Festival Programme

Saturday 25th August - Saturday 22nd September

www.techfest.org.uk

Scottish Charity Number: SC010349
Shell and BP are proud, as Joint Principal Sponsors, to welcome you to TechFest 2018 as we celebrate the 25th annual festival of Science, Technology, Engineering and Mathematics (STEM).

We are delighted to support the public programme of fascinating events, which allow audiences to explore science, technology, engineering and maths. The varied programme encourages visitors to get involved in STEM activities throughout the North-east of Scotland through the exciting variety of shows, presentations and workshops on offer.

We are especially proud to sponsor TechFest’s Silver Anniversary by bringing the Science Museum of London’s ‘The Greatest Hits’ Show to the Activity Weekend on 25th and 26th August.

By supporting TechFest 2018 we aim to provide both enjoyment for the public and inspiration for the next generation of scientists and engineers. We look forward to another successful festival.

Steve Phimister
Upstream Director U.K. & Ireland
Shell U.K. Limited

Ariel Flores
Regional President
BP North Sea
Welcome to our 25th TechFest Festival. We have come a long way from our humble beginnings in 1994 to the well-established Science festival that we are today. However our aim has stayed the same throughout the 25 years: Presenting a variety of events to give you a sense of excitement for the practical applications of Science, Technology, Engineering and Mathematics (STEM).

We are really excited to invite you to our special 25th Anniversary Show. Thanks to the extra support this anniversary year from Shell and BP on top of their joint principal sponsorship, we have been able to bring up to Aberdeen the London Science Museum, who will perform their “Greatest Hits” Show at the Activity Weekend on Saturday 25 and Sunday 26 August in the Sir Ian Wood Building, RGU, Garthdee Campus.

For our Public Programme (Saturday 8 September – Saturday 22 September) we have a variety of events that, we are sure, will entertain, educate and inspire you.

As a charitable organisation we are really grateful to all of our sponsors and supporters. We would not be able to deliver the quality and quantity of activities without their generous support.

Also I am hugely thankful to the incredible TechFest team that has supported me for this year that I have been standing in for Sarah Chew, our Managing Director, who has just returned from maternity leave this summer. Thank you Sarah, for entrusting your “third child” into my hands for a year.

This leaves me with wishing you all a great Festival! I hope you will enjoy attending the events as much as we have enjoyed putting this programme together for you.

Alies Bartelds
Acting Managing Director, TechFest
TECHFEST 2018 ACTIVITY WEEKEND
SATURDAY 25TH AND SUNDAY 26TH AUGUST

In for a penny, in for a pound

With over 30 hands-on workshops, shows and demonstrations, the TechFest Activity Weekend continues to provide fun, exciting and inspiring activities for all ages. No need to pre-book as this year we are ‘In for a Penny, In for a Pound’ adults pay £1 and children pay 1p.

“TechFest offers people of all ages the opportunity to gain hands-on experience with science and technology. It fires the imagination by allowing young people the chance to try things out themselves and to ask questions directly to experts, hopefully encouraging many to choose a career in science and technology. It is a hugely successful event for Aberdeen and one which Marathon Oil is proud to support.”

James Edens, Vice President, Conventional Marathon Oil Corporation

The Greatest Hits
Presented by Science Museum, London

Warning: This show contains loud noises, flashes and bangs!

At the Science Museum, there’s nothing we like better than an experiment that makes your jaw hit the floor. So we’ve chosen all our favourite demos and packed them into this explosive show for all ages!

From rockets to ‘magic’ tricks, from instant ice cream to earth-shaking bangs, this is science at its most entertaining!

SHOW TIMES: 11.00, 12.00, 14.00, 15.00
Baby Photos & Identity Theft - the Role of Parents

Presented by Dr Suzanne Prior, Abertay University

There are frequently stories in the news about the dangers of children and teenagers sharing information about themselves online. But what about parents? Can an innocent announcement of a child’s birth put them at risk for identity theft in the future? This talk will present some recent research looking at what information parents share about their children and the risks this poses.

**TALK TIMES:** 13.00 AND 15.00 (SATURDAY AFTERNOON), 13.00 (SUNDAY AFTERNOON)

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Brilliant Brains

Presented by Anna Cranston and Matteo Santoro, Translational Neuroscience, University of Aberdeen

Do you know how your brain really works? Discover all about the most exciting organ in the human body! Join us in our build-a-brain workshop, test out your memory in our memory challenge games and even have the chance to get right up close to a real brain!

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Destination Space

Presented by Aberdeen Science Centre

Do you have what it takes to be an astronaut? Discover the skills needed and challenges faced through hands on activities including rocket launching, robot arms and the moon buggy challenge.

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Who Says I’m A Windbag!

Presented by Live Wire Productions

**SHOW TIMES:** 10.45, 12.45, 14.45

**Sponsored by Equinor**

Presented by personified lungs Laura and Lucy, the children are engaged with what happens in our wind pipe and lungs when we live and breathe in today’s harsh environment. Watch out for the Lung Cloggers!

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An Introduction to Dinosaurs

Presented by Dinostar

Dinosaurs are a fascination and an inspiration for children. Dinostar’s hands-on, interactive workshops feature genuine and replica fossils from their museum in Hull, Yorkshire. The artefacts include teeth, claws, even a genuine dinosaur egg! The highlight of the presentation is a full size replica Allosaur skull (sharp, scary teeth!). Children are told the exciting stories of the fossils then have the chance to touch and handle the artefacts.

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H2O Show

Presented by Jon Davies

**SHOW TIMES:** 10.30, 11.30, 12.30, 14.30, 15.30

**Sponsored by Marathon Oil**

How much water is in everyday food? Bubbles aren’t always made of water. Why did Archimedes put so much water in his bath?

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Wild About Maths

Presented by TechFest

Take a walk on the wild side with TechFest as you undertake puzzles, challenges and problem solving activities inspired by the natural world. In these hands-on maths activities you can work through a series of puzzles designed to challenge your idea of how much fun maths can be.

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Home Energy Scotland

Cutting down on how much energy you use, whether at home, school or work, can help save money, energy and the environment. Come and visit us and try out our fun and interactive games, and benefit from our top tips and advice – all designed to help you reduce your carbon footprint.

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Remote Locations Scotland

Presented by Remote Locations Scotland

Experience remote locations through hands-on activities and interactive games, learning about the challenges and wonders of life in remote areas.
Make the Future with Shell

Sponsored and Presented by Shell in conjunction with Aberdeen Science Centre

We believe the answers to tomorrow’s energy challenges lie in the power of people’s ingenuity, and that together we can #makethefuture today. Come and explore Science, Technology, Engineering and Maths with lots of fun, exciting and challenging hands-on activities for the family.

Construct your own toy racing car powered by salt water, produce an electronic drum kit with the Makey-Makey kits, use everyday household materials to create your own science experiment and enter our Engineering challenges.

Yoga Science

Presented by Rona Main and Sandra Cook
Jointly sponsored by Grampian Yoga Association, Yoga Scotland and British Wheel of Yoga

A scientific led discovery of our amazing bodies and minds through Yoga. This fun session uses Yoga postures to learn about your skeleton & muscles, understand movement, and to gain an awareness of some of the body’s clever systems. By getting on a mat in your socks to take part in Yoga, you will discover the importance of strong, flexible and balanced healthy bodies; and how this benefits the mind. Through simple relaxation techniques, you may also feel the effects Yoga has on encouraging better breathing, positive thoughts and a healthy attitude. Learn, develop an awareness of your potential and have lots of fun at Yoga Science.

AGE RANGE: 4 - 16 years
RUNNING TIME: 30 minutes
Parents and Carers to be in attendance and can take part
BOOK ON THE DAY AT THE WORKSHOP

Good Vibrations

Presented and Supported by Robert Gordon University School of Engineering

Sounds are everywhere but what actually is sound? See some demonstrations and carry out a range of exciting hands-on experiments which help us to picture what sound is, how we can hear it, and how we can use sound to solve problems in science and engineering.

Dissolving and Solubility

Presented by TechFest
Sponsored by CNR International

Come along and try your hand at being a scientist and investigate solubility! Learn about making a hypothesis and designing a fair test with hands on investigations and experiments as we consider how solubility affects our everyday lives.

