

TECHFEST

Aberdeen and North-East Scotland's Festival of
Science, Technology, Engineering & Mathematics

2019 FESTIVAL PROGRAMME

Saturday 24th August – Saturday 28th September



www.techfest.org.uk

Scottish Charity Number: SC010349

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Joint Principal Sponsors

Highlights From A Busy Year So Far



equinor

We invited Secondary School pupils to join us at R&U for Heroes of Tomorrow in January.



Shell bp

Wish you were here at Caithness Science Festival in March.



bp Shell

Ben Garrod came with his 'So You Think You Know About Dinosaurs' show in April.



In May we attended MayFest and had our Dome in the Sir Duncan Rice Library.



Did you see us at the Aberdeen Highland Games in June. We had a fab day in the sun.



Have you seen us at your local library over the summer holidays as part of our Eureka programme.

TechFest 2019 Public Programme



BP and Shell are proud, as Joint Principal Sponsors, to welcome you to TechFest 2019 as we celebrate the 26th 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.

By supporting TechFest 2019 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.

Ariel Flores
Regional President
BP North Sea

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

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TECHFEST 2019

ACTIVITY WEEKEND

Saturday 24th & Sunday 25th August

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



Marathon Oil®

Entertaining Science Circus Show



SHOW

Presented by Dr Ken Farquhar,
Inspirational Science

Roll up, roll up it's time to check out the science of the circus. Champion Juggler & practicing scientist Dr Ken explores the scientific principles behind the thrills and spills of skilful tricks and impossible stunts. Find out why jugglers love gravity, how clowns use the force of a Jedi and why unicyclists keep moving to stay still. It's science but not as you may know it!!

Roxy and her Rock Pool Friends

Marathon Oil



SHOW

Presented by Live Wire Productions

Roxy visits her favourite rock pool friends, the Laughing Limpet, the Boring Barnacles, the Prickly Prawns, Starry, the Sea Star, Aggie Anemone and the Creepy Crab on a warm summer's day. They exchange ideas and their feelings with the help of CC, their magical friend and her happiness song.

 **ROBERT GORDON
UNIVERSITY ABERDEEN**

VENUE OPENING TIMES

Saturday 24th and Sunday 25th August,
09.30 – 16.00 each day.

The Sir Ian Wood Building, Robert Gordon University,
Garthdee Campus, Aberdeen, AB10 7GJ

ADMISSION COSTS

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.

PICNICS & PACKED LUNCHES

Although there are catering providers on site please feel free to bring your own food and soft drinks.

BUGGIES & PUSHCHAIRS

We have provided a Buggy Park at the Activity Weekend. Please be aware that it is not staffed and items are left at the owner's risk.

BABY CHANGE AREA

There will be a Baby Change area provided at the Activity Weekend.



FIRST AID

If you require First Aid Treatment - please visit the ABRRAS stand.

Booking Information - See page 30

A Breath of Fresh Air



SHOW

Presented by Jon Davies, thinkscience

What is Air? Why doesn't it just float off into Space? Can you see it? Can you feel it? Is it pushing on you? Is it part of you? Find out more in 'A Breath of Fresh Air'.

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 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.

Programming Lego Robots



Presented and Supported by Robert Gordon University School of Computing

Self-driving cars are just around the corner! Learn how to program a self-driving Lego Mindstorms robot. Watch as it navigates a maze.

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.

Build and Program Lego Robots



Presented by John and Mary McGill of ComputerExplorers 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.

Tremendous Trees



Presented by the Duthie Park Ranger Service

Do you know your Beech from your Birch? Come and meet the Rangers and work on your identification skills, by the time you 'leaf' you will know a tree both inside and out, and also learn some other interesting facts along the way!!

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

ABRRAS and Dinky Doctors... Saving lives



Presented by ABRRAS

Come and meet the team to find out more about First Aid. Name the bones, learn CPR, use a defibrillator and many more activities. We are also the home of Dinky Doctors which is first aid training for children aged 3-12 years, see our Teddy Ambulance, meet Mr Teddy and find out more in our Dinky Hospital!

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.

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!

Making Things Move



Presented and Supported by Robert Gordon University School of Engineering

How do we generate movement in different forms of transport? What is it that keeps us moving and, more importantly, what will stop us moving? We will use some demonstrations and hands-on experiments to investigate these important questions.

Powering The Future



Presented by Glasgow Science Centre

Energy underpins our modern lives but there are difficult choices to be made about how we will supply and use energy in the future. Is our energy affordable, secure and environmentally sustainable? As you explore these interactive hands-on exhibits, you can explore our energy options – from how we can produce electricity and fuels to how we can be smarter with our use of energy. What would you do?

The Critter Keeper

Presented by The Critter Keeper



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.

Build It



Presented by Aberdeen Science Centre

Discover the engineering skills needed and take part in a range of Built It challenges from our overhanding challenge to building the strongest shape with magnets.

Brilliant Brains



Presented by TauRx Therapeutics, University of Aberdeen

In this workshop you can learn more about the different areas of the brain while painting a little model to take home. Or learn about internal structures such as the hippocampus by solving fun memory puzzles with us. This part of the brain is responsible for your memories and is affected in diseases such as Alzheimer's. Come talk to us to learn more about this disease or get your memory tested by us!

Maths Week Scotland



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

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. Visit Maths Week Scotland at www.mathsweek.scot or follow us @mathsweekscot on Twitter.

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.

TECHFEST

Connect with TechFest on Social Media



Like us on
Facebook



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@techfestaberdeen



Twitter
@TechFestNews

Tag your pics and comments #techfest19

www.techfest.org.uk

Toddle Fest



When they're little, playing is just another way of learning. Let your under 5's discover the fun of playing in our soft play area, an ideal place for TechFest's youngest visitors.

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.

Artroom at TechFest



Presented by Grampian Hospitals Art Trust

Join Grampian Hospitals Art Trust's Artroom team to explore the world of Mark-1, the world's first whole body MRI scanner which is currently on permanent display in The Suttie Arts Space in Aberdeen Royal Infirmary. Explore how the first hand drawn images of a scanned mouse were created and colour in your own version.

Maths Around the World



Presented by TechFest | Sponsored by Chevron

A fun, hands-on maths workshop designed to challenge and build confidence. A variety of puzzles, representing different countries, are set out around the room. In small teams, pupils travel around each puzzle with a customised passport logging the countries they have visited. Help and encouragement is at hand and solutions checked.

GPSticket



Join GPSticket at our activity station and enjoy the chance to start collecting our local attractions. Brand new for TechFest 2019 you can also take part in the Festival treasure hunt! Stick with us we are going places.

Geology Rocks



Presented by TechFest | Sponsored by CNR International

Get your hands on some exciting rocks in this interactive workshop, learn about natural processes that have shaped the surface of the earth and delve underground to explore what lies beneath.

Apollo 7



Presented by TechFest | Sponsored by TechnipFMC

Ensuring astronaut safety is one of the biggest challenges faced by NASA engineers. Work as a team to apply physics and engineering principles in a dynamic and creative way to bring an astronaut safely back to Earth.

Beat the Bugs



Presented by NHS Grampian Antimicrobial Management Team

Come and find out about some amazing characters from the world of microbes. Microbes or micro-organisms are living things only visible under a microscope. They live in us and all around us and they come in all shapes and sizes. Some are useful for humans; some deadly! Antibiotics kill bugs called bacteria that cause infections. At our workshop you can create your own superbug, learn how bugs spread infections with the Shrek snotgun, find out some interesting facts about antibiotics and go home with some top tips on how to beat the bad bugs.

