EDT SCIENCE FESTIVAL SAT 5-SUN 20 APRIL

SPACESHIP EARTH



BOOKING HOTLINE: 0131 553 0320 ONLINE BOOKING: sciencefestival.co.uk



Principal Funding Partners



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It's an honour to welcome you to the 2025 Edinburgh Science Festival – my first as Director and CEO.

This year, our theme is Spaceship Earth – a recognition that our planet is not just a backdrop to life but a shared, living system that connects us all. Through the lenses of sustainability, space exploration, and emerging technologies, this Festival invites you to discover how we can work together to create a more just and regenerative world.

At the heart of the Festival is a spectacular line-up of renowned scientists, bold explorers, and creative thinkers, including **Richard Dawkins**, NASA astronaut **Kathy Sullivan**, *The Great British Sewing Bee*'s **Patrick Grant**, and sustainability expert **Mike Berners-Lee**. They join over 400 active researchers from across the UK, all dedicated to bringing science into public conversation, sparking curiosity, and inspiring action.

This year also marks the launch of *DiscoveryLab*, our reimagined flagship family experience at City Art Centre. Designed to ignite wonder in young minds, families will dive into interactive exhibits, get stuck into exciting experiments, and uncover the joy of discovery together.

Edinburgh has long been a city where science thrives, and we are proud to collaborate once again with Dynamic Earth, Edinburgh Zoo, the National Museum of Scotland, The University of Edinburgh, and the Royal Botanic Garden Edinburgh – institutions that continue to make Scotland a global hub for scientific innovation.

A Festival of this scale is only possible because of the generosity and commitment of our supporters, Catalyst members, and patrons. Your belief in Edinburgh Science enables us to engage thousands of people every year. And to our incredible Festival staff – your passion, creativity, and dedication are what bring this Festival to life. Thank you for everything you do.

So, join us aboard Spaceship Earth, a fragile vessel adrift in the cosmic sea, bound only by the limits of our curiosity and imagination. Ask questions, challenge ideas, and explore new frontiers – because science is a tool of discovery that belongs to all of us, and through it we chart our course among the stars.

Hassun El-Zafar Director and CEO, Edinburgh Science

How to Explore the Festival

To help find the perfect event for you, we've separated this programme into four sections:



Science for Families [pages 9–34]

From hands-on workshops, interactive activities and explosive science shows, we have everything you need for the perfect family day out this Easter.



Science for Adults [pages 36–49]

Broadcasting big ideas! Hear from experts as they share the latest discoveries, technology and research shaping the world that we live in – from genes to galaxies and death to immortality.



Nights Out [pages 50–53]

Enjoy science in a relaxed environment with friends at our Science Nights Out, our adults-only events that combine science, art, hands-on activities and music in the ultimate Festival experience.



SCIENCE AND ART

These exhibitions blend science and art through breathtaking photography and thought-provoking artpieces, exploring everything from vaccine development to microscopic marine life.

How to Book

Online

sciencefestival.co.uk

If you experience any issues while attempting to make an online booking, please email the Box Office at **boxoffice@scifest.co.uk**

Phone

0131 553 0320 Tuesday 18 February-Friday 4 April 9.30am-4.30pm

(Monday–Friday) Saturday 5–Sunday 20 April 9.30am–5.30pm (Monday–Saturday)

10am–5pm (Sunday)

In Person

During the Festival, you can visit our Box Office counters at the National Museum of Scotland and the City Art Centre. Please note the Box Office at the National Museum of Scotland is cashless.

Ticketing Information

Groups

We welcome groups and discounts may be available depending on the event and the size of the party. Please call the Box Office on **0131 553 0320** to discuss your needs.

Concessions

Unless otherwise stated, concessions are available to pensioners, the unemployed and disabled persons, with a complimentary ticket available for personal assistants, which can be booked by phoning our Box Office on

0131 553 0320 or emailing boxoffice@scifest.co.uk

Refunds

All Science Festival tickets are non-refundable, except in the event of a cancellation.

Transaction Fee

Festival bookings are subject to a £1.50 transaction fee. Free events are exempt from this charge.

Support Edinburgh Science

Please consider adding a donation to your purchase and help us deliver science related activities to community groups and schools around Scotland.

Edinburgh Science Foundation – Registered Charity No. SC003790

Edinburgh Science in the Community

We believe that the wonders of science, technology, engineering and maths (STEM) are for everyone and should be a joy for anyone who engages with them. However, we're acutely aware that accessing these experiences is difficult for some, who might be held back by financial barriers or long ingrained negative associations with science. It is part of our mission as an educational charity to see an end to these barriers and prevent them from forming in the first place.



DiscoveryLab School Visits

Every year before our science playground at City Art Centre opens to the public, we host three special open days for local schools.

This year around 900 school children, many of whom wouldn't have the opportunity to visit with their families, get to experience these activities for free.

This year, our school DiscoveryLab visits are supported by



Mini-Science Festivals

Last year we had the pleasure of partnering with Craigmillar Library, Wester Hailes Library and North Edinburgh Arts to deliver one-day mini-Science Festivals in community settings. These events were free of charge for local residents and offered a range of drop-in activities including storytelling sessions, building with foam dinosaur bones and our explosive street science shows. With these events we wanted to combine the flair and excitement of an Edinburgh Science event with well-known and trusted venues, ensuring the events felt welcoming to children who don't traditionally feel like science is for them.

These three events welcomed over 750 attendees, and we look forward to building on these community partnerships in 2025.



Edinburgh Science in the Community supported by

Baillie Gifford

Scottish Childen's Lottery Trust Our Catalysts and those that wish to remain anonymous

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Accessibility at the Festival

Venue Facilities

On each venue page you'll find the following symbols which indicate the facilities available:

- S Wheelchair access throughout
- Sensory Backpacks
- Quiet space
- Ear defenders
- Elevator
- 🔄 Ramp access
- 5 Level access throughout
- €.# Accessible toilet
- Et Changing places toilet
- Lowered counters
- 6 Access aware staff
- Hearing loop
- Exhibition transcripts
- Assistant dogs welcome
- Low lighting
- Cafe
- Bar
- Packed lunch area
- ۵ Water available
- ~) ***** Cloakroom
- Buggy park
- Baby changing
- Ρ Parking
- Mobility scooters and wheelchairs available to book in advance

Find full venue details, including addresses, at sciencefestival.co.uk/venues.

If you have specific access requirements or need to book a wheelchair space, please call our Box Office on **0131 553 0320** or email boxoffice@scifest.co.uk

For information about accessibility provisions across the Festival. visit sciencefestival.co.uk/accessibility



BSL Interpreted

P.12	Walk Like an Astronaut sat 5 apr 11am gordon aikman lecture theatre
P.37	Less with Patrick Grant Sat 5 Apr 2pm Gordon Aikman Lecture theatre
P.37	Above and Below: An Astronaut's View of Our Planet sat 5 apr 7PM Gordon Aikman Lecture theatre
P.55	Pressed for Time: BSL Tour sun 6 apr 2pm royal botanic garden edinburgh
P.14	The Rocket Show sun 13 apr 11am National Museum of Scotland
P.45	The Genetic Book of the Dead MON 14 APR 6.30PM MCEWAN HALL

Accessibility at City Art Centre

DiscoveryLab is a vibrant and exciting space that at times may be overwhelming for some people. We have sensory backpacks and ear defenders available free of charge from the ticketing desk on the ground floor, and a Quiet Space on the fourth floor where you can take a breather from the noise. These are available to all, particularly visitors with autism or other sensory needs.





Our planet is in crisis and the effects of climate change are being felt all over the world. Tackling it can often feel daunting and overwhelming, but we know that a better world is possible if we can work together now to create it. That's why sustainability has always been - and remains - a key theme throughout our programme.

Here are some highlights:

Climate for Kids

- **Spaceship Earth** P.16 SAT 5-SUN 20 APR | 10AM-5PM NATIONAL MUSEUM OF SCOTLAND
- Brick Botanics THU 10 APR | 12PM-4PM **ROYAL BOTANIC GARDEN EDINBURGH**
- Step to Sustainabilitu SAT 12 APR | 6PM | EDINBURGH ZOO
- The Ocean & Our Climate P.30 SUN 13-SUN 20 APR | 12PM-4PM DVNAMIC FARTH

Climate for Adults

- **Less with Patrick Grant** SAT 5 APR | 2PM | GORDON AIKMAN
- LECTURE THEATRE A Climate of Truth
- NATIONAL MUSEUM OF SCOTLAND
- **Edinburgh Medal Address:** NAVIGATING HUMANITY'S FUTURE ON EARTH WED 16 APR | 7PM | CITY CHAMBERS
- Shaping a Better World NATIONAL MUSEUM OF SCOTLAND

Doing our Part

We work hard to be as sustainable as possible when running the Science Festival. Many of the materials, sets and artwork that you will see throughout the Festival are reused year-on-year to eliminate waste. Where we create new exhibitions, we use recycled materials or materials we know can be repurposed and this programme is printed on FSC accredited paper from a responsible source. We have implemented policies that discourage internal UK flights by both staff and our Festival quests, and we encourage travel by bike and bus throughout the Festival.

Bringing Together Leaders for Change

To make substantial progress in the fight against climate change, we need action from those in power. Since 2019, we've been running our Climate Co-Labs - round-table discussions that bring together politicians, business leaders and decision-makers to tackle complex climate problems head-on.

Our Co-Labs spark collaboration, unlock potential solutions and drive change. This is a space where change-makers can create connections, find inspiration and crucially make climate change solutions into a reality.

Find out more at edinburghscience.co.uk/ climate-colabs

Climate Funding **Partners**

Baillie Gifford



HITACHI Inspire the Next

Hitachi Energy





VITAL **ENERGi**



Save the date!

Edinburgh International Children's Festival 24 May – 1 June 2025

What to expect at the Festival:

- 13 visually stunning theatre, circus and dance shows
- Inspiring performances to stimulate young minds

• CDINBVRGH• Scottish Government Ricghaltas na h-Alba

 Sat 24 May: Free Family day at the National Museum

Programme announced and tickets on sale from 25 March www.imaginate.org.uk

DISCOVERYLAB

Where science meets play

Play the role of scientist and let your curiosity run wild as you explore our living laboratory! Children aged 5–11 can also book entry to one of our premium workshops.

CITY ART CENTRE, MARKET STREET, EH1 IDE 9.45AM & 2PM | 3 HOURS SAT 5-SAT 19 APR (NOT OPEN SUNDAYS)

DiscoveryLab Tickets

CHILD AGED 0-2 FREE | CHILD AGED 3-4 & 6 CHILD AGED 5-11 & 16 [INCLUDES 1 BOOKABLE WORKSHOP] ADULTS & 8

REGISTERED DISABLED **&5** REGISTERED UNEMPLOYED **&5** [FOR EACH FAMILY MEMBER UP TO 6 PEOPLE, ID REQUIRED]

Tickets purchased at City Art Centre on the day of the event cost £1 more per ticket.

Please note that all activities have a minimum age recommendation, and some may not be suitable for younger participants. Children must be accompanied by an adult and, unfortunately, we do not issue tickets to lone adults.





Explore DiscoveryLab

Explore five floors of hands-on interactive activities the whole family can enjoy:



Science Studio

Let your creativity flow as art meets science! Learn about aerodynamics and how things balance in our hands-on crafty activities.



Curiosity Corner

Expand your mind while enjoying our mini-science cinema, enjoy *The Playroom*, an exhibition by artist **John Brown**, or take a break from the excitement in our Quiet Space.



Exploratorium

Little scientists can explore through play in this space designed for 3–4-year-olds, with engaging story time sessions and fun arts and crafts!



Power Plant

Get ready to experience a real lightbulb moment! Discover the science behind electricity and experiment with the green energy of the future.



It's time to tinker! Put your building skills to the test with a series of fun construction challenges, and design and race your very own land yacht.

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Accessibility at City Art Centre

DiscoveryLab is a vibrant and exciting space that at times may be overwhelming for some people. We have sensory backpacks and ear defenders available free of charge from the ticketing desk on the ground floor, and a Quiet Space on the fourth floor where you can take a breather from the noise. These are available to all, particularly visitors with autism or other sensory needs. Sponsor



Cirrus Logic is proud to support the Edinburgh Science Festival as it provides hands-on opportunities to explore how science, technology, and creativity can shape the future for all. cirrus.com



Choose Your Workshop

As part of a *DiscoveryLab* ticket, children aged 5–11 can also book entry to one of our premium workshops to enjoy during their visit. Will you help solve a crime in CSI: Crime Scene Investigation, create your very own slime in Splat-tastic or code a dancing robot in Creative Coding?