Operation Earth

Presented by Dynamic Earth
Supported by The Robertson Trust

Take part in Operation Earth, an exciting national programme exploring the amazing stories and science of the environment. Become a trainee environmental scientist and help us investigate our planet’s land, air and oceans, and see if together we can find solutions to some of the challenges Earth is facing with exciting hands-on activities and demonstrations.

Racing Rockets

Presented by TechFest

The sky’s the limit when you put your imagination to the test to design a space rocket that is out of this world. This challenge gets you to think about rocket design and to build a rocket that will travel as high as possible.
Grinning With Health
Presented by Live Wire Productions
Sponsored by Marathon Oil

Featuring Big Mouth, Floss the Cleaner and Miss Paste. Find out what happens in the mouth when we eat and grow. A drama workshop presentation with larger than life props.

SHOW TIMES: 9.45, 11.45, 13.45, 15.45

Amazing Animals
Presented by Animates

This drop-in activity is suitable for all ages and will be showing live animals including mini-beasts and reptiles. The animals will come out for regular educational and fun animal handling sessions throughout the day. An important partnership between Animates and HM Revenue & Customs shows the realisation that even today animals are still being poached for their tusks, skin and fur. Our display will also include animal by-products belonging to endangered species confiscated from holidaymakers as they travelled back through Scottish airports.

Build & Program Lego Robots
Presented by John McGill of ComputerXplorers
Sponsored by BP

Join us for a fun-packed session of exciting, creative and fun computer activity. Using the latest Lego robotics technology to build and program amazing creatures that can move using motors, gears and wheels. You will learn how to program sensors to make the robot react to its surroundings. Program robot birds to chirp, crocodiles to snap and plane engines to rev! This drop in workshop is great fun and ideal for nurturing and enhancing Science, Technology, Engineering and Maths (STEM) skills.

BodyVision Exhibits
Presented by Glasgow Science Centre

Get hands-on with a range of engaging physiology and anatomy-themed exhibits. They explore themes such as cardio-vascular fitness, body composition and the effects of lifestyle choices like smoking.

Clinical Skills at Foresterhill with Teddy Bears Hospital and AUPS
Supported and Presented by the University of Aberdeen – Medical School Clinical Skills Centre and Teddy Bear Hospital with AUPS Save a Child’s Life

Don’t forget to bring your own teddy!! Come along and join the Medical School Clinical Skills Teaching Team and find out how we train healthcare professionals of the future using the latest state of the art technology with our family of Human Patient Simulators and 360 degree cameras.

As always for our younger clinical skills trainees don’t forget to bring your teddy bear or soft toy to the Teddy Bear’s Hospital for a check-up. You can even watch and assist the doctors in the operating theatre as they help a teddy bear get better.

K’Nex Lighthouses
Presented by TechFest
Sponsored by TechnipFMC

Shine a light of creativity to tackle a historic engineering challenge. Investigate problems associated with the construction of lighthouses. Use your engineering skills to develop a lighthouse prototype.
TECHFEST 2018 ACTIVITY WEEKEND

K’NEX Under the Sea with Subsea 7

Presented by TechFest
Sponsored by Subsea 7

Discover the unique challenges of exploring the subsea world. Find out how science and technology can push the limits of this intriguing environment. Learn about how people dive and work under the sea and how technology can help us go even further.

Genetic Taste Test

Presented by Cancer Research UK

Take part in the genetic taste test and discover the importance of individual genes and their role in cancer. By sticking a tab on your tongue, you can find out if you have a mutation in your TAS2R38 gene. This gene is not linked to cancer, but instead controls the shape of the bitterness receptor on your tongue. It’s amazing how one tiny mutation can change how we taste different foods.

Cancer can develop when certain genes are damaged and become faulty. In the past, we’ve had a ‘one size fits all’ approach to treatment but now we are moving towards an era of personalised medicine. Researchers in Aberdeen are working on new genetic tests and treatments to identify and target faulty genes.

A Demonstration of 3D Printing & How It Works

Supported and Presented by Robert Gordon University School of Computing Science and Digital Media

Digital fabrication is a trendy and innovative technology enabling low-cost and fast-prototyping of real-world objects from their digital models. In this drop-in session, we will showcase several key steps of the fabrication pipeline, including shape modelling, using computer-aided design and 3D printing.

Making Maths Count

Presented by TechFest in collaboration with Maths Week Scotland (10th September – 16th September 2018)

Join TechFest as we celebrate the up-and-coming Maths Week Scotland by exploring a series of interactive puzzles and challenges. This hands-on session will be accessible and fun for all ages. We look forward to seeing you there to experience the joy of maths in exciting new ways. Follow Maths Week Scotland on Twitter @mathsscot and contact at mathsweekscot@gov.scot

The TechFest Dome

Presented by TechFest
Sponsored by Apache

Enjoy a visit to the unique environment of the TechFest Dome. Find out why we have day and night, wonder at a sky full of stars and discover the constellations.

Not suitable for under 5 years
BOOK ON THE DAY AT THE DOME

Terrific Tracking

Presented by Duthie Park Ranger Service

Do you know your badger track, from your fox track? Come along and meet the Duthie Park Ranger Service, and discover how to identify animals by the tracks that they leave behind.

TechFest 2018 Venue Locations
See page 31
Have fun on the farm with SRUC

Presented by Scotland’s Rural College (SRUC)

Why should farmers have all the fun? You can too! Join Scotland’s Rural College at TechFest 2018! Have you always wanted to drive a tractor or dreamed of working on a farm? Come and visit the SRUC tractor simulator and find out what it really feels like to sit in the cab and be at the controls. Get ready for a super cool, fun and challenging new driving experience steering through the farmyard or even ploughing the fields. For further information on the courses offered SRUC Aberdeen, visit www.sruc.ac.uk.

The Effect of Latency on Games

Supported and Presented by Robert Gordon University School of Computing Science and Digital Media

Have you ever experienced the frustration of being beat time and time again on your favourite Multiplayer Game? Do you know your lag from your FPS? Your latency from your K/D ratio? Many online multiplayer games rely on quick reactions, learn how to spot where your lag is coming from and what to do about it.

ToddleFest

Presented by The Critter Keeper
Sponsored by Chevron

Meet The Critter Keeper and a selection of his amazing exotic animals. Come and chat with David and learn some interesting facts about some weird but wonderful animals. You may also get the opportunity to touch and hold some too. Suitable for all ages The Critter Crew will amaze you.

Lego Robots - Eco Challenge

Supported and Presented by RGU School of Computing Science and Digital Media

It is now a widely accepted belief that humans are to blame for the mess of the planet. We need to build machines to help us save the planet. To do this, however, we need some extremely clever people to program them. This workshop will allow you to build and program a Lego EVE3 robot using simple programming techniques to take part in a challenge against other robots designed on the day. It will let you see how robots can be created that interact with each other and the world around them using simple sensors and rules. Will your robot win the day and defeat all challengers? Only one way to find out.

First Aid - Saving Lives

Presented by ABRRAS

Meet the ABRRAS team and learn more about first aid. Have your questions answered whilst hearing about the latest developments in the first aid world. Or get hands-on and participate in some practical demonstrations and learn how to save a life. Fun and informative for all ages.

Green Screen Photography

Supported and Presented by Robert Gordon University School of Computing Science and Digital Media

Green Screen Technology is widely used today, from presenting a map behind a weather forecaster to adding Computer Generated Imagery (CGI) to photos and films. In this drop-in session we will transport you to another world. Past, present, future or extra-terrestrial. Where will your imagination and our technology take you?

Amazing Aberdeen

Presented by TechFest
Sponsored by Equinor

Come and learn about the scientists and engineers who have made Aberdeen the incredible city it is!
TECHFEST 2018 ACTIVITY WEEKEND

Great Scot!

Presented by TechFest
Sponsored by Marathon Oil

‘Great Scot!’ celebrates science and engineering in Scotland. Through fun, interactive and hands-on experiments we will find out how Great Scots have shaped our daily lives.

Robogals Aberdeen

Not just for girls, not just about robots...

Curious to meet Proton the Robot and friends, and find out what they have learnt over the past year? Want to create an exciting computer game using Scratch and design your own controllers to play it? Come and learn how to use simple code to create wonders! And while you wait why not create your own paper helicopter. Let your imagination run wild with the endless possibilities!

