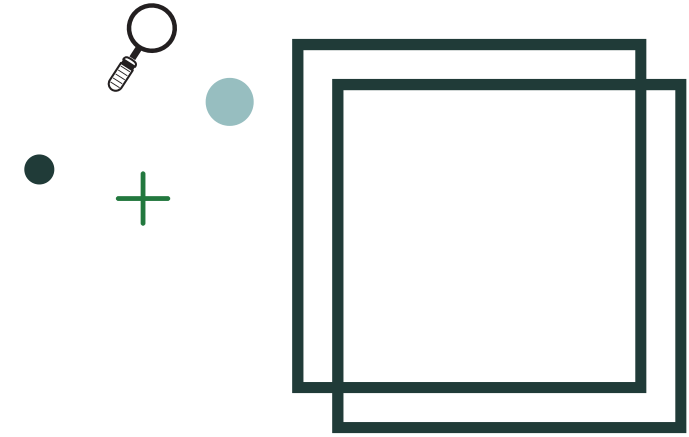




TechFest 2020 Programme Review



TECHFEST

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

digital



As is the case with so many endeavours this year, TechFest 2020 has been a little different. The ongoing pandemic has meant we were not able to run most of our events, including our 27th annual flagship festival, in the same way as in the past so this year we went digital.

Digital events have come with a new set of challenges and have been a learning curve for the whole team, but we are pleased to be able to report lots of positive outcomes from TechFest 2020.

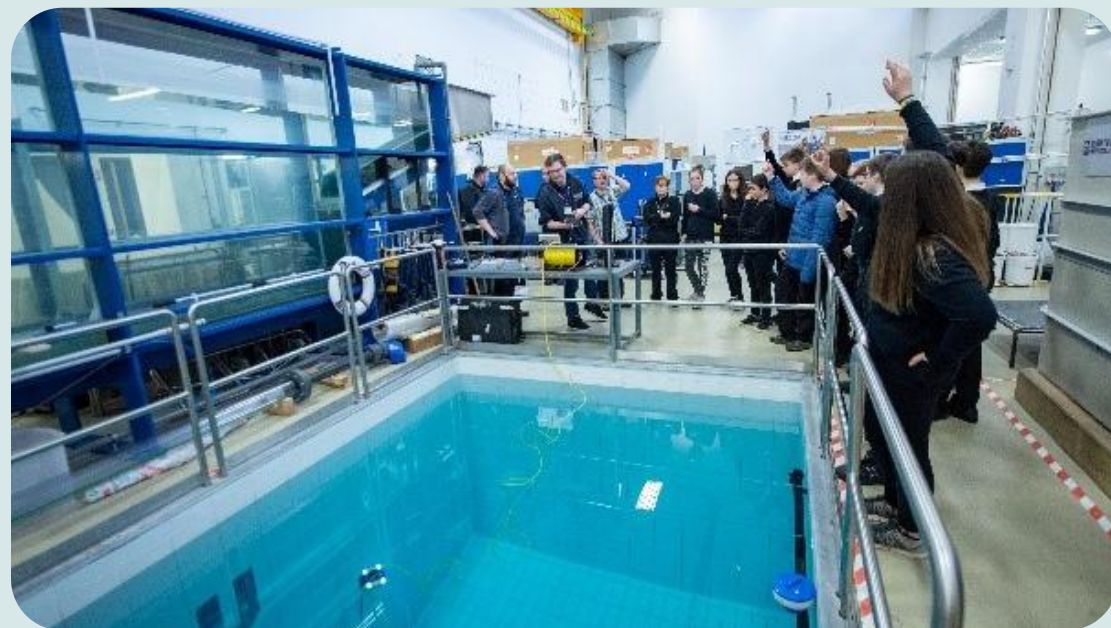
WE SUPPORT
**THE HEROES
OF TOMORROW**



Heroes of Tomorrow, sponsored by Equinor and hosted by RGU, engaged with S1 and S2 pupils from across Aberdeen and Aberdeenshire with a wide range of project-based learning activities and presentations linked to STEM and the Energy Industry.



Workshops were provided by RGU School of Engineering, RGU School of Computing, Equinor, Techfest, RGU Innovation Hub, Skills Development Scotland and the shows were presented by Glasgow Science Centre and Dr Matt Pritchard. Pupils also had the chance to take part in a Careers Networking session which was staffed by volunteers from the SPE and STEM Ambassadors Network.



From March 2020 events were postponed or cancelled due to the global pandemic:

TechFest Festival Fringe programme of events across Aberdeen and Aberdeenshire had to be put on hold, although we did manage to attend the BSA Discovery Day on 14 March 2020 at Aberdeen Science Centre just before the country went into lockdown.

Co-operative delivery of 2020 NASA in Aberdeen talks – postponed until September 2020 and then again until March 2021, and then cancelled and replaced by an online presentation in March 2021.