SPLAT TASTIC

AGES 5+

Ready to uncover dinosaur remains in our dig site? Millions of years ago, dinosaurs ruled the Earth – millions of years later, it's time to find out all about them!

AGES 5+

Take on the role of an animal conservationist in our totally wild workshop. Discover more about Scottish wildlife and the work being carried out to rewild the landscape.

AGES 5+ Get your goo on! Be creative with chemistry and design your own smelly slime to take home. Test its thickness and stickiness under the extreme conditions of our 'Splat-o-meter'.

AGES 7+

Introducing Marty – the dancing robot! Program Marty to follow commands and navigate an obstacle course. Host the coolest party in town and make Marty dance at our robot disco.

Supported by Seeby te

AGES 8+

A crime has been committed; can you help us solve it? Become a forensic scientist, study the crime scene and find the evidence. Can you solve the mystery and help us catch the criminal?











Walk Like an Astronaut

SHOWS

SHOW | AGES 7+ THE UNIVERSITY OF EDINBURGH GORDON AIKMAN LECTURE THEATRE SAT 5 APR | 11AM | 1 HOUR | £12/£8

🂩 BSLINTERPRETED

Join NASA astronaut and oceanographer Dr Kathy Sullivan for a mind-blowing leap into her adventures on Earth and in space. Learn how Kathy became the first American woman to walk in space and the first woman to visit the deepest spot in Earth's oceans, and hear what it's like to launch a space telescope so powerful it changed how we understand the universe. Kathy will be chatting to constantly curious science presenter Siân Bevan. This is your unmissable opportunity to ask an astronaut and eyeball an oceanographer!

The Ornithopter

SHOW | AGES 8+ ASSEMBLY ROXY THE SNUG SAT 5 APR | EVERY 15 MINUTES FROM 12PM-4PM | LAST ENTRY 3.45PM

15 MINS | £3

Look Up! To the Stars! A pioneering step in human powered flight, a visionary creation set to change the course of human history ... or maybe it's just a complete disaster. Follow one man as he races to set foot on the moon before anyone else. A celebration of spectacular failure based on the myth of Icarus, this new work-in-progress is an intimate walk-through performance experience. Please note this is a walking/ standing experience and the space is not wheelchair accessible. Presented by Tortoise in a Nutshell

The Ultimate Bubble Show

SHOW | AGES 3+ NATIONAL MUSEUM OF SCOTLAND AUDITORIUM SAT 5 APR | 2PM & 3.45PM | 55 MINS

SAT 5 APR | 2PM & 3.45PM | 55 MINS £12/£8

Help Ray, International Bubbleologist (yes, that's a real job!) and Guinness World Record Holder, on his quest to make... THE ULTIMATE **BUBBLE!** This family-friendly show is packed with surprises as Ray uses all his scientific know-how to create incredible bubble sculptures and magical displays, Expect a volcano bubble, a soap bubble carousel. a bubble ghost and even a tornado inside a bubble. This is chemistry as you've never seen it before!

Presented by Paris Bubbles Entertainment



Incredible Inventions

SHOW | AGES 6+ NATIONAL MUSEUM OF SCOTLAND AUDITORIUM SUN 6 APR | 11AM | 45 MINS | £12/£8 Join Blue Peter awardwinning cartoonist Mike Barfield for a hilarious rollercoaster ride through the amazing world of modern inventions from bubble-wrap to beefburgers and beyond! Complete with crazy costumes, crazy cats and an even crazier auiz, no show could be more inventive. So, strap yourself in and get ready for facts, family-friendly fun and full-on audience participation with more lightbulb moments than a fairground after dark! Presented by Piccadilly Press



The Unbelievably Creative AI Show

DYNAMIC EARTH | OZONE FRI 11 & SAT 12 APR

11AM.1.30PM & 3.30PM | 1 HOUR | £9 Can Artificial Intelligence be creative? In this interactive family show, you're the judge. Learn about AI, and look at our fun examples of art. fashion. and photography. Are they a product of human creativity, or generated by an algorithm? How would you feel if your crush sent vou a romantic poem written by a robot? What if your favourite comic book wasn't even drawn by a human? Help us explore if it's ever fair to use AI to create art. Presented by Dynamic Earth and

Digital Skills Education

Beastlands with Jess French

SHOW | AGES 8+ NATIONAL MUSEUM OF SCOTLAND AUDITORIUM SAT 12 APR | 11AM | 1 HOUR | £12/£8 Put on your explorer hat, grab your magnifying glass and get your imagination ready in this show that explores the animal kingdom and encourages you to imagine vour own fantasy beasts. complete with animal noises! Be transported to a magical world full of imaginative creatures with presenter of the BBC's Minibeast Adventure with Jess and zoologist Jess French. Jess shows how she uses her knowledge of conservation and her experience as an animal handler on the BBC's Live 'n' Deadly series to inspire her children's books. It's going to be roar-some! Presented by Piccadilly Press





The Rocket Show

SHOW | AGES 7+

NATIONAL MUSEUM OF SCOTLAND AUDITORIUM

SUN 13 APR | 11AM & 2.30PM | 45 MINS **£12/£8** | **bsl interpreted** | 11AM

Join our back-yard scientist and discover what it takes to build a rocket fit for space. In this explosive family-friendly adventure, delve into rocket science by exploring forces and test materials as we prepare for launch. So strap-in, countdown and blast-off for a show that's out of this world.

Presented by Edinburgh Science



Mission Bake: From Bake Off to Blast Off

SHOW | AGES 5+ NATIONAL MUSEUM OF SCOTLAND

MISSION BAKI

AUDITORIUM

FRI 18 APR | 11.30AM | 1 HOUR | £12/£8

Are you ready to see some "out-of-this-world" treats? Join scientist and *Great British Bake Off* finalist **Josh Smalley** as he showcases the wonders of space through the art of baking. From edible meteorites to macaron planets, *Mission Bake* will have you rocketing home to your kitchen to have a try for yourself. Presented by Josh Smalley

The Easter Baking Show

SHOW | AGES 6+

NATIONAL MUSEUM OF SCOTLAND AUDITORIUM

FRI 18 APR | 2.30PM | 1 HOUR | £12/£8

From hot cross buns to chocolate eggs, join chemist and *Great British Bake Off* finalist **Josh Smalley** as he explores the science behind our Easter treats. He will journey through the transformations happening inside our mixing bowl and provide an insight into the look and flavour of our delicious creations. Packed with live baking and a sprinkle of science demos, prepare to have your taste buds tantalised and discover the hidden world of your Easter favourites.

Shows

Presented by Josh Smalley



NATIONAL MUSEUM OF SCOTLAND



5

National Museum of Scotland

SATURDAY 5-SUNDAY 20 APRIL | 10AM-5PM CHAMBERS STREET, EDINBURGH, EH1 1JF

FOR EVENING TALKS & DISCUSSION EVENTS, ENTER THROUGH LOTHIAN STREET DOORS

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One of Edinburgh's most iconic buildings, the National Museum of Scotland houses treasures from around the world, all under one roof.

During this year's Science Festival, blast off on *Spaceship Earth* to find out how living among the stars can teach us a lot about living on a planet. Science fiction meets science fact in this exhibition in the Grand Gallery.

Enjoy explosive family shows, inventive workshops and fun drop-in activities throughout the day, and join us in the evening for our programme of talks and discussions for adults and young people [p.36].



THE UNIVERSITY of EDINBURGH

The University of Edinburgh works to connect science and society to make the world a better place. Discover science with real scientists from The University of Edinburgh during the Science Festival. Visit the Learning Centre at the National Museum of Scotland for family-friendly activities, and keep an eye out for adult events throughout the programme.





SPACESHIP EARTH

Spaceship Earth

EXHIBITION | ALL AGES NATIONAL MUSEUM OF SCOTLAND GRAND GALLERY SAT 5-SUN 20 APR | 10AM-5PM | DROP-IN | FREE

Look to the stars and see if the science of space travel might hold the solutions to Earth's climate crisis in this brand-new interactive exhibition.

Explore what life is like on board the International Space Station, where technology is used to carefully manage its finite resources, and imagine how these groundbreaking innovations could be used here on Earth to ensure the planet is thriving and sustainable 100 years from now.

Spaceship Earth draws inspiration from a collision between science fact and science fiction, questioning how we might live better on Earth.





Solutions in the Stars

Do you want to live like an astronaut? On board a space station, every gram of material and watt of energy is precious - join us as we look Earthwards to see how we can take that approach at home.

From water and air to food production and energy, see the current technology and future ideas that take inspiration from the space industry, including world leading innovation coming from Scotland, that could re-design everyday life to run on less.

Our science communicators are on hand to bring the story to life, demonstrating how astronauts adapt their daily lives to live with limited resources.

Creating the Future

The best innovation happens when you think creatively! Take inspiration from creative thinkers in the arts and science and imagine what a thriving Earth could look like in 100 years' time. Build your vision out of LEGO[®] and add it to our collaborative installation.



Sci-Fi Futures

We paired Scotland-based science fiction writers **Martin MacInnes**, L R Lam and Eris Young with scientists to explore what a future sustainable world could look like. From these discussions, the writers have created three commissioned pieces that imagine a utopian future living within our means. Learn more about the development process and read extracts of their work in this exhibition.

Don't miss our *Sci-Fi Futures* [p.40] event, where you can hear about the experience of the project from the writers themselves.

Alongside these pieces of writing, we're displaying the winning pieces from our sci-ku (science haiku) competition. The winning entries from Scottish entrants in the primary school, secondary school and all ages categories perfectly share their vision of the future in a constrained sci-ku format, echoing the challenge of constrained resources.

All these writings are accompanied by illustrations representing the authors' future worlds by graphic illustrators from Edinburgh College of Art.

Presented by Edinburgh Science Supported by













Illustration: Kirstin Bone

Discover Our Science with The University of Edinburgh

ACTIVITY | ALLAGES

NATIONAL MUSEUM OF SCOTLAND EVENT SPACE

MON 7-THU 10 & MON 14-THU 17 APR 10.30AM-4.30PM | DROP-IN | FREE What's it like to work in a laboratory? How are scientists working to better understand our world? What mysteries are they trying to solve? Meet our scientists and researchers and discover what they're working on in our drop-in space and have a go yourself. We'll be joined by researchers in biology, psychology, maths, artificial intelligence, design and medicine who will share what they're up to and why. Activities will be different each week of the Festival! Presented by The University of Edinburgh

Moral Minds

ACTIVITY | AGES 6+ NATIONAL MUSEUM OF SCOTLAND EVENT SPACE MON 7-THU 10 APR | 10.30AM-4.30PM

DROP-IN | FREE Calling all child scientists – come along and participate in developmental science! We're conducting a survey that aims to understand how children and adults think about conservation and insects – meet our researchers, answer some questions and draw your own conservation poster, We offer prizes to those who take part! Presented by The University of Edinburgh



Build a Plant

ACTIVITY | AGES 8+ NATIONAL MUSEUM OF SCOTLAND LEARNING CENTRE LEVEL 4, STUDIO 2 MON7 APR | 11AM, 2PM & 3.30PM 1 HOUR | & 6 | FREE FOR ACCOMPANYING ADULT

Have you ever wondered why plants look so different? Join our plant scientists to explore the amazing world of plants! In this hands-on workshop. you'll build your very own plant avatar choosing from various shapes, sizes and traits. Face challenges and adapt to see if your plant can survive the daily stresses plants face. Will your plant stand the test of time? Discover the science behind the incredible diversity of plants and see if you can build the ultimate survivor! All children must be accompanied by an adult. Presented by The University of Edinburah

Your Amazing Brain!

ACTIVITY | AGES 5+

NATIONAL MUSEUM OF SCOTLAND

LEARNING CENTRE LEVEL 4, STUDIO 2 TUE 8 APR | 11AM, 2PM & 3.30PM 1 HOUR | **&6 | FREE FOR**

ACCOMPANYING ADULT

Your brain is amazing – it controls every move you make, stores all your thoughts and memories, sorts through your senses and more. So how can you help your brain grow and keep it healthy? Come along to this hands-on workshop to discover amazing brain facts, learn how we can protect and support our brains every day, and build your own brain! All children must be accompanied by an adult.