Robogals is a student-run organisation which aims to inspire and encourage young girls and children to consider STEM throughout their education and as a career. We are happy to talk about the Robogals cause, so pop by!

The Chemistry of Cooking

Presented and Supported by Robert Gordon University School of Pharmacy and Life Sciences

In cooking, everything is chemistry! Whether you knead bread, bake a pie, or roast meat, chemical reactions are taking place. Food is just a complex mixture of chemicals and cooking can be thought of as a series of chemical reactions. Cooking may be the oldest and most widespread application of chemistry, and recipes the oldest practical result of chemical research.

The UV Drawing Room

Presented by Kenny Bean

Enter the UV Drawing Room and create amazing drawings together using UV torches and special templates. You’ll discover amazing facts about UV light and the history surrounding its discovery while you doodle across the light sensitive tables!

Plastics “R” Fantastic

Presented by Sustainable Communities Initiative

Hold on to those empty plastic bottles! Did you know they can be easily transformed into flowers, windmills, spiders and rockets? Why buy expensive toys when you can make your own out of waste? Bring your own clean and empty 500ml bottle to transform or we can provide one.

AWPR – Go Engineering! The Opportunity of a Lifetime

Meet young engineers who have worked on the new 36 mile, £745m AWPR project at the special stand dedicated to the new road. They will be on hand to answer questions about the project itself, their fledgling careers in engineering and the opportunities this project has afforded them already. There will be activities for younger children based on civil engineering and the AWPR itself.

TechFest 2018 Festival Calendar

See page 29
TECHFEST 2018
PUBLIC PROGRAMME

The energy industry depends on advances in science, technology, engineering and maths. Investing in science is key for us to be able to provide the world with the energy it needs in a sustainable way. TechFest offers something for everyone in STEM – it promotes young children’s natural curiosity as well as offers opportunities for secondary pupils to gain an insight into subjects for future studies or careers. We are proud to play our part in inspiring the next generation of scientists and engineers with TechFest to improve the world in which we live. We call them our ‘Heroes of Tomorrow’.

Hedda Felin, Senior Vice President, Equinor UK and Ireland Offshore

AGE CLASSIFICATION
This key will help you identify which events are suitable for each age group. The appropriate symbols will be highlighted in yellow under each event.

F = Suitable for Family
Y = Suitable for Young Adult
S = Suitable for Student
A = Suitable for Adult

TECHFEST 2018 OPENING EVENT
Return to Nature with Nick Baker

Professional naturalist and TV presenter Nick Baker has travelled to every corner of the globe while following his passion for the natural world. Now, Nick uses his lifetime of experience and lifelong love of science and nature to provide some insight of how to reconnect with the wilderness that lives within us all.

Join Nick for an unforgettable evening as he describes the art of returning to nature and how to get back in touch with our “wild” senses. It will inspire all ages to strip life back to the essentials from time to time and truly connect with the natural world around us. The result, to once again discover the great outdoors and all that it beholds.

DATE: Saturday 8th September
TIME: 6pm
VENUE: Arts Lecture Theatre, 569 King St, University of Aberdeen, AB24 5SU
COST: £6.00, £4.50 concession
Doors Open Day will return to Aberdeen this year on Saturday 8 September. Join us for a day of discovery in buildings old and new across the city - all for free. A number of new buildings will be open, so be sure to follow us on Facebook to see what’s happening: www.facebook.com/AberdeenDoorsOpenDay

DATE: SATURDAY 8TH SEPTEMBER

Doors Open Day and TechFest are collaborating at the University of Aberdeen, Zoology Building. Come and explore the fantastic collection of around 75,000 specimens at Aberdeen’s Zoology Museum; attend TechFest’s Bizarre Bones workshop; learn about exciting new research from ‘Snappy Science’ presented by University of Aberdeen science students.

DATE: SATURDAY 8TH SEPTEMBER 2018
TIME: 10am - 4pm
COST: Free
VENUE: Zoology Building and Cruickshank Botanical Garden, University of Aberdeen, Tillydrone Avenue, Aberdeen, AB24 2TZ

The Nankai Accretionary Complex has been formed by sediment being scraped off the Philippine Sea Plate as it is subducted beneath Japan. At the present day it is known to be the source of many earthquakes. It may also be home to microbial life, living deep beneath the seafloor. In this talk we will explain how it was explored by Expedition IODP 370, and what the expedition discovered!

DATE: MONDAY 10TH SEPTEMBER
TIME: 7.30pm
COST: £4.00, £3.00 Concession
VENUE: Fraser Noble Building, University of Aberdeen, AB24 3UE

TechFest 2018 Booking Information
See page 30
The Changing Climate: a History

Presented by Dr Michael Wood, Emeritus Senior Lecturer, University of Aberdeen

Climate change can be considered both historically and geographically. Some of the variations recorded over recent centuries, and their possible causes, will be examined, including the decades when global warming has been influencing so many aspects of our lives.

DATE:  MONDAY 10TH SEPTEMBER
TIME:  6.30pm
COST:  £4.00, £3.00 Concession
VENUE: Fraser Noble Building, University of Aberdeen, AB24 3UE

Grain to Bottle Brewing and Distilling Chat

Sit down, enjoy a beer or gin and listen to our makers walk you through how we make it. A collaborative process combining brewing, quality labs, maintenance and packaging. Get an insight into the world of beer-commerce and BrewDog’s digital roadmap. Feast your eyes into our breathtaking Lonewolf distillery and all the hard work that goes into it. A sneak peek into the new world of our Overworks Sour beer facility. Step by step, we follow these amazing liquids on their journey from our brewery to your glass. A bit of science, a bit of beer and a whole lot of BrewDog.

DATE:  TUESDAY 11TH SEPTEMBER
TIME:  6.30pm
COST:  £5.00
VENUE:  Fierce Brewery, 46 Howe Moss Avenue, Dyce, AB21 0GP

FIERCE Beer Brewery Tour

FIERCE BEER are Aberdeen’s only microbrewery. Launched in April 2016, FIERCE concentrate on beers that challenge the senses. There is no Lager, no Mild, no brown murky boring beers. The beers must taste of what the label says - so expect Raspberries, Blackcurrant, Habaneros, Vanilla, Coffee and more.

FIERCE will take your taste buds to a new dimension. Once you turn FIERCE, there is no turning back...

DATE:  TUESDAY 11TH SEPTEMBER
TIME:  6.30pm
COST:  £5.00
VENUE:  Fierce Brewery, 46 Howe Moss Avenue, Dyce, AB21 0GP

Tomorrow’s Doctors: Medical Students Leading Cutting-Edge Research

Presented by Aberdeen Student Society for Academic Medicine, University of Aberdeen

Academic medicine translates revolutionary science into everyday clinical practice to improve your healthcare. Aberdeen University are at the forefront of encouraging medical students to pursue careers as clinician-scientists. Our top medical student researchers will share their cutting-edge research with you in a series of short talks followed by a chance to mingle with the speakers. This event is suitable for anyone interested in science, healthcare or medicine. No expert knowledge is required! This event is brought to you by Aberdeen Student Society for Academic Medicine.

DATE:  TUESDAY 11TH SEPTEMBER
TIME:  6.30pm
COST:  £4.00, £3.00 Concession
VENUE:  Fraser Noble Building, University of Aberdeen, AB24 3UE
Behind the scenes of Scotland's Early Silver: From Conservation to Display

Presented by Stefka Bargazova, Lead Conservator, National Museums Scotland

The exhibition of Scotland’s Early Silver opened at National Museums Scotland (NMS) in Edinburgh in 2017. The exhibition is now touring nationally and can be seen at Duff House, Banff, from October 2018 to March 2019. This presentation will be given by Stefka Bargazova, the lead NMS conservator for the exhibition. Stefka will explore the conservation work of over 400 objects for the exhibition, showcasing several key objects, including the reconstruction of the Roman hacksilver hoard found at Dairsie in Fife (Scotland). The process of conservation to final display will be discussed, involving collaboration between conservators, curators, archaeologists, illustrators, mount-makers and exhibition officers at every step.