STEM through the Ages



Presented by TechFest | Sponsored by Premier Oil

History is all around us, but have you ever considered how Science, Technology, Engineering and Maths have impacted on the ancient world? Investigate the challenges that civilisations overcame to make their environments safer. Discover how they were able to navigate incredible distances successfully and learn how to do it yourself.

Wild About Maths



Presented by TechFest | Sponsored by Marathon Oil

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.

RGU Innovation Hub



Presented by Robert Gordon University Innovation Team

Meet the Robert Gordon University Innovation Team at our on-campus co-working space. Find out how we support entrepreneurs, what the future of work will look like and the range of start-up businesses we have helped develop.

Dolphinwatch



Presented by RSPB Scotland

Join RSPB Scotland to learn more about the local Dolphinwatch project, learn what amazing marine wildlife can be seen in Aberdeen City and find out ways you can protect them. Join in with lots of activities from our popular bycatch challenge where you race against the clock to rescue the animals to our disturbance game where you learn more about why dolphins need space to swim while testing your throwing aim. We will also have an exciting lock box challenge, come along to find out more!

Woodland to Waves: Environmental Detectives



Presented by JNCC, SEPA and Saving Scotland's Red Squirrels

Become an environmental detective today! Join us on a journey down the river, through woodlands to the sea and help us to identify and protect the UK's incredible animals and habitats on the way.

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!

NASA Space Zone



Join us in our Space Zone for hands-on practical activities with an out of this world twist.

Innovate your world, connect with BECS



Take part in therapeutic sensory activities with BECS who provides specialist play, leisure and sensory activities for all children including those with additional support needs and their families.





TECHFEST

EUREKA SERIES 

Sponsored by



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 for and produce oil and gas. 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

TechFest Eureka Summer Series in the Library

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

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

Children, from 4 – 12 years, will be given the opportunity to test their science, engineering and maths skills through a number of hands-on workshops including using science to solve mysteries, completing puzzles and designing and building.

If you would like to attend, please contact your local library.

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

STEM through the Ages

Presented by TechFest

The past is the key to the future, learn about the Science, Technology, Engineering and Maths behind ancient civilisations. Eureka workshops give children the opportunity to discover historical science secrets through experimentation and play.

Workshops cover the following topics: Effective Egyptians, Glorious Greeks, Resilient Romans, Valuable Vikings





Friday 2nd August, 2019

Mastrick Library, Greenfern Road, Mastrick, Aberdeen, AB16 6TR

Suitable For	Activity	Time
P1-3	Glorious Greeks	14.30 – 15.15
P4-7	Valuable Vikings	14.30 – 15.15
P4-7	Glorious Greeks	15.30 – 16.15
P1-3	Valuable Vikings	15.30 – 16.15

Thursday 8th August, 2019

Tillydrone Library, Tillydrone Community Campus, Hayton Road, Aberdeen AB24 2UY

Suitable For	Activity	Time
P1-3	Glorious Greeks	10.30 – 11.15
P4-7	Valuable Vikings	10.30 – 11.15
P4-7	Glorious Greeks	11.30 – 12.15
P1-3	Valuable Vikings	11.30 – 12.15

Tuesday 6th August, 2019

Cruden Bay Library, Station Road, Cruden Bay, AB42 0NL

Suitable For	Activity	Time
P1-3	Glorious Greeks	10.15 – 11.00
P4-7	Valuable Vikings	10.15 – 11.00
P4-7	Glorious Greeks	11.15 – 12.00
P1-3	Valuable Vikings	11.15 – 12.00

Friday 9th August, 2019

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

Suitable For	Activity	Time
P1-7	Glorious Greeks	14.30 – 15.15
P1-7	Valuable Vikings	15.30 – 16.15

Tuesday 6th August, 2019

Peterhead Library, 51 St Peter Street, Peterhead, AB42 1QD

Suitable For	Activity	Time
P1-3	Glorious Greeks	14.00 – 14.45
P4-7	Valuable Vikings	14.00 – 14.45
P4-7	Glorious Greeks	15.00 – 15.45
P1-3	Valuable Vikings	15.00 – 15.45

Tuesday 13th August, 2019

Bucksburn Library, Kepplehills Road, Bucksburn, Aberdeen, AB21 9DG

Suitable For	Activity	Time
P1-3	Glorious Greeks	14.30 – 15.15
P4-7	Valuable Vikings	14.30 – 15.15
P4-7	Glorious Greeks	15.30 – 16.15
P1-3	Valuable Vikings	15.30 – 16.15

Wednesday 7th August, 2019

Portlethen Library, Community Campus, Bruntland Road, Portlethen, AB12 4QL

Suitable For	Activity	Time
P1-3	Effective Egyptians	10.15 – 11.00
P4-7	Resilient Romans	10.15 – 11.00
P4-7	Effective Egyptians	11.00 – 11.45
P1-3	Resilient Romans	11.00 – 11.45

Thursday 15th August, 2019

Central Library, Rosemount Viaduct, Aberdeen, AB25 1GW

Suitable For	Activity	Time
P1-3	Effective Egyptians	10.30 – 11.15
P4-7	Resilient Romans	10.30 – 11.15
P4-7	Effective Egyptians	11.30 – 12.15
P1-3	Resilient Romans	11.30 – 12.15

TECHFEST 2019

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



Activity Weekend TechFest Goes Quiet

For families with children who have additional support needs, we have opened up our festival to allow you to enjoy the events as a family at your own pace in a safe, supported environment away from the hustle and bustle of the crowds.

After you have enjoyed all the workshops, relax with a cup of tea or juice.

TechFest is happy to support your individual requirements, please contact us to discuss how best we can support you or for more details at Enquiries@techfest.org.uk.

- Date:** Saturday 24th August 2019
- Time:** 16.00 -18.00
- Cost:** Adults £1, Children 1p pay on the door
- Venue:** Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

F Y S A



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.



Suitable for Family



Suitable for Young Adult



Suitable for Adult



Suitable for Student

TECHFEST

EUREKA SERIES



Sponsored by



EUREKA DAY AT ADEN COUNTRY PARK

Saturday 31st August, 10.15 – 16.00 (last entry 15.30)
Aberdeenshire Farming Museum at Aden Country Park,
Station Road, Mintlaw, Peterhead AB42 5FQ
£2, Under 3's free

TechFest is coming to Aden Country Park. 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.**

Roxy and her Rock Pool Friends



SHOW

Presented by Live Wire Productions

Roxy visits her favourite rock pool friends, the Laughing Limpet, the Boring Barnacles, the Prickly Prawns, Starry, the Sea Star, Aggie Anemone and the Creepy Crab on a warm summer's day. They exchange ideas and their feelings with the help of CC, their magical friend and her happiness song.

Show Times throughout the day.

Slime Academy

TECHFEST

Join the TechFest team at our Slime Academy as we explore different ways to make your perfect Slime. Fun for all the family this workshop will add some sparkle and squelch as well as getting you to think about the chemistry involved.

How to Book: No Pre-Booking needed!

How to find us: The entrance to the park is situated half a mile west of the village of Mintlaw on the A950 New Pitligo road (Station Road)

Travel: Buses run regularly to Mintlaw from Aberdeen and Fraserburgh. Information on Stagecoach services 67, X67, X68 can be found on their website - www.stagecoachbus.com/timetables

Access: Parking on site. Disabled parking spaces at entrance Wheelchair accessible throughout.

