovation and Employment is a sponsor of the festival, recognising the importance of science and technology to New Zealand's future.

**BE CURIOUS!**

Families, schools and communities up and down the country are engaging with science and technology through projects that matter to them and their communities. Discover opportunities to get involved at [www.curiousminds.nz](http://www.curiousminds.nz)

Curious Minds, the Government's National Strategic Plan for Science in Society, seeks to encourage all New Zealanders to get engaged with science and technology.







# BEST BITS!

## From the Lab to the Stage Workshops

Otago Museum, 419 Great King Street

- 9:00am - 11:00am: Physics
- 11:00am - 1:00pm: Chemistry
- 1:00pm - 3:00pm: Zoology
- 3:00pm - 5:00pm: Geology

Become a science communicator making your own science show along with scientists of the University of Otago and the Science Communicators of the Otago Museum! Sign up for one of our masterclasses.

Free | Booking essential  
8-12 years | 03 4747474



### Play Safe with Structures

Otago Polytechnic, Block L,  
100 Anzac Avenue

9:00am - 4:00pm

Otago Polytechnic invites you to an opportunity to see how physics and geometry go into the design of bridges beams and towers. Design and build your own structure using different techniques then load it to destruction to see how strong you have made it.

Free | Booking essential | jfindlay@op.ac.nz



### Young Children Being Curious with Science

Helen Deem Kindergarten, 81 Forbury Rd,  
St Clair

9:00am - 12:30pm

A range of hands on science experiences for young hands and minds to meddle with.

Free | Booking not required

### Super Inventions Discovery Trail

All Dunedin Public Libraries

9:30am - 8:00pm

Free | Booking not required

See page 6

### Great Big Dino Hunt

All Dunedin Public Libraries

9:30am - 8:00pm

Free | Booking not required

See page 6



### Dental Detectives

Downes Room, Mosgiel Public  
Library, 7 Hartstonge Ave

10:00am - 11:00am and  
11:30am - 12:30pm

Put on your dental detective hats and try out the four interactive dental activities from the Dental School. Learn how to use mirrors to look in the mouth, place a sealant on a tooth, experiment with pH, and learn all about different types of teeth!

Free | Booking essential | library@dcc.govt.nz 03 4743690

### A Science Festival Activity in Playspace

Dunedin Public Art Gallery Playspace, 30 The Octagon

10:00am - 4:30pm

Free | Booking not required

See page 6



### Paws for Cause (4 Part Workshop)

Duningham Suite, Dunedin City Library,  
230 Moray Place

10:00am - 11:00am

How are animals used in science? Why do we use some animals and not others? What are the benefits and problems with using animals in science? You will explore these questions with others, and decide: Is it appropriate to use animals in science? Workshop continues on Tue, Wed & Thu.

Free | Booking essential | www.nzscs.org



### Edwardian Innovation Tour

Oliveston, 42 Royal Terrace

10:30am - 12noon

Join our Edwardian Innovation Tour and experience the technological marvels the Theomin family enjoyed at their home. Afterwards, create some delicious treats using Edwardian methods in our 'Drying Room'.

Kids \$5 | Booking essential 03 4713320  
www.olveston.co.nz



### Science and the Criminal Mind (4 Part Workshop)

Duningham Suite, Dunedin City Library,  
230 Moray Place

11:30am - 12:30pm

How has science changed our understanding of criminals? Can science help predict criminal behaviour? Should science determine our response to criminal activity? You will explore these questions with others, and decide: Is science helpful in understanding and responding to criminals? Workshop continues on Tue, Wed & Thu.

Free | Booking essential | www.nzscs.org



### Fight Like a Physicist

Duningham Suite, Dunedin City Library,  
230 Moray Place

11:30am - 12:30pm

Practical and interactive workshop where concepts of centre of mass, gravity and equilibrium are developed using stances, and basic foot movements. Learn how a small person can "win" against a bigger opponent through physics. Force, momentum and torque concepts are explored using basic striking and fighting techniques.

Free | Booking essential | library@dcc.govt.nz 03 4743690



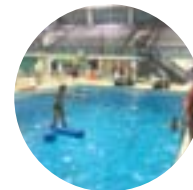
### Mapping the Universe Workshop

Duningham Suite, Dunedin City Library,  
230 Moray Place

1:00pm - 2:00pm

Let's map the universe starting with the nearest stars and ending with the furthest galaxies visible with the naked eye! Make your own planisphere and learn to find things in a clear night sky!

Free | Booking essential | library@dcc.govt.nz 03 4743690



### The Science of Swimming: Biology

Moana Pool, 60 Littlebourne Rd

5:30pm - 6:30pm

Take part in this fun session of science in the pool! Today the session will focus in biology. From swimming like a dolphin to singing like a whale underwater! Get ready to splash!

Kids \$5 | Booking essential 03 4719780



### Your Slice of Life

Toitu Otago Settlers Museum NZR Foyer,  
31 Queens Gardens

10:00am - 2:00pm

Find out more about how your mind and body work. Inspired by the museum exhibition Slice of Life. Take part in a circuit of psychological and physiological tests used by scientists in the Dunedin Study.

Free | Booking not required

### A Science Festival Experiment

Dunedin Public Art Gallery, 30 The Octagon

10:00am - 5:00pm

Free | Booking not required

See page 6

mission statement filler



# OLVESTON HISTORIC HOME



For bookings and enquires contact

OLVESTON HISTORIC HOME

42 Royal Terrace, Dunedin

t: 03-477-3320

e: reception@olveston.co.nz

w: www.olveston.co.nz



The Edwardian Era was a time of great innovation and scientific discovery.

Join our Edwardian Innovation Tour and experience the technological

marvels at the Theomin family home. For children 6-12 years old.

Mon, 11 July - Fri, 15 July, 10.30am - 12pm. Bookings Essential





**Skeleton Alive! Building a Body with Dr. Baillie**

Wall Street Mall, 211 George St

➔ 10:30am - 3:00pm

As you watch, Dr. Baillie will model muscles onto a skeleton. Learn what you have under your own skin, and how these muscles move your bones so that you can run, jump, climb... or pick up that dropped dollar!

Free | Booking not required

ALL AGES

**Tracking Blue Penguins Pukekura Exhibit**

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

➔ 11:00am - 5:00pm

Free | Booking not required See page 6

ALL AGES



**Adventure of a Lifetime**

Dunningham Suite, Dunedin City Library, 230 Moray Place

➔ 6:00pm - 7:00pm

Hear about Aidan Braid's adventures on the Sir Peter Blake Trust voyage to the Sub-Antarctic in January 2016. Travelling on HMNZS Otago, he experienced life onboard a naval ship and then explored and carried out research on the remote and biodiverse Auckland Islands.

Free | Booking essential library@dcc.govt.nz 03 4743690

ALL AGES



**Observatory Open Nights**

Beverly-Begg Observatory, 1A City Rd, Belleknowes

➔ 7:00pm - 9:30pm

Discover the Dunedin Observatory and all the amazing science that takes place there, whether it's cloudy or clear there are always heaps of things to be enjoyed!