Presented by The University of Edinburgh





Light Lab

ACTIVITY | AGES 8+ NATIONAL MUSEUM OF SCOTLAND LEARNING CENTRE LEVEL 4, STUDIO 2 WED 9 APR | 11AM, 2PM & 3.30PM

1HOUR | &6|FREEFOR

ACCOMPANYING ADULT

Join the U-Care team to learn about the fascinating world of ultraviolet (UV) light. Through interactive activities and hands-on demonstrations, discover the how, where, and why of UV light. Explore why bees can see UV light, why sunscreen protects our skin, and how we could use UV light to treat brain tumours. Discover how UV light impacts the natural world around us and see if you have what it takes to be a laser brain surgeon! All children must be accompanied by an adult. Presented by The University of Edinburgh

Crystal Explorers

ACTIVITY | AGES10+ NATIONAL MUSEUM OF SCOTLAND LEARNING CENTRE LEVEL 4, STUDIO 2 THU 10 APR | 11AM, 2PM & 3.30PM 1HOUR | & 6 | FREE FOR ACCOMPANYING ADULT

Ready to unlock the secrets of nature's gems? Join scientists for an exciting adventure into the world of crystals! Explore everyday crystals like salt and sugar. as well as fascinating crystals lab-grown by our own expert. You'll then set up vour own crystal-growing experiment to grow at home. Become a Crystal Explorer, learn awesome science and discover how to grow your very own crystals. Don't miss out on this hands-on, magical scientific experience! All children must be accompanied by an adult. Presented by The University of Edinburah

Code Your Own Mars Mission

ACTIVITY | AGES 8+

NATIONAL MUSEUM OF SCOTLAND

LEARNING CENTRE LEVEL 4, STUDIO 2 FRI 11 APR | 11AM, 2PM & 3.30PM 1 HOUR | **& 6 | FREE FOR**

ACCOMPANYING ADULT

Mars Rovers are robots designed to explore the surface of Mars, collecting and sending back important information. They have to work in an extremely remote place, with no one there to fix problems! Join us to learn how to use Scratch computer programming with a mini LEGO[®] rover to take on challenges just like the real ones face, such as avoiding obstacles and searching for water. Can you code a successful Mars mission? All children must be accompanied by an adult.

Presented by The University of Edinburgh



Decide Your Climate Future

ACTIVITY | AGES 8+

NATIONAL MUSEUM OF SCOTLAND

LEARNING CENTRE LEVEL 4, STUDIO 2 MON 14 APR | 11AM, 2PM & 3.30PM | 1 HOUR

£6 | FREE FOR ACCOMPANYING ADULT

The researchers at Edinburgh Climate Change Institute (ECCI) work to create a resilient Scotland. Climate change can cause us to worry but there are many things we are doing to protect our future – how do you imagine the future? Researchers from ECCI will showcase our climate change work and together we'll draw a vision of a thriving future, living with climate change.

All children must be accompanied by an adult. Presented by The University of Edinburgh

Let's Grow a Language!

ACTIVITY | AGES 8+

NATIONAL MUSEUM OF SCOTLAND

EVENT SPACE

MON 14-THU 17 APR | 10.30AM-4.30PM | DROP-IN | FREE Are you fascinated by languages? Come and learn our new language not spoken anywhere in the world. Take part in Edinburgh Meaning Science Lab's the research project, led by **Dr Wataru Uegaki** and help us discover if there is a universal pattern in all human languages. All children must be accompanied by an adult. Presented by The University of Edinburgh

Your Robot Friend

ACTIVITY | AGES 5+

NATIONAL MUSEUM OF SCOTLAND

LEARNING CENTRE LEVEL 4, STUDIO 2 TUE 15 APR | 11AM & 2PM | 1 HOUR

£6 | FREE FOR ACCOMPANYING ADULT

Come along and unleash your creativity at this art collage workshop! Design the robots (or any other kind of technologies) you want for the future, to help you at home, in school or in the hospital. Join researchers **Dr. Giulia DeTogni** (University of Edinburgh, Medical School) and **Dr. Marta Romeo** (Heriot-Watt University, Computer Science) as they guide you through this exciting exploration.

All children must be accompanied by an adult. Presented by The University of Edinburgh

Eye, Eye Doctor!

ACTIVITY | AGES 8+ NATIONAL MUSEUM OF SCOTLAND LEARNING CENTRE LEVEL 4, STUDIO 2

WED 16 APR | 11AM, 2PM & 3.30PM | 1 HOUR

£6 | FREE FOR ACCOMPANYING ADULT

Explore the fascinating world of eye health! Be an optometrist and take your own retinal images to uncover the mysteries of how our eyes reflect our overall well-being. Through games, art, and hands-on activities, you will learn about the vital role of eye health while having a blast at this unique event.

All children must be accompanied by an adult. Presented by The University of Edinburgh







Spacebound Minds

ACTIVITY | AGES 8+ NATIONAL MUSEUM OF SCOTLAND LEARNING CENTRE LEVEL 4, STUDIO 2 THU 17 APR | 11AM, 2PM & 3.30PM 1HOUR | & 6 | FREE FOR

ACCOMPANYING ADULT

Mission control have sorted out the basics – food, water, air – but the rest is up to you! Join scientists in building a space station where people of all ages can keep their brains and bodies healthy. Learn how everyday activities can shape our mental and physical wellbeing as you build and decorate the rooms of a model space station. Come back later to see the full transformation – see if you can spot your own 'happy place'!

All children must be accompanied by an adult.

Presented by The University of Edinburgh

Solving a Crime, Brick by Brick

ACTIVITY | AGES11+ NATIONAL MUSEUM OF SCOTLAND LEARNING CENTRE LEVEL 4, STUDIO 2 FRI18 APR | 11AM & 2PM | 1 HOUR

£6 | FREE FOR ACCOMPANYING ADULT

Explore a Lego[®] crime scene and try to crack the case in this forensic science workshop. Learn about the people involved in the investigation of crimes, the different types of biological evidence commonly recovered from crime scenes and how the experts analyse DNA. Put these skills to the test as you conduct your own investigation - gather evidence, build a DNA profile and see if you can catch the culprit! All children must be accompanied by an adult. Supported by

E-Waste Scavengers

ACTIVITY | AGES 7+

NATIONAL MUSEUM OF SCOTLAND EVENT SPACE

SAT 19 APR | 10.30AM, 11.45AM, 1PM, 2.15PM & 3.30PM | 1HOUR | &12 Become an e-waste scavenger and make some amazing robotic musical instruments from upcycled electronic junk. Become part of an electrical circuit with your friends, use scavenged parts from old computers to make a robotic chicken, and find out what a hacked CD ROM drive sounds like. Let's make some weird noisy toys!

Please note this workshop has a minimum age recommendation as it may not be suitable for younger participants. Children must be accompanied by an adult, and all participants require a ticket. Presented by Noisy Toys



Pational Museum of Scotland



Have a wild day out at Edinburgh Zoo!

With world-class attractions and a roar-some animal collection, you and your family will make memories to last a lifetime.

This Easter, get up close with some of the zoo's most incredible animals in family shows and unique workshops.

SATURDAY 5-SUNDAY 20 APRIL | 10AM-6PM 134CORSTORPHINEROAD, CORSTORPHINE, EDINBURGH, EH12 GTS

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Don't miss *Conservation and Cans* [p.51], an evening exploring Edinburgh Zoo's global conservation efforts that's just for adults!





Creatures of the Planet

SHOW | ALL AGES EDINBURGH ZOO SAT 5-SUN 20 APR | 11.45AM | 30 MINS

FREE WITH EDINBURGH ZOO ADMISSION

Join our expert animal experiences team in our engaging and fun animal antics shows. Meet some of our incredible animals as they showcase their remarkable natural behaviours and instincts. Experience the thrill of birds swooping over your head and even get involved in the show yourself! Presented by the Royal Zoological Society of Scotland

Spring Explorers

ACTIVITY | AGES 6-12

EDINBURGH ZOO MEMBERS GATE ENTRANCE TUF 8-THU 10 & TUF 15-THU 17 APR 10AM | 3 HOURS | £22 Join our Discovery and Learning team in an active and engaging 3-hour session that aims to deepen nature connections for younger audiences through visiting our animals and unique spaces here at Edinburgh Zoo. This is a drop-off experience for children only. Presented by the Royal Zoological Society of Scotland







Wildlife Adventurers

ACTIVITY | AGES 5+ EDINBURGH ZOO WED 9 & THU 10 APR | 11AM & 12PM 45 MINS

£5|FREEFOR

ACCOMPANYING ADULT

Discover our wildlife garden at Edinburgh Zoo where children can participate in experimental play and a range of fun engaging activities while learning how to use the natural resources around them.

All children must be accompanied by an adult. Edinburgh Zoo admission tickets must also be purchased for all visitors.

Presented by the Royal Zoological Society of Scotland

Step to Sustainability

EDINBURGH ZOO

SAT12 APR | GPM | 1HOUR 30 MINS | £10 Join us for an exclusive guided tour of the Zoo after closing led by one of our rangers followed by a talk at our new solar meadow. Learn amazing facts about the species we care for and our conservation work. Hear about our wildlife conservation charity's commitment to reduce its carbon footprint by 60% by 2030 and be net zero by 2040. Presented by the Royal Zoological Society of Scotland





Royal Botanic Garden Edinburgh is a world renowned centre for plant science and education, aiming to explore, conserve and explain the world of plants for a better future.

Visit the Royal Botanic Garden Edinburgh for interactive family activities, exhibitions for all ages and discussions for adults and young people.

SATURDAY 5-SUNDAY 20 APRIL | 10AM-5PM JOHN HOPE GATEWAY, ARBORETUM PLACE, EH3 5NZ EAST GATE, INVERLEITH ROW, EH3 5LR

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Don't miss their *Pressed for Time* exhibition [p.55] running throughout the Festival.

ROYAL BOTANIC GARDEN EDINBURGH

Botanics Lab

ACTIVITY | AGES 10-16 **ROYAL BOTANIC GARDEN EDINBURGH** BALFOUR SCIENCE BUILDING, 22A INVERLEITH ROW WED 9 APR | 2PM | 2 HOURS | £15 In this fun hands-on workshop, explore how scientists at the Botanics use plant DNA in the

quest to understand plants and their potential. Please note this is a different entrance to the Garden's two gates and is not accessible from inside the Garden. Presented by Royal Botanic

Garden Edinburgh

Plant Power

ONLINE | ALLAGES ONLINE WED 9 APR | 5PM & THU 10 APR | 9AM 30 MINS | FREE

Planet Earth, like all spacecraft, needs power to function. The light energy powering life on Earth has travelled 93 million miles of space from the Sun. taking just over eight minutes. The super power of plants is capturing and storing light energy. Join botanist Max Coleman on an Instagram livestreamed tour of the Garden looking at the wonderful world of leaves - the organs plants use to carry out the chemical wizardry of photosynthesis. Presented by Royal Botanic Garden Edinburgh

Brick Botanics

ACTIVITY | AGES 3+ ROYAL BOTANIC GARDEN EDINBURGH JOHN HOPE GATEWAY THU 10 APR I 12PM-4PM FREE, SIGN UP IN PERSON ON THE DAY FOR A 30MIN PLACE Can you imagine a city that is not only good for us, but also good for the planet? By bringing nature into our cities, we can do so much: reduce pollution, stop flooding, regulate heat waves, and help keep our minds and bodies healthy. Using LEGO® bricks, join our scientists to construct the city of the future where plants make a better place for us all. Build a wall of plants, a rain garden or even better, something that no one has invented yet. Speak to our scientists and find out what they are doing to make our cities better.

Presented by Royal Botanic Garden Edinburgh



Botanical Frontiers

ACTIVITY | AGES 5+ ROYAL BOTANIC GARDEN EDINBURGH JOHN HOPE GATEWAY SAT12 & SUN 13 APR | 12PM-4PM DROP-IN | FREE

Get ready for your journey to a new planet with scientists from the Botanics, and discover the surprising variety of plants you'll take with you. The Botanics' Herbarium contains 3 million plants in its collection: learn about some unusual ones you have never heard of and be amazed at how they are used here on Earth. Presented by Royal Botanic Garden Edinburgh

Planet Botanics

ACTIVITY | AGES 3+ ROYAL BOTANIC GARDEN EDINBURGH JOHN HOPE GATEWAY SAT 12 & SUN 13 APR | 12PM-4PM DROP-IN | FREE

You have landed on a new planet. What now – how are you going to survive? What will you build shelter with? What will you eat? How will you grow plants? Join the team at the Botanics and scientists from SRUC for fun hands-on activities to explore how to grow plants in a brave new world.

Presented by Royal Botanic Garden Edinburgh and Scotland's Rural College



Dynamic Earth is Edinburgh's science centre and planetarium that tells the extraordinary story of planet Earth, from beginning to mend. Through exhibitions and events, they open the eyes of all kinds of people about planet Earth – its origin, history, its place in the Universe, its present state and potential future.

