



2018 Ingenious Awardees

Careers Hive

Edinburgh International Science Festival

Amount awarded: £29,888

Careers Hive is a free six-day event held in the National Museum of Scotland. Open to young people aged 12 to 15 across Scotland, the event encourages pupils to continue with and increase the number of STEM subjects they study, keeping the door open for them to pursue as wide a spectrum of careers as possible.

Curiosity Connections - Women Like Me

University of the West of England

Amount awarded: £29,574

This project aims to change the perception of women in engineering and to encourage more women into engineering careers through tiered mentoring and role modelling. The project will pair mid-career women engineers with female junior engineers throughout Bristol and Bath (apprentices or postgraduates) to provide career and public engagement mentoring.

Daughters of Invention - primary schools engineering and drama project

The Play House

Amount awarded: £27,825

A project for primary schools delivered by the Play House, a theatre and education company with a unique participatory approach to working in schools that use drama to engage children in a range of subjects and issues. The project will work with children aged 9 to 11 from four deprived Birmingham primary schools with a high proportion of BAME pupils.

DIY renewables workshop with East London school students

University College London

Amount awarded: £21,341

The project is aimed at inspiring secondary-school students to design, prototype and create their own renewable energy devices within an exciting engineering environment. The weekly workshops will encourage innovation in an initial ideation phase, teach basic design skills and introduce students to user-friendly graphics software.

Engineer the Story

Ideas Foundation

Amount awarded: £29,995

'Engineer the Story' will give engineers the skills to create compelling digital stories about how their work can improve the world and meet the UN global sustainable development goals.

Engineering – everywhere, everyone: hands-on experiences for engineers/students/parents/academics

Engineering Development Trust

Amount awarded: £24,216

This project sets out to link industry with education through an innovative project within Birmingham and Manchester and aims to motivate engineers to engage with the public creatively through mentor training, hands-on activities, presentations and discussions.

FixCamp

Fixperts

Amount awarded: £28,600

FixCamp, is a holiday activity for the problem-solvers of tomorrow. Indoors and outdoors, hands-on and brains-on, these camps challenge young people to look around and actively engage with the world around them. Taking place across economically deprived areas of South London, FixCamp will offer inspiring learning experiences that allow students to develop a range of practical skills like soldering or drilling, as well as transferable skills like problem-solving, teamwork and communication.

Future Engineers

University of Central Lancashire

Amount awarded: £27,990

This project takes engineering out into the community, working with youth groups and community centres where there is a high percentage of young people from low socio-economic status backgrounds and run clubs with Girl Guide groups to encourage girls to engage with engineering. The project will take place across deprived areas of Blackburn aiming to encourage participants to solve engineering challenges through a series of workshops. Engineers from local universities and industry will attend the sessions and help young people with their projects, give short talks on their area of engineering and answer questions.

Low Carbon Technologies - the Art of a Sustainable Future

University of Leeds

Amount awarded: £26,060

Climate change presents the greatest challenge facing humanity. This Leeds-based project will train 10 to 20 engineers to communicate their knowledge of technological solutions, by encouraging them to imagine a fictional (but plausible) optimistic future where low carbon technologies have enabled a

sustainable society. These scenarios will then form the basis of a public art competition; competition entries could include short stories, illustration, songs and performance responding to these visions of the future. Competition entrants will be encouraged to correspond with engineers to obtain technical advice for their creations.

Making Engineering a family affair – answering the “HOW” questions

University of the West of Scotland

Amount awarded: £15,000

This project will work with organisations that specialise in providing training and community engagement to underrepresented groups and plans to recruit young apprentices, retired engineers and industrial professionals to train in equality and science communications in Renfrewshire and Glasgow.

Mars Safari

Spacefund

Amount awarded: £30,000

Mars Safari is an exciting project that aims to inspire girls through engineering and science. Working with a team of engineers and STEM Ambassadors, 800 Girl Guides from Kent will design and build their own Mars Rovers and take them on a fun-packed Safari to explore the surface of Mars.

Performing Engineering: bringing together engineers and children through theatre

Cap-a-Pie Engagements

Amount awarded: £20,660

Not for profit theatre company Cap-a-Pie will deliver a public engagement project bringing together engineers working on sustainability and school children with their parents/carers from areas of deprivation in the North East of England. The project will engage children in how engineers are addressing the most pressing environmental problems, such as climate change, which humanity is currently facing.

Re-Engineering Science Career-ing

Queen’s University Belfast

Amount awarded: £3,300

This project brings together the University of Glasgow and Scottish broadcaster Sunny Govan Radio with Queens University Belfast and Bangor FM, a local radio station in Northern Ireland. This partnership with local radio stations will allow engineering PhD students to create two bespoke engineering radio shows, involving local young people. The students will have a target audience and a creative platform to reach out and engage with hard-to-reach, underserved young people from deprived parts of Scotland and Northern Ireland, using community radio to encourage interest in engineering and science.

Shipping 2050, Young people explore ships and shipping with maritime engineers

The Bristol Initiative Charitable Trust

Amount awarded: £13,380

This project involves engineers from the maritime sector working with 13 to 15 year olds on-board the MV Balmoral, an inshore passenger vessel that is moored from September to May in Bristol's Floating Harbour, to engage them with existing engineering innovations and ideas that are being sought for ships and shipping in 2050.

STEM Engagement Science Club

Offshore Renewable Energy Catapult

Amount awarded: £5,211.72

Working with the STEM Network and Science Connects across Glasgow to establish the schools most in need, this programme aims to develop a series of lesson plans that can be one off classroom challenges or part of a longer standing STEM club arrangement with local schools.

TechTown Makerspace at Barnsley Library

Barnsley Council

Amount awarded: £29,999

TechTown Makerspace at Barnsley Library, is a project that will create an interactive making activity space in a library in Barnsley, equipped with 3D printers, robotics and coding areas, in the 10th most deprived area in England for education, training and skills.

The mysterious case of the elephant that forgot: explaining engineering

ech2o Consultants Ltd

Amount awarded: £22,981

This is a workshop aimed at introducing primary school pupils to engineering through an engaging and accessible children's story that explains key facts and principles of engineering. As part of this project, engineers will be trained up to deliver workshops to primary school children in schools across South East England which will give them an understanding of engineering.

The Photonics Music Workshop

University of Southampton

Amount awarded: £8,970

The UK has a shortage of engineers in both industrial and academic environments. Part of the issue is the perception of engineering being mundane and unimaginative. The Photonics Music Workshop challenges these assumptions and aims to inspire the next generation of British engineers into the field of photonics. The workshops will work with school children aged 14 to 18 and will combine basic principles of digital encoding, optical data transfer and lasers to create music.

Westcountry Women Working With Water (5W)

Westcountry Rivers Trust

Amount awarded: £30,000

Through engaging three different schools in deprived areas of Taunton in discussing, designing and delivering sustainable drainage systems (SuDS) and alternative water supplies (AWS), this project aims to engage an audience of 70% girls and women with water issues and the contribution of engineering to solving them.

Working with engineers to teach children to think like engineers

Canterbury Christ Church University

Amount awarded: £26,892

In this project, engineers work with STEM education specialists to design and deliver a strategy to give young people an authentic experience of the curiosity and wonder of thinking like an engineer. The participating engineers will target two key audiences: approximately 600 primary school students and 100 education specialists, industry leaders and fellow engineers across the Thanet region of Kent.