Gold coin donation | Booking not required

ALL AGES

**Green Bike Discovery Ride**

Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula

➔ 9:00am - 3:30pm

Adults from \$20 for one hour | Booking essential 03 4761775 www.glenfalloch.co.nz/green-bikes See page 6

ADULTS

**The Hum of the Parts | A Global Honeycomb**

Community Gallery, 20 Princes Street

➔ 11:00am - 3:00pm

Free | Booking not required See page 6

ALL AGES

**Art Exhibition 'Bone of our Bones'**

Robert Piggott Gallery, 8 Jetty Street

➔ 11:00am - 3:00pm

Free | Booking not required See page 6

ALL AGES



**Blue Penguins Pukekura Community Art Day**


Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

➔ 11:00am - 3:00pm

Blue Penguin art activities will allow young and old to contribute to the blue penguin exhibit which will be on display all week at the Royal Albatross Centre.

Free | Booking essential education@albatross.org.nz 03 4780499

ALL AGES



**BEST BITS!**

**How Unique is My Job! With Special Guest Submarine Designer Lucy Collins (UK)**

Hutton Theatre, Otago Museum, 419 Great King Street

➔ 7:30pm - 8:30pm

Lucy Collins' job is one of the most unique we have ever had at the festival. With a first class Masters degree in Civil and Structural Engineering, Lucy worked for the Ministry of Defence as a Naval Architect (a designer of ships and submarines for the Royal Navy) and is now helping run an MSc in Naval Architecture, as well as undertaking a PhD in submarine design. Join Lucy as she shares some of her insights from this unique role, and her work in encouraging young women into science careers.

All ages | No booking required  
Gold coin donation



**IT'S OUR BIRTHDAY!**

The first NZ International Science Festival was back in 1997 and this is our 10th festival!



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**Back to the Future: An Intergenerational Food Journey Like No Other**  
Technique Restaurant, Otago Polytechnic, Harbour Terrace

➔ 7:00pm - 9:00pm

Dunedin's multi-generational study began 40 years ago. Be part of this special meal with a menu made up of 5 courses from throughout the decades, beginning in the 70s, and throughout the night hear from Prof Richie Poulton as he explores some of the findings over the years from this world leading study. Get a group together, pick a decade, and get into the swing of things. There will be prizes for best (and possibly the worst) dressed and spot prizes.

18 years + \$60  
Booking essential | 03 4749256  
www.ticketdirect.co.nz  
0800 TICKETDIRECT & at outlets



**Crumple My Car**  
Otago Polytechnic, L Block, 100 Anzac Avenue

➔ 9:00am - 4:00pm

Learn how crumple zones affect safety for passengers in cars. You will design and build your own "crumple zone" to protect the "egg head" and test it to see if it works best.

Free | Booking essential | jfindlay@op.ac.nz

**Super Inventions Discovery Trail**  
All Dunedin Public Libraries

➔ 9:30am - 8:00pm

Free | Booking not required | See page 6

**Great Big Dino Hunt**  
All Dunedin Public Libraries


➔ 9:30am - 8:00pm

Free | Booking not required | See page 6

**A Science Festival Activity in Playspace**  
Dunedin Public Art Gallery Playspace, 30 The Octagon

➔ 10:00am - 4:30pm

Free | Booking not required | See page 6



**Dental Detectives**  
Downes Room, Mosgiel Public Library, 7 Hartstonge Ave

➔ 10:00am - 11:00am and 11:30am - 12:30pm

Put on your dental detective hats and try out the four interactive dental activities from the Dental School. Learn how to use mirrors to look in the mouth, place a sealant on a tooth, experiment with pH, and learn all about different types of teeth!

Free | Booking essential | library@dcc.govt.nz 03 4743690



**Edwardian Innovation Tour**  
Olveston, 42 Royal Terrace

➔ 10:30am - 12noon

Join our Edwardian Innovation Tour and experience the technological marvels the Theomin family enjoyed at their home. Afterwards, create some delicious treats using Edwardian methods in our 'Drying Room'.

Kids \$5 | Booking essential 03 4713320  
www.olvoston.co.nz

**Magical Colour with Valspar, Cryptic Clues, Treasure Hunt and Experimenting with pH**  
Mitre 10 MEGA, 350 Andersons Bay Road

➔ 11:00am - 11:45am and 2:00pm - 2:45pm

Learn about pH levels in garden soil; use Litmus paper to change the colour of plants in your garden! Wear something bright, learn how to colour match and discover how colour changes when you paint onto different surfaces! Do our colour quiz and be in to win a MEGA prize!

Free | Booking essential | www.mitre10.co.nz/local/MegaDunedin



**Rainbows from the Stars**  
Dunningham Suite, Dunedin City Library, 230 Moray Place

➔ 1:00pm - 2:00pm

Turn a cereal box into a spectrometer and discover with it the amazing rainbows made by all the different lights around us. That is precisely how we know what stars are made up of! Enjoy using it with any light apart from the sun!

Free | Booking essential | library@dcc.govt.nz 03 4743690



**Nature Challenge at Glenfalloch Garden**  
Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula

➔ 1:00pm - 3:00pm

Come and explore the garden and take part in a series of nature challenges to learn about local birds, plants and the world around

Kids \$3 or 4 kids for \$10 | Booking essential  
education@albatross.org.nz

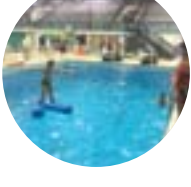


**About the Heart!**  
Dunningham Suite, Dunedin City Library, 230 Moray Place

➔ 2:30pm - 3:30pm

A hands-on demonstration that will give interesting insights into how your heart works!

Free | Booking essential | library@dcc.govt.nz 03 4743690




**Science of Swimming: Geology**  
Moana Pool, 60 Littlebourne Rd

➔ 5:30pm - 6:30pm

Get ready to rumble as we simulate plate tectonics in action, submarine volcanoes and making a tsunami right in the pool!

Kids \$5 | Booking essential | 03 4719780



**CSI: Forensic Science Workshop**  
Dunningham Suite, Dunedin City Library, 230 Moray Place

➔ 6:30pm - 8:30pm

Have you ever wanted to investigate a crime? This is your chance! You will explore a mock crime scene, using real forensic techniques and equipment to collect and analyse evidence. Are you ready to uncover the mystery and find out who committed the crime?

Free | Booking essential | library@dcc.govt.nz 03 4743690

**A Science Festival Experiment**  
Dunedin Public Art Gallery, 30 The Octagon

➔ 10:00am - 5:00pm

Free | Booking not required | See page 6

**Your Slice of Life**  
Toitu Otago Settlers Museum NZR Foyer, 31 Queens Gardens

➔ 10:00am - 2:00pm

Free | Booking not required | See page 10




**Frogs Forever!**  
Downes Room, Mosgiel Public Library, 7 Hartstonge Ave

➔ 11:00am - 12noon

Dive into the slimy world of amazing amphibians! Meet frog scientists and the frogs they study! Discover how the survival of the planet depends on frogs! Transform into a frog with our frogmagician and froggy facepainting!