SATURDAY 5-SUNDAY 20 APRIL 10AM-6PM [LAST ENTRY 4PM] HOLYROOD ROAD, EDINBURGH, EH8 8AS

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Families should not miss *The Unbelievably Creative AI Show* [p.12] or the exhibition *Tiny Archives of Earth and Time* [p.56]. Adults can also enjoy cult sci-fi films [p.52-53] and guided shows in the planetarium [p.42 &48].





Tiny Tales: Dynamic Earth's Spring Trail

ACTIVITY | ALLAGES DYNAMICEARTH | STRATOSPHERE SAT 5-SUN 20 APR | 10AM-4PM | DROP-IN

&4 PLUS ADMISSION TO DYNAMIC EARTH

Spring into adventure this April at Dynamic Earth with a trail like no other! Travel through time and explore our exhibition to find all sorts of baby animals from the tiny and cute, to the large and ferocious! Discover a host of curious creatures as you learn fun facts to complete our trail and collect a cuddly surprise at the end! Presented by Dynamic Earth

Outdoor Explorer Kits

ACTIVITY | AGES 5+ DYNAMIC EARTH | STRATOSPHERE SAT 5-SUN 20 APR | PICK UP/DROP OFF KITS DURING DYNAMIC EARTH OPENING TIMES | £10

Connect with nature in Edinburgh's great outdoors with our Outdoor Explorer Kits! Our kits will provide you with nets, pots and magnifying glasses for a creepy-crawly bug hunt, and you can also see how many animals you can spot with our tracks and trails kit! Kits can be collected from Dynamic Earth and returned during opening hours.

Presented by Dynamic Earth





Rainforest Adventure

ACTIVITY | ALLAGES

DYNAMICEARTH | STRATOSPHERE

SAT5-SAT12 APR | 12PM-4PM | DROP-IN | FREE Discover the tropical rainforest with Dynamic Earth's family drop-in activities! In a range of fun activities for the whole family, you'll come face to face with some tropical specimens, find out about the impact of deforestation on our planet and craft your own forest friend to

take home. Presented by Dynamic Earth

Meet the Sustainability Scientists

ACTIVITY | ALLAGES

DYNAMIC EARTH | STRATOSPHERE MON 7 APR | 10AM-4PM | DROP-IN | FREE

Meet the researchers from Heriot-Watt University and Edinburgh Napier University that are revolutionising fashion and sustainability! From tackling microplastic pollution and empowering sustainable fashion choices, to developing new technologies to tackle the climate crisis, you can get hands-on with activities and demonstrations that are helping mend the world around us.

Presented by Dynamic Earth, Heriot-Watt University and Edinburgh Napier University

Meet the Marine Scientists

ACTIVITY | ALLAGES **DYNAMIC EARTH | STRATOSPHERE** MON7-WED 9 APR | 10AM-4PM | DROP-IN | FREE Join the Scottish Association for Marine Science at Dynamic Earth. Meet marine scientists for some amazing activities looking at how they use satellites to monitor the polar seas from space! Learn all about climate change and how it's affecting our polar environments, and the impact it is having on the marine life and human populations that live there. Presented by Dynamic Earth and the Scottish Association for Marine Science

Animal Adventures

ACTIVITY | AGES 8+

DYNAMICEARTH | DISCOVERY BASES

TUE 8 APR | 10.30AM & 1.30PM | 1HOUR 30 MINS | £9 Have you ever wanted to track a tiger? How about tagging a turtle? In this family digital workshop, you can do just that! Explore the movements of animals using satellite information, program a satellite to spot different animals and explore why animals migrate across the globe.

Children must be accompanied by an adult and adults cannot participate without a child. All participants require a ticket.

Presented by Dynamic Earth



Planet Power

ACTIVITY | ALLAGES DYNAMICEARTH | STRATOSPHERE THU 10 APR | 10AM-4PM | DROP-IN FREE

If you love gems, volcanoes and all things rocky, join us at Dynamic Earth for a meet and areet with scientists from the British Geological Survey - the people who work with them every day! Did you know there are such jobs as space weather forecaster, deep sea mapper, or volcano landslide expert? Step into their shoes with dazzling displays and fun hands-on activities to find out the deep secrets of the Earth that can be unlocked by rocks. Presented by Dynamic Earth and the

British Geological Survey

Ocean Explorers

ACTIVITY | UNDER 5S DYNAMIC EARTH | DISCOVERY BASES THU 10 APR | 10.30AM & 1.30PM 45 MINS | £8 | FREE FOR ACCOMPANYING ADULT Dive deep into this early years session, where children and their grown ups can enjoy a fun mix of storytelling, singing and crafting, all based around the ocean! As we explore what makes our blue planet blue, you'll meet remarkable creatures, get hands on with real ocean specimens and craft your own ocean pal to take home, plus lots more fun activities.

Children must be accompanied by an adult, and adults cannot participate without a child.

Presented by Dynamic Earth



Dynamic Earth Family Outdoor Day

HOLYROOD PARK PARADE GROUNDS FRI 11 & FRI 18 APR | 11AM-3PM | DROP-IN FREE

Kickstart a family adventure in Holyrood Park with Dynamic Earth! Drop by and use our high-tech equipment to complete a weather report and work together to engineer rockets that can soar to great heights, plus lots more activities for the whole family, all in the great outdoors of Edinburgh's Holyrood Park! Children must be accompanied by an adult, and adults cannot participate without a child.

Presented by Dynamic Earth



Vastum Destinatio

Meet the Satellite Scientists

DYNAMICEARTH | STRATOSPHERE SAT 12 & SUN 13 APR | 10PM-4PM DROP-IN | FREE

Dive into the fascinating world of satellite imagery with SatSchool's interactive activities! Participate in exciting challenges like 'I Spy from the Sky' and 'Time Lapse Twins'. Each game is designed to spark curiosity and offer a glimpse into the incredible applications of Earth observation. Suitable for all ages, these experiences provide a fun, educational journey through the high-tech world of satellite imagery. Join us to explore, learn, and be amazed at what you can discover from a whole new perspective! Presented by Dynamic Earth and SatSchool

Earth From Above: Family Planetarium Screenings

DYNAMIC EARTH | PLANETARIUM SAT 12 APR (WALL-E) & SAT 19 APR (THE IRON GIANT) 10AM | RUNNING TIME VARIES BY FILM | &10

How do astronauts feel as they look down on our planet from above? How might you feel when the Earth only appears as big as your thumb? Join us in the Planetarium as we screen family-favourite sci-fi films *Wall-E* and *The Iron Giant* with an introduction from our astronomers. A chance for a little cosmic perspective on our small world in a big Universe. Join us under the stars for family fun!

Presented by Dynamic Earth

Ferrum Giganticus

The Ocean and Our Climate

ACTIVITY | ALLAGES DYNAMICEARTH | STRATOSPHERE SUN 13-SUN 20 APR | 12PM-4PM DROP-IN | FREE

Explore our ocean and discover how climate change is affecting us here in Scotland and beyond. Investigate how a changing ocean will affect sea creatures, separate fact from fiction when it comes to combatting climate change and get crafty with a range of activities for the whole family to enjoy!

Presented by Dynamic Earth

Meet the Scientists: The University of Edinburgh

ACTIVITY | ALLAGES DYNAMIC EARTH | STRATOSPHERE MON 14-WED 16 APR | 10AM-4PM DROP-IN | FREE

Join us at Dynamic Earth to meet The University of Edinburgh scientists working to better understand our world and how to tackle our climate and environmental crises. See first-hand how issues such as carbon emissions and freshwater shortages are being tackled, dive into the microscopic world of biofilms and ask if the potential of AI and supercomputing technologies of the future are worth the environmental costs. Presented by Dynamic Earth and The University of Edinburgh

Infinity & Beyond

ACTIVITY | UNDER 8S **DYNAMICEARTH | BIOSPHERE** MON 14 & TUE 15 APR 10.30AM, 12.30PM & 2.30PM | 45MIN £10 | FREE FOR ACCOMPANYING ADULT Get ready for blast off in an out-of-this-world session aimed at budding astronauts! We'll share a space story and take a look at real meteorites, before boldly going into **Dynamic Earth's Portable** Planetarium for a trip to the stars like no other! Children must be accompanied by an adult, and adults cannot participate without a child. Presented by Dynamic Earth



Icy Investigations

DYNAMIC EARTH | DISCOVERY BASES TUE 15 APR | 10.30AM & 1.30PM 1HOUR 30 MINS | &9 What will happen if the world keeps getting warmer? Why do we want to stop our ice caps melting? In this digital family workshop, you will explore these issues through a blend of coding and experimenting with

digital technology! Children must be accompanied by an adult and adults cannot participate without a child. All participants require a ticket.

Presented by Dynamic Earth

Jurassic Juniors

DYNAMIC EARTH | DISCOVERY BASES THU 17 APR | 10.30AM & 1.30PM | 45 MINS &8 | FREE FOR ACCOMPANYING ADULT Join us at Dynamic Earth for a roar-some early years session! Can you do a dinosaur stomp? Do you know your T-Rex from your Triceratops? Budding palaeontologists will love this session where we sing songs, get crafty and let out our inner dinosaur!

Children must be accompanied by an adult, and adults cannot participate without a child. Presented by Dynamic Earth

Meet the Scientists: Heriot-Watt University

ACTIVITY | ALLAGES DYNAMIC EARTH | STRATOSPHERE SAT19 & SUN 20 APR | 10AM-4PM DROP-IN | FREE Join us at Dynamic Earth and take a microscopic journey with researchers from Heriot-Watt University! Enjoy hands-on activities, meet some microorganisms and chat to the scientists who work with them on a day to day basis. Presented by Dynamic Earth and Heriot-Watt University





Family Day in Space

ACTIVITY | AGES 8+ ROYAL SOCIETY OF EDINBURGH. GEORGE STREET

SAT 5 APR | 11AM-3PM | DROP-IN | FREE Join us at the Royal Society of Edinburgh (RSE) for an out-of-this-world day of fun and hands-on learning. Let our experts lead you on an exciting iourney of exploration through space, answering questions on the possibility of life on other planets and the technologies of the future. Did we really land on the moon? Could the science fiction of Star Wars become a reality? What makes our sun so special? Could we live on another planet? Discover this and more during our fun, interactive celestial celebration of space, science, and technologies, at the RSE. Snacks and drinks will be available to purchase on the day. Under 18s must be accompanied by an adult. Presented by Royal Society of Edinburah



Higgs Theoretical Physics Walking Tour

TOUR | AGES 12+

THE UNIVERSITY OF EDINBURGH | OLD COLLEGE QUAD, SOUTH BRIDGE SAT 5, MON 7, SAT 12 & MON 14 APR | 3PM | 1 HOUR 30 MINS | £2 Discover Edinburgh's storied history of theoretical physics. This tour will guide you through the nooks and crannies of beautiful Edinburgh, highlighting places associated with extraordinary physicists who have called the Scottish capital home. You'll learn personal anecdotes about physicists whose names you'll recognise, as well as others who are less famous but no less interesting. Hear about their fascinating life stories and world-changing science in small groups led by physics lecturers and PhD researchers from the University. Please dress for the weather and wear suitable footwear. The route is step free and covers approximately 2.4km. Presented by The University of Edinburgh

Edinburgh's Veterinary History

TOUR | AGES 12+ SCOTTISH PARLIAMENT WED 9, FRI 11 & SAT 12 APR | 2PM 1 HOUR 30 MINS | £2

Join veterinary professor, Prof Andrew Gardiner and cairn terrier Annie for a creaturely walk exploring the history of veterinary education in Edinburgh. Learn about the links between human and veterinary medicine and discover how history influences veterinary education today. The 2km walk around central Edinburgh's veterinary landmarks starts at the Scottish Parliament public entrance and finishes at Summerhall. It includes a visit to All4Paws, the student-run veterinary outreach clinic on Nicolson Street. The walk includes hills, steps and some rougher ground. Presented by The University of Edinburgh

Wonders of Space Family Festival

ACTIVITY | ALL AGES

ARCHERFIELD WALLED GARDEN

FRI 11 APR | 10 AM & 1PM | 3 HOURS | & 3 Join us at Archerfield Walled Garden for a family festival of astronomical science! Dive into hands-on space-themed activities and uncover the fascinating science behind our solar system. Perfect for all ages, this celebration of space promises an educational and fun-filled experience. Be sure to also embark on a captivating tour of the solar system along the Dirleton Solar Walk. stretching from Archerfield Walled Garden to Dirleton Village. Sign up for a guided tour on the day, or enjoy a self-led tour at any time. Presented by Heriot-Watt University

AI for All: Designing Responsibly

ACTIVITY | ALLAGES EDINBURGH FUTURES INSTITUTE FRI 11 APR | 10AM-4PM | DROP-IN FREE

Natural Language Processing (NLP) is an area of AI underpinning technologies we use every day, including personalisation systems. voice assistants. translation tools and generative AI, such as ChatGPT. But how do we make these systems work best for humans, and ensure they are fair. accountable and transparent? Join us for a drop-in festival of exhibits. hands on activities and an opportunity to meet the next generation of researchers sharing their work and ideas of how we design and build a more responsible future. Presented by The University of Edinburgh







Tomorrow's Tech Today

ACTIVITY | ALL AGES HERIOT-WATT UNIVERSITY CAMPUS NATIONAL ROBOTARIUM FRI 11 APR | 10AM, 12.30PM & 3PM 1 HOUR 30 MINS | & 3

Can you help a Sphero find its way around a maze or score a goal with a clawbot? Dive into the fascinating world of robotics at the world-leading National Robotarium. Our expert scientists and engineers will show you how robots can make our lives safer, healthier and more productive. During an interactive self-guided tour, visit our high-spec labs, watch live demonstrations and meet our robots, including one the of world's most advanced humanoids. Under 16s must be accompanied by an adult.

