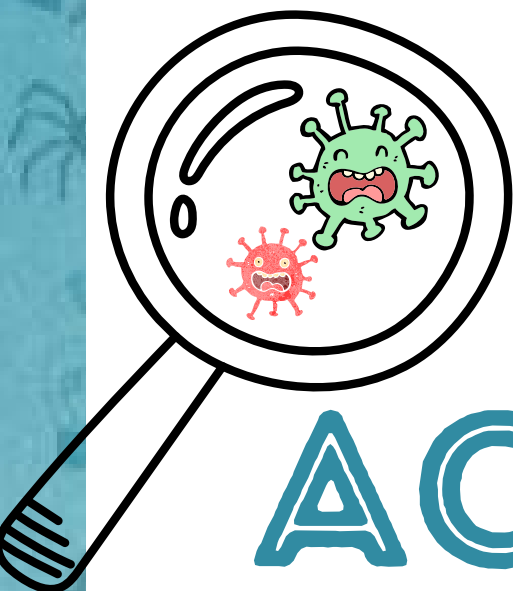


TECHFEST

Aberdeen and North-East Scotland's
Festival of Science, Technology,
Engineering & Mathematics
www.techfest.org.uk/festival



ACTIVITY WEEKEND 2023

3 - 4 JUNE



ROBERT GORDON UNIVERSITY,
GARTHDEE CAMPUS, AB10 7GJ



JOINT PRINCIPAL SPONSORS



techfest.org.uk

Scottish Charity No. SC010349



WELCOME TO

TECHFEST

ACTIVITY WEEKEND

2023

Shell and bp are proud, as Joint Principal Sponsors, to welcome you to TechFest, as we celebrate the 29th 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 STEM. The varied programme encourages visitors to get involved in activities throughout the North-east of Scotland through the exciting variety of shows, presentations and workshops on offer.

By supporting TechFest 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.

Simon Roddy

Senior Vice-President Upstream
Shell U.K. Limited

Doris Reiter

Senior Vice President
bp North Sea

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HERE'S WHAT YOU NEED TO KNOW

Venue Opening Times

The Sir Ian Wood Building, Robert Gordon University, Garthdee Campus, Aberdeen AB10 7GJ
Saturday 3 & Sunday 4 June 2023, 09.30 – 16.00 each day

Admission Costs

With over 20 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. **Cash only.**

Picnics and Packed Lunches

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

Buggies and 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

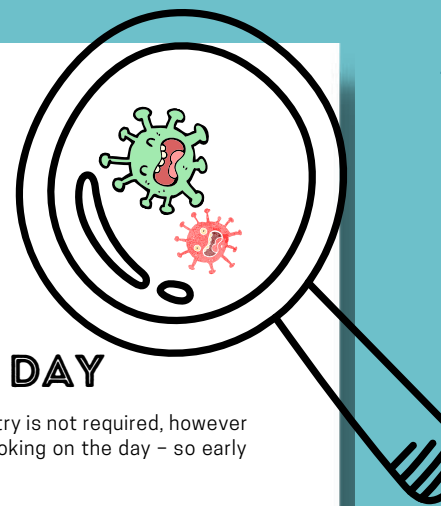
If you require First Aid Treatment – please visit Reception



Quiet Space /Time

If you feel that you would prefer to attend TechFest when it is quieter then please be aware that Saturday mornings tend to be less busy than later on in the day or on Sunday. Quiet spaces will be available at all times for anyone who needs time out. Just ask a member of staff and they will point them out.'

AT A GLANCE



WORKSHOPS & ACTIVITIES

POWERING PROGRESS TOGETHER - BUILD A WIND TURBINE

BUILD AND PROGRAM LEGO ROBOTS

TODDLEFEST

K'NEX UNDER THE SEA WITH SUBSEA 7

MATHS WEEK SCOTLAND

WILD ABOUT MATHS

MATHS AROUND THE WORLD

THE WONDERFUL RAINFOREST

THE SECRET OF STRAWBERRY DNA

BUILD IT WITH ASC

EXPLORING THE POSSIBILITIES OF MEDICINE

SECRETS OF THE SENSES

EXPLORING THE ROCKY SHORE

ANTICS IN THE ARCTIC AND ANTARCTIC

K'NEX ENGINEERING

CLINICAL SKILLS AT FORESTERHILL WITH TEDDY BEARS HOSPITAL AND AUPS

APOLLO 7

BUILD A STARSHADE – ORIGAMI IN SPACE

SCARF AND HOME ENERGY SCOTLAND

STEM IN THE PARK

PROGRAMMING LEGO ROBOTS

ENERGISING THE TRANSITION

STEM THROUGH THE AGES

BOOK ON THE DAY

Places are limited. Pre-booking entry is not required, however the below activities do require booking on the day - so early arrival is encouraged.