Free | Booking essential 03 4821755  
www.oroconui.nz secretary@oroconui.nz



**Otago School of Medical Sciences Photo Exhibition**  
Art Society Rooms, Dunedin Railway Station 22 Anzac Ave

➔ 11:00am - 3:00pm

The images submitted by staff and students of the OSMS include microscopic images of viruses, neurones firing in the brain, wildlife, scenery, people and places....they're all curious!

Free | Booking not required

**The Hum of the Parts | A Global Honeycomb**  
Community Gallery, 20 Princes Street

➔ 11:00am - 3:00pm

Free | Booking not required | See page 6

**Art Exhibition 'Bone of our Bones'**  
Robert Piggott Gallery, 8 Jetty Street

➔ 11:00am - 3:00pm

Free | Booking not required | See page 6

**Tracking Blue Penguins Pukekura Exhibit**  
Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

➔ 11:00am - 5:00pm

Free | Booking not required | See page 6




**Women in Science Breakfast with Lucy Collins**  
Technique Restaurant, Otago Polytechnic, Harbour Terrace

➔ 8:30am - 9:30am

Join special guest Naval Architect Lucy Collins over breakfast as she shares her science journey in the specialist field of submarine design. With one of the most unique job descriptions of any festival guest, Lucy is passionate about inspiring young women into science. Sponsored by the British High Commission.

Women 14 years + \$20 | Booking essential  
www.ticketdirect.co.nz  
0800 TICKETDIRECT & at outlets





**Otago Polytechnic Experimental Fun**  
Wall Street Mall, 211 George Street  
→ 11:30am - 2:30pm

Share in a host of innovative science displays and demonstrations including micro power generation, civil engineering equipment, high-tech robotic controls, and 3D printing for product design. See science that is shaping the world and take the first step in gaining your dream career.

Free | No booking required

**Seven Climates in One Day**  
Propagation Building, Upper Lovelock Avenue  
→ 1:00pm - 3:00pm

Come see the amazing plants grown in climates ranging from alpine to tropical in the new propagation building at the botanic garden.

Free | Booking essential library@dcc.govt.nz 03 4743690

**BEST BITS!**

**How Climate Change is Degrading My Daughter's Future: From Epidemiology to Economics**  
University of Otago College of Education Auditorium, 145 Union St  
→ 7:30pm - 9:00pm

Nearly all predicted rates of climate disruption have been exceeded in the last five years, meaning that a number of worst-case scenarios are being realised much earlier than expected. Join Prof Bradshaw as he looks at the future of our children and the impacts on their generation.

All ages | Free | Booking not required

**The Power of Pool!**  
Downes Room, Mosgiel Public Library, 7 Hartstonge Ave  
→ 12:00pm - 1:00pm

Become emPOOwered to make POOitive change to save our POOlanet by harnessing the endless POOsibilities of POO! This hands on workshop includes poo identification and making your own pretend seed ball or 'poo bomb'.

Free | Booking essential 03 4821755  
www.oroconui.nz secretary@oroconui.nz

**BEE Curious!**  
Downes Room, Mosgiel Public Library, 7 Hartstonge Ave  
→ 2:00pm - 3:00pm

Journey into a BEEautiful world and find out what it takes to be a bee! This hands on workshop includes bee displays and honey tasting.

Free | Booking essential 03 4821755  
www.oroconui.nz secretary@oroconui.nz

**Cafe Sci: Forget it! Take Another Look at ... Memory**  
Hutton Theatre, Otago Museum, 419 Great King Street  
→ 12:15pm - 12:45pm

Join Owen Jones and Rachel Zajac from Otago University's Brain Health Research Centre as we discuss memory - from understanding the accuracy of memory recall to explanations of how the cells in the brain create, store, reassemble and retrieve memories, this is an opportunity to take another look at one of the brain's incredible functions.

Free | Booking not required

**Bird Brains**  
Downes Room, Mosgiel Public Library, 7 Hartstonge Ave  
→ 3:00pm - 4:00pm

Curiosity may have killed the cat but it definitely benefits birds! Examine both human and bird brain structures to find out who is the brainiest native bird! Take the Bird Brain challenge and win yourself a yummy prize!

Free | Booking essential 03 4821755  
www.oroconui.nz secretary@oroconui.nz

**Observatory Open Nights**  
Beverly-Begg Observatory, 1A City Rd, Belleknoves  
→ 7:00pm - 9:30pm

Gold coin donation | Booking not required See page 11

**Green Bike Discovery Ride**  
Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula  
→ 9:00am - 3:30pm

Adults from \$20 for one hour | Booking essential 03 4761775  
www.glenfalloch.co.nz/green-bikes See page 6

# Mitre 10 MEGA Dunedin's WEEK OF COLOUR

**Bookings online from June 2nd**  
<http://goo.gl/IFf6TS>

## KIDS CLINICS

Tues 12th July, Wed 13th July, Thurs 14th July

45min workshops 11am & 2pm (20 kids max)  
7 - 12years (under-7s must have a buddy)

### Experimenting with pH

Learn about pH levels in Garden soil; find out how to use Litmus paper to discover how you can change the colour of plants in your Garden!

### Magical colour with Valspar

Wear something Bright, learn how to colour-match and discover how the colour changes when you paint onto different surfaces and see the difference with lights!

### Cryptic Clues Treasure Hunt

Be part of our colour quiz and be in to win a MEGA prize!



## EVENING EVENT

Thurs 14th July at 6:45pm

### "Colour to enhance your home Inside & Out"

\$5 entry. ALL proceeds to charity.

Learn how to transform your home inside & out with colour! Talk to our experts and learn the tips and tricks about the following:

- Spraypainting
- Colour consultant
- Lighting
- Tiling
- Curtains & Blinds
- Flooring
- Garden Pots & Plants
- Paving



Drinks & Nibbles provided!

**DUNEDIN**  
Andersons Bay Road.  
Ph 455 3344

find us [www.mitre10.co.nz](http://www.mitre10.co.nz)

**"Be Curious"**

Fri 8 - Sat 16 July 2016

<http://www.scifest.org.nz/>

## Open Hours

Monday - Friday: 7am - 6pm

Saturday, Sunday

& Public Holidays: 8am - 6pm

**MITRE 10 MEGA**





## BEST BITS!

### Concussion in Sport - Big Issue or Should We Just Shake it Off?

St David Lecture Theatre, St David Street

→ 7:30pm - 9:00pm

From international level through to junior levels, concussion is one of the biggest issues facing sport today. Join one of Australia's foremost authors and speakers Peter Fitzsimons (yes the ex Wallaby), Prof. Damien Bailey (Wales) and Prof. John Sullivan (Otago) as they give their different perspectives on the impact of sport on brain health and challenge us to think about what can (or should) be done.

Kids \$5 | Booking essential  
Adults \$10 | www.ticketdirect.co.nz  
Families (2+2) \$20 | 0800 TICKETDIRECT / at outlets  
Limited door sales may be available



### Edwardian Innovation Tour

Olveston, 42 Royal Terrace

→ 10:30am - 12noon

Join our Edwardian Innovation Tour and experience the technological marvels the Theomin family enjoyed at their home. Afterwards, create some delicious treats using Edwardian methods in our 'Drying Room'.