Aberdeenshire Farming Museum



The award-winning Aberdeenshire Farming Museum at Aden brings alive the story of the North East's farming history in the restored estate home farm. This unique semi-circular steading is in turn surrounded by the beautiful woodlands of Aden Country Park which provide an attractive haven for wildlife. The Farming Museum portrays the story of north-east farming in three related interpretive themes: a display celebrating innovations in farming methods and implements from the 1780s onwards; the Horseman's House which recreates an impression of life in the 1920s, with daily demonstrations of making oatcakes over an open fire; and Hareshow Farm a small Buchan farm transported nine miles and rebuilt at Aden. Discover the farm and its family, the Barrons, around the time electricity arrived in 1955.

Date: Throughout the summer season until the last Sunday in October. The park is open every day from dawn until dusk.

Time: 10:15am to 4pm (last entry 3:30pm) Thursday to Tuesday (closed Weds)

Cost: Free

Venue: Aberdeenshire Farming Museum at Aden Country Park, Mintlaw, AB52 4FQ

Contact: 01771 624590

Eureka Festival Demonstrations



TECHFEST

Presented by TechFest

Join us for fun festival STEM madness with hands-on practical demonstrations suitable for all ages.

TECHFEST

EUREKA SERIES

Sponsored by



EUREKA AT THE BETTRIDGE CENTRE



You can do it too Science Fair with Newtonhill Out of School Club



Join Newtonhill Out Of School Club at the Bettridge Centre with a fun filled afternoon of STEM, Science, Technology, Engineering and Mathematics as part of this year's TechFest Eureka Series sponsored by Chevron.

Date: Friday 16th August
Time: 14.00 -16.00
Cost: £2 entry – under 3's free
Venue: The Bettridge Centre, Greystone Place, Newtonhill, AB39 3UL

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 Wheelchair accessible throughout.

Sunday 1st September 2019, 13.00 -16.00,
 The Bettridge Centre, Greystone Place, Newtonhill AB39 3UL,
 £1 entry - under 3's free



Roxy and her Rock Pool Friends



SHOW Presented by Live Wire Productions

Roxy visits her favourite rock pool friends, the Laughing Limpet, the Boring Barnacles, the Prickly Prawns, Starry, the Sea Star, Aggie Anemone and the Creepy Crab on a warm summer's day. They exchange ideas and their feelings with the help of CC, their magical friend and her happiness song.

Eureka Festival Demonstrations



Presented by TechFest

Join us for fun festival STEM madness with hands-on practical demonstrations suitable for all ages.

Contact us:
enquiries@techfest.org.uk

Doors Open Day

**DOORS
OPENDAYS**
Get into buildings!

Doors Open Day will return to Aberdeen this year on Saturday 7 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 for this year, so be sure to follow us on Facebook to see what's happening - www.facebook.com/AberdeenDoorsOpenDay

Date: Saturday 7th September 2019

Doors Open Day with TechFest

**DOORS
OPENDAYS**
Get into buildings!
TECHFEST

Doors Open Day and TechFest are collaborating with the University of Aberdeen Institute of Medical Sciences. Look out for one of our workshops in the central atrium.

Date: Saturday 7th September 2019
Time: 10.00 -16.00
Cost: Free
Venue: Institute of Medical Science, Ashgrove Road West, AB25 2ZD

Motor Neurone Diseases: what's next?

cafeMED
1495 UNIVERSITY OF
ABERDEEN

Presented by Professor Simon Parson, Regius Chair of Anatomy, University of Aberdeen

The pan-Scotland Euan MacDonald Centre carries out research on how motor neurones work, looking at new drug treatments and improving quality of life for people with motor neurone diseases (MND). The Centre's researchers and clinicians will discuss progress and future developments in MND.

Date: Monday 9th September 2019
Time: 18.00 -19:30
Cost: Free
Venue: Suttie Centre, Foresterhill Rd, Foresterhill, Aberdeen AB25 2ZD

Y S A

#madeinaberdeem

To the Moon and Back



Presented by Professor Martin Hendry, University of Glasgow

Aberdeen Astronomical Society would like to invite you to come and join us for this fascinating free talk celebrating this year's fiftieth anniversary of the Apollo 11 mission, as well as the formation of AAS. Join University of Glasgow astronomer Martin Hendry on a voyage of discovery as he explores the science and technology behind Neil Armstrong's giant leap for humankind. And if you've ever wondered about the (surprisingly persistent) claims that the Moon landings were faked, prepare for some debunking fun as Martin casts a critical eye over the most popular conspiracy theories – before looking ahead to the exciting future for human space exploration. Further information and tickets available at aberdeen-astro.eventbrite.co.uk

Date: Tuesday 10th September 2019
Time: 19.00
Cost: Free
Venue: MacRobert Hall, Robert Gordon's College, Schoolhill, Aberdeen, AB10 1FE

Y S A

How to Speak Gorilla

Presented by Dr Michael Leach

Michael Leach is a zoologist and author. Using his experience living with mountain gorillas of Central Africa, gathering material for a book, Michael conducts a practical workshop on getting close to wild apes. Or, in other words, "how to walk, think and speak like a gorilla" - one of the most iconic animals on the planet. The audience learns, and participates in, how to chest-beat, knuckle-walk and communicate to their family using belches.



Date: Saturday 14th September 2019
Time: 14.30
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE

F Y S A



OPENING EVENT

Foxdog Studios: Tomorrow's Office

Presented by Peter Sutton and Lloyd Henning,
Foxdog Studios

In a rare appearance outside, IT rock'n'roll superstars Lloyd and Pete bring their latest inventions from their cable-infested living room to TechFest with a brand-new show. Following last year's show Robot Chef, where the audience controlled the duo's robot chef from their phones, their new inventions include a musical mop, a souped-up sausage cannon and a pair of light-up bongo boots. Bring your phone, control the office of tomorrow. Featured in WIRED Magazine. Winner of Best Show at Leicester Comedy Festival, the Chortle Award for Innovation and two Malcolm Hardee Awards. "If you don't enjoy their brand of techy musical comedy, there must be something wrong with your hardware" - Four Star Rating, Time Out



Date: Monday 16th September 2019
Time: 19.30
Cost: £4 / £3 concession
Venue: ONE Tech Hub, Schoolhill, Aberdeen AB10 1FR

Y S A

Advances in antibacterial and antifungal medicines – tackling antimicrobial resistance



Presented by Laura Simpson, Dan Smith,
Dr Doug Fraser-Pitt of Novabiotics Ltd

A guide to antimicrobial resistance and how Aberdeen based companies are helping tackle this global challenge by developing novel, innovative new treatments.

Date: Monday 16th September 2019
Time: 18.30
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE

Y S A

Cruickshank Botanic Garden Tour



Presented by Mark Paterson, University of Aberdeen

Mark Paterson, Curator of the University of Aberdeen's Cruickshank Botanic Garden, will lead you on a tour highlighting the management of Cruickshank Botanic Garden during the year. He will provide a captivating insight into the wonderful array of plants and flowers; their research uses and discuss some of the future plans for these beautiful gardens.