GLORIOUS GERMS ★

GRUESOME GUTS ★

THE TECHFEST DOME

TOUGH MONKEES OBSTACLE COURSE



★ **SHOW**



TECHFEST

Promoting Science, Technology, Engineering and Mathematics

Scottish Charity No SC010349

The CREST Regional Support Organisation for Scotland is TechFest.

For advice about undertaking CREST Awards in Scotland, please contact Kirsty Cranna by email at kirstycranna@techfest.org.uk.

Take part in activities at our Activity Weekend and collect your award stickers!



Click or scan the qr code to view the Activity Weekend map.



SUPERSTAR



PASSPORT

Name _____

Collect stickers for your passport after completing each activity!

Start
your journey here



Great job!



Only two more to go!



Nearly there!



Well done
you have completed your CREST SuperStar Award!



WORKSHOPS & ACTIVITIES

POWERING PROGRESS TOGETHER - BUILD A WIND TURBINE



Join us to learn all about wind energy and rise to the challenge of building a wind turbine.

Get hands-on by constructing your own turbine and explore the best place to build a wind farm to generate the most power.

Can you make your turbine float?

PRESENTED BY: Shell UK

TODDLEFEST

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.



MATHS WEEK SCOTLAND



Maths Week Scotland (25th September - 1st October 2023)

Join TechFest as we celebrate the upcoming Maths Week Scotland by exploring a series of interactive puzzles and challenges. Visit Maths Week Scotland at www.mathsweek.scot or follow us @mathsweekscot on Twitter

BUILD AND PROGRAM LEGO ROBOTS



Join us for a fun-packed session of exciting, creative and fun coding activity.

Using Lego robotics technology to build and program amazing robotic models that can move using motors, gears and wheels. Learn how to code sensors to make your robot react to its surroundings. Perhaps program a wind turbine to only switch on when the wind is strong enough or build a battery powered car and then change the design to make it go faster! This drop-in workshop is great fun and ideal for nurturing and enhancing Science, Technology, Engineering and Maths (STEM) skills.

PRESENTED BY: JOHN MCGILL OF COMPUTERXPLORES

SPONSORED BY: bp

K'NEX UNDER THE SEA WITH 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.

PRESENTED BY: TECHFEST

SPONSORED BY: SUBSEA 7

WILD ABOUT MATHS



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.

PRESENTED BY: TECHFEST

SPONSORED BY: EQUINOR





WORKSHOPS & ACTIVITIES

MATHS AROUND THE WORLD



A fun, hands-on maths workshop designed to challenge and build confidence. A variety of puzzles, representing different countries, are set out. Help and encouragement is at hand and solutions checked.

PRESENTED BY: TECHFEST

SPONSORED BY: EQUINOR



EXPLORING THE POSSIBILITIES OF MEDICINE

The Aberdeen Student Society for Academic Medicine (ASSAM) aims to encourage undergraduate interest in medical research and inspire students to pursue a career in medical academia. Our event will highlight commonly encountered clinical skills, discuss scientific projects undertaken by students and give a brief introduction to the world of research in medicine. You will have the opportunity to ask questions about medicine or research.

PRESENTED BY: THE ABERDEEN
STUDENT SOCIETY FOR
ACADEMIC MEDICINE



THE WONDERFUL RAINFOREST



Rainforests only cover 2 percent of our earth's surface, yet house over 50 percent of all living creatures and plant life on our planet.

Using real life animal demonstrations, we will travel to different countries meeting some amazing animals that live in rainforests around the world. Get up close to real rainforest animals in this workshop. You'll learn what makes our rainforests so important, not only to our planet, but to the animals who call the rainforest home.

PRESENTED BY: THE CRITTER KEEPER

THE SECRET OF STRAWBERRY DNA



Come along and unlock the secrets behind DNA. Get hands on and a little messy with the extraction of DNA from strawberries, unlocking the secrets behind their colour, seeds and shape.