Kids \$5 | Booking essential 03 4719780  
www.olvoston.co.nz

6-12 YEARS



### Health Science in Action

Wall Street Mall, 211 George St

→ 10:00am - 3:00pm

Explore the science behind health, demystify the procedures and gadgets used in a range of situations.

Free | Booking not required

ALL AGES

### A Science Festival Experiment

Dunedin Public Art Gallery, 30 The Octagon

→ 10:00am - 5:00pm

Free | Booking not required

See page 6

ALL AGES

### Your Slice of Life

Toitu Otago Settlers Museum NZR Foyer, 31 Queens Gardens

→ 10:00am - 2:00pm

Free | Booking not required

See page 10

ALL AGES



### Frogs Forever!

Downes Room, Mosgiel Public Library, 7 Hartstonge Ave

→ 11:00am - 12noon

Dive into the slimy world of amazing amphibians! Meet frog scientists and the frogs they study! Discover how the survival of the planet depends on frogs! Transform into a frog with our frogmagician and froggy facepainting!

Free | Booking essential 03 4821755  
www.oroconui.nz secretary@oroconui.nz

ALL AGES



### Royal Albatross Express!

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

→ 11:00am - 3:00pm

How heavy can a chick actually be? What do they eat? What's the wingspan of the biggest seabird? Discover huge Royal Albatross chicks at the world's only mainland Royal Albatross breeding colony.

Kids \$3 | Booking essential 03 4780499  
Adult \$15 | reservations@albatross.org.nz

ALL AGES

### Tracking Blue Penguins Pukekura Exhibit

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

→ 11:00am - 5:00pm

Free | Booking not required

See page 6

ALL AGES

### Art Exhibition 'Bone of our Bones'

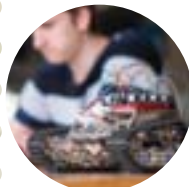
Robert Piggott Gallery, 8 Jetty Street

→ 11:00am - 3:00pm

Free | Booking not required

See page 6

ALL AGES



### Automation Rules Our Lives

Otago Polytechnic, L Block, 100 Anzac Avenue

→ 9:00am - 4:00pm

Learn about robots and automated machinery and how this will impact on the jobs people will have in the future. Understand how you can be part of the changing world, not surprised by it.

Free | Booking essential jfindlay@op.ac.nz

15-17 YEARS



### Life of an Aluminium Can

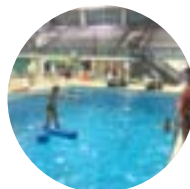
Dunningham Suite, Dunedin City Library, 230 Moray Place

→ 1:00pm - 2:00pm

Curious about the life of every day things we use? Learn about the life of an aluminium can through this interactive activity that will show you where it's come from and what happens to it. Open your eyes to costs of production, embodied energy and our relationship to things.

Free | Booking not required

7+ YEARS



### Science of Swimming: Astronomy

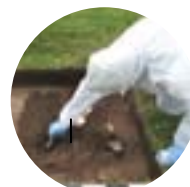
Moana Pool, 60 Littlebourne Rd

→ 5:30pm - 6:30pm

Get ready to train like an astronaut to go to space! Experience the neutral buoyancy astronauts train in pools to go to space. Get in a floating zorb ball to explore what it is like to be thrown around like in a rocket launcher.

Kids \$5 | Booking essential

8+ YEARS



### CSI: Forensic Science Workshop

Dunningham Suite, Dunedin City Library, 230 Moray Place

→ 6:30pm - 8:30pm

Have you ever wanted to investigate a crime? This is your chance! You will explore a mock crime scene, using real forensic techniques and equipment to collect and analyse evidence. Are you ready to uncover the mystery and find out who committed the crime?

Free | Booking essential library@dcc.govt.nz 03 4743690

13+ YEARS

### Great Big Dino Hunt

All Dunedin Public Libraries

→ 9:30am - 8:00pm

Free | Booking not required

See page 6

4+ YEARS

### Super Inventions Discovery Trail

All Dunedin Public Libraries

→ 9:30am - 8:00pm

Free | Booking not required

See page 6

8+ YEARS

### A Science Festival Activity in Playspace

Dunedin Public Art Gallery Playspace, 30 The Octagon

→ 10:00am - 4:30pm

Free | Booking not required

See page 6

4+ YEARS



# Kingsgate

DUNEDIN

## CURIOUS ABOUT WHAT WE HAVE TO OFFER?

Come visit us at:  
[www.kingsgatedunedin.co.nz](http://www.kingsgatedunedin.co.nz)

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10 Smith Street, Dunedin  
T +64 447 6784  
E [kingsgate.dunedin@millenniumhotels.com](mailto:kingsgate.dunedin@millenniumhotels.com)  
A MILLENNIUM HOTEL





**Otago School of Medical Sciences Photo Exhibition**

Art Society Rooms, Dunedin Railway Station, 22 Anzac Ave

→ 11:00am - 3:00pm

Free | Booking not required

See page 14

ALL AGES



**The Power of Pool!**

Downes Room, Mosgiel Public Library, 7 Hartstonge Ave

→ 12:00pm - 1:00pm

Become emPOOwered to make POOitive change to save our POOlanet by harnessing the endless POOsibilities of POO! This hands on workshop includes poo identification and making your own pretend seed ball or 'poo bomb'.

Free | Booking essential 03 4821755  
www.oroikonui.nz secretary@oroikonui.nz

ALL AGES



**BEE Curious!**

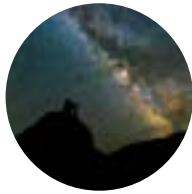
Downes Room, Mosgiel Public Library, 7 Hartstonge Ave

→ 2:00pm - 3:00pm

Journey into a BEEautiful world and find out what it takes to be a bee! This hands on workshop includes bee displays and honey tasting.

Free | Booking essential 03 4821755  
www.oroikonui.nz secretary@oroikonui.nz

ALL AGES



**Observatory Open Nights**

Beverly-Begg Observatory, 1A City Rd, Belleknoves

→ 7:00pm - 9:30pm

Discover the Dunedin Observatory and all the amazing science that takes place there, whether it's cloudy or clear there are always heaps of things to be enjoyed!

Gold coin donation | Booking not required

ALL AGES



**Café Sci: From Zika to Measles, Take Another Look at... Infectious Diseases**

Hutton Theatre, Otago Museum, 419 Great King Street

→ 12:15pm - 1:15pm

Join Prof Kurt Krause (Director of the Webster Centre for Research on Infectious Diseases) and some of the University team as they look at issues facing us from a local, national, and international perspective. Hear from the panel and ask them some of the burning questions you may have on infectious diseases.