DATE: WEDNESDAY 12TH SEPTEMBER 2018
TIME: 6.30pm
COST: £4.00, £3.00 Concession
VENUE: Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

Silver Jewellery Workshop

Presented by Anne Marquiss

Join Anne for an evening workshop to discover the basic skills and techniques in jewellery making. Experiment with traditional materials and tools to create textures and patterns for your own design.

Anne Marquiss is a Jewellery designer and maker working in silver, semiprecious stones and leather. She teaches part time at Gray’s School of Art and as a mentor, supporting developing designers.

www.annemarquissjeweller.co.uk

DATE: WEDNESDAY 12TH SEPTEMBER 2018
TIME: 8.00pm
COST: £10.00
VENUE: Gray’s School of Art, Robert Gordon University, Garthdee Campus, AB10 7QD

Why do we Sleep?

Presented by Dr Olga Runcie, Consultant Psychiatrist, NHS Tayside

Sleep remains a scientific enigma. It is the only physiological process for which there is a lack of scientific agreement concerning its function. Why do we need to sleep? What happens when we sleep? In this talk Dr Runcie will discuss advances in sleep neurobiology answering questions about sleep functions and mechanisms of sleep and wake control. You will learn how to use this knowledge to improve your sleep.

DATE: THURSDAY 13TH SEPTEMBER 2018
TIME: 6.30pm
COST: £4.00, £3.00 Concession
VENUE: Fraser Noble Building, University of Aberdeen, AB24 3UE

TechFest at TechFest - tea, tonics and botanicals

Presented by The Rowett Institute, University of Aberdeen

For tea lovers or those interested in tea tipples. Bring your favourite tea mug and learn how tea and other botanicals can impact on health and wellbeing led by the Rowett Institute, University of Aberdeen.

DATE: WEDNESDAY 12TH SEPTEMBER 2018
TIME: 7.00pm
COST: £10.00
VENUE: Café Cognito at Queens Cross Church, Albyn Place, Aberdeen, AB10 1YN

TechFest 2018 Careers Guide
See page 28
Chortle award-nominees and IT superstars Foxdog Studios bring their unique brand of techy comedy to TechFest.

In Robot Chef, Pete and Lloyd present a unique comedy-tech experience, where the audience connect their phones to Foxdog’s own WiFi to play games, music and more. The comedic duo has audiences draw their own characters and control them onstage through augmented reality, with their character’s controlling Foxdog’s 3D-printed custom tech – igniting a fully automated stove, driving a sky tractor and firing a head-mounted sausage cannon to cook and serve a meal of sausage and beans (it’s the simplest way).

As heard on BBC Radio 4 Extra and featured in WIRED Magazine.

DATE: THURSDAY 13TH SEPTEMBER 2018
TIME: 7.00pm
COST: £4.00, £3.00 Concession
VENUE: Fraser Noble Building, University of Aberdeen, AB24 3UE

In Robot Chef, Pete and Lloyd present a unique comedy-tech experience, where the audience connect their phones to Foxdog’s own WiFi to play games, music and more. The comedic duo has audiences draw their own characters and control them onstage through augmented reality, with their character’s controlling Foxdog’s 3D-printed custom tech – igniting a fully automated stove, driving a sky tractor and firing a head-mounted sausage cannon to cook and serve a meal of sausage and beans (it’s the simplest way).

As heard on BBC Radio 4 Extra and featured in WIRED Magazine.

DATE: THURSDAY 13TH SEPTEMBER 2018
TIME: 7.00pm
COST: £4.00, £3.00 Concession
VENUE: Fraser Noble Building, University of Aberdeen, AB24 3UE

Breakfast is often promoted as the most important meal of the day and advocated to kick start the metabolism and fuel the brain and body for the day. However the media often cultivates common fallacies and misconceptions and the scientific basis for such concepts are often lost. Doctor Leonie Ruddick-Collins will address some of the truths and fallacies about breakfast consumption and its impact on metabolism and health.

DATE: THURSDAY 13TH SEPTEMBER 2018
TIME: 7.30pm
COST: £4.00, £3.00 Concession
VENUE: Fraser Noble Building, University of Aberdeen, AB24 3UE

Join us for an entertaining and captivating evening with recently retired pathologist Professor James Grieve and SPA forensic biologist Chris Gannicliffe as they look at the advances in forensic science over the years. During this fascinating foray into the world of forensics learn how modern technology has changed the face of forensics and discover the common misconceptions in forensic fiction vs reality.

DATE: FRIDAY 14TH SEPTEMBER
TIME: 7.00pm
COST: £5.00, £4.00 Concession
VENUE: Fraser Noble Building, University of Aberdeen, AB24 3UE
Joint Principal Sponsors

Aberdeen Harbour Expansion Project Visitor Centre Tour

Dragados UK, principal contractor for the Aberdeen Expansion Project, are delighted to join the TechFest 2018 by opening the doors of our project Visitor Centre.

The Aberdeen Harbour Expansion Project Visitor Centre affords the general public from the North East of Scotland the opportunity to gain an insight into one of the most ambitious marine engineering projects in Scotland for many decades.

You will be able to learn about the background of the development, the different construction activities underway, the environmental protection measures being deployed, and some of the history of the area. Furthermore, the Visitor Centre offers the opportunity to see real-time works from a privileged position.

DATE: SATURDAY 15TH SEPTEMBER 2018
TIME: Visitor Centre open 10.00am – 3.00pm
COST: Free
VENUE: Aberdeen Harbour Expansion Project Visitor Centre, Walker Park, Aberdeen, AB11 8QX

Wild Adaptations

Presented by Lizzie Daly

How does a hagfish defend itself from predatory sharks? Who is the best at camouflage in the animal kingdom? How do species adapt to living in the deep sea ocean? CBeebies presenter and wildlife super star Lizzie Daly knows!

Join Lizzie as she explores some of the animal kingdoms most wacky and wild adaptations! Lizzie will be delving into the science behind each adaptation and using demonstrations to understand some of the most bizarre survival strategies the natural world has to offer.

DATE: SATURDAY 15TH SEPTEMBER 2018
TIME: 2.00pm and 4.00pm
COST: £5.00, £2.50 concession
VENUE: Arts Lecture Theatre, University of Aberdeen, 569 King Street, Aberdeen, AB24 5SU

Jenny Sturgeon Trio

Scottish folk music with a touch of natural history. With roots in seabird ecology and wildlife conservation, Jenny’s enthusiasm for nature and the natural world creeps in to all her writing. Playing songs from Jenny’s most recent release, the critically acclaimed ‘The Wren And The Salt Air’ - a National Trust for Scotland commission to celebrate 30 years since St Kilda became a World Heritage Site for nature - as well as material inspired by folklore, history and observations of society.

DATE: SATURDAY 15TH SEPTEMBER
TIME: 8.00pm
COST: £5.00, £4.00 Concession
VENUE: The Blue Lamp, 121 Gallowgate, Aberdeen, AB25 1BU

AGE SUITABILITY: 18+

TechFest 2018 Festival Calendar
See page 29
TechFest is coming to the Bettridge Centre. Join us for a fun filled day of STEM, Science, Technology, Engineering and Mathematics as part of this year’s TechFest Eureka Series sponsored by Chevron. With hands-on activities and workshops, this interactive experience provides inspiring activities for all ages. Bring a packed lunch and stay all day!

SUNDAY 16TH SEPTEMBER | 10.00AM - 4.00PM
THE BETTRIDGE CENTRE, GREYSTONE PLACE, NEWTONHILL AB39 3UL
£2.00 ENTRY - UNDER 3’S FREE

Who Says I’m A Windbag!

Presented by Live Wire Productions

Presented by personified lungs Laura and Lucy, engage with what happens in our wind pipe and lungs when we live and breathe in today’s harsh environment. Watch out for the Lung Cloggers!

Show Times throughout the day.

HOW TO BOOK
No Pre-Booking needed!

HOW TO FIND US
The Bettridge Centre is located in the village of Newtonhill, after leaving the A90, take Newtonhill Road as far as it will go, cross the railway bridge and then turn sharp right to the Bettridge Centre on Greystone Place.