Date: Tuesday 17th September 2019
Time: 18.00
Venue: Cruickshank Botanic Garden, meet in the courtyard of the Cruickshank Building in the south-eastern section of the Garden. If the weather is wet, an indoor slide show and talk will be given highlighting the Garden through the seasons.
Cost: £4 / £3 concession (Pre-booking essential as places are limited)

F Y S A

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



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

Aberdeen Student Society for Academic Medicine have invited top medical student researchers to share their cutting-edge research with members of the public. There will be a series of short talks followed by a chance to mingle with the speakers. The University of Aberdeen is at the forefront of encouraging medical students to pursue a career as clinician scientists, and this event showcases the very best Aberdeen has to offer. This event is suitable for anyone who has any interest in science, healthcare or medicine.

Date: Tuesday 17th September
Time: 19.00
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE

Y S A

Career Guide - See page 28



From ink on paper to 3D virtual mapping: A life in Cartography



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

Join us for this fascinating insight to how map making has developed over the years, from the pen and ink drawings to the modern 3D virtual mapping world of computers. Dr Michael Wood has been President of the British Cartographic Society (the business and academic aspects) and is a member of The Society of Cartographers (the practical technical cartographers of the UK) and The International Cartographic Association (ICA). His work involved travelling the World between 1991-2003. He received an OBE for 'Services to Cartography' in 2003.

Date: Tuesday 17th September
Time: 18.30
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE



Bridging the gap: patient involvement in design of care



Presented by Josefine Björkqvist and Sheela Tripathie, Institute of Applied Health Sciences, University of Aberdeen

Patient involvement in the design of care can help provide health services that are more relevant and responsive to the individual needs of patients. Come and learn about patient and public involvement in health research, policy and care, with examples from urological cancer care.

Date: Wednesday 18th September
Time: 7pm
Cost: Free
Venue: Belmont Filmhouse, 49 Belmont Street, Aberdeen, AB10 1JS



Social communication across the generations



Presented by Professor Louise Phillips, University of Aberdeen

As we get older, there are changes to the brain, cognition, motivation and health, which can influence the way in which we communicate with each other. There are also generational differences in the rules of social engagement. At this event, Professor Louise Phillips will discuss evidence about the nature of social communication changes with age, and the impact this can have on the lives of people of all generations.



Date: Thursday 19th September
Time: 18.30
Cost: £4, £3 concession
Venue: Fraser Noble Building, University of Aberdeen, AB24 3UE



Subsea Technology - Totally Technical



TechFest has teamed up with the Aberdeen Branch of the Society for Underwater Technology (SUT) to bring together an evening of quick-fire technology themed presentations. The SUT, along with its Member Companies, will produce and deliver up to nine (9) ten-minute presentations, all of which will showcase the latest innovations in subsea technology and processes.



"Subsea Technology – Totally Technical" will be a must-see event in this year's TechFest programme.

Date: Wednesday 18th September
Time: 17.30 for 18.00 start
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, AB24 3UE



#madeinaberdeen

How to win the battle with Insomnia

Presented by Dr Olga Runcie, Somniance Ltd

Insomnia is the most common sleep disorder. Chronic insomnia is reported to affect up to 10% of the general population. Insomnia causes much distress to sufferers and is associated with low quality of life and a higher level of physical and mental illness. In this talk Dr Runcie will discuss how to deal with anxiety and fear about not sleeping. You will learn how to change your sleep routine in order to break a vicious insomnia cycle.



Date: Thursday 19th September
Time: 19.30
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, AB24 3UE

Y S A

Scot Free Tours: Science and the City Tour



Presented by Scot Free Tours Aberdeen

Aberdeen scientists are responsible for an array of world-changing discoveries, from finding the cure to diabetes to the equation behind mobile phones. But what of the people behind these technological developments? Join Scot Free Tours to hear the human stories of scientific innovation, featuring a whole lot of backstabbing, unethical experiments and Margaret Thatcher's ex-boyfriend. You'll never see Aberdeen city centre in the same way again.



Image: Lia Sanders

Date: Saturday 21st September
Time: 15.30
Cost: Free but Donations are welcome.
Venue: Meeting point outside Marischal College main entrance, Broad Street, Aberdeen, AB10 1AB

F Y S A

New Music Workshop on Microtonality



With composer Donald Bousted, Artistic Director of Microtonal Projects and EUROMicroFest

Duo Contour and composer, Donald Bousted present the microtonal trumpets, the malletKat (a midi mallet Instrument) and the tunings (quarter-tone and 19-division of the octave) which the instruments will play in this evening's concert.

www.donaldbousted.com
www.duocontour.org
www.microtonalprojects.com

Date: Saturday 21st September
Time: 14.30
Cost: £4 / £3 concession
Venue: Butchart Centre, University Road, Aberdeen, AB24 3UT

F Y S A

New Music for Microtonal Trumpets and malletKat



Presented by duo Contour; Stephen Altoft, microtonal trumpets and Lee Ferguson, malletKat

Based in Freiburg, Germany, duo Contour has long-established working relationships with composers such as Donald Bousted, Christopher Fox, Jürg Frey, Anne La Berge and James Saunders. As part of the Microtonal Projects Collective, they have developed repertoire for malletKat (a midi mallet instrument) and microtonal trumpets, and appear regularly at EUROMicroFest.

Date: Saturday 21st September
Time: 18.00
Cost: £4 / £3 concession
Venue: Butchart Centre, University Road, Aberdeen, AB24 3UT

F Y S A

#madeinaberdeen



Rocks, Stars and Rockstar Rockets: Constellation Making, Handling Rocks from Space and Rocket Engineering Competition

Presented by CPS200 | University of Edinburgh | ROE
BIS Scotland

As part of this drop-in workshop, the participants will create their own constellation picture to take home, using supplied "night sky" postcards and sticky stars. For larger groups of participants or more determined individuals, there is also an option to create a number of constellations and put them up on a wall to make a "night sky" mural. As well as the constellation shapes, they will incorporate different coloured stickers to represent different stellar temperatures/sizes. They will also be able to handle some "rocks from space" and find out more about how we use Meteorites to understand evolution of our own Solar System. Weather and space permitting, there might perhaps even be a chance to make a paper rocket and launch it with a compressed air launcher. The activity will be complimented with discussing the cultural and scientific significance of the constellations and providing information about current work in Astrophysics research and technology development.

Date: Saturday 21st September
Time: 14.00 – 16.00
Cost: £1 pay on the door
Venue: Sir Duncan Rice Library, University of Aberdeen,
AB24 3AA

F Y S A

From Charles Piazzi Smyth to Scottish Spaceport: 200 years of reaching for the stars

Presented by CPS200 | University of Edinburgh | ROE
BIS Scotland



In this talk, we will link the rich History of Astronomy and Space Science in Scotland with present-day exciting new developments and ambitions, including the proposal to build first Scottish Spaceports. From Astronomers moving their instruments to higher and higher altitudes, to space entrepreneurs hoping to mine asteroids, 50 years since the Moon landings, a new Space Race seems to be starting off! What should we believe and what is "fake news"? Looking at how science, engineering and the rest of society are co-evolving ideas about the future Space Exploration and an off-Earth Economy - what are the opportunities in/for Scotland and how/should we take them? Building a new space ecosystem is not trivial – after all, who said it was not rocket science?!

Date: Saturday 21st September
Time: 18.00
Cost: £4 / £3 concession
Venue: Sir Duncan Rice Library, University of Aberdeen,
AB24 3AA

Y S A

TECHFEST

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@TechFestNews

Tag your pics and comments #techfest19

www.techfest.org.uk



**Innovation at RGU –
Stories from University
Start-up Entrepreneurs**



Presented by Robert Gordon University Innovation Team

How do you turn an idea into a viable business? At Robert Gordon University, we seek to develop a culture of entrepreneurship and support our community to turn their ideas into reality. This session will give an overview of our projects and introduce teams from our Start-up Accelerator to tell stories of the highs and lows of building a business and the lessons they have learnt in using technologies to prepare us for the future.