Free | Booking not required

ADULTS

**Green Bike Discovery Ride**

Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula

→ 9:00am - 3:30pm

Adults from \$20 for one hour | Booking essential 03 4761775  
www.glenfalloch.co.nz/green-bikes See page 6

ADULTS

**BEST BITS!**

**What Inspires me: Women in Science 2 Minute Talks**

Wall Street Mall, 211 George Street

→ 7:30pm - 9:00pm

Be part of this inspirational evening with some of our special guests and women from our science community as they share what inspires them in just two minutes. Women from all walks of life and backgrounds share their science stories. Two slides, two props, two minutes.

Gold coin donation | Booking not required



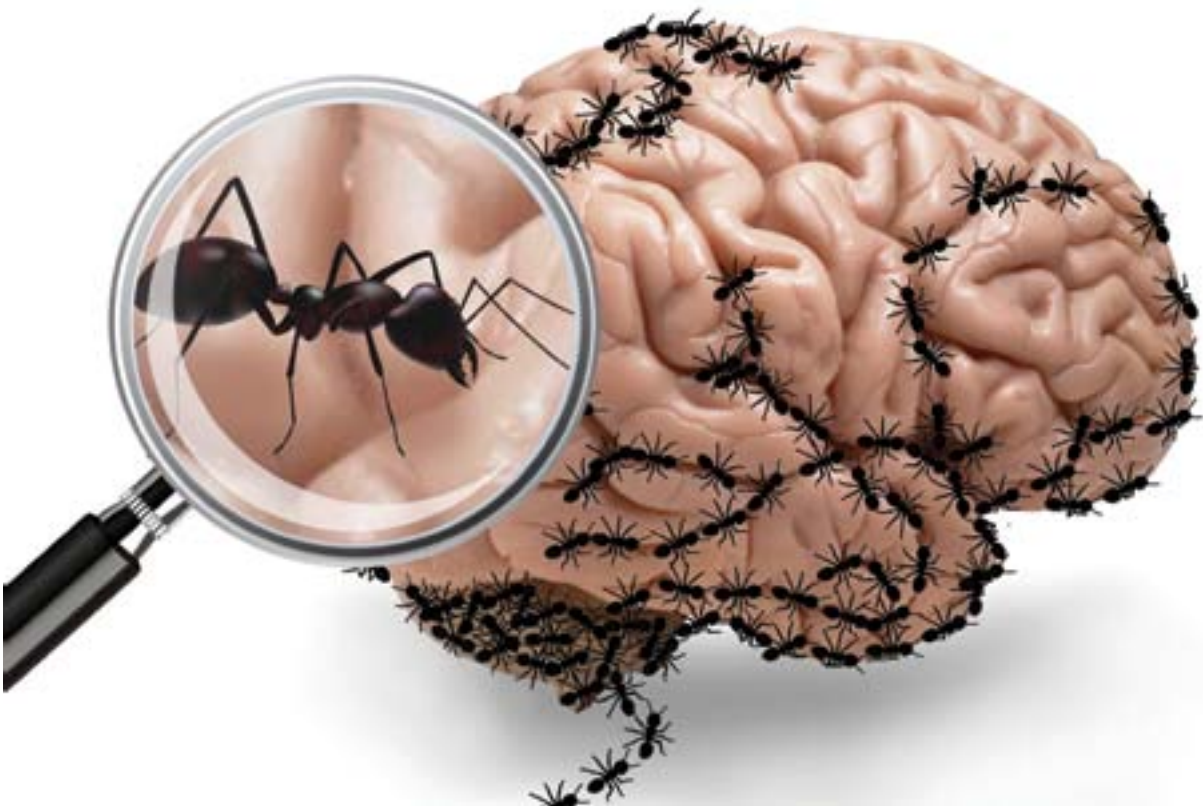
LUCY COLLINS

“ I can think of no other professions which contribute more to society than those within science, technology and engineering. These professions change the world. These professions shape society. ”



**zoology**

it's the Natural Selection



Visit the Department of Zoology "What's the Buzz? Swarm robots and social insects" display ... and build your own insect robot at Otago Museum's Family Fun Day, The Curious Case of Science, on 16 July.





# BEST BITS!

Exploring Together - with NASA Deputy Administrator Dr Dava Newman  
St David Lecture Theatre, St David Street

7:30pm - 9:30pm

Come and hear Dr Newman as she outlines the vision of space travel. 'I find that less often are folks asking, "Why aren't you doing things my way?" or "Is Mars the right destination?" Rather, they're now asking questions like, "How can we be a part of this?" and "What are some areas where we can work together?"

Gold coin donation | Booking not required



## 3D Printing - How Does It Really Work?

Otago Polytechnic, L Block, 100 Anzac Avenue

9:00am - 4:00pm

3D printing is the new technology of the future! Understand how 3D printing can be used in all manner of ways in engineering to change how manufacturing occurs.

Free | Booking essential | [jfindlay@op.ac.nz](mailto:jfindlay@op.ac.nz)

## Great Big Dino Hunt

All Dunedin Public Libraries

9:30am - 8:00pm

Free | Booking not required

See page 6

## Super Inventions Discovery Trail

All Dunedin Public Libraries

9:30am - 8:00pm

Free | Booking not required

See page 6

## A Science Festival Activity in Playspace

Dunedin Public Art Gallery Playspace, 30 The Octagon

10:00am - 4:30pm

Free | Booking not required

See page 6



## Dental Detectives

Downes Room, Mosgiel Public Library, 7 Hartstonge Ave

10:00am - 11:00am and 11:30am - 12:30pm

Put on your dental detective hats and try out the four interactive dental activities from the Dental School. Learn how to use mirrors to look in the mouth, place a sealant on a tooth, experiment with pH, and learn all about different types of teeth!

Free | Booking essential | [library@dcc.govt.nz](mailto:library@dcc.govt.nz) 03 4743690



## Edwardian Innovation Tour

Olveston, 42 Royal Terrace

10:30am - 12noon

Join our Edwardian Innovation Tour and experience the technological marvels the Theomin family enjoyed at their home. Afterwards, create some delicious treats using Edwardian methods in our 'Drying Room'.

Kids \$5 | Booking essential | 03 4719780  
[www.olveston.co.nz](http://www.olveston.co.nz)



## Pesky Pests at Glenfalloch

Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula

11:00am - 2:00pm

Some animals and plants are nasty threats to our native wildlife and bush. With a map find pesky pests hiding in our garden and receive a treat.

Kids \$3 | Booking not required  
3 kids for \$10 | Cash only please

## Magical Colour with Valspar, Cryptic Clues, Treasure Hunt and Experimenting with pH

Mitre 10 MEGA, 350 Andersons Bay Road

11:00am - 11:45am and 2:00pm - 2:45pm

Learn about pH levels in garden soil; use Litmus paper to change the colour of plants in your garden! Wear something bright, learn how to colour match and discover how colour changes when you paint onto different surfaces! Do our colour quiz and be in to win a MEGA prize!

Free | Booking essential | [www.mitre10.co.nz/local/MegaDunedin](http://www.mitre10.co.nz/local/MegaDunedin)



## Science of Swimming: Physics

Moana Pool, 60 Littlebourne Rd

5:30pm - 6:30pm

Come and explore the amazing physical properties of water as we experiment in the pool, from icebergs to clouds, and the supercold temperature of the salty Antarctic waters!