Presented by The National Robotarium, Heriot-Watt University

Beach Explorers

ACTIVITY | ALL AGES BEACHES ABOUND EDINBURGH SEE OUR WEBSITE FOR DETAILS TUE 15-FRI 18 APR | 10AM, 11AM & 12PM 1HOUR | FREE BOOKING REQUIRED Join geologists from the Edinburgh Geological Society exploring geology on local beaches. Find out about the stories hidden under our feet and in every pebble. We'll discover an amazing variety of different pebbles, find out where they come from and what they tell us about Scotland's geology. Presented by Edinburgh Geological Society

Sustainable Skies

ACTIVITY | ALL AGES NATIONAL MUSEUM OF FLIGHT **CONCORDE HANGAR** MON 14-FRI 18 APR | 11AM-4PM | **DROP-INI FREE WITH ENTRY TO THE** NATIONAL MUSEUM OF FLIGHT Explore the future challenges faced by flight through fun, family activities. Join a guided tour of the Civil Aviation Hangar to find out more about the future of sustainable flight. Test yourself on our Sustainable Quiz as vou explore the museum. Challenge your group's ingenuity in our Shared Resources Game: your party has crashed in the jungle. Working together, you must choose which equipment to take with you to escape the jungle. Will you do better as a group or on your own? Presented by The National Museum of Flight

Around Edinburgh

Edinburgh Science in Schools

We are committed to supporting teachers and engaging students in the exciting world of science, technology, engineering and mathematics (STEM). Over the last 30 years, we have created positive, memorable and inspirational STEM experiences for students all over Scotland.

Primary Schools

Each year we bring *Generation Science*, our touring programme of science shows and workshops, into primary school classrooms all across Scotland. Our science communicators bring everything with them, so whether visiting a school in inner-city Edinburgh or a rural school in Shetland, pupils can enjoy the exact same experience.

Over 50% of the programme is delivered for free, with all other state schools receiving their visit at a heavily subsidised rate.



Be a Catalyst - Create Change

Our Catalysts are a dedicated group of individuals who share our vision to inspire, encourage and challenge people of all ages and backgrounds to explore and understand the world around them.

Please consider making a philanthropic gift to support our year round work, making science accessible to school pupils and community groups, inspiring the next generation of innovators and change makers.

For more information on becoming a Catalyst, visit **sciencefestival.co.uk/individual-giving**



Secondary Schools

To ensure pupils' passion for STEM is nurtured, we run *Careers Hive* – a skills and careers event for early year secondary pupils. This free, interactive event allows pupils to meet early-career STEM professionals, broaden their understanding of STEM careers and see where their skills, interests and strengths may lead them in the future. Reaching pupils at the point when they begin to choose their subjects, *Careers Hive* champions the wide benefits of further studying STEM subjects.

We are able to run our school projects thanks to the generous support of our supporters [p.58].

If you are a teacher or parent who wants to find out how your school can get involved with one of our programmes, visit edinburghscience.co.uk/schools for more information.

With Thanks to our Catalysts

Benefactors David Milne The Nimar Charitable Trust

Patrons

Paul Atkinson Janet Brown Brendan Dick Edina Trust Richard Kimberlin Chris Masters Ian Ritchie

Innovators

Joe Faraday Ron Inglis Dawn Robertson Ian Wall

And all those who wish to remain anonymous

Edinburgh Science Foundation – Registered Charity No. SC003790





You can find a complete listing of all our adult events, including our science nights out, on [p.59].

Big Ideas, Small Prices

Early Bird Tickets

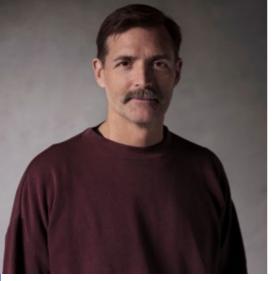
Save $\underline{\hat{E}}2$ per ticket on our talk and discussion events at the National Museum of Scotland and The Bayes Centre if booked before Sunday 9 March. Call the Box Office or book online using the code EARLYBIRD25.

Talks for Teens

Aged 12–18? Enjoy the wonders of STEM for less with £5 tickets available for all talk and discussion events at the National Museum of Scotland and The Bayes Centre.











Sat 5 April

The Art of Rocks

ACTIVITY | AGES14+ DYNAMIC EARTH | DISCOVERY BASES SAT 5 & SAT 12 APR | 11AM & 2PM 1 HOUR 30 MINS | &12

Rocks are all around us but we rarely pay attention to them. In this relaxed science art workshop with science illustrator **Vojta Hýbl**, get inspired by the building blocks of our planet. Using a range of beginner-friendly approaches, we will explore rocks from both scientific and artistic points of view to get to know them better and draw our way into a different understanding of geology.

Presented by Dynamic Earth and Rocks on Paper

Less with Patrick Grant

DISCUSSION | AGES12+ **THE UNIVERSITY OF EDINBURGH** GORDON AIKMAN LECTURE THEATRE SAT 5 APR | 2PM 1HOUR30 MINS | **£18/£14**

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Clothes are important. They define who we are, impact our mood and influence how people think of us. Today the average person buys 60% more clothes than they did 15 years ago and wears them for half as long. Last year 100 billion garments were made worldwide, most by workers paid virtually nothing and 70% from plastic textiles that don't recycle. Join Director of Community Clothing and judge on the BBC's Great British Sewing Bee Patrick Grant in conversation with sustainability journalist and author of To Die For: Is Fashion Wearing Out the World Lucy Siegle as they consider the crisis of consumption and quality in fashion. Presented by Harper Collins

Above and Below: An Astronaut's View of our Planet

DISCUSSION | AGES 12+

THE UNIVERSITY OF EDINBURGH GORDON AIKMAN LECTURE THEATRE SAT 5 APR | 7PM

1HOUR 30 MINS | £18/£14

BSL INTERPRETED

Join NASA astronaut and oceanographer Dr Kathy Sullivan for an unmissable opportunity to hear firsthand from the first American woman to walk in space, and the first woman to visit the deepest spot in the oceans about her unparalleled experiences. Kathy will be in conversation with Dr Hermione Cockburn. Earth scientist and former BBC presenter. Kathy will talk about her time as a crew member on three Space Shuttle missions, her role in deploying the Hubble Space Telescope. as well as her dive to the Challenger Deep.

E | Talks and Discussions

Science Festival Church Service

TALK | AGES 12+

ST GILES' CATHEDRAL, HIGH STREET

SUN 6 APR | 11AM | 1 HOUR | FREE

The Lord Provost of Edinburgh and the Minister of St Giles' Cathedral warmly invite you to the annual church service celebrating the Edinburgh Science Festival. This year's featured speaker is **Dr Simon Gage**, former Director and CEO of Edinburgh Science. Simon will reflect on the Scottish scientific landscape and the issue of climate and sustainability which underlies this year's Festival theme, *Spaceship Earth*.

Presented by Edinburgh Science and St Giles' Cathedral



Tam Dalyell Prize Lecture

TALK | AGES18+ OLD COLLEGE, SOUTH BRIDGE PLAYFAIR LIBRARY

SUN 6 APR | 6PM | 1HOUR 30 MINS | FREE

Mosquitoes might be the world's most dangerous animal, but they are also a cool (and creepy) tool for encouraging an interest in biology. **Dr Aidan O'Donnell** and **Dr Petra Schneider** use their research to help pupils experience being a scientist and improve teachers' confidence with STEM. Reece Lab on Tour focuses on rural schools with less access to universities or scientists, providing hands-on activities supported by professional learning for teachers and resource boxes. They have been awarded the University of Edinburgh's Tam Dalyell Prize for Excellence in Engaging the Public with Science in recognition of their work. Presented by The University of Edinburgh

Mon 7 April

FameLab UK: Scottish Finals

TALK | AGES12+

NATIONAL MUSEUM OF SCOTLAND

AUDITORIUM MON7APRIL|6PM

1HOUR 30 MINS | £16/£12

Join us for the ultimate evening of guick-fire science as we host the Scottish **Regional Finals of FameLab** UK. Scotland's best new voices in science, technology and engineering will each have just three minutes to convey a scientific concept to you and our expert panel of judges, before a winner is chosen to represent Scotland at the final of FameLab UK. Packed with FameLab's 3 C's - Content, Clarity and Charisma - this will be an unmissable night of fun, facts and fabulous entertainment. Get ready to make some noise! Presented by Edinburgh Science and Cheltenham Festivals



Who Wants to Live Forever?

DISCUSSION | AGES12+ THE UNIVERSITY OF EDINBURGH BAYES CENTRE, ROOM G.03 MON 7 APR | 7PM | 1 HOUR 30 MINS | £12/£10

Life-spans across the world are increasing, but this often overlooks the health-span: the period of life spent healthy and disease-free. So how do we ensure that later life is a healthy life? Join Professor of Elderly Care **Gillian Mead**, Patient and Public Involvement Coordinator **Daria Ihnatenko**, Senior Lecturer in Global Health Policy **Dr Emily Adrion**, Artificial Intelligence expert **Prof Jacques Fleuriot** and Immunologist **Prof Neil Mabbott**, for an interactive session discussing what healthy ageing means to us, the challenges we face as a society, and how science and artificial intelligence can support healthy ageing.

Presented by The University of Edinburgh





💿 💿 women in



Representation remains vitally important in the world of science, technology, engineering and mathematics (STEM), and the Edinburgh Science Festival are proud to champion the achievements of women in science and science communication.

We strive to promote, encourage and inspire the next generation of women in STEM by showcasing amazing women in a series of panel events and discussions. Here are just some of the highlights from this year's programme:

P.37	Above and Below: An Astronaut's View of Our Planet SAT 5 APR 7PM GORDON AIKMAN LECTURE THEATRE
P.41	The Beauty of Falling TUE 8 APR 8PM NATIONAL MUSEUM OF SCOTLAND
P.43	Transplanting Hope Thu 10 Apr GPM NATIONAL MUSEUM OF SCOTLAND
P.44	Demystifying the Menopause SUN 13 APR GPM NATIONAL MUSEUM OF SCOTLAND
P.48	Memory Lane: The Imperfect Ways We Remember FRI 18 APR I GPM

NATIONAL MUSEUM OF SCOTLAND

Tue 8 April

Professors for a Better World

TALK | AGES18+

THE UNIVERSITY OF EDINBURGH, HOLYROOD CAMPUS PATERSON'S LAND, LECTURE THEATRE G1 TUE 8 & THU 17 APR | 5PM | 2 HOURS 30 MINS | FREE Discover how our professors are using creativity and collaboration to drive innovation and improve health for people, animals, and our planet. Join us as they share the personal stories behind the science shaping their ground-breaking research. The events will include a series of talks and will be followed by a drinks reception.

Presented by The University of Edinburgh



Illustration Rebecca Tate

40

Air Quality Stripes: A Global History of Air Pollution

DISCUSSION | AGES 12+

THE UNIVERSITY OF EDINBURGH

BAYES CENTRE, ROOM G.03

TUE 8 APR | 6PM | 1 HOUR | £12/£10

From Edinburgh's days as 'Auld Reekie' and London's 'Pea Souper' smogs, to the toxic haze of modern-day Delhi, air pollution has plagued city dwellers for centuries. So take a deep breath and take a journey through the global history of air pollution. Guided by the 'Air Quality Stripes,' we'll explore how pollution levels have shifted across the world. Discover the science behind the data and gain insights into the air quality challenges – and solutions – for a healthier future. Presented by The University of Edinburgh

Sci-Fi Futures

DISCUSSION | AGES 12+

NATIONAL MUSEUM OF SCOTLAND | AUDITORIUM TUE 8 APRIL | GPM | 1HOUR 15 MINS | £16/£12 What future for our fragile planet? In this creative collision of science fiction and science fact, we have brought together Scottish writers Martin MacInnes, L R Lam and Eris Young, and Professor of Applied Space Technology and Scotland's leading space expert Prof Malcolm Macdonald to commission three brand new writings envisioning a utopian future truly living within our means. Hear exclusive first readings and unpick how their shared ideas grew through this exciting collaboration between Edinburgh Science Festival and Edinburgh International Book Festival. Chaired by Chartie Pike.