TRAVEL
Buses run regularly to Newtonhill from Aberdeen and Stonehaven.
Information on Stagecoach services 7, 7A, 7B, X6 and X7 can be found on their website:
www.stagecoachbus.com/timetables

ACCESS
Parking on site, disabled parking spaces at entrance and wheelchair accessible throughout.
Telephone 01569 731320 or visit www.bettridgecentre.org.uk

Wild About Maths

Presented by TechFest

Take a walk on the wild side with TechFest as you undertake puzzles, challenges and problem solving activities inspired by the natural world. In these hands-on maths activities you can work through a series of puzzles designed to challenge your idea of how much fun maths can be.

Bizarre Bones

Presented by TechFest

Which part of your body is stronger than steel and harder than granite? Find out the answer to these questions and discover many more incredible facts about the skeleton as we investigate the hardest organ in the human body: bones.

Amazing Aberdeen

Presented by TechFest

Come and learn about the scientists and engineers who have made Aberdeen the incredible city it is!
TECHFEST 2018

EUREKA DAY @ THE BARN

SUNDAY 16TH SEPTEMBER | 10.00AM - 4.00PM
THE BARN, BANCHORY, AB31 5QA | £2.00 ENTRY - UNDER 3’S FREE

TechFest is coming to the Barn. Join us and the Barn learning team for a fun filled day of STEM, Science, Technology, Engineering and Mathematics as part of this year’s TechFest Eureka Series sponsored by Chevron. With hands-on activities and workshops, this interactive experience provides fun for all ages. Bring a packed lunch and stay all day!

The TechFest Dome - Night Sky

**Presented by TechFest**

Enjoy a visit to the unique environment of the TechFest Dome. What makes day and night? Where does the Sun go at night? This show demonstrates how the Sun moves across the sky during the day in both summer and winter. Find the North Star, the Plough, Orion, Beteigeuse, and Sirius in the night sky and relate them to the Greek constellations.

Advance Booking Available for 10.15 / 11.45 / 13.45 / 14.30
Suitable for age 3+
Show Times throughout the day - some show times can be booked online.

Racing Rockets

**Presented by TechFest**

The sky’s the limit when you put your imagination to the test to design a space rocket that is out of this world. This challenge gets you to think about rocket design and to build a rocket that will travel as high as possible.

HOW TO BOOK

Online: www.thebarnarts.co.uk
Box Office: Tuesday - Saturday, 12pm – 4pm
Telephone: 01330 825431

HOW TO FIND US

The Barn is based in refurbished farm buildings, between Crathes Castle and the beautiful Deeside town of Banchory, just 30 minutes from Aberdeen.

TRAVEL

Buses run regularly to Banchory from Aberdeen and Braemar.

Information on Stagecoach services 201, 202, 203 can be found on their website:

www.stagecoachbus.com/about/north-scotland

ACCESS

Extensive free parking on site. Disabled parking spaces at Barn entrance. Wheelchair accessible throughout. Induction Loop in main theatre. Please call The Barn prior to your visit to discuss any additional access needs you may have.

Telephone 01330 825431 or visit www.thebarnarts.co.uk
Adrian Gomes of local drinksmith’s 10 Dollar Shake takes you through some of the key natural methods of preserving ingredients and drinks, including curing, fermenting and pickling a range of everyday foods. Each drink will be paired with a similarly-preserved ingredient served as a canape.

**The Lynx and Us**

Presented by Dr David Hetherington

Unlike wolves and bears that weaved their way into our childhood consciousness, the Eurasian lynx is largely unknown to us. What do these secretive ambush hunters look like? What do they eat? How do they live? And how do they get on with people?

As this enigmatic predator recovers lost ground across Europe, Dr David Hetherington explores, with the help of Laurent Geslin’s stunning photographs, its various interactions with humans. He then examines what this means for Scotland, where there is a growing discussion about reintroducing Europe’s largest cat.

**Dr Emily’s Weird and Wonderful Science Facts**

Presented by Dr Emily Grossman

Did you know that you can block a tickle? Or that we share 50% of our DNA with a banana? Would it surprise you to discover that snakes can bite you even when they’re dead? That there’s a planet on which a day lasts longer than a year? Or that we make better decisions when we need a wee?! Join TV scientist Dr Emily Grossman for this fun and interactive science quiz show, as she explains some of the world’s weirdest science facts. Emily challenges you to figure out the answers, and uses audience volunteers to help her with simple and fun experiments, demonstrating core scientific concepts. This show is guaranteed to amuse and amaze, whether you’re 7 or 70.

Dr Emily Grossman is an internationally acclaimed science author, public speaker and TV personality. She is an expert in molecular biology and genetics, with a Double First in Natural Sciences from Queens’ College Cambridge and a PhD in cancer research. Emily is best known as a Resident Science Expert on ITV’s The Alan Titchmarsh Show and Sky1’s Duck Quacks Don’t Echo, for her fun YouTube videos for BBC Britlab and The Royal Institution, and for her inspirational talks in schools, universities and at live events such as The Hay Festival, The Science Museum and Cheltenham Science Festival. Emily is a passionate advocate for gender equality and diversity in STEM and has delivered a TEDx talk at UCL on Why Science Needs People Who Cry. Last year she was named as the second Honorary STEM Ambassador, alongside astronaut Tim Peake, for her pioneering work in STEM education and as a role model to young people.
Sonal Bhadane, Elekta Ltd

Sonal is a Medical Physicist, Radiation Therapy Technologist, Clinical Educator, Science Communicator and an advocate for Women in STEM. She is on a mission to help young minds develop and cultivate their interests in STEM fields by guiding them about the future opportunities and showing them what their involvement can mean in a rapidly transforming world. She has 10 years of combined clinical, medical device and technology industry experience in Medical Physics and Radiation Therapy. From treating cancer patients with Radiation therapy to helping develop those lifesaving cancer therapy machines, her journey is about making difference. She is also a founder of Talking Science, a digital online community to build relationships for organizations and individuals in STEM fields and raise STEM awareness. Sonal is a storyteller where she enjoys talking about radiation physics, linear accelerator technology and cancer biology, weaving a meaningful story that is sure to intrigue curious minds.

In her talk she will give insights on profession and professionals involved in Radiation therapy care of cancer patients

DATE: TUESDAY 18TH SEPTEMBER
TIME: 7.00pm
COST: £4.00, £3.00 Concession
VENUE: Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

Lava Jewellery Design

Coinciding with TechFest's Silver Anniversary, Jacqui Grant has been designing jewellery for 25 years. Jacqui and her husband Duncan are the founders of Lava Jewellery Design situated in Peterculter. Lava is well known for its authentic, original and bespoke jewellery. Jacqui's passion lies with Scottish Historical Silver design with many pieces influenced by Charles Rennie Mackintosh, the works of Robert Burns and by the beautiful Scottish landscape. Jacqui will talk about the history of Scottish Silver Design, how this relates to her own work and how it influences others. Join her to discuss different pieces and have a look at examples of silver jewellery.

DATE: TUESDAY 18TH SEPTEMBER 2018
TIME: 6.00pm
COST: £4.00, £3.00 Concession
VENUE: Garthdee House, Robert Gordon University, Garthdee Campus, AB10 7QB

AWPR - Go Safer, Go Greener, Go Connect... Go North East!

Senior project managers from the new 36 mile, £745m AWPR project present a fascinating overview of this vast infrastructure project – one of the biggest road schemes on the ground anywhere in Europe – and discuss the array of benefits the long-awaited project will bring to the city, the region and Scotland as a whole. The team, from Transport Scotland, Aberdeen City Council, Jacobs and Aberdeen Roads Ltd, will then take your questions.

DATE: TUESDAY 18TH SEPTEMBER 2018
TIME: 7.30pm
COST: £4.00, £3.00 Concession
VENUE: Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

Tag your pics and comments #techfest18
www.techfest.org.uk
The Cambus O’May Cheese Company was developed from one man’s passion for the real taste of Scottish cheese. The cheese is hand-made just as it was in the farmhouse and matured in rooms where the environment is akin to that of the farmhouse cellar.

Come and join us at the creamery for a tour of our facilities and learn how we make this wonderful Scottish Cheese.