Kids \$5 | Booking essential | 03 4719780

## A Science Festival Experiment

Dunedin Public Art Gallery, 30 The Octagon

10:00am - 5:00pm

Free | Booking not required

See page 6

## Your Slice of Life

Toitu Otago Settlers Museum NZR Foyer, 31 Queens Gardens

10:00am - 2:00pm

Free | Booking not required

See page 10

## Art Exhibition 'Bone of our Bones'

Robert Piggott Gallery, 8 Jetty Street

11:00am - 3:00pm

Free | Booking not required

See page 6

## Tracking Blue Penguins Pukekura Exhibit

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

11:00am - 5:00pm

Free | Booking not required

See page 6

## The Hum of the Parts | A Global Honeycomb

Community Gallery, 20 Princes Street

11:00am - 3:00pm

Free | Booking not required

See page 6

## Otago School of Medical Sciences Photo Exhibition

Art Society Rooms, Dunedin Railway Station, 22 Anzac Ave

11:00am - 3:00pm

Free | Booking not required

See page 14



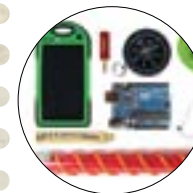
## Good Vibrations - Sound Lab

Wall Street Mall, 211 George St

12noon - 1:30pm

The world that surrounds us is full of sound. But what exactly is sound? How is it made? How does it travel? Join the Otago Museum team for some family fun science explorations and discover the wonders of sound.

Free | Booking not required



## Tools and Fieldwork in the Face of Climate Change

Hutton Theatre, Otago Museum, 419 Great King Street

12noon - 1:00pm

Introducing 'Climate Kit', brought to NZ by ZERO1 American Arts Incubator together with the U.S. Department of State. A climate change/art and design/women in STEM program discussing solar energy & digital design to create a cross disciplinary workshop discussing raising awareness of resiliency on climate change.

Gold coin donation | Booking not required



## A Science Festival Experiment

Dunedin Public Art Gallery, 30 The Octagon

10:00am - 5:00pm

Free | Booking not required

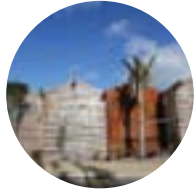
ALL AGES



Food+Science+Consumers+Policy+  
Flavour+Product development =  
Careers all over the world

contact | [food.science@otago.ac.nz](mailto:food.science@otago.ac.nz) | [otago.ac.nz/foodscience](http://otago.ac.nz/foodscience)





**Seven Climates in One Day**

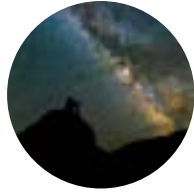
Propagation Building, Upper Lovelock Avenue

→ 1:00pm - 3:00pm

Come see the amazing plants grown in climates ranging from alpine to tropical in the new propagation building at the botanic garden.

Free | Booking essential library@dcc.govt.nz 03 4743690

ALL AGES



**Observatory Open Nights**

Beverly-Begg Observatory, 1A City Rd, Belleknowes

→ 7:00pm - 9:30pm

Discover the Dunedin Observatory and all the amazing science that takes place there, whether it's cloudy or clear there are always heaps of things to be enjoyed!

Gold coin donation | Booking not required

ALL AGES



**True Crime and Crime Writing - Bestselling Crime Writing by Vanda Symon**

Dunedin Former Prison, 2 Castle St

→ 5.30pm - 7:00pm

To miss this event would be a crime. A fascinating talk on crime and crime writing with a Dunedin flavour, presented in the heart of the Dunedin Former Prison. Warm dress recommended.

\$15 per person | Booking essential www.ticketdirect.co.nz / 0800 TICKETDIRECT

ADULTS



**Afternoon Tea @ Olveston**

Olveston, 42 Royal Terrace

→ 2:00pm - 4:00pm

Ever wondered how to make the perfect cup of tea? Join us at Olveston and learn the art of Edwardian entertaining. Learn how to create different blends of tea and create the perfect cup from instructions given in the family recipe books.

Kids \$20 | Bookings essential www.olvoston.co.nz 03 4773320  
Adults \$30

ALL AGES

**Green Bike Discovery Ride**

Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula

→ 9:00am - 3:30pm

Adults from \$20 for one hour | Booking essential 03 4761775 www.glenfalloch.co.nz/green-bikes See page 6

ADULTS



**Are You Your DNA? High Speed Pitches and a Hot Debate**

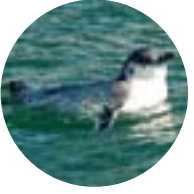
Dunedin Public Art Gallery, 30 The Octagon

→ 5.30pm - 6:50pm

Two teams from science, art and humanities argue different positions on how much our DNA drives who we are. Take part in question time, and more, during informal refreshments and debrief. For further information and credits, see the website.

Free | Booking not required

ADULTS



**Tracking Blue Penguins Pukekura**

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

→ 4.30pm - 7:00pm

Find out how to track a Blue Penguin, how microchips will help penguin population management at Pilots Beach and how you can get involved. Then discover the world's smallest penguin, in its natural habitat.

Talk free | Booking essential 03 4780499 reservations@albatross.org.nz  
Tour \$30 per family (2 adults + 3 kids)

ALL AGES

**BEST BITS!**

**Colour to Enhance Your Home Inside & Out**  
Mitre 10 MEGA Dunedin, 350 Andersons Bay Road

→ 7:00pm - 9:30pm

Learn how to transform your home inside & out with colour! Talk to our experts and learn the tips and tricks about the following:

- Spraypainting • Colour consultant • Lighting • Tiling
- Curtains & blinds • Flooring • Pots • Plants • Paving

Drinks & nibbles provided!

Adults \$5 incl goodie bags, drinks & nibbles | Entry fee goes to charity  
Booking essential www.mitre10.co.nz/local/MegaDunedin



Otago School of Medical Sciences

Excellence in research and teaching

Anatomy  
Biochemistry  
Biomedical Sciences  
Microbiology and Immunology  
Pharmacology and Toxicology  
Physiology



otago.ac.nz/osms

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1,000,000 meals provided  
TO THE DUNEDIN COMMUNITY

www.foodshare.org.nz 0800 44 55 33



ADInstruments are proud to support this amazing local charity  
adinstruments.com







# BEST BITS!

## Why Science is Cool - with Nigel Latta

Hutton Theatre, Otago Museum, 419 Great King Street

➔ 1:00pm - 2:00pm

Nigel Latta loves science. He's weighed penguins in the Antarctic, been zapped with a million volts, jumped out of planes with fruit and burned down an entire house. In this session he'll show you why science is the coolest thing in the world right now. Be warned, stuff may blow up!

Free | Booking essential  
www.otagomuseum.nz  
Otago Museum Info Desk



## Science of Swimming: Chemistry

Moana Pool, 60 Littlebourne Rd

➔ 5:30pm - 6:30pm

Come and discover the amazing chemical properties of water as we experiment right in the pool! From the acidification of our oceans to the amazing chemistry of the primordial soup from which life rose!