Presented by Edinburgh Science and Edinburgh International Book Festival



Developed with support from Creative Scotland through the Scottish Government's Festivals Expo Fund



Who Dunit?

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

TUE 8 APR | 6.30PM | 1 HOUR | &6 Ah. mes amis! Join us at the Royal College of Physicians of Edinburgh for an evening of intrigue, analysis and deduction. Experience a unique behind-the-scenes tour of the oldest medical library in Scotland while you delve into the ghastly and most extraordinary world of historic forensic science. Exercise your little grey cells as we uncover the intricacies of decomposition, delve into the depths of forensic psychiatry, explore the realm of amateur detectives and analyse the actual murder weapons collected by Edinburgh's esteemed forensic expert, Sir Sydney Smith. Do not miss this opportunity to satisfy your curiosity and awaken your inner detective. It will be an evening to remember. I assure you. À bientôt mes amis, my little grey cells bid you adieu! Presented by Royal College of

Physicians of Edinburgh

The Beauty of Falling

TALK | AGES 12+ National Museum of Scotland Auditorium

TUE 8 APR | 8PM | 1 HOUR | £16/£12 The brightest scientists in history have yet to fully answer the simple question: what exactly is gravity? Prof Claudia de Rham has been playing with gravity her entire life. As a pilot. As a diver, experimenting with buoyancy. As an astronaut candidate, dreaming of flying free from Earth's pull. And as a physicist, exploring the limits of Einstein's general theory of relativity. Join this world-renowned physicist as she shares captivating stories about our surprising. gravity-driven universe and what led her to develop a new theory of "massive gravity". Presented by Princeton University Press

Wed 9 April



Nature's Undertakers

ACTIVITY | AGES14+

THE UNIVERSITY OF EDINBURGH BAYES CENTRE, ROOM G.03

WED 9 APR | 6PM | 1 HOUR 10 MINS £12/£10

Discover the fascinating world of burving beetles. Find out about their crucial role in ecosystems and dive into their amazing lives through hands-on activities. Use microscopes to look at beetles up close. observe their behaviour, and practice research handling techniques. This experience offers a closer look at nature's undertakers and their essential recycling work. Perfect for curious minds and nature enthusiasts alike. Presented by The University of Edinburgh

Thu 10 April

Alzheimer's: To Test or Not to Test

DISCUSSION | AGES 12+ National Museum of Scotland Auditorium

WED 9 APR | 6PM | 1 HOUR 15 MINS £16/£12

We are on the cusp of a diagnostic revolution. Soon it will be possible to diagnose health conditions such as Alzheimer's years ahead of time - but would you want to know? Our panel of experts put together by the University of St Andrews will tackle the complex questions that society must face. Should the state provide these tests? What are the implications for our emotional. physical and financial wellbeing? Hear all sides of the argument from researchers. economists, lawyers and patient advocates, ask your questions and cast your votes on this ethical dilemma. Presented by University of St Andrews

Clean Energy Communities

DISCUSSION | AGES 12+ National Museum of Scotland Auditorium

WED 9 APR | 8PM | 1 HOUR 15 MINS £16/£12

Scotland has set ambitious targets for achieving net zero carbon emissions, but with 80% of Scottish buildings currently reliant on fossil fuels. how can this be achieved? Heat networks offer a low carbon, low-cost solution. Join experts in low carbon solutions Vital Energi and grassroots movement Clean Heat Edinburgh Forum for a myth-busting discussion on the potential of heat networks as a tool against climate change and the rising cost of living. Bring your guestions and learn what this means for vour local community. Chaired by environmental scientist and climate campaigner Laura Young.

Supported by



Planetarium Lates: You Are Here

SHOW | AGES18+ DYNAMICEARTH PLANETARIUM THU 10, FRI 11 & SAT 12 | 6PM | 45 MINS £12/£10

Take a journey across the Solar System with spectacular stops along the way as we push the boundaries of human space exploration. As we venture further from Earth, we will remember to look back our home in space - the pale blue dot. The Earth is the only known world to harbour life. and that life has been on an extraordinary journey. Join our expert astronomers on that iourney and delve deeper into the Universe than ever before. Presented by Dynamic Earth



Transplanting Hope

DISCUSSION | AGES 12+ NATIONAL MUSEUM OF SCOTLAND AUDITORIUM THU 10 APRIL | 6PM | 1 HOUR 15 MINS

£16/£12

The first UK human womb transplant took place in 2023. This incredible milestone has extended hope to the 1 in 5.000 UK women without a viable womb. Join renowned surgeons and co-leaders of this research programme Prof Richard Smith and Miss Isabel Quiroga as they share the extraordinary story of a 25-year journey to the moment they changed history. Their mission continues to help those who were born without a womb or have lost their womb due to illness to realise their wish of giving birth to their own child. Presented by Edinburgh Science

Illuminating Hidden Worlds

DISCUSSION | AGES 12+ THE UNIVERSITY OF EDINBURGH BAYES CENTRE, ROOM G.03 THU 10 APR | 7PM | 1 HOUR 30 MINS

£12/£10

Positron Emission Tomography (PET) scans are an everyday part of medical imaging but they sound like science fiction. relving on tiny particles of antimatter to reveal what's going on in the body. Join Prof Adriana Tavares and her team of PET pioneers to learn how they're pushing the boundaries of this technology, using PET to trace the connections in our brains, understand more about the way we age, and even keep an eye on the health of our planet.

Presented by The University of Edinburgh

Quantum Music

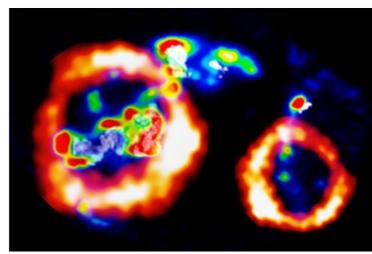
TALK | AGES12+

NATIONAL MUSEUM OF SCOTLAND | AUDITORIUM THU 10 APRIL | 8PM | 1 HOUR | £16/£12

The fields of quantum physics and music seem worlds apart, but theoretical physicist and industrial musician **Prof Bob Coecke** is here to open our minds and ears. The former Oxford University professor and founder of rock/electronica fusion band **Black Tish** gives a revolutionary perspective on quantum, using his picture-based framework for explaining quantum to a mass audience. Bob illustrates how the coming quantum revolution can be used to compose new kinds of music and will "play his guitar on a quantum computer".

Presented by Quantinuum







Fri 11 April

P.42

Planetarium Lates: You Are Here GPM | DYNAMIC EARTH

Desert Future

FILM | AGES 12+ THE UNIVERSITY OF EDINBURGH BAYES CENTRE, ROOM G.03 FRI 11 APR | 7PM | 1 HOUR 15 MINS £12/£10

Far from being lifeless or lawless, deserts are dynamic places where indigenous knowledge offers much to society - and they cover over a third of land on Earth. Can arid lands be spaces for new ecological world-making? Might 'water wars' or 'making the desert bloom' suggest alternative futures that place drylands at the heart of our thinking? This film screening of Wanuri Kahiu's Pumzi and discussion explores climate fiction. environmental humanities, history of science and Black/Africana studies. Presented by The University of Edinburgh



image: ©Jenny Smith

Sat 12 April



You Are Here GPM | DYNAMIC EARTH

Sun 13 April

Demystifying the Menopause

TALK | AGES12+ NATIONAL MUSEUM OF SCOTLAND AUDITORIUM SUN 13 APRIL | 6PM | 1 HOUR £16/£12 Join women's health expert and documentary-maker Kate Muir for a groundbreaking discussion busting myths and sharing the latest science about the menopause. Known for her activism and approachable, practical advice. Kate has written a book on the menopause and produced two documentaries for Channel 4 with Davina McCall, and another on the pill. Have vour questions answered about women's health and explore why understanding the perimenopause and menopause is critical for everyone.

Presented by Simon and Schuster



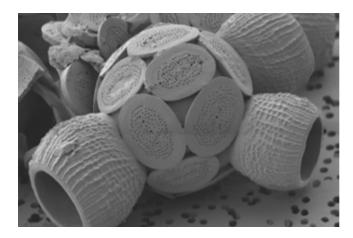
Mon 14 April

The Genetic Book of the Dead

DISCUSSION | AGES12+

MCEWAN HALL

MON14 APR [6.30PM] HOUR 15 MINS | £35-£20] BL INTERPRETED Join one of the world's most eminent writers and thinkers **Prof Richard Dawkins**. The award-winning author of *The Selfish Gene*, *The Blind Watchmaker* and *The God Delusion* introduces his latest groundbreaking book, *The Genetic Book of the Dead*, exploring of the power of Darwinian evolution and what it can reveal about the past. This is an unforgettable opportunity to hear from one of the world's leading scientific figures and to unlock the door to evolutionary history, seen through wholly new eyes. Presented by Edinburgh Science



Nature's Architecture

ACTIVITY | AGE 12+ THE UNIVERSITY OF EDINBURGH JOSEPH BLACK BUILDING KINGS BUILDINGS MON 14 APR | 7PM | 1 HOUR 30 MINS

£12/£10

Explore the microscopic world around us in the chemistry research laboratories at The University of Edinburgh. You'll discover how the microstructure of shells and bones determines the strength and resilience of skeletons. and ultimately where animals can survive and what they can do. Try your hand at using an electron microscope to see these fascinating structures for vourself. and meet the researchers working to understand how living organisms control the creation and use of these intricate crystals. Presented by The University of Edinburgh

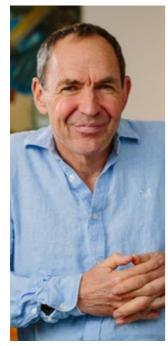
Tue 15 April

A Climate of Truth

TALK | AGES12+ NATIONAL MUSEUM OF SCOTLAND AUDITORIUM

TUE 15 APR | 6PM | 1 HOUR | £16/£12 We have all the technology we need to live better than ever before, and yet humanity is still accelerating into a climate emergency. Sustainability expert Prof Mike Berners-Lee looks at the challenge from new angles, and reveals how the need for radically higher standards of honesty in our politics, media, and business is the single most critical point of leverage for those seeking change. Berners-Lee shows what all of us can do to be part of the evolution that humanity so urgently needs to deal with the polycrisis.

Presented by Cambridge University Press



Bright Ideas in Medicine

DISCUSSION | AGES 12+ THE UNIVERSITY OF EDINBURGH BAYES CENTRE, ROOM G.03 TUE 15 APR | 7PM | 1 HOUR 30 MINS £12/£10

Discover how doctors and scientists are using light-based technologies in healthcare, from diagnostic imaging to advanced therapies. High powered lasers, photodynamic therapy and light-based diagnostics are becoming more common in the treatment of diseases like cancer and infections. Join experts from The University of Edinburgh and Heriot-Watt University in their discussion on research breakthroughs, clinical trials, and the future potential of light to improve non-invasive procedures, transforming medical practices and enhancing patient outcomes. Presented by The University of Edinburgh

Seven Deadly Sins

TALK | AGES 12+ NATIONAL MUSEUM OF SCOTLAND AUDITORIUM TUE15 APR | 8PM | 1 HOUR | £16/£12 Gluttony. Greed. Sloth. Pride. Envy. Lust. Anger. These are the Seven Deadly Sins, the vices of humankind that define immorality. But do these sins really represent moral failings. or are they simply important and useful human functions that aid us? Are they really just a result of how our bodies and our brains are wired? Professor of neurology Guy Leschziner reveals the hidden science and humanity behind our so-called flaws and follies.