Date: Monday 23rd September
Time: 18.30 – 19.30
Cost: £4 / £3 concession
Venue: ONE Tech Hub, Schoolhill, Aberdeen AB10 1FR



HYPED



Presented by the University of Edinburgh Hyperloop Team

Join the University of Edinburgh Hyperloop team as they explain the design and manufacture of the Hyperloop; Elon Musk's concept for the future of mass transportation. The concept would see electrically propelled pods travel autonomously through a near-vacuum tube. The pods will be able to reach speeds comparable to aircraft and could see a journey such as Edinburgh to London shortened to 50 minutes.

Date: Monday 23rd September 2019
Time: 17.30 – 18.30
Cost: £4 / £3 concession
Venue: ONE Tech Hub, Schoolhill, Aberdeen AB10 1FR
Cost: £4 / £3 concession (Pre-booking essential as places are limited)



#madeinaberdeem

Hollywood Science



Presented by Dr Jonathan Hare, University of Sussex

Based on the BBC / OU TV series Hollywood Science. We ask how realistic is the science behind some of Hollywood's classic movies and stunts? We will take a number of Hollywood Films and look in more detail to find out. Depending on time, films will include; SPEED, Jason Bourne, The Score, Waterworld, UP, Moon, Angels and Demons, National Treasure.



Date: Tuesday 24th September 2019
Time: 18.00
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE





Medication can be harmful! What can I do to reduce the harm from taking medicine?



Presented by Miss Katherine Graves-Morris: Medical Student Year 2, Dr Carrie Stewart, Post-Doctoral Research Fellow, Dr Roy Soiza, Consultant Physician/Honorary Senior Lecturer Prof Phyto Myint, Professor of Medicine of Old Age, University of Aberdeen

All medications have side effects. These side effects are wide ranging, and they can be short term side effects or long-term side effects. Our research focuses on how best to reduce such harm. Our presentation will demonstrate how patient and public engagement is essential in reducing such harm.

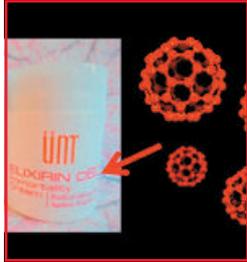
Date: Tuesday 24th September 2019
Time: 18.30
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE



Fullerenes, Nanotubes and Nobel Prizes - the discovery of Buckminsterfullerene: Can C60 Prolong Your Life?

Presented by Dr Jonathan Hare, University of Sussex

The discovery of a new form of carbon in 1985 - the Fullerenes - has led to a new carbon mechano that promises amazing developments for the future. In 1996 the Nobel Prize for Chemistry was awarded for the discovery of these new and potentially important materials. This talk is an account of the scientific story, breakthroughs and latest research. It will also cover the most recent developments of people around the world eating it (in olive oil)! A 2012 rat study showed doubling of life, so people are now eating C60! Jonathan was directly involved with the Nobel Prize winning C60 research.



Date: Tuesday 24th September 2019
Time: 19.30
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE



Superhero Science

Presented by Dr Matt Pritchard

Are superpowers fact, fiction or feasible in the future? Explore invisibility, superstrength, body armour, levitation, mind control and find out what they do (or don't) have to do with real science. And for those superpowers which are scientifically impossible? That's where the magic comes in!



Image: Vanley Burke

Date: Wednesday 25th September 2019
Time: 18.30
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE



FIERCE Beer Brewery Tour



FIERCE BEER are Aberdeen City's only microbrewery. Launched in April 2016, FIERCE, concentrate on beers that challenge the senses. Fresh and flavourful are two key elements. The beers must taste of what the label says – so expect Raspberries, Chocolate, Vanilla, Coffee and more. On the top of that, there are always new and exciting projects going on – spirits, barrels, experiments - it has a lot to offer. FIERCE will take your taste buds to a new dimension. Once you turn FIERCE, there is no turning back... Age Suitability: 18+

Date: Wednesday 25th September 2019
Time: 18.30
Venue: Fierce Brewery, Unit 49, 46 Howe Moss Avenue, Dyce, AB21 0GP
Cost: £7.50

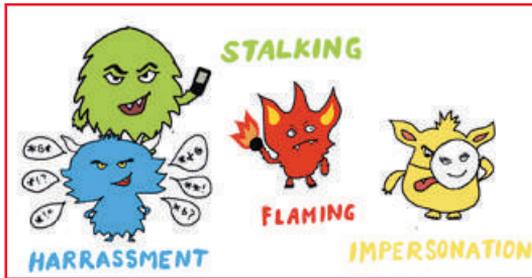


Booking Information - See page 30

**Troll hunting:
Recognising and coping
with cyberbullying**



Presented by Dr Amy Irwin, Dr Ceri Trevethan, Dr Emma Hepburn, University of Aberdeen



Cyberbullying is a concern among young people with as many as 75% of school children experiencing cyberbullying at some stage. This interactive seminar will discuss four types of 'troll' – cyberbully types (harassment, flaming, impersonation, stalking). Clinical and Applied Psychologists will talk you through how to spot the signs of cyberbullying, the impact that bullying can have, and how to find support and cope with cyberbullying. Come along to find out more and learn to squash cyber-trolls!

Date: Wednesday 25th September 2019
Time: 19.30
Cost: £4 / £3 concession
Venue: Fraser Noble Building, University of Aberdeen, Aberdeen, AB24 3UE



**Code the City
Mini-Workshop**



Come and hear how Code the City use their innovation process to generate social good through weekend co-design events. We bring together people who have a challenge, have an interest in the solution, and those who might be able to develop a solution. We believe that you need to bring all of these people together to find the best solutions. You'll experience the process of a weekend in our one-hour session.

Date: Thursday 26th September 2019
Time: 18.30
Cost: £4, £3 concession
Venue: ONE Tech Hub, Schoolhill, Aberdeen AB10 1FR

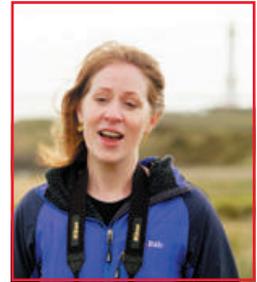


**Dolphins at the Battery:
Aberdeen's Circular
Showcase**



Presented by Fiona McIntyre, Greyhope Bay Ltd

How do our daily choices and actions impact our marine and natural environment? Greyhope Bay has designed a zero-footprint visitor centre to be built at Torry Battery where you can see circular technologies and models of design first-hand while viewing the city's resident dolphins. Find out how you can be a part of it!



Date: Thursday 26th September 2019
Time: 18.30
Cost: £4, £3 concession
Venue: Fraser Noble Building, University of Aberdeen, AB24 3UE



Bright Club



Join us at Aberdeen's premier comedy club, Breakneck Comedy, for a night of stand up with a difference...a research twist! Bright Club is the platform that transforms researchers into stand-up comedians and has been doing this for 10 years across the UK – it's about having fun and audience participation! So come along enjoy the relaxed atmosphere, have a laugh and learn all about the latest research being undertaken at the University of Aberdeen. Age Suitability: 18+

Date: Thursday 26th September 2019
Time: 20.30
Venue: Breakneck Comedy Club, 22-24 King St, Aberdeen AB24 5AX
Cost: Free



Venue Locations - See page 31



Alexa make me an appointment with RoboDoc



EXPLORATHON '19
www.explorathon.co.uk/ab10
caféSci

Presented by Katie Wilde, Digital Research Services Manager, University of Aberdeen

In a world where technology is ever changing come and hear how the University is working with partners from NHS Grampian and Industry to create a secure platform to facilitate the use of Artificial Intelligence (AI) as Diagnostic Tools in a Health Care environment.