Kids \$5 | Booking essential 03 4719780



## Florokonui

Wall Street Mall, 211 George St

➔ 9:00am - 5:00pm

Wall Street Mall gets greener: Forest for a day with Orokonui. Join the team from Orokonui Ecosanctuary and explore the Forest! Including hands on activities, live animal encounters, face painting, games, storytelling, competitions and prizes!

Free | Booking not required

## Your Slice of Life

Toitu Otago Settlers Museum NZR Foyer, 31 Queens Gardens

➔ 10:00am - 2:00pm

Free | Booking not required See page 10

## A Science Festival Experiment

Dunedin Public Art Gallery, 30 The Octagon

➔ 10:00am - 5:00pm

Free | Booking not required See page 6

## Art Exhibition 'Bone of our Bones'

Robert Piggott Gallery, 8 Jetty Street

➔ 11:00am - 3:00pm

Free | Booking not required See page 6

## Royal Albatross Express!

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

➔ 11:00am - 3:00pm

Kids \$3 | Booking essential 03 4780499  
Adult \$15 | reservations@albatross.org.nz See page 16

## The Hum of the Parts | A Global Honeycomb

Community Gallery, 20 Princes Street

➔ 11:00am - 3:00pm

Free | Booking not required See page 6

## Tracking Blue Penguins Pukekura Exhibit

Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula

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Art Society Rooms, Dunedin Railway Station, 22 Anzac Ave

➔ 11:00am - 3:00pm

Free | Booking not required See page 14



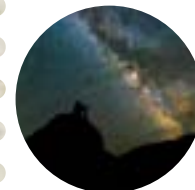
## Science Academy Shows

Hutton Theatre, Otago Museum, 419 Great King Street

➔ 3:00pm - 5:00pm

Come and enjoy 6 short science shows delivered by the 2016 University Science Academy students.

Free | Booking not required



## Observatory Open Nights

Beverly-Begg Observatory, 1A City Rd, Belleknowes

➔ 7:00pm - 9:30pm

Discover the Dunedin Observatory and all the amazing science that takes place there, whether it's cloudy or clear there are always heaps of things to be enjoyed!

Gold coin donation | Booking not required

## Super Inventions Discovery Trail

All Dunedin Public Libraries

➔ 9:30am - 8:00pm

Free | Booking not required See page 6

## Great Big Dino Hunt

All Dunedin Public Libraries

➔ 9:30am - 8:00pm

Free | Booking not required See page 6

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Dunedin Public Art Gallery Playspace, 30 The Octagon

➔ 10:00am - 4:30pm

Free | Booking not required See page 6



## Edwardian Innovation Tour

Olveston, 42 Royal Terrace

➔ 10:30am - 12noon

Join our Edwardian Innovation Tour and experience the technological marvels the Theomin family enjoyed at their home. Afterwards, create some delicious treats using Edwardian methods in our 'Drying Room'.

Children \$5 | Booking essential 03 4719780  
www.olveston.co.nz

## Pesky Pests at Glenfalloch

Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula

➔ 11:00am - 2:00pm

Kids \$3 or 3 for \$10 | Booking not required See page 18



TAHU MACKENZIE

“It is so important to have nature education because we want to keep the planet alive. We want to save what we have left and in order to do that I think people need to connect emotionally with nature”



The Dunedin Study participants are children of the 1970s. They grew up with colour television. But only two channels.

EXHIBITION runs until 27 March 2017  
10am-5pm | Open 7 days | Free Entry | Free Wifi  
31 Queens Gardens, Dunedin | P (03) 477 5052  
www.toituosm.com



# Yayoi Kusama: The Obliteration Room

YAYOI KUSAMA The Obliteration Room 2002-present. Collaboration between Yayoi Kusama and Queensland Art Gallery. Commissioned by Queensland Art Gallery. Gift of the artist through the Queensland Art Gallery Foundation 2012. Collection Queensland Art Gallery, Australia. Photograph: OAGOMA Photography







**Green Bike Discovery Ride**  
Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula  
→ 9:00am - 3:30pm  
Adults from \$20 for one hour | Booking essential 03 4761775  
www.glenfalloch.co.nz/green-bikes See page 6

**Improsaurus Presents: A Special Improvised Scientific\* Extravaganza!**  
Fortune Theatre, 231 Stuart St  
→ 10.30pm - 12midnight  
Join Improsaurus, Dunedin's critically-acclaimed Improvised Theatre Troupe, as they explore the real life of scientists, doctors, professors and lecturers in a hilarious evening made up entirely on the spot based on your suggestions!  
\*Content may not be scientific at all  
Adults \$10 | Booking not required



ALBERT MANERO

“ We have a responsibility to do this. With these degrees in engineering if we can't be helping others with them then what are they worth? Let's show students that engineering is a tool to help change the world. ”



**BEST BITS!**

**Making a Difference - Using 3D Technology to Change Lives**  
University of Otago College of Education Auditorium, 145 Union St  
→ 7:30pm - 9:00pm

Limbitless Solutions help innovators to use their skills and passion to improve the world around them using personalized bionics and solutions for disabilities. Hear their story about how they are looking to assist communities to innovate with compassion and how they use 3D printing to create an arm specifically for a local young man. Limbitless Solutions are proudly sponsored by the Otago Polytechnic. Funding support from the US Embassy is also appreciated

Kids \$5  
Adults \$10  
Family (2+2) \$20  
Booking essential  
www.ticketdirect.co.nz  
0800 TICKETDIRECT / at outlets  
Limited door sales may be available



**MAKE YOUR OWN VOLCANO!**

**To make your volcano, you will need:**

- 1 square of cardboard
- 1 2L plastic bottle
- Strips of newspaper
- 1 large bowl
- Flour & water mixed
- Tape, Paint & brushes

**To make your lava, you will need:**

- Vinegar
- Washing up liquid
- Red food colouring
- Baking soda
- A teaspoon

**To make your volcano:**

1. Place the bottle in the centre of the cardboard.
2. Stick strips of tape from the top of the bottle to points near the edge of the cardboard so it stays still.
3. Dip strips of the newspaper into the flour mixture.
4. Drape the strips between the masking tape strips.
5. Cover the whole thing in these strips.
6. Let it dry overnight. Once it's dry, paint it.



- To make your volcano erupt:**
- Carefully pour vinegar, red food colouring & a few drops of washing up liquid in to the bottle.
  - Put a spoonful of baking powder in the bottle and stand back!

Upload your volcano pics online & tag us on: Facebook @nzscifest

**Wellness Checks**  
... how healthy are you?

The Southern District Health Board's Skills Laboratory will be open to the public (12+) and to all staff during the science festival. See session times below.

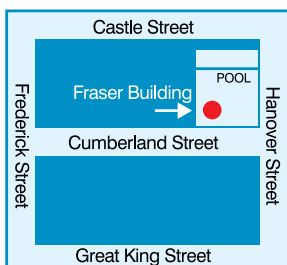
- Take the stairs — get your pulse rate checked
- Get your blood-glucose level checked
- Get your vision checked
- Get a breathing (respiratory) check

Come and see a model of how the eye works! See how modern technology saves lives.