Presented by Harper Collins

Wed 16 April

The Sound of Galaxies

DISCUSSION | AGES 12+

THE UNIVERSITY OF EDINBURGH

BAYES CENTRE, ROOM G.03 WED16 APR | 6PM | 1HOUR | £12/£10 There is more to astronomy than meets the eye! Sonification maps astronomical data to sound. allowing us to hear patterns in galaxies from the farthest reaches of space - no images needed. In this interactive sound-forward session. vou'll listen to galaxy data and gain a deeper appreciation for the innovative ways scientists explore the Universe. Learn about the technologies that data experts and sonification engineers use to bring the cosmos to life in sound and the fresh possibilities for discovery. Presented by The University of Edinburgh

Edinburgh Medal Address: Navigating Humanity's Future on Earth



TALK | AGES 12+ CITY CHAMBERS | COUNCIL CHAMBER | WED 16 APR | 7PM | 1 HOUR | £20/£16

Each year the *Edinburgh Medal* is presented to those who have made a significant contribution to the wellbeing and understanding of humanity through the sciences. This year's recipient is **Prof Johan Rockström**, an internationally recognised scientist whose work has redefined the way we understand and address global sustainability and Earth resilience.

In leading the development of the Planetary Boundaries framework, Prof Rockström has defined the safe limits for humans to operate within to ensure a stable and resilient Earth that will allow humanity to thrive for generations to come. This framework has been embraced by governments, organisations and NGOs around the world to guide their approach to sustainable development. With more than 25 years' experience in applied water research in tropical regions, he is also a leading scientist on global water resources.

Prof Rockström is Director of the Potsdam Institute for Climate Impact Research, Professor at the Institute of Earth and Environmental Science at Potsdam University and Professor in Water Systems and Global Sustainability at Stockholm University. He has received numerous awards, most recently the Tyler Prize for Environmental Achievement and the Virchow Prize towards Health for all in 2024. In 2023 he was recognised in TIME100: Most Influential People. Passionate about public engagement with global issues, his TED talks have over seven million views and his popular science books *Big World*, *Small Planet*, *Breaking Boundaries* and *The Human Quest* encourage a shift toward more sustainable management of planetary resources.

We are delighted that Prof Rockström will be joining us at this year's Festival, with an address which examines *Navigating Humanity*'s *Future on Earth*.

The *Edinburgh Medal* is awarded by the **Lord Provost of the City of Edinburgh**, with an oration to be delivered by **Prof Mike Berners-Lee**.



Previous Recipients

2024 Mario Negri Institute for Pharmalogical Research 2023 Prof Marion Nestle 2022 Dr Gladys Kalema-Zikusoka 2021 Prof Heidi Larson 2020 Sunita Narain 2019 Christiana Figueres 2018 Prof Cordelia Fine 2017 Prof Peter Piot 2016 Kevin Govender & IAU 2015 Mary Midgley 2014 Prof Mary Abukutsa-Onvango 2013 Prof Peter Higgs & CERN 2012 Dr James Hansen 2011 Prof Carl Dierassi 2010 Sir Alex Jefferies 2009 Prof Jonathan Beckwith 2008 Prof Chris Rapley 2007 Dr Richard Horton 2006 Prof James Lovelock 2005 Prof Colin Blakemore 2004 Prof Steven Rose 2003 Prof Wang Sung 2002 Dr Lise Kingo 2001 Sir John Sulston 2000 Prof Lynn Margulis 1999 Prof Jocelyn Bell Burnell 1998 Sir David Attenborough 1997 Prof Amartva Sen 1996 Prof Richard Levins 1995 Sir John Crofton 1994 Prof Manuel Pattarroya 1993 Prof Wangari Maathai 1992 Prof Heinz Wolff 1991 Prof Jane Goodall 1990 Prof Stephen J Gould 1989 Prof Abdus Salam

Thu 17 April

Professors for a Better World 5PM | THE UNIVERSITY OF EDINBURGH, HOLYROOD CAMPUS

Planetarium Lates: Don't Panic!

SHOW | AGES18+

DYNAMIC EARTH

PLANETARIUM

THUR 17, FRI 18 & SAT 19 | 6PM | 45 MINS | £12/£10 In days where it seems like Earth is lurching from one disaster to the next, anxieties around the future of our planet mount and it seems like there isn't much we can do. We'll explore in our state-of-the-art planetarium how there's actually a lot of cause for optimism as long as we remember: Don't Panic! Presented by Dynamic Earth

Shaping a Better World

TALK | AGES12+

NATIONAL MUSEUM OF SCOTLAND | AUDITORIUM THU 17 APR | 6.30PM | 1 HOUR 30 MINS | £16/£12 Every day, Arup works to shape a better world. But, in a rapidly changing environment what does "better" truly mean? How can we drive meaningful and positive change collectively, whilst responding to global crises that are testing society and creating risks - but also opportunities? Join Dame Jo da Silva. Arup's Global Director for Sustainable Development, as she explores how we can define "better" and tackle these changes. Gain practical insights on how you can contribute to building a safe, resilient and regenerative future, and learn how your actions can make a meaningful impact on the world around you.



Fri 18 April

Planetarium Lates: Don't Panic!

Memory Lane: The Perfectly Imperfect Ways We Remember

DISCUSSION | AGES 12+

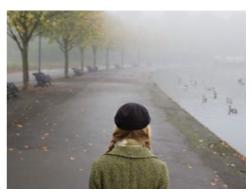
NATIONAL MUSEUM OF SCOTLAND | AUDITORIUM FRI 18 APR | 6PM | 1 HOUR | £16/£12

We often think of our memories as impressions of the past that remain preserved somewhere inside our brains. In fact, we reconstruct our memories every time we try to recall them. But a faulty memory isn't always a bad thing... Join psychologists **Ciara Greene** and **Gillian Murphy** to explore the cutting-edge science of human memory, the ethical implications of memory manipulation and the pitfalls of false recollections. They reveal the surprising benefits of a flexible memory system, and explain why no two trips down memory lane are ever quite the same.

Presented by Princeton University Press







ONLINE BOOKING: sciencefestival.co.uk

BOOKING HOTLINE: 0131 553 0320





Sat 19 April

Edinburgh Conservation Film Festival

FILM | AGES 9+ NATIONAL MUSEUM OF SCOTLAND

AUDITORIUM

SAT 19 APR | 11.30AM | 1 HOUR 45 MINS | £5

The Edinburgh Conservation Film Festival is a celebration of conservation stories from around the world that will inspire, engage, and inform you about some of the many projects helping to protect the world's biodiversity. This year showcases where the future of conservation could be if we embrace creativity, positivity and innovation. Come and discover the many projects and people who are helping preserve global biodiversity, followed by a prize-giving ceremony for the winning films.

Presented by Edinburgh Conservation Film Festival

Planetarium Lates: Don't Panic!

Extracting Evidence

DISCUSSION | AGES16+ NATIONAL MUSEUM OF SCOTLAND AUDITORIUM

FRI 18 APR | 8PM | 1 HOUR | £16/£12

A crime has been committed. A body has been found. Join us for an interactive criminal case, from crime scene to conviction, as we explore the future of CSI. Through cutting edge research, the SCAnDi project is using single cell sorting, artificial intelligence, 3D printing and genome sequencing to create a new approach to identify suspects where only trace amounts of biomaterial can be recovered from crime scenes. Join **Prof Lorna Dawson** and **Dr Nicholas Dawnay** for a unique look at the potential of this research, and how it could revolutionise the world of forensic science.

Supported by





UNIVERSITY

Support Our Charitable Work

We are one of Scotland's largest science education charities, bringing the wonder of science to thousands of children and communities for over 30 years.

Throughout the year we bring unique science experiences to schools and communities across Scotland for free, championing the fact that STEM is for everyone.

Please consider adding a donation to your ticket purchase and help us continue this vital work.

Edinburgh Science Foundation - Registered Charity No. SC003790









Science Festival Late

EXPERIENCE | AGES18+ CITY ART CENTRE THU 3 APR | 7.30PM | 2 HOURS 30 MINS | £18/£14 Don't let the kids hog all the hands-on science fun! Join us as we turn our flagship family venue into the ultimate science party for one night only. Dance with a robot, sidle up to CSI: Crime Scene Investigation or get down digging up a dinosaur in this night just for the grown-ups! Presented by Edinburgh Science

An Evening of Cosmic Exploration

EXPERIENCE | AGES 18+ ROYAL SOCIETY OF EDINBURGH, GEORGE STREET FRI 4 APR | 6.30PM | 3 HOURS | FREE

Celebrate cosmic exploration at this intergalactic night out that's just for adults! The night is yours to explore – choose from a programme of quick-fire talks, interactive experiences, or relax with a drink. Find out answers to big questions. Did we really land on the moon? Could the science fiction of Star Wars become a reality? Could we live on another planet? Explore all this and more during an evening dedicated to the wonders of space, science, and cutting-edge technologies. Food and drinks will be available to purchase on the evening.

Presented by Royal Society of Edinburgh

BOOKING HOTLINE: 0131 553 0320

Conservation and Cans

TALK | AGES 18+

EDINBURGH ZOO | MEMBERS GATE ENTRANCE FRI 11 APR | 6PM | 1 HOUR 30 MINS | £15

Join us for an exclusive evening talk where you will hear all about the latest conservation work we are doing around the globe from one of our leading experts! With drinks provided by Pilot beer, this is the perfect opportunity for conservation enthusiasts or those looking to learn more! On the evening, you will hear about our mission to save wildlife and empower people in Scotland and around the world to protect, value and love nature. From invertebrates to flapper skates, we'll be showcasing a selection of species we're conserving, what makes them both wonderful and important to save and all the people working to help them.

Presented by the Royal Zoological Society of Scotland in partnership with Pilot Beer.

Spaceship Earth After Hours

EXPERIENCE | AGES 18+ NATIONAL MUSEUM OF SCOTLAND | GRAND GALLERY FRI 11 APR | 7PM | 3 HOURS | £18/£14

Brace yourself for an out-of-this-world collision of science fiction and science fact, as we throw open the doors of the National Museum of Scotland after hours. Immerse yourself in our *Spaceship Earth* exhibition, exploring the challenge of living on a planet with finite resources and questioning how we might live better on Earth. At this adults-only event, marvel at new works in the *Spaceship Earth* costume show from the Edinburgh College of Art, groove along to our DJ, try your hand at some rocket-building science and ask what it's really like living on the International Space Station when you meet Turkish astronaut **Alper Gezeravc1** Presented by Edinburgh Science

Scottish Governmen Riaghaltas na h-Alb gov.scot beveloped with support from Creative Scotlan through the Scottish Government's













Atmosphere: Arrival

FILM | AGES12+ GRASSMARKET COMMUNITY PROJECT SUN 6 APR | 6.30PM 2 HOURS 30 MINS | £16 When gigantic, sculptural

spaceships of unknown origin arrive at twelve locations around the globe, a crack team of scientists and experts are quickly enlisted by the world's military to help them understand... why are they here? Linguist Louise Banks (Amy Adams) travels with one team to Montana to discover what lies within what hovers above. Director Denis Villeneuve's Academy Award-winning adaptation of a short story by Ted Chiang's Story of Your Life is a sublime experience that transcends traditional science-fiction cinema. We are delighted to collaborate with Simon Kirby, Professor of Language Evolution at the University of Edinburgh on our expansion of this film.

Presented by New Media Scotland in partnership with Grassmarket Community Project

Planetarium Lates: Earth From Above

DYNAMIC EARTH | PLANETARIUM THU 10 APR-SAT 12 & THU 17-SAT 19 APR 7PM | £20/£18

How do astronauts feel as they look down on our planet from above? How do they feel when the Earth is only as big as their thumb? Join us in Dynamic Earth's planetarium to enjoy some of our favourite science films, with an introduction from our astronomers! Pick up a cosmic cocktail for an evening of extra-terrestrial entertainment as we screen *Gravity, Moon, Apollo 13, Star Trek IV, The Martian* and *Contact.*

Presented by Dynamic Earth



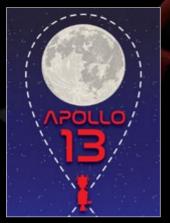
THU 10 APR



FRI 11 APR









SAT 12 APR

FRI 18 APR



THU 17 APR



SAT 19 APR

Atmosphere: Silent Running

FILM | AGES 18+

DYNAMIC EARTH | PLANETARIUM SUN 13 APR | 6.30PM | 2 HOURS £20/£18

Experience cult classic Silent Running like never before! It's the 21st Century and all the forests on Earth have become extinct due to careless environmental exploitation. Hope of reforesting the planet lies with Freeman Lowell. resident botanist on a closed ecological system aboard a space freighter en route to Saturn. A prophetic directorial debut from American special effects pioneer Douglas Trumbull.