Hywind offshore wind Secondary outreach programme for S1-S2 pupils in Peterhead

University of Aberdeen's Mayfest in May

Chevron sponsored Eureka libraries tour in July and August

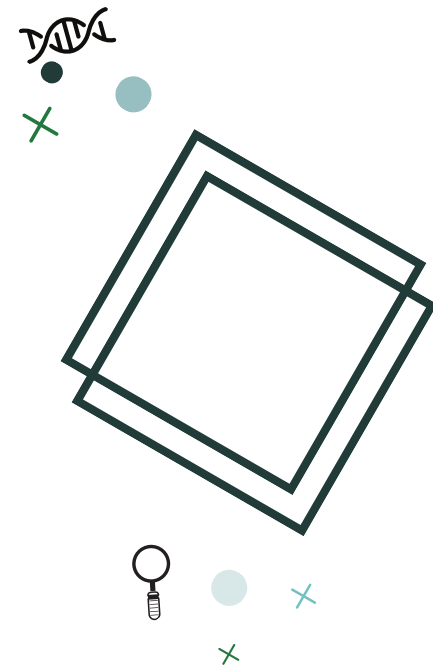
TechFest Festival Activity Weekend at RGU in August 2020 – postponed until May 2021

TechFest Festival Early Years and Primary Programme at RGU in August 2020 – postponed until May 2021

Maths in the Pipeline postponed until we can convert it to a digital offering

Maths Masterclasses postponed until we can convert it to a digital offering

Primary Outreach postponed until school restrictions are lifted although we have made some of our workshops digital.



However not all was lost, and we successfully managed the following:

As the world went into lockdown as a result of the Covid-19 global pandemic, TechFest, as so many other things have this year, have had to change our method of operating and while we continue to work remotely, this year has been a great example of how we have all adapted to the change in the circumstances that we find ourselves in. TechFest has embraced these changes in order to continue our mission to promote STEM to a wider audience.

The **Silver Lining Programme** was introduced during the first lockdown to showcase other organisations and their online content with activities for people to enjoy at home.



TechFest At Home was started to be a one stop shop for online content – as the country was in lockdown for three months and children were learning from home we developed this curated programme of things to do during lockdown was regularly updated to reflect the exciting STEAM content to come out of this period, and although we provided some of the content ourselves we also linked to other providers

and the science centres to share content. This proved to be a valuable asset and has now got its own dedicated tab on our website.

In addition to the above we also have our **TechFest Resources** page which we are constantly adding to and linking with other providers and organisations who have cool activities to try.



Newsletters: We have been sending out quarterly newsletters to our mailing list, sponsors and supporters. These have included links to our online content such as TechFest At Home.



Book club: we asked staff, Festival Presenters and STEM Ambassadors to give us a book recommendation which we then shared online. The books could be for adult or children as long as they had STEM content, and we had some very interesting suggestions.

Seasonal Activities: we released seasonal activities for Easter, Summer, Christmas via our social media and put them on our website to give families some fun activities to try at home. These included the 'Egg Drop Challenge' at Easter and making non-Newtonian fluid snowmen at Christmas.





This year due to the global pandemic, we launched our first ever digital TechFest programme with three weeks of digital presentations and activities from presenters old and new running from 5th – 25th November.



Talks and Demonstrations are provided for our Public Programme by Universities and other institutions, local industry and businesses as well as some more well-known names. This year, due to making the Festival fully digital, we were able to ask people from further afield to take part; we had several presenters who are based in England and Dr Vivienne Ming took part from San Francisco and despite the time difference this proved to be very successful.

Although we weren't able to meet our audiences in person this year, we know from the ticket sales that although we have gained an international following, many of our regular cohort of attendees have joined us. We made full use of the chat box and Q&A feature on Zoom, with audiences asking pertinent questions both as we went through the presentations and at the end directly to the presenter, all of whom were willing to stay and answer questions for as long as it took.



This supports the view that TechFest continues to have a core audience who attend multiple events with new faces attending as our public awareness increases. We continue to seek new partnerships and collaborations that increase the public awareness and understanding of their Science Festival.



Following on from previous years we have again placed our careers guide in the programme to support teachers and young people and encourage the use of the festival programme as career role models. As the festival was on-line this year, we have also managed to record most of the presentations and share them on our [YouTube](#) channel, meaning that if you couldn't watch at the appointed time you didn't miss out on the content. We will analyse this after the festival is finished and see how many extra views were after the event. We hope to keep the content up for as long as possible as a lasting legacy resource.



THANK YOU TO ALL OF THE
BRILLIANT PRESENTERS WHO
MADE THE DIGITAL
FESTIVAL 2020 SUCH A SUCCESS





This year due to the global pandemic, TechFest had to re-think the respected STEM in the Pipeline project and so instead of having fifteen school teams taking part with an Introduction Day and Presentation Day we decided to change it to an online essay competition for individual students and so STEM in the Pipeline – Energising the Transition Essay Competition was born.