PRESENTED AND SUPPORTED BY: ROBERT GORDON UNIVERSITY SCHOOL
OF PHARMACY AND LIFE SCIENCES

BUILD IT WITH ASC



Discover the engineering skills needed whilst you take part in a range of 'Build It' challenges including our Ko-do marble runs, building the strongest shape with magnets and our table overhanging challenge.

PRESENTED BY: ABERDEEN SCIENCE CENTRE

SECRETS OF THE SENSES

Challenge your senses with the Duthie Park Ranger Service! Test your sense of touch to identify the hidden items. Use your sense of smell to match up the scents with the pictures and try to spot the animals hiding in their environments. You can even make your own musical shaker to take home with you!

PRESENTED BY: DUTHIE PARK RANGER
SERVICE



EXPLORING THE ROCKY SHORE



Join Macduff Marine Aquarium for a fun interactive session looking at the critters that inhabit our local rocky shores. Get hands on with hardy sea creatures as you discover how these animals cope with life on land when they are left behind by the tides.

PRESENTED BY: MACDUFF MARINE
AQUARIUM

@MACDUFFMARINEAQUARIUM



<https://www.instagram.com/macduffmarineaquarium/>
https://www.youtube.com/channel/UCkZGgp10TQvQ2s7fgfEf_HQ
<https://www.facebook.com/macduffmarineaquarium>



WORKSHOPS & ACTIVITIES

ANTICS IN THE ARCTIC AND ANTARCTIC

Saturday ONLY

Discover fun facts about polar research, explore polar habitats and ask questions of early career Polar scientists.

We have lots of activities suitable for all ages including:

- How tall are you in comparison to polar animals?
- Using satellites to see the Arctic and Antarctic
- Polar themed puzzles and activities



ukpolarnetwork



@UKPolarNetwork

PRESENTED BY: UK POLAR NETWORK (UKPN)

K'NEX ENGINEERING

Shine a light of creativity to tackle an engineering challenge. Investigate problems associated with the construction of buildings. Work together and use your engineering skills to develop a prototype. Can you build higher, bigger, stronger?

PRESENTED BY: TECHFEST

SPONSORED BY: FUGRO



CLINICAL SKILLS AT FORESTERHILL WITH TEDDY BEARS HOSPITAL AND AUPS



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.

PRESENTED BY: UNIVERSITY OF ABERDEEN –
SPONSORED BY: MEDICAL SCHOOL CLINICAL SKILLS CENTRE AND TEDDY BEAR HOSPITAL WITH AUPS
SAVE A CHILD'S LIFE



BODYVISION EXHIBITS

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

PRESENTED BY: GLASGOW SCIENCE CENTRE



APOLLO 7

apollo



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.

PRESENTED BY: TECHFEST

SPONSORED BY: APOLLO

STEM IN THE PARK



The aim of STEM in the Park is to engage all ages in science activities that are done outside utilising teamwork, creativity and most of all fun while learning.

PRESENTED BY: TECHFEST

SPONSORED BY: TAQA





WORKSHOPS & ACTIVITIES

BUILD A STARSHADE – ORIGAMI IN SPACE

NASA is planning to capture the first images of planets in another solar system trillions of miles away. Some of these planets, called exoplanets, are thought to be similar to Earth. A new device, called Starshade, could shield a telescope's camera from the light of a distant star. When it's unfolded, Starshade is too big to fit in a rocket, so NASA has used origami to create a perfect design and develop a way of folding it for launch.

PRESENTED BY: TECHFEST

SPONSORED BY: APOLLO

apollo



ENERGISING THE TRANSITION

Look around you. Are the lights on? Is your computer running? Or the TV playing? All of these things require energy! We use energy every day to power our world.

Come and delve into the exciting future of energy and take part in hands-on, interactive experiments to learn about different energy sources, and the trade-offs associated with each. Which energy source will you choose to power your future?

PRESENTED BY: TECHFEST

SPONSORED AND SUPPORTED BY: APACHE & CNOOC INTERNATIONAL

Apache



PROGRAMMING LEGO ROBOTS

RGU ROBERT GORDON UNIVERSITY ABERDEEN

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

Watch as it navigates a maze.