- See how resuscitation equipment works
- See how CPR (cardiac) equipment works
- See other life-saving scenarios on PC-based simulators

**When:** Mon, July 11th from 10.30am – 3pm, Wed, July 13th 10.30am – 3pm and Fri, July 15th 9am-1.30pm. No checks on Thursday, 14th July.

**Where:** The Otago Clinical Skills Laboratory in the Fraser Building, opposite the carpark entrance to Dunedin Hospital on Cumberland St, follow the signs.



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# BEST BITS!

## ZooMoo Live

University of Otago College of Education Auditorium, 145 Union St

→ 3:30pm - 5:00pm

ZooMoo Live is a unique opportunity to meet the loveable characters of ZooMoo - an international children's television channel filmed right here in Dunedin and broadcast in over 20 countries around the world!

Age 4-8  
Kids \$5  
Adults \$7  
Family (2+2) \$20

Booking essential  
www.ticketdirect.co.nz  
0800 TICKETDIRECT  
At outlets

**A Science Festival Activity in Playspace**  
Dunedin Public Art Gallery Playspace, 30 The Octagon  
→ 10:00am - 4:30pm  
Free | Booking not required See page 6

**Otago School of Medical Sciences Photo Exhibition**  
Art Society Rooms, Dunedin Railway Station, 22 Anzac Ave  
→ 11:00am - 3:00pm  
Free | Booking not required See page 14

**A Science Festival Chemistry Event: Kids T-shirt Sun Print Workshop**  
Dunedin Public Art Gallery, 30 The Octagon  
→ 2:00pm - 4:00pm  
Kids \$5 | Booking essential 03 4743249  
www.dunedin.art.museum

**Green Bike Discovery Ride**  
Glenfalloch Garden, 430 Portobello Rd, Otago Peninsula  
→ 9:00am - 3:30pm  
Adults from \$20 for one hour | Booking essential 03 4761775  
www.glenfalloch.co.nz/green-bikes See page 6

**BEST BITS!**

**The Curious Case of Science Family Fun Day**  
Otago Museum, 419 Great King St  
→ 10:00am - 3:00pm

Meet scientists from around Otago as they explore the Museum's collection in our galleries. They will shine a light on physics, help you make your own robotic insect and take you to other planets with virtual reality. Don't forget to bring your curiosity to our explosive free science show.

All ages Free | Booking not required



## From Lab to Stage Children's Science Show

Barclay Theatre, Otago Museum  
419 Great King St

→ 10.00am - 12noon

Come and enjoy 4 amazing science shows that will bring on to the stage some of the amazing things scientists are doing at the University of Otago! The shows are delivered by children that have been following scientists at work earlier in the week studying the latest research.

Free | Booking essential 03 4747474

**A Science Festival Experiment**  
Dunedin Public Art Gallery, 30 The Octagon  
→ 10:00am - 5:00pm  
Free | Booking not required See page 6

**Art Exhibition 'Bone of our Bones'**  
Robert Piggott Gallery, 8 Jetty Street  
→ 11:00am - 3:00pm  
Free | Booking not required See page 6

**Tracking Blue Penguins Pukekura Exhibit**  
Royal Albatross Centre, 1260 Harington Point Road, Otago Peninsula  
→ 11:00am - 5:00pm  
Free | Booking not required See page 6

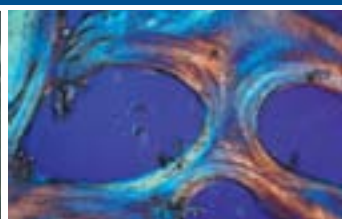
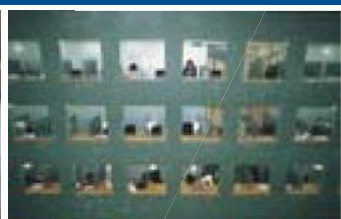
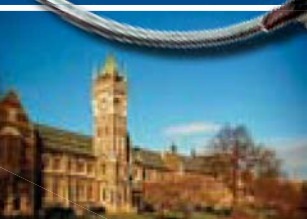
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SCIENCE IS ALL ABOUT MAKING GREAT DISCOVERIES

# Adventures at the Dunedin Botanic Garden

<http://scifest.org.nz/our-living-world>



Creatures of the Night • Saturday 9 July • 5.00-7.00pm

Our Living World • Sunday 10 July • 1.00-4.00pm







NZ International Science Festival

**Otago Daily Times**

**COMMUNITY SCIENCE AWARDS**

A huge thank you to all of the sponsors who supported the first Otago Daily Times Community Science Awards this year. The range of skills and passion throughout Otago is and inspiring - we are so proud to represent and showcase such a diverse range of talent throughout the region. Nominations have now closed but go to [www.odt.co.nz/odtcommunityscience](http://www.odt.co.nz/odtcommunityscience) on Saturday July 9 to find out who the winners are!

# Our thanks

The festival happens due to the support of many people, and we are grateful for the many hours that go into developing, planning and bringing together the events. From staff through to supporters and volunteers, we would like to say a huge thank you for your contribution to making this festival happen.

In particular, we would like to acknowledge the fantastic contribution of the following people:

**Festival Team**

Chris Green | Director  
Jen Smith | Associate Director

**Publicity**

Amie Richardson | Profile Media  
Brydie Meinung | Profile Media

**Festival Guide Design**

Glen Ross | Otago Daily Times  
Creative Services

**Ticketing Partner**

[www.ticketdirect.co.nz](http://www.ticketdirect.co.nz)

**Treasurer**

Wai Piggott | Dunedin City Council

**Festival Website Design**

Phillip Rasmussen | Webolution

**Festival Patrons**

Professor Harlene Hayne, ONZM, PhD, FRSNZ, Vice Chancellor University of Otago  
Dave Cull, Mayor of Dunedin

**Executive Committee**

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Dame Elizabeth Hanan DNZM, CRSNZ, BSc  
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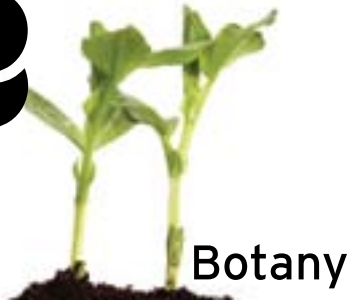
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**C**

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**D**



Dentistry

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**F**

Food Science

**G**



Genetics

**H**

Human Nutrition

**I**

Information Science

**J**



Jellyfish

**K**

Kinetics

**L**



Lightning

**M**

Mathematics

**N**



Neuroscience

**O**



Ophthalmology

**P**

Psychology

**Q**



**R**

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Surveying

**T**



Toxicology

**U**

Urology

**V**



Virology

**W**

Wildlife Management

**X**

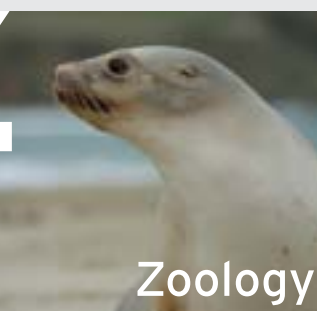


X-ray

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