Date: Friday 27th September
Time: 18.00 – 19.15
Cost: Free
Venue: Kino Bar, Belmont Filmhouse, 49 Belmont Street, Aberdeen, AB10 1JS

Y S A

Science of Champagne



10
DOLLAR SHAKE

With Adrian Gomes, 10 Dollar Shake

Adrian Gomes of 10 Dollar Shake (www.10dollarshake.com) guides you through a tutored tasting of Champagne, discussing production techniques such as the essential secondary fermentation along with food pairing suggestions. As the fizz is nosed and tasted, Adrian will discuss the specific characteristics of each Champagne variety – the grape blend, dosage, aging and vintage. We will taste five Champagnes – Brut, Blanc de Blanc, Blanc de Noir, Rose and Demi-Sec. Age Suitability: 18+

Date: Friday 27th September
Time: 18.30
Cost: £30 (no concessions)
Venue: The Tipping House, 4 Belmont Street, Aberdeen, AB10 1JE

S A

The Ugly Animal Show: Weird Life Underwater



Presented by Simon Watt



From fish that use sickening slime as defence to sea cucumbers that fight with their bum, our seas are full of some of the strangest animals in the world. Join biologist and presenter Simon Watt to hear how to help these creatures and our planet survive.

Date: Friday 27th September 2019
Time: 18.30
Cost: £4, £3 concession
Venue: Fraser Noble Building, University of Aberdeen, AB24 3UE

F Y S A

Aberdeen Harbour Expansion Project Visitor Centre Tour

DRAGADOS

Dragados UK, principal contractor for the Aberdeen Harbour Expansion Project, are delighted to join TechFest 2019 by opening the doors of our project Visitor Centre. The Visitor Centre affords the general public 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. Tours for up to 30 people every hour.

Date: Saturday 28th September 2019
Time: Visitor Centre open 10am – 3pm, Tours starting at 10am, 11am, 12pm, 1pm and 2pm.
Venue: AHEP Visitor Centre, Walker Park, Aberdeen, AB11 8QX
Cost: Free

F Y S A

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Mark-1 MRI Scanner Exhibition



Presented by Grampian Hospital Art Trust

Visit The Suttie Arts Space in Aberdeen Royal Infirmary to explore the world of Mark-1, the world's first whole body MRI scanner which is on permanent display along with an accompanying 20 minute film detailing its development and achievements. Mark-1 was developed and built in Aberdeen during the 1970's. It was used in 1980 to diagnose over 1000 patients.

Date: Permanent Display
Time: Accessible 24hours per day
Cost: Free
Venue: The Suttie Arts Space, Aberdeen Royal Infirmary, Foresterhill, Aberdeen AB25 2ZN

F Y S A

Across the Grain Festival in collaboration with Aberdeenshire Council



Date: Sunday 6th October 2019
Time: 12.00 – 16.00
Cost: TBC
Venue: Alford Community Campus, Greystone Road, Alford, AB33 8UR

CLOSING EVENT

Fireworks: Real Science or Just Bangs?



Presented by Matthew Tosh

Matthew Tosh introduces you to his magical and explosive world of pyrotechnic science. Find out about the STEM (Science, Technology, Engineering and Mathematics) behind fireworks, and see how he creates colours, sound effects and perfectly timed bursts to music. Featuring shock waves, forces, energy pathways, electricity, fire, sparks, smoke and more. Go behind the scenes with Matthew as he unpicks the building blocks of modern-day firework displays. This is an exciting and demonstration-filled show which is guaranteed to have you on the edge of your seat.



Date: Saturday 28th September 2019
Time: 14.30
Venue: Arts Lecture Theatre, 569 King St, University of Aberdeen, AB24 5SU
Cost: £4 / £3 concession

F Y S A

Sounding Doric



Presented by Sound

Composer and sound artist, Pete Stollery, will run a session where participants will make recordings of words and phrases in Doric, provided by members of the public, and then, working with computers, will turn these into a sound picture which will be presented at the end of the day.

F Y S A

STEM through the Ages



Presented by TechFest

History is all around us but have you ever considered how Science, Technology, Engineering and Maths have impacted on the ancient world? Investigate the challenges that civilisations overcame to make their environments safer. Discover how they were able to navigate incredible distances successfully and learn how to do it yourself.

F Y S A

Oceans of Opportunity

The Underwater World of Science and Technology



Wednesday 13 November 2019; 10:00 - 12:00
Music Hall, Union St, Aberdeen AB10 1QS

Reasonable transport costs will be refunded. Register early to secure your place.

Did you know?

The oceans cover over 70% of our planet. We are all dependent on them for food, transport and vital resources. They affect our weather and even our future as a species. Yet most of us are unaware of the cutting-edge developments in underwater technology, or the science it is based on, largely because it is hidden from view.

SUT looks forward to welcoming schools to this exciting annual event aimed at P7 school children to learn more about the career opportunities that our oceans have to offer. Each session will include a structured mix of audio-visual presentations by leading industry experts from a range of underwater science and technology backgrounds.

Seashore to Sea Floor presented by Macduff Marine Aquarium

Remotely Operated Vehicles (ROV's) presented by ROVOP & school pupils who participated in the ROV MATE competition

Saturation Diving presented by David Smith



Apache

Thank you to Apache for sponsoring the Christmas Advent calendars.

The event is free to attend but places must be booked in advance by contacting: SUT Events, Enterprise Centre, Exploration Drive, Bridge of Don Aberdeen AB23 8GX

01224 823 637 events@sut.org www.sut.org



Sponsored by



TECHFEST 2019

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

LOCATION	DAY	TIME
Kincorth Library	Mon Sept 02	14.15 – 14.45
Northfield Library	Mon Sept 02	14.15 -14.45
Central Children's Library*	Tue Sept 03	10.30 -11.00
Kaimhill Library	Thur Sept 05	14.15 -14.45
Dyce Library	Tue Sept 10	10.30 -11.00
Bucksburn Library	Wed Sept 11	14.00 -14.30
Culter Library	Thur Sept 12	10.30 -11.00
Torry Library	Thur Sept 12	14.15 -14.45
Cove Library	Fri Sept 13	14.15 -14.45
Cults Library	Mon Sept 16	14.00 -14.30
Ferryhill Library*	Tue Sept 17	14.00 -14.30
Tillydrone Library	Tue Sept 17	10.30 -11.00
Cornhill Library	Wed Sept 18	10.30 -11.00
Bridge of Don Library*	Thur Sept 19	10.30 -11.00
Woodside Library	Thur Sept 19	10.30 -11.00
Airyhall Library*	Tue Sept 24	10.30 -11.00
Mastrick Library	Wed Sept 25	10.30 -11.00