**DATE:** WEDNESDAY 19TH SEPTEMBER  
**TIME:** 10.30am  
**COST:** £4.00  
**VENUE:** Cambus O’May, Ballater, AB35 5SD

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Join Scottish International and former Olympic Curler Jackie Lockhart as she explains how she started first skating then curling and her love of the ice with former Team GB curler, Tom Brewster, Manager of Curl Aberdeen providing the technical insight into the ice plant and its maintenance which can affect the results and outcomes of matches.

**DATE:** WEDNESDAY 19TH SEPTEMBER  
**TIME:** 6.45pm  
**COST:** £4.00, £3.00 Concession  
**VENUE:** Curl Aberdeen, Eday Walk, Summerhill, Aberdeen AB15 6LN

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**Wonder Workers**

Presented by Dr Matt Pritchard

Throughout the centuries magicians have captivated audiences with mysterious and impossible acts that defy the laws of nature. Scientists also know that the world is full of wonder; spending their lives trying to explore and explain it. From pneumatically operated temple doors to augmented reality, this demo packed talk will explore the history, conflict and collaborations between these two groups of wonder workers.

Before becoming a science magician, Matt researched atomic physics at Durham University. He then went on to work at Thinktank Science Museum, Birmingham. Now as a science communicator he performs to over 50,000 people a year. He has also spent the last 18 years working as a magician and is an Associate of the Inner Magic Circle - one of only 300 people in the world at this level. In 2015 he was a finalist in the national Speaker Factor competition.

**DATE:** WEDNESDAY 19TH SEPTEMBER  
**TIME:** 6.30pm  
**COST:** £4.00, £3.00 Concession  
**VENUE:** Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

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Join Professor Alex Johnstone of the Rowett Institute, University of Aberdeen to learn about ‘You are what you eat – how time of eating influences body weight’. Professor Johnstone works on dietary aspects linked to appetite control for a healthy body weight, across the lifespan. Come along to find out about the latest research on weight loss and how chrono-nutrition or timing of eating and human physiology influence body weight.

Follow us on Facebook: CafeScientifiqueAberdeenCity

**DATE:** WEDNESDAY 19TH SEPTEMBER  
**TIME:** 7.00pm  
**COST:** Free  
**VENUE:** Tempo Café, Bon Accord & St Nicholas Centre, AB25 1HZ

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**TechFest 2018 Bookbug Sessions**

See page 26
**Science in Song: The Surprising Success of Songs for Education and Engagement**

Presented by Jonny Berliner

In a thought-provoking, humorous, and song-studded talk science troubadour, Jonny Berliner, explains how he uses the art of song writing to make science accessible and entertaining for all. His unique brand of comedy science songs were originally commissioned for the Guardian Science Weekly podcast. He has since appeared alongside some of the world’s leading science communicators, become a science teacher, education researcher, and a TEDx-talking advocate of using songs for education and engagement.

**DATE:** THURSDAY 20TH SEPTEMBER 2018  
**TIME:** 7.30pm  
**COST:** £4.00, £3.00 Concession  
**VENUE:** Aberdeen Science Centre, 179 Constitution Street, Aberdeen, AB24 5TU

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**Universilly Challenged**

Presented by Simon Watt and Jonny Berliner

A geeky pub quiz cum cabaret. Will you have the folding skills to win the Origami Olympics? Will you be the last one standing in the Elimination Round of Death!!! Win points in wacky rounds, and pick up points for pedantry, to give your team the advantage in a fiendish final challenge, like The Leaning Tower of Pasta, or the Super Scrabble Scramble!

**DATE:** FRIDAY 21ST SEPTEMBER 2018  
**TIME:** 8.00pm  
**COST:** £4.00, £3.00 Concession  
**VENUE:** Triple Kirks, Schoolhill, Aberdeen, AB10 1JT

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**Dark Matter: The Sound of New Physics**

Presented by Dr Charles Wang, University of Aberdeen and the Birmingham Ensemble for Electroacoustic Research

This performance by the Birmingham Ensemble for Electroacoustic Research, created in collaboration with the art@CMS project at CERN in Switzerland, involves the real-time sonification of data streams from the Large Hadron Collider, the world’s largest and most complex particle accelerator. Experimental data containing clues towards possible ‘new physics’ becomes the raw material for improvised music and visualisations programmed by the ensemble with an aim to creating a result that while beautiful, is both musically and scientifically meaningful.

**DATE:** THURSDAY 20TH SEPTEMBER 2018  
**TIME:** 6.30pm  
**COST:** £4.00, £3.00 Concession  
**VENUE:** Aberdeen Science Centre, 179 Constitution Street, Aberdeen, AB24 5TU

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**TechFest 2018 Booking Information**

See page 30
Look Up

Presented by Simon Watt

Festival favourite, Simon Watt, explores some of the science behind space exploration. Which planet is hottest? Which would float in a swimming pool? Which is the most studied? And just how much space is in space? Join him in this live show to see what experiments you can recreate at home and learn about what you can see if you only look up!

DATE: SATURDAY 22ND SEPTEMBER 2018
TIME: 2.00pm
COST: £4.00, £3.00 Concession
VENUE: Arts Lecture Theatre, University of Aberdeen, 569 King Street, Aberdeen, AB24 5SU

The Ugly Animal Roadshow

Presented by Simon Watt

At the Ugly Animal Preservation Society, we celebrate and explore the incredible biology of the animal kingdom’s most monstrous. What adaptations make them amazing? How did such hideous creatures evolve in the first place? The show features videos, demonstrations and lots and lots of audience participation.

This show has been hailed as an example of British Science Communication at its best and has been performed as part of a tour of Canada, Ireland and the UK as well as in Bulgaria, Mexico and the USA.

DATE: SATURDAY 22ND SEPTEMBER 2018
TIME: 4.00pm
COST: £4.00, £3.00 Concession
VENUE: Arts Lecture Theatre, University of Aberdeen, 569 King Street, Aberdeen, AB24 5SU

Graeme Obree the ‘Flying Scotsman’

Graeme Obree is an author, commentator and ex professional cyclist. He exploded to prominence on 17th July 1993 when he broke the UCI World Hour Record on the bike he hand built, ‘Old Faithful’. His hour record was broken a week later but Obree went on to regain the record and to become the UCI world pursuit champion twice. His autobiography “The Flying Scotsman” inspired a movie of the same name. He published his acclaimed training manual, “The Obree Way” in 2011. In 2013 he established a new world prone recumbent speed record riding Beastie, in Battle Mountain, which inspired the documentary film, Battle Mountain – Graeme Obree’s Story.

DATE: SATURDAY 22ND SEPTEMBER 2018
TIME: 6.30pm
COST: £6.00, £4.50 Concession
VENUE: Arts Lecture Theatre, University of Aberdeen, 569 King Street, Aberdeen, AB24 5SU

TechFest 2018 Careers Guide
See page 28
“Our industry is driven by technological advancement and it is the ‘aha!’ or ‘eureka’ moments that often develop into more innovative and efficient ways to safely explore and produce oil and gas. We know that tomorrow’s Chevron employees are today’s schoolchildren and by supporting initiatives like TechFest’s ‘Eureka Series’ we hope to encourage and inspire the next generation of industry professionals that can drive our industry forward with their game-changing ideas.”

Greta Lydecker, Managing Director
Chevron Upstream Europe

As part of our Eureka Series sponsored by Chevron, TechFest has organised a series of Summer activities to be held across Aberdeen and Aberdeenshire.

Children, from 3 years - 12 years, will be given the opportunity to test their science and engineering skills through a number of hands-on workshops including using science to solve mysteries, solving puzzles and designing and building.

The cost of each workshop is £1 per child, please note all children must be accompanied by an adult.

If you would like to attend or would like more information, please contact TechFest enquiries@techfest.org.uk.

Brilliant Bubbles
Prepare to be blown away by this hands on investigation into bubble making in this CREST Award accredited workshop.

Making Toothpaste
A fun and interactive experiment investigating the science behind a healthy smile. Make and test a new, top secret toothpaste recipe in this CREST Award accredited workshop.

Fossil Folly
Investigate why dinosaurs come in different shapes and sizes and have a go at designing and making your own in this CREST Award accredited workshop.