New Media Scotland's Atmosphere events bring together a team of guest artists and creatives, who work with technology old and new to create multi-sensory interactives and live elements. Expect some smoke and mirrors before the bells and whistles of the main feature. Presented by New Media Scotland in partnership with Dynamic Earth



Injecting Hope: The Race for a COVID-19 Vaccine

EXHIBITION | ALLAGES NATIONAL MUSEUM OF SCOTLAND SPECIAL EXHIBITION GALLERY 1

UNTILSUN 27 APR | 10AM-5PM | DROP-IN | FREE Learn about the rapid research, development and delivery of the COVID-19 vaccine in this free exhibition at the National Museum of Scotland. Through historic and contemporary objects, artworks and personal items, discover the science behind the creation of the vaccine and learn about the logistics of its global rollout. *Injecting Hope: The Race for a COVID-19 Vaccine* is presented by the Science Museum Group. Presented by National Museums Scotland

Morning Curator Tour

TOUR | AGES 12+ NATIONAL MUSEUM OF SCOTLAND MEET AT TOWER ENTRANCE, LEVEL1 WED 9 APR | 9.15AM | 45 MINS | £12/£10 Join our exhibition curator for an exclusive early morning tour of our *Injecting Hope* exhibition. **Sophie Goggins**, Senior Curator of Biomedical Science, will explain the science behind the creation of the vaccine, the logistics behind its global roll-out and will also share some of the uniquely Scottish experiences of the global pandemic. Presented by National Museums Scotland

Pressed for Time

EXHIBITION | ALLAGES ROYAL BOTANIC GARDEN EDINBURGH JOHN HOPE GATEWAY GALLERY

SAT 5-SUN 20 APR | 10AM-5PM | DROP-IN | FREE Travel the world in one room. Home to three million preserved plant and fungi specimens, encompassing over 300 years of biodiversity, the herbarium at the Royal Botanic Garden Edinburgh is a scientific resource of worldwide importance. Take a journey through time, over land and sea, and discover how the herbarium might shape our future in this new exhibition. Explore intriguing stories behind diverse specimens and uncover the vital role this collection plays in tackling today's urgent challenge of protecting and restoring biodiversity.

Presented by Royal Botanic Garden Edinburgh

Spotlight Talks

TALK | ALLAGES ROYAL BOTANIC GARDEN EDINBURGH JOHN HOPE GATEWAY GALLERY SAT 5 & TUE 15 APR | 2.30PM | 30 MINS FREE | BOOKING REQUIRED Enjoy a free introduction to *Pressed for Time*,

in which a Botanics volunteer shines a light on their favourite aspects of this new exhibition. Presented by Royal Botanic Garden Edinburgh

BSLTour

TOUR | ALL AGES ROYAL BOTANIC GARDEN EDINBURGH JOHN HOPE GATEWAY GALLERY

SUN 6 APR | 2PM | 1HOUR | £5 | BEL INTERPRETED Join us for a British Sign Language (BSL) tour of *Pressed for Time*, led by **Trudi Collier**, and discover fascinating and unexpected stories from the Botanic's herbarium. Presented by Royal Botanic Garden Edinburgh



Tiny Archives of Earth and Time

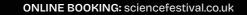
EXHIBITION | ALL AGES DYNAMIC EARTH | OUTDOOR TERRACE SAT 5-SUN 20 APR | 10AM-6PM | DROP-IN | FREE Microscopic marine life is crucial for the whole Earth. We usually look across the ocean but not into it, where tons of tiny organisms live, leaving a vital footprint on our climate and records of climate history. This exhibition, presented by researchers from Heriot-Watt University, highlights the importance of these microorganisms as tiny authors and record keepers. They save information about climate change over time, teach us about the Earth we inhabit and what this means for the future. Presented by Dynamic Earth and Heriot-Watt University

Design, Data and Beyond

EXHIBITION | AGES 12+ THE UNIVERSITY OF EDINBURGH INSPACE, CRICHTON ST

SAT5-MON7 APR | 10AM-5PM | DROP-IN | FREE Join students from the Institute for Design Informatics at the University of Edinburgh to explore their intergalactic connections of data, technology and matter, presented through a series of creative prototypes that reflect on human (and beyond human) experiences of the future. Through this interactive exhibition, they examine limits and boundaries of our systems where bodily interfaces connect with more than human experiences, where design fiction meets science communication, and where digital, virtual and artificial merge with sustainable matters.

Presented by The University of Edinburgh



Machine Whispers: Reading – Writing – Robots

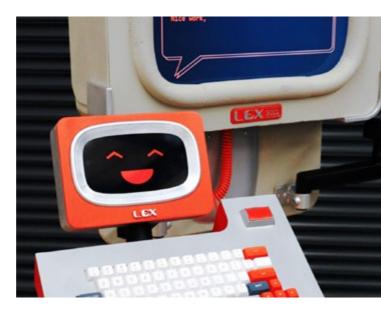
EXHIBITION | ALLAGES SCOTTISH POETRY LIBRARY SCOTTISH POETRY LIBRARY MON 7-THU 10 & MON 14-THU 17 APR 10AM-3PM I DROP-IN | FREE

Explore the futuristic world of AI reading and writing at this playful interactive exhibition. Use the power of poetry to confuse and befuddle our translation machine, become a best-selling author with LEX, our cheeky writing robot, or discover the cheapest poem in the world. Uncover the glitches behind AI's glamour! Presented by The University of Edinburgh

Operation Biodegradable: Rethinking Surgical Environments

EXHIBITION | AGES 12+

THE UNIVERSITY OF EDINBURGH INSPACE, CRICHTON ST SAT 19-SUN 27 APR [NOT TUE 22 APR] 10AM-5PM | DROP-IN | FREE Discover how biomaterials and human-centred design could revolutionise surgical environments at this exhibition brought to you by staff, students and graduates at the University of Edinburgh. Showcasing a range of artwork, artefacts and prototypes, it offers a hands-on opportunity to engage with and understand the challenges and potential solutions in designing an operating theatre that better supports surgeons and the environment. This exhibition will feature an event including performances exploring embodiment, materialism, artist talks and a panel discussion. Presented by The University of Edinburah







I Art and Exhibitions

Principal Schools Funding Partners



Barrack Charitable Trust | Cruden Foundation | The Basil Death Trust The Hayward Sanderson Trust | The Hugh Fraser Foundation | Jimmie Cairncross Charitable Trust The Marlen McDonald Charitable Trust | Mrs Margaret Douglas Trust Miss Caroline Jane Spence's Fund | Misses Barrie Charitable Trust | Nancie Massey Charitable Trust PF Charitable Trust | Scottish Childen's Lottery | Walter Craig Charitable Trust Weatherall Foundation | William S Phillips Fund **The following funds administered by Foundation Scotland**

Denny and District Community Fund | Drone Hill Wind Farm Community Benefit Fund Glenkens and District Community Fund | Mossmorran Wind Farm Ltd Community Fund Todhill Wind Farm Community Fund [Larbert, Stenhousemuir and Torwood – LST]

Our Catalysts and those who prefer to remain anonymous

Adult Events at a Glance

DATE	TIME	EVENT	ТҮРЕ	THEME	PAGE
THU 3 APR	7.30PM	SCIENCE FESTIVAL LATE	EXPERIENCE	SOCIETY & CULTURE	50
FRI 4 APR	6.30PM	AN EVENING OF COSMIC EXPLORATION	EXPERIENCE	SPACE	50
		THE ART OF ROCKS	ACTIVITY	ARTS & DESIGN	37
SAT 5 APR	2PM	LESS WITH PATRICK GRANT	DISCUSSION	CLIMATE & SUSTAINABILITY	37
	7PM	ABOVE AND BELOW: AN ASTRONAUT'S VIEW OF OUR PLANET	DISCUSSION	SPACE	37
	11AM	SCIENCE FESTIVAL CHURCH SERVICE	TALK	SOCIETY & CULTURE	38
SUN 6 APR	6PM	TAM DALYELL PRIZE LECTURE	TALK	MIND & BODY	38
	6.30PM	ATMOSPHERE: ARRIVAL	FILM	SPACE	52
	6PM	FAMELAB UK: SCOTTISH FINALS	TALK	SOCIETY & CULTURE	38
MON 7 APR	7PM	WHO WANTS TO LIVE FOREVER?	DISCUSSION	MIND & BODY	39
	5PM	PROFESSORS FOR A BETTER WORLD	TALK	ENVIRONMENT & NATURE	40
	6PM	AIR QUALITY STRIPES: A GLOBAL HISTORY OF AIR POLLUTION	DISCUSSION	CLIMATE & SUSTAINABILITY	40
TUE 8 APR	6PM	SCI-FI FUTURES	DISCUSSION	CLIMATE & SUSTAINABILITY	40
	6.30PM	WHO DUNIT?	TOUR	MIND & BODY	41
	8PM	THE BEAUTY OF FALLING	TALK	PHYSICS & MATHS	41
	6PM	NATURE'S UNDERTAKERS	ACTIVITY	ENVIRONMENT & NATURE	41
WED 9 APR	6PM	ALZHEIMER'S: TO TEST OR NOT TO TEST	DISCUSSION	MIND & BODY	42
	8PM	CLEAN ENERGY COMMUNITIES	DISCUSSION	CLIMATE & SUSTAINABILITY	42
	6PM	PLANETARIUM LATES: YOU ARE HERE	SHOW	SPACE	42
	6PM	TRANSPLANTING HOPE	DISCUSSION	MIND & BODY	43
THU 10 APR	7PM	ILLUMINATING HIDDEN WORLDS	DISCUSSION	MIND & BODY	43
	7PM	PLANETARIUM LATES: GRAVITY	FILM	SPACE	52
	8PM	QUANTUM MUSIC	TALK	PHYSICS & MATHS	43
	6PM	PLANETARIUM LATES: YOU ARE HERE	SHOW	SPACE	42
	6PM	CONSERVATION AND CANS	TALK	CLIMATE & SUSTAINABILITY	51
FRI 11 APR	7PM	DESERT FUTURES	FILM	ENVIRONMENT & NATURE	44
	7PM	PLANETARIUM LATES: MOON	FILM	SPACE	52
	7PM	SPACESHIP EARTH AFTER HOURS	EXPERIENCE	SPACE	51
	11AM & 2PM	THE ART OF ROCKS	ACTIVITY	ARTS & DESIGN	37
SAT 12 APR	6PM	PLANETARIUM LATES: YOU ARE HERE	SHOW	SPACE	42
	7PM	PLANETARIUM LATES: APOLLO 13	FILM	SPACE	52
	6PM	DEMYSTEFYING THE MENOPAUSE	TALK	MIND & BODY	44
SUN 13 APR	6.30PM	ATMOSPHERE: SILENT RUNNING	FILM	SPACE	53
MON 14 APR	6.30PM	THE GENETIC BOOK OF THE DEAD	DISCUSSION	MIND & BODY	45
WON 14 APR	7PM	NATURE'S ARCHITECTURE	ACTIVITY	CHEMISTRY	45
	6PM	A CLIMATE OF TRUTH	TALK	CLIMATE & SUSTAINABILITY	46
TUE 15 APR	7PM	BRIGHT IDEAS IN MEDICINE	DISCUSSION	MIND & BODY	46
	8PM	SEVEN DEADLY SINS	TALK	SOCIETY & CULTURE	46
WED 16 APR	6PM	THE SOUND OF GALAXIES	DISCUSSION	SPACE	46
WED TO AT IN	7PM	EDINBURGH MEDAL ADDRESS: NAVIGATING HUMANITY'S FUTURE ON EARTH	TALK	CLIMATE & SUSTAINABILITY	47
	5PM	PROFESSORS FOR A BETTER WORLD	TALK	ENVIRONMENT & NATURE	40
THU 17 APR	6PM	PLANETARIUM LATES: DON'T PANIC!	SHOW	SPACE	48
IIIO I7 AI K	6.30PM	SHAPING A BETTER WORLD	TALK	CLIMATE & SUSTAINABILITY	48
	7PM	PLANETARIUM LATES: STAR TREK IV	FILM	SPACE	52
	6PM	PLANETARIUM LATES: DON'T PANIC!	SHOW	SPACE	48
	6PM	MEMORY LANE: THE PERFECTLY IMPERFECT WAYS WE REMEMBER	DISCUSSION	MIND & BODY	48
FRI 18 APR	7PM	PLANETARIUM LATES: THE MARTIAN	FILM	SPACE	52
	8PM	EXTRACTING EVIDENCE	TALK	MIND & BODY	49
	11.30AM	EDINBURGH CONSERVATION FILM FESTIVAL	FILM	CLIMATE & SUSTAINABILITY	49
SAT 19 APR	6PM	PLANETARIUM LATES: DON'T PANIC!	SHOW	SPACE	48
	7PM	PLANETARIUM LATES: CONTACT	FILM	SPACE	52

Explore DiscoveryLab

Five floors filled with things to make, build and investigate.

Science meets play at the City Art Centre this Easter.







SCOVE





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