Bookbug sessions in Aberdeenshire Libraries during September

LOCATION	DAY	TIME
Meldrum Library (B)	Mon Sept 02	09.45-10.15
Meldrum Library (T)	Mon Sept 02	10.30 -11.00
Ellon Library	Mon Sept 02	11.00 -11.30
Turriff Library	Mon Sept 02	14.00 -14.30
Kemnay Library	Tue Sept 03	10.30 -11.00
Macduff Library	Tue Sept 03	14.30 -15.00
Banff Church Hall (with Makaton Session)	Tue Sept 03	10.30 -11.00
Mearns Community Library	Wed Sept 04	10.30 -11.00
Alford Library	Wed Sept 04	14.00 -14.30
Aboyne Library	Tue Sept 10	10.30 -11.00
Bracoden Library	Tue Sept 10	11.00 -11.30
Alford Library	Wed Sept 11	09.30 -10.00
Stonehaven Library	Wed Sept 11	10.30 -11.00
New Pitsligo Library	Thur Sept 12	10.00 -10.30
Kintore Library	Fri Sept 13	14.00 -14.30
Stonehaven Library	Fri Sept 13	11.00 -11.30
Turriff Library	Sat Sept 14	11.00 -11.30
Banff Library (with Makaton Session)	Sat Sept 14	11.00 -11.30
Westhill Library (Story and Song Session)	Sat Sept 14	10.30 -11.00
Turriff Library	Mon Sept 16	14.00 -14.30
Macduff Library	Tue Sept 17	14.30 - 15.00
Stonehaven Library	Wed Sept 18	10.30 -11.00
Banchory Library (T)	Fri Sept 20	10.00 -10.30
Stonehaven Library	Fri Sept 20	11.00 -11.30
Fraserburgh Library	Saturday Sept 21	10.30 -11.00
Macduff Library	Saturday Sept 21	10.30 -11.00
Banchory Library (A)	Saturday Sept 21	10.00 -10.30
Kintore Library	Tue Sept 24	14.00 -14.30
Banchory Library (B)	Thur Sept 26	10.30 -11.00



*Booking Required | (B) Baby Session
(T) Toddler Session | (A) All Ages



The Royal Institution's Mathematics Masterclasses 2019/20



Masterclass network



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 2019 until March 2020 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 **E: enquiries@techfest.org.uk**
T: 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 marthagavan@techfest.org.uk.

Explorathon



Explorathon is Scotland's version of a rock and roll research weekender where Aberdeen's researchers meet the public at events dedicated to bringing the region's most exciting research out into venues and onto streets across the City.

Research and what it discovers plays a huge part in everyone's daily lives and Explorathon showcases the diversity of research taking place on our doorstep and what impact it can have on our daily lives.

Over the weekend of September 27, 28 and 29 researchers working on new ideas around health, social science and the natural environment will host a series of fun events such as a comedy night, talks, workshops, films and discussions everywhere from shopping centres to pubs, museums to cinemas.

Join us to explore, learn and talk with the researchers behind some of Scotland's most cutting-edge new research ideas.
For more details: www.explorathon.co.uk

Heroes of Tomorrow



An exciting event for S1 & S2 pupils Tuesday 21st, Wednesday 22nd & Thursday 23rd January 2020 at Robert Gordon University, Garthdee Campus, Aberdeen.

During the day pupils will be able to speak to Industry Professionals, participate in hands on workshops, experiments and demonstrations from a range of organizations including Robert Gordon University and Equinor.

For more information please contact Laura McHardie at TechFest.lauramchardie@techfest.org.uk



WE SUPPORT THE
HEROS OF TOMORROW






TECHFEST 2019 CAREER GUIDE

Astronomy and Space

- Rocks, Stars and Rockstar Rockets: Constellation Making, Handling Rocks from Space and Rocket Engineering Challenge
- From Charles Piazzi Smyth to Scottish Spaceport: 200 years of reaching for the stars.

Biology and the Environment

- How to Speak Gorilla
- Advances in antibacterial and antifungal medicines – tackling antimicrobial resistance
- Cruickshank Botanic Garden Tour
- Dolphins at the Battery: Aberdeen’s Circular Showcase
- Aberdeen Harbour Expansion Project Visitor Centre Tour
- The Ugly Animal Show: Weird Life Underwater

Chemistry

- FIERCE Beer Brewery Tour
- Science of Champagne
- Fireworks: Real Science or Just Bangs?

Computing Science

- Foxdog Studios: Tomorrow’s Office
- Code the City mini-workshop
- Troll Hunting: Recognising and coping with cyberbullying

Design and Technology

- Foxdog Studios: Tomorrow’s Office
- Subsea Technology – Totally Technical
- Innovation at RGU – Stories from the University Start-up Entrepreneurs
- HYPED
- Troll Hunting: Recognising and coping with cyberbullying
- Mark 1 – MRI Scanner Exhibition

Engineering

- Subsea Technology – Totally Technical
- From Charles Piazzi Smyth to Scottish Spaceport: 200 years of reaching for the stars.
- Aberdeen Harbour Expansion Project Visitor Centre Tour

Food and Drink

- FIERCE Beer Brewery Tour
- Science of Champagne

Geography

- From Ink on Paper to 3D virtual mapping: A Life in Cartography

Health

- Advances in antibacterial and antifungal medicines – tackling antimicrobial resistance
- Social communication across the generations
- How to win the battle with Insomnia
- Medication can be harmful! What can I do to reduce the harm from taking medicine?
- Fullerenes, Nanotubes and Nobel Prizes – the discovery of Buckminsterfullerene: can C60 Prolong Your Life?
- Troll Hunting: Recognising and coping with cyberbullying
- Mark 1 – MRI Scanner Exhibition

Media and Entertainment

- New Music Workshop on Microtonality
- New Music for Microtonal Trumpets and malletKat
- Hollywood Science
- Superhero Science
- Troll Hunting: Recognising and coping with cyberbullying
- Bright Club
- Fireworks: Real Science or Just Bangs?

Physics

- HYPED
- Fireworks: Real Science or Just Bangs?
- New Music Workshop on Microtonality
- New Music for Microtonal Trumpets and malletKat

Research

- Tomorrow’s Doctors: Medical Students Leading Cutting-Edge Research
- Social communication across the generations
- How to win the battle with Insomnia
- Medication can be harmful! What can I do to reduce the harm from taking medicine?
- Fullerenes, Nanotubes and Nobel Prizes – the discovery of Buckminsterfullerene: can C60 Prolong Your Life?

STEM Careers

- Fireworks: Real Science or Just Bangs?
- Hollywood Science
- Superhero Science
- How to Speak Gorilla
- The Ugly Animal Show: Weird Life Underwater



Joint Principal Sponsors



TECHFEST 2019

FESTIVAL CALENDAR

August

24.8.19 (SATURDAY)

Activity Weekend

Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

25.8.19 (SUNDAY)

Activity Weekend

Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, AB10 7GJ

31.8.19 (SATURDAY)

Eureka Day

Aden Country Park, Mintlaw, AB42 5FO

September

1.9.19 (SUNDAY)

Eureka Day

The Bettridge Centre, Greystone Place, Newtonhill, AB39 3UL

7.9.19 (SATURDAY)

Doors Open Day with TechFest

Institute of Medical Science, Ashgrove Road West, AB25 2ZD

14.09.19 (SATURDAY)

How to Speak Gorilla

Fraser Noble Building, University of Aberdeen, AB24 3UE

16.9.19 (MONDAY)

Advances in antibacterial and antifungal medicines - tackling antimicrobial resistance

Fraser Noble Building, University of Aberdeen, AB24 3UE

17.09.19 (TUESDAY)