K’Nex Lighthouses
Shine a light of creativity to tackle a historic engineering challenge. Investigate problems associated with the construction of lighthouses as you come up with your own prototype model using K’Nex.
### Wednesday 1st August

**Kaimhill Library, Pittmedden Terrace, AB10 7HR**

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### Friday 10th August

**Turriff Library, The Square, Turriff, AB53 4AE**

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### Wednesday 1st August

**Dyce Library, Riverview Drive, AB21 7NF**

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### Saturday 11th August

**Portsoy Library, Aird Green, AB45 2RH**

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### Tuesday 7th August

**Alford Community Campus, Greystone Road, AB33 8TY**

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### Saturday 11th August

**Macduff Library, 17 High Street, AB44 1LR**

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### Tuesday 7th August

**Westhill Library, Westhill Drive, Westhill, AB32 6FY**

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### Friday 10th August

**Huntly Library, The Square, Huntly, AB54 8BR**

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### Thursday 16th August

**Ferryhill Library, Fonthill Road, Aberdeen, AB11 6UP**

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TECHFEST 2018 BOOKBUG SESSIONS

It's never too early to develop a passion for stories, songs and science! TechFest is delighted to bring a special twist to these fantastic sessions in partnership with Aberdeen City Libraries, Aberdeenshire Libraries and Scottish Book Trust. For further details please contact your local library.

**BOOKBUG SESSIONS IN ABERDEEN CITY LIBRARIES DURING SEPTEMBER**

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<tr>
<td>Bridge of Don*</td>
<td>Thur 20th Sept</td>
<td>10.30 - 11.00am</td>
</tr>
<tr>
<td>Woodside</td>
<td>Thur 20th Sept</td>
<td>10.30 - 11.00am</td>
</tr>
<tr>
<td>Airyhall*</td>
<td>Tue 25th Sept</td>
<td>10.30 - 11.00am</td>
</tr>
<tr>
<td>Torry</td>
<td>Thur 27th Sept</td>
<td>14.15 - 14.45pm</td>
</tr>
<tr>
<td>Cove</td>
<td>Fri 28th Sept</td>
<td>14.15 - 14.45pm</td>
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</tbody>
</table>

**BOOKBUG SESSIONS IN ABERDEENSHIRE LIBRARIES DURING SEPTEMBER**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>DAY</th>
<th>TIME</th>
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<tbody>
<tr>
<td>Westhill Library</td>
<td>Sat 1st Sept</td>
<td>10.30 - 11.15am</td>
</tr>
<tr>
<td>Meldrum Library (B)</td>
<td>Mon 3rd Sept</td>
<td>9.45 - 10.15am</td>
</tr>
<tr>
<td>Meldrum Library (T)</td>
<td>Mon 3rd Sept</td>
<td>10.30 - 11.00am</td>
</tr>
<tr>
<td>Ellon Library</td>
<td>Mon 3rd Sept</td>
<td>11.00 - 11.30am</td>
</tr>
<tr>
<td>Newtonhill Library</td>
<td>Tue 4th Sept</td>
<td>9.30 - 10.00am</td>
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<tr>
<td>Inverurie Library</td>
<td>Wed 5th Sept</td>
<td>10.30 - 11.00am</td>
</tr>
<tr>
<td>Banchory Library (T)</td>
<td>Fri 7th Sept</td>
<td>10.00 - 11.00am</td>
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<tr>
<td>Bettridge Centre</td>
<td>Fri 7th Sept</td>
<td>9.30 - 10.00am</td>
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<tr>
<td>Portlethen Library</td>
<td>Sat 8th Sept</td>
<td>11.00 - 11.30am</td>
</tr>
<tr>
<td>Banchory Library (A)</td>
<td>Sat 8th Sept</td>
<td>10.00 - 10.30am</td>
</tr>
<tr>
<td>Fraserburgh Library</td>
<td>Sat 8th Sept</td>
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<tr>
<td>Newtonhill Library</td>
<td>Tue 11th Sept</td>
<td>9.30 - 10.00am</td>
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<tr>
<td>Stonehaven Library</td>
<td>Wed 12th Sept</td>
<td>10.30 - 11.00am</td>
</tr>
<tr>
<td>Banchory Library (B)</td>
<td>Thur 13th Sept</td>
<td>10.30 - 11.00am</td>
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<tr>
<td>Kintore Library</td>
<td>Fri 14th Sept</td>
<td>2.00 - 2.30pm</td>
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<tr>
<td>Stonehaven Library</td>
<td>Fri 14th Sept</td>
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<tr>
<td>Portlethen Library</td>
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<td>Kemnay Library</td>
<td>Tue 18th Sept</td>
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<td>Inverurie Library</td>
<td>Wed 19th Sept</td>
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<td>Portlethen Library</td>
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<td>Portlethen Library</td>
<td>Thur 20th Sept</td>
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<td>Portsoy Library</td>
<td>Fri 21st Sept</td>
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<td>Fraserburgh Library</td>
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<td>Kintore Library</td>
<td>Tue 25th Sept</td>
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<tr>
<td>Huntly Library</td>
<td>Wed 26th Sept</td>
<td>10.00 - 10.30am</td>
</tr>
</tbody>
</table>

*Booking Required | (B) Baby Session | (T) Toddler Session | (A) All Ages
The Royal Institution's Mathematics Masterclasses 2018/19

TechFest is delighted to announce the new series of Royal Institution Mathematics Masterclasses. Organised by TechFest, with support from the Royal Institution, this series is available to S1 – S3 pupils from Aberdeen, Aberdeenshire and the neighbouring areas.

The Masterclass series is an excellent opportunity for keen mathematicians to meet with other like-minded students. Exploring a variety of different mathematical topics in a hands-on manner, these Masterclasses are delivered by enthusiastic speakers from industry, academia and education. Although primarily aimed at S2 pupils, eager S1 and S3 pupils are also welcome.

This series consists of Masterclasses held on Saturday mornings at Aberdeen City Centre venues. The series runs from mid-November 2018 until March 2019 and is made possible due to generous sponsorship from Chevron.

The Masterclasses provide a great opportunity to explore different mathematical topics in hands-on workshops from professionals who use mathematics on a daily basis.

Please visit our website for full details
www.techfestsetpoint.org.uk/education/ages-over-11/maths-masterclasses

For more information please speak to your Maths Teacher or contact TechFest at enquiries@techfest.org.uk or phone 01224 274348

Crest Awards

The CREST Awards scheme is the British Science Association's flagship programme for young people. It is the only nationally recognised accreditation scheme for STEM project work (science, technology, engineering and mathematics) subjects, providing science enrichment activities to inspire and engage 5-to-19-year olds.

• CREST is delivered by educators (teachers, technicians, club leaders, home educators etc.)
• CREST can be run in schools, clubs, youth groups, other organisations or at home.
• In addition to giving young people the opportunity to undertake hands-on science, CREST Awards also build skills that are transferrable to other subjects, further education and future employment (time management, project management, teamwork, communication). You can use CREST to enhance your personal statement on your UCAS form.

To find out about doing CREST in Scotland, visit the TechFest website at www.techfestsetpoint.org.uk/crest or email crest@techfest.org.uk

Explorathon

Join us for an extravaganza of events, research, comedy and much more at Explorathon! Meet researchers working on the most exciting areas of health, social science and the natural environment. Drop into our special “See Cancer” Café MED on Aberdeen’s unique approach to fighting cancer, check out our Pecha Kucha talks or come along to our comedy night at Bright Club. Join us at our stalls in town on Saturday for hands on science and fun family friendly activities.

For more details see www.explorathon.co.uk

DATE: FRIDAY 28TH & SATURDAY 29TH SEPTEMBER 2018

 Heroes of Tomorrow

Tuesday 15th & Wednesday 16th January 2019

AN EXCITING EVENT FOR S1 & S2 pupils at Robert Gordon University, Garthdee Campus, Aberdeen.

During the day pupils will be able to speak to Industry Professionals, participate in hands on workshops from a range of organisations including Robert Gordon University and join the Science Museum (London) who will host awe-inspiring interactive science shows, live experiments and demonstrations – explosive theatre for curious minds.