PRESENTED & SUPPORTED BY: ROBERT GORDON UNIVERSITY SCHOOL OF COMPUTING

SCARF AND 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, try out our e-bike, get involved with sustainable transport and active travel, and learn more about how you can be increasingly energy efficient at home!



@scarfscotland



@scarfscotland



@scarfscotland



@scarf

STEM THROUGH THE AGES



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.

PRESENTED BY: TECHFEST

SPONSORED BY: HARBOUR ENERGY



BOOK ON THE DAY

TOUGH MONKEES OBSTACLE COURSE



The Movement Bothy are delighted to be attending the TechFest Activity Weekend with the Tough Monkees Obstacle Course. The Tough Monkees Obstacle Course is made up of ten large obstacles all designed to challenge Basic Athletic Skills in a fun and playful environment. Athletic Skills challenged include climbing; swinging; balancing; bounding; jumping; landing; crawling and clambering. Developing these skills helps to develop healthy and confident children who are fit for their future.

PRESENTED BY: MOVEMENT EVOLUTION



GRUESOME GUTS



Follow the journey of food from your mouth, through the acid bath in your stomach, along metre after metre of pulsating guts and out the other end! Find out how the body gets energy and nutrients from food, and what waste we leave behind.

PRESENTED BY: TECHFEST



GLORIOUS GERMS



Plunge into the mysterious world of sickness and disease. Learn about the transmission of germs and how to protect your body. How long would you have lasted during an outbreak of the Black Death?

PRESENTED BY: TECHFEST



THE TECHFEST DOME – NIGHT SKY

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.



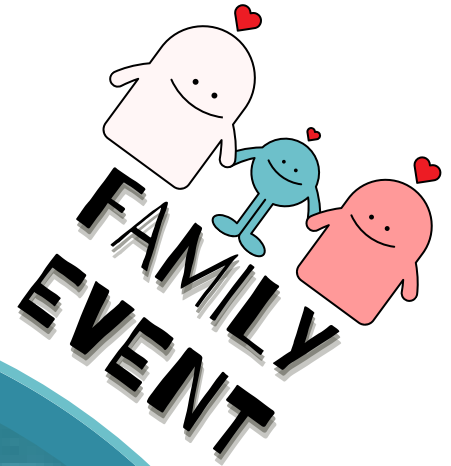
PRESENTED BY: TECHFEST

SPONSORED BY: APACHE





UPCOMING EVENTS



BEN GARROD: EXTINCT!



SATURDAY 22 JULY

UNIVERSITY OF ABERDEEN



TECHFEST

ACTIVITIES TO DO AT YOUR OWN PAGE!

Sociable Science

The aim of Sociable Science is to engage all ages in science activities that are done in conversation utilising teamwork, creativity and most of all fun while learning.

Visit our [website](#) to view the programme:

<https://techfest.org.uk/news-events/news/item/323-easter-in-the-city>





THE **CREST AWARDS** SCHEME IS THE BRITISH SCIENCE ASSOCIATION'S FLAGSHIP PROGRAMME FOR YOUNG PEOPLE, PROVIDING SCIENCE ENRICHMENT ACTIVITIES TO INSPIRE AND ENGAGE 5–19 YEAR OLDS.

It is the only nationally recognised accreditation scheme for project work in science, technology, engineering and mathematics (STEM) subjects.

In addition to giving young people the opportunity to undertake hands-on science, CREST Awards are designed to help develop skills that are transferrable to other subjects, further education and future employment.

To find out more about CREST Awards and to see how you can get involved visit the TechFest website: www.techfest.org.uk/educationcrest or email: kirstycranna@techfest.org.uk

TECHFEST
digital

TechFest is your Regional CREST Support Organisation for Scotland.

TechFest.org.uk

Follow the link below to find out more about CREST, and how to register for Awards;

www.crestawards.org

WE WOULD LIKE TO THANK OUR SPONSORS AND SUPPORTERS*

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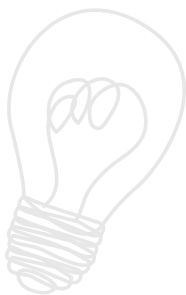
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THANK YOU



TO ALL OF OUR CONTRIBUTORS WHO HELPED MAKE THE TECHFEST 2023
EARLY YEARS AND PRIMARY PROGRAMME AND ACTIVITY WEEKEND POSSIBLE



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techfest.org.uk



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