Cruickshank Botanic Garden Tour

Cruickshank Botanic Garden, St Machar Drive, AB24 2TY

17.09.19 (TUESDAY)

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

Fraser Noble Building, University of Aberdeen, AB24 3UE

17.09.19 (TUESDAY)

From Ink on Paper to 3D virtual mapping: A Life in Cartography

Fraser Noble Building, University of Aberdeen, AB24 3UE

18.9.19 (WEDNESDAY)

Subsea Technology – Totally Technical

Fraser Noble Building, University of Aberdeen, AB24 3UE

19.9.19 (THURSDAY)

Social Communication across the Ages

Fraser Noble Building, University of Aberdeen, AB24 3UE

19.9.19 (THURSDAY)

How to win the battle with Insomnia

Fraser Noble Building, University of Aberdeen, AB24 3UE

21.9.19 (SATURDAY)

Science and the City Tour

Meeting point outside Marischal College main entrance, Broad Street, Aberdeen, AB10 1AB

21.9.19 (SATURDAY)

Rocks, Stars and Rockstar Rockets: Constellation Making, Handling Rocks from Space and Rocket Engineering Challenge

Sir Duncan Rice Library, University of Aberdeen, AB24 3AA

21.9.19 (SATURDAY)

New Music Workshop on Microtonality

Butchart Centre, University Road, Aberdeen, AB24 3UT

21.9.19 (SATURDAY)

New Music for Microtonal Trumpets and malletKat

Butchart Centre, University Road, Aberdeen, AB24 3UT

23.9.19 (SATURDAY)

Innovation at RGU – Stories from University Start-up Entrepreneurs

ONE Tech Hub, Schoolhill, Aberdeen, AB10 1FR

23.9.19 (SATURDAY)

HYPED

ONE Tech Hub, Schoolhill, Aberdeen, AB10 1FR

24.09.19 (TUESDAY)

Hollywood Science

Fraser Noble Building, University of Aberdeen, AB24 3UE

24.09.19 (TUESDAY)

Medication can be harmful! What can I do to reduce the harm from taking medicine?

Fraser Noble Building, University of Aberdeen, AB24 3UE

24.09.19 (TUESDAY)

Fullerenes, Nanotubes and Nobel Prizes – the discovery of Buckminsterfullerene: can C60 Prolong Your Life?

Fraser Noble Building, University of Aberdeen, AB24 3UE

25.9.19 (WEDNESDAY)

FIERCE Beer Brewery Tour

Fierce Brewery, Unit 49, 46 Howe Moss Avenue, Dyce, AB21 0GP

25.9.19 (WEDNESDAY)

Superhero Science

Fraser Noble Building, University of Aberdeen, AB24 3UE

25.9.19 (WEDNESDAY)

Troll Hunting: Recognising and coping with cyberbullying

Fraser Noble Building, University of Aberdeen, AB24 3UE

26.9.19 (THURSDAY)

Code the City mini-workshop

ONE Tech Hub, Schoolhill, Aberdeen, AB10 1FR

26.9.19 (THURSDAY)

Dolphins at the Battery: Aberdeen's Circular Showcase

Fraser Noble Building, University of Aberdeen, AB24 3UE

26.9.19 (THURSDAY)

Bright Club

Breakneck Comedy Club, 22-24 King St, Aberdeen, AB24 5AX

27.9.19 (FRIDAY)

The Ugly Animal Show: Weird Life Underwater

Fraser Noble Building, University of Aberdeen, AB24 3UE

27.9.19 (FRIDAY)

Science of Champagne

The Tipping House, 4 Belmont Street, Aberdeen, AB10 1JE

28.9.19 (SATURDAY)

Aberdeen Harbour Expansion Project Visitor Centre Tour

AHEP Visitor Centre, Walker Park, Aberdeen, AB11 8QX

28.9.19 (SATURDAY)

Fireworks: Real Science or Just Bangs?

Arts Lecture Theatre, 569 King St, University of Aberdeen, AB24 5SU

13.10.19 (SUNDAY)

Across the Grain Festival

Alford Community Campus, Greystone Rd, Alford AB33 8UR



TECHFEST 2019

BOOKING INFORMATION

Tickets for all events at TechFest are available from the Eventbrite website unless specified in the programme entry.

How to Book Tickets

1. Online, tickets are available at www.eventbrite.co.uk
2. At the venue, Tickets for an event MAY also be available at the venue immediately prior to the event.

Please note: All prices are inclusive of VAT and booking fee. Any tickets purchased at the venue will be cash payment only.

Wheelchair Accessibility

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

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 has a no refund or exchange policy, unless the event is cancelled.

Video & Audio Recording

The recording of video and audio is not permitted during any of the events.

Mobile Phones

Please ensure all mobile phones are on silent during performances.

Disclaimer

All details of events in this programme are correct at time of going to print. TechFest 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, their Sponsors or Supporters.

Contact

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Aberdeen, AB24 3UT

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W: www.techfest.org.uk

Scottish Charity Number: SC010349



TECHFEST 2019

VENUE LOCATIONS

Aberdeen City Venues

AHEP VISITOR CENTRE

Walker Park, Aberdeen, AB11 8QX

ARTS LECTURE THEATRE

569 King St, University of Aberdeen,
Aberdeen, AB24 5SU

BELMONT FILMHOUSE

49 Belmont Street, Aberdeen, AB10 1JS

BREAKNECK COMEDY CLUB

22-24 King Street, Aberdeen, AB24 5AX

BUTCHART CENTRE

University Road, Aberdeen, AB24 3UT

CRUICKSHANK BOTANIC GARDEN

St Machar Drive, Old Aberdeen, AB24 2TY

FIERCE BEER BREWERY

Unit 49, 46 Howe Moss Avenue, Dyce, Aberdeen,
AB21 0GP

FRASER NOBLE BUILDING

University of Aberdeen, Aberdeen, AB24 3UE

INSTITUTE OF MEDICAL SCIENCE

Ashgrove Road West, Aberdeen, AB25 2ZD

MACROBERT HALL

Robert Gordon's College, Schoolhill, Aberdeen,
AB10 1FE

MARISCHAL COLLEGE (MAIN ENTRANCE)

Broad Street, Aberdeen, AB10 1AB

ONE TECH HUB

Schoolhill, Aberdeen, AB10 1FR

SIR DUNCAN RICE LIBRARY

University of Aberdeen, AB24 3AA

SIR IAN WOOD BUILDING

Robert Gordon University, Garthdee Campus,
AB10 7GJ

THE BETTRIDGE CENTRE

Greystone Place, Newtonhill, AB39 3UL

THE SUTTIE ARTS CENTRE

Aberdeen Royal Infirmary, Foresterhill, Aberdeen,
AB25 2ZN

THE SUTTIE CENTRE

Foresterhill Rd, Foresterhill, Aberdeen, AB25 2ZD

THE TIPLING HOUSE

4 Belmont Street, Aberdeen, AB10 1JE

ZOOLOGY BUILDING

University of Aberdeen, Tillydrone Avenue, Aberdeen,
AB24 2TZ

Aberdeenshire Venues

ADEN COUNTRY PARK

Station Road, Mintlaw, Peterhead, Aberdeenshire,
AB42 5FQ

ALFORD COMMUNITY CAMPUS

Greystone Road, Alford AB33 8UR

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Zoology Museum, University of Aberdeen

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CONTACT US

TECHFEST

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