For more information please contact Roseanne Miller at TechFest roseannemiller@techfest.org.uk
## Biology & The Environment
- Return to Nature with Nick Baker
- A Celebration of Scottish Wildlife
- Why do we sleep?
- Wild Adaptations
- The Lynx and Us
- The Nankai Accretionary Complex; how it formed and what lives there – Expedition IODP 370
- The Ugly Animal Roadshow

## Chemistry
- FIERCE Beer Brewery Tour
- Grain to Bottle Brewing and Distilling Chat

## Computing Science
- Robot Chef
- Dark Matter: The Sound of New Physics

## Design & Technology
- Robot Chef
- Fascinating Forensics
- Dark Matter: The Sound of New Physics
- Silver Jewellery workshop
- Lava
- Behind the scenes of Scotland’s Early Silver: From Conservation to Display

## Engineering
- AWPR – Go Safer, Go Greener, Go Connect…Go North East!

## Food & Drink
- The Bartender’s Guide to Preservation
- Cambus O’May Cheese Creamery Tour 2018
- FIERCE Beer Brewery Tour
- Teafest at TechFest – tea, tonics and botanicals
- Grain to Bottle Brewing and Distilling Chat

## Geography
- The Changing Climate: a History
- The Nankai Accretionary Complex; how it formed and what lives there – Expedition IODP 370

## Health
- Why do we sleep?
- TeaFest at TechFest – tea, tonics and botanicals
- Breakfast like a King, Dine like a Pauper: Debunking common breakfast myths
- Radiation Therapy for Cancer Treatment: insights into the profession
- Tomorrow’s Doctors: Medical Students Leading Cutting-Edge Research
- Fascinating Forensics

## Media & Entertainment

## Physics
- Dark Matter: The Sound of New Physics

## Research

## Sports Science
- Skating on Thin Ice
- Graeme Obree the ‘Flying Scotsman’

## STEM Careers
- Fascinating Forensics
- Science in Song: The Surprising Success of Songs for Education and Engagement.
- The Ugly Animal Roadshow
- Look Up
- Wonder Workers
25.8.18 (Saturday)   Activity Weekend
Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

26.8.18 (Sunday)    Activity Weekend
Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

8.9.18 (Saturday)
Doors Open Day with TechFest
Zoology Building, University of Aberdeen, Tillydrone Avenue, Aberdeen, AB24 2TZ

8.9.18 (Saturday)
Return to Nature with Nick Baker
Arts Lecture Theatre, 569 King St, University of Aberdeen, AB24 3SU

9.9.18 (Sunday)
A Celebration of Scottish Wildlife
Zoology Building and Cruickshank Botanical Garden, University of Aberdeen, Tillydrone Avenue, Aberdeen, AB24 3UE

10.9.18 (Monday)
The Changing Climate: a History
Fraser Noble Building, University of Aberdeen, AB24 3UE

10.9.18 (Monday)
The Nankai Accretionary Complex; how it formed and what lives there – ExpeditionIODP370
Fraser Noble Building, University of Aberdeen, AB24 3UE

11.9.18 (Wednesday)
Silver Jewellery Workshop
Gray’s School of Art, Robert Gordon University, Garthdee Campus, AB10 7JD

12.9.18 (Wednesday)
TeaFest at TechFest – tea, tonics and botanicals
Café Cognito at Queens Cross Church, Albyn Place, Aberdeen, AB10 1YN

12.9.18 (Wednesday)
Why do we Sleep?
Fraser Noble Building, University of Aberdeen, AB24 3UE

12.9.18 (Wednesday)
Breakfast like a King, Dine like a Pauper: Debunking common breakfast myths
Fraser Noble Building, University of Aberdeen, AB24 3UE

13.9.18 (Thursday)
Robot Chef
Fraser Noble Building, University of Aberdeen, AB24 3UE

13.9.18 (Thursday)
Breakfast like a King, Dine like a Pauper: Debunking common breakfast myths
Fraser Noble Building, University of Aberdeen, AB24 3UE

13.9.18 (Thursday)
Fascinating Forensics
Fraser Noble Building, University of Aberdeen, AB24 3UE

15.9.18 (Saturday)
Aberdeen Harbour Expansion Project Visitor Centre Tour
Aberdeen Harbour Expansion Project Visitor Centre, Walker Park, Aberdeen, AB11 8QX

15.9.18 (Saturday)
Wild Adaptations
Arts Lecture Theatre, University of Aberdeen, 569 King Street, Aberdeen, AB24 3SU

15.9.18 (Saturday)
Jenny Sturgeon Trio
The Blue Lamp, 121 Gallowgate, Aberdeen, AB25 1BU

15.9.18 (Saturday)
Eureka Day @ the Barn
The Barn, Banchory, AB31 5QA

16.9.18 (Sunday)
Eureka Day @ the Bettridge Centre
The Bettridge Centre, Greystone Place, Newtonhill AB39 3UL

17.9.18 (Monday)
The Bartender’s Guide to Preservation
The Tipping House, 4 Belmont Street, Aberdeen, AB10 1JE

17.9.18 (Monday)
Dr Emily’s Weird and Wonderful Science Facts
Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

17.9.18 (Monday)
The Lynx and Us
Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

18.9.18 (Tuesday)
AWPR – Go Safer, Go Greener, Go Connect...Go North East!
Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

18.9.18 (Tuesday)
Radiation Therapy for Cancer treatment: insights into the profession
Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

18.9.18 (Tuesday)
Scottish Silver Design - from Tableware to Jewellery
Garthdee House, Robert Gordon University, Garthdee Campus, AB10 7QB

19.9.18 (Wednesday)
Cumbus O’May Cheese Creamey Tour
Cambus O’May, Ballater, AB35 5SD

19.9.18 (Wednesday)
Skating On Thin Ice
Curl Aberdeen, Eday Walk, Summerhill, Aberdeen AB11 8BL

19.9.18 (Wednesday)
Wonder Workers
Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

20.9.18 (Thursday)
Dark Matter: The Sound of New Physics
Aberdeen Science Centre, 179 Constitution Street, Aberdeen, AB24 5TU

20.9.18 (Thursday)
Science in Song: The Surprising Success of Songs for Education and Engagement.
Aberdeen Science Centre, 179 Constitution Street, Aberdeen, AB24 5TU

21.9.18 (Friday)
Universally Challenged
Triple Kirks, Schoolhill, Aberdeen, AB10 1JT

22.9.18 (Saturday)
Look Up
Arts Lecture Theatre, University of Aberdeen, 569 King Street, Aberdeen, AB24 3SU

22.9.18 (Saturday)
The Ugly Animal Roadshow
Arts Lecture Theatre, University of Aberdeen, 569 King Street, Aberdeen, AB24 3SU

22.9.18 (Saturday)
Graeme Obree the ‘Flying Scotsman’
Arts Lecture Theatre, University of Aberdeen, 569 King Street, Aberdeen, AB24 3SU
TECHFEST 2018 BOOKING INFORMATION

Tickets for all events at TechFest are available from Aberdeen Box Office unless specified in the programme entry.

HOW TO BOOK

1. By phone, the Aberdeen Box Office ticketline is (01224) 641122 and is open 9:30am - 6pm Monday to Saturday.

2. Online, tickets are available at www.aberdeenperformingarts.com

3. In person, tickets can be booked in person at the city centre box offices at His Majesty’s Theatre or The Lemon Tree and are open from 9:30am - 6pm Monday to Saturday.

4. At the venue, tickets for an event MAY also be available at the venue immediately prior to the event.

Please note that any tickets purchased at the venue will be cash payment only.

Any wheelchair users booking tickets should let the booking administrator know to ensure suitable seats are reserved where possible.

TICKET FEE
All prices are inclusive of VAT and booking fee.

CONCESSIONS
Unless otherwise stated, those eligible for concessionary rates are; Senior citizens, registered unemployed, full-time students, registered disabled and under 18s. Under 3’s are free for all events.

CANCELLATIONS
Please note that TechFest-SetPoint has a no refund or exchange policy, unless the event is cancelled.

Audio recorders and cameras may not be used in performance areas. Please ensure mobile phones are on silent during performances.

DISCLAIMER: All details of events in this programme are correct at time of going to print. TechFest-SetPoint reserves the right to alter or cancel programme information without prior notice. Any changes will be posted on the TechFest website. The views of presenters are their own and are not necessarily endorsed by TechFest-SetPoint, their Sponsors or Supporters.