The essay competition was open to all S5 and S6 students with no limit set on the number of students who could compete. In contrast to previous years this was a solo project which required individual research and writing with criteria laid out for competition.

After initial interest from 27 students from 9 schools across Aberdeen City and Aberdeenshire, TechFest received 16 entries by the deadline date. We were delighted with the response when taking into consideration the pressures of the pandemic on all involved. For our inaugural year it was a super start.

It was positive to note that the essays themselves covered a broad range of topics; Renewable Electric Power Generation, The Potential of Hydrogen Fuel, Is Oil and Gas still Economical and The Good, The Bad and The Green Energy amongst others. It is encouraging to see the work around increasing an understanding of the Energy Transition is stimulating discussion and hopefully a broader understanding.

In the main the judge's feedback was positive, feeling that the entrants had found and referenced their sources appropriately and made good use of their interview with an Industry Professional. However quite a lot of the feedback centred on the essays going off topic, lacking clarity to their arguments and not having enough illustration whether that was graphs or diagrams to support their viewpoints. This is something that can be supported in future years building on the experiences of this pilot year.

Finally, and all importantly the students were asked for their feedback. Most of them enjoyed the project and felt that their knowledge of their particular topic had increased, they enjoyed the challenge of writing an essay and keeping it relevant to their topic – some of the topics had a lot of information which had to be filtered to get the correct content.

Moving forward, whether online or in person TechFest aims to provide the students with a video guide to referencing to go alongside the written help sheet as many of the students had not experienced this before and found it hard to get right. An exemplar essay would also be useful as a guide to what is expected.





STEM in the Installation Ph4 is a project for teams of S6 pupils (max of 6 pupils per team). It is a three-month project that this year was entirely digital. In addition, TechFest was excited to announce that this project had undergone an extensive revision. The project now focuses on how the Energy Industry is transitioning to reduce carbon emissions as much as possible, as part of the global movement towards net zero. It is the aspiration for TechFest to reflect an accurate reflection of the energy transition across all our programmes.

Inspired by CNOOC Internationals Buzzard Platform, students were challenged to develop a proposal to install and connect an offshore wind farm to the facility, which would generate power for the installation and reduce the amount of gas import required to provide electricity. This was a challenging project that tested pupils' skills and required teamwork, independent research and good project management in order to successfully complete the report.

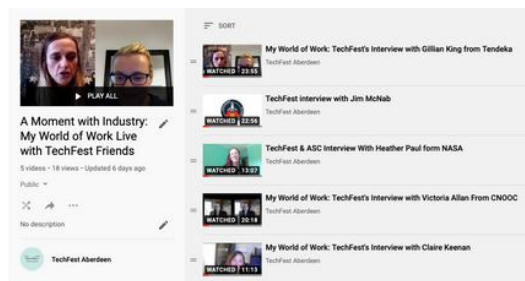
Information was sent out to schools across Aberdeen and Aberdeenshire and by the registration deadline date, 11th September, TechFest had 4 teams signed up. We felt that this was a good number to have received considering the impact Covid was having on teacher's workload and the fact that schools had just gone back in August after having been learning at home since March. CNOOC volunteers made video presentations which provided the teams with all the technical information they would require to start the project, although it was expected that they would have to do some independent research as well.



All the teams did really well to complete the project in what had been a trying year. The teams impressed the judges with their knowledge and understanding of the project and did a really good job with the FEED document, presentation and answering some tough questions and after some deliberation the team from Robert Gordon's College was named as the winner.



As well as our regular events and despite the ongoing situation, we have managed to adapt to the 'new normal' and work successfully albeit remotely. This year we have learned to meet on Teams and Zoom, and because of that we have had more collaborations with other Science Festivals across Scotland, learning from each other about what worked – or didn't, sharing content and tips on how to get the best out of the technology to make it all run smoothly.



Although we have been fortunate to keep our main sponsors on board, we have had a few put on hold, however on the plus side we have made new liaisons with The Data Lab and Scottish Business Resilience Centre (SBRC) who sponsored our digital festival programme. We have also collaborated more with Skills Development Scotland (SDS), who provided content for the digital festival while we have provided video interviews with Industry professionals for their My World of Work Live. These videos have been inspiring and we want everyone to be inspired by meeting a range of people from industry to understand what skills they use, how they got to where they are now and where to go next.

Although 2020 has proved to be challenging in many ways, we feel that we move forward into 2021 with a positive mindset, our schools and audience's feedback have proved there is an appetite for good quality interaction which we continue to strive to achieve.

We would like to thank our sponsors and supporters who helped make these projects happen and for their continued support as we find new ways of informing the public of STEM topics.

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POTENTIAL SPONSORS

