

‘Careers Hive’ gets underway at the National Museum of Scotland

‘Careers Hive’ was initially developed in 2016, with the aim of inspiring S1-S3 pupils to pursue a STEM-based (science, technology, engineering and maths) career through hands-on activities, workshops and discussions with STEM professionals who are early in their careers. The event is designed to help young people realise what skills they possess that might be useful in a STEM career through fun and engaging workshops and activities.

‘Careers Hive’ is an annual, week-long free event run by Edinburgh Science Learning, the education arm of Edinburgh Science Foundation and one of the UK’s leaders in science education. The organisation delivers projects to and for teachers and schools throughout the year which have reached more than a million pupils around Scotland over the past three decades.



Design is everywhere

Good design can make a complicated task simple. Design teams consider shape, color, materials and how to convert new products. Everything you use was designed by someone. Look around and think about who made the things you can see and why.

Iconic household objects

- Anglepoise lamp: George Carter, 1932
- Converse sneakers: U.S. Rubber Company, 1909
- Reusable dog lead: Mary A. Doherty, 1908
- Apple iPhone: Apple Computer, 2007
- McCartney pen: Louis and George, 1955
- Post-it note: 3M, 1974

Making things

Advances in science and engineering impact the design process. They help us tackle global challenges and lead to exciting new products and manufacturing processes.

The process of innovation

- Requirements
- 3D Modeling
- Engineering
- Prototyping
- Testing
- Final design

"You can design and create and build the most wonderful place in the world but it takes people to make the dream a reality."

— Walt Disney, *Pinocchio* (1940)

Design matters

Who's involved in creating a new bike?

- Materials scientist
- Industrial designer
- Graphic designer
- Manufacturer
- Cycle works

We always need new devices to improve how we work, eat, play and communicate. This means we will need more designers.

CAREERS HIVE

EDINBURGH SCIENCE LEARNING

DESIGN + PLAY

Partners: ARUP, Alamy, etc.



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This year the event takes place between [24 and 29 February at the National Museum of Scotland](#) in Edinburgh and will welcome over 3500 pupils from 40 schools all around Scotland. The event is now fully booked with school visits but audiences are encouraged to visit the Museum on Saturday 29 February between 11am and 4pm which is the 'Careers Hive Open Day'.

Joan Davidson, Head of Learning at Edinburgh Science, said: "We are so excited to be welcoming over 3500 of Scotland's young people to the National Museum of Scotland for 'Careers Hive' this February. Our aim over the course of the week is to open their eyes to the incredible opportunities available to them through their lives if they continue to study science, technologies and maths at school.

"We hope that by taking part in our massive range of engaging, hands-on activities and by chatting to professionals from the science, tech, engineering and maths industries that are early in their careers, they will think about some of the fascinating jobs that can be open to them in the future and the different education and career paths that lead there."

EXPERIENCE STEM

Students get hands-on with STEM careers in the Grand Gallery with four themed zones. Throughout each zone students engage with professionals about their jobs, and experience tasks and activities related to different fields.

The zones and some of the activities are:

- Build and Connect looks at our connections through the internet, keeping transport systems running smoothly, designing homes for a growing population and creating happy communities. This includes an activity showing how machines can run a production line efficiently, and engines that participants can take apart to see their inner workings.
- Design and Play illustrates how good design can make a

complicated task simple, how to turn an idea into reality, creating and manipulating our digital environments and how coding is changing the world; this includes a special appearance from Robotical's 'Marty the Robot', a programmable robot with character.



Putting people at the heart of things

The buildings and infrastructure of our towns and cities is one thing, but let's not forget about the people. 78% of people in the UK live in cities, in all kinds of different homes, streets and neighbourhoods. Our cities are getting more connected, and this may help to improve quality of life.

Fast
Transport

Less
Pollution

Being
connected
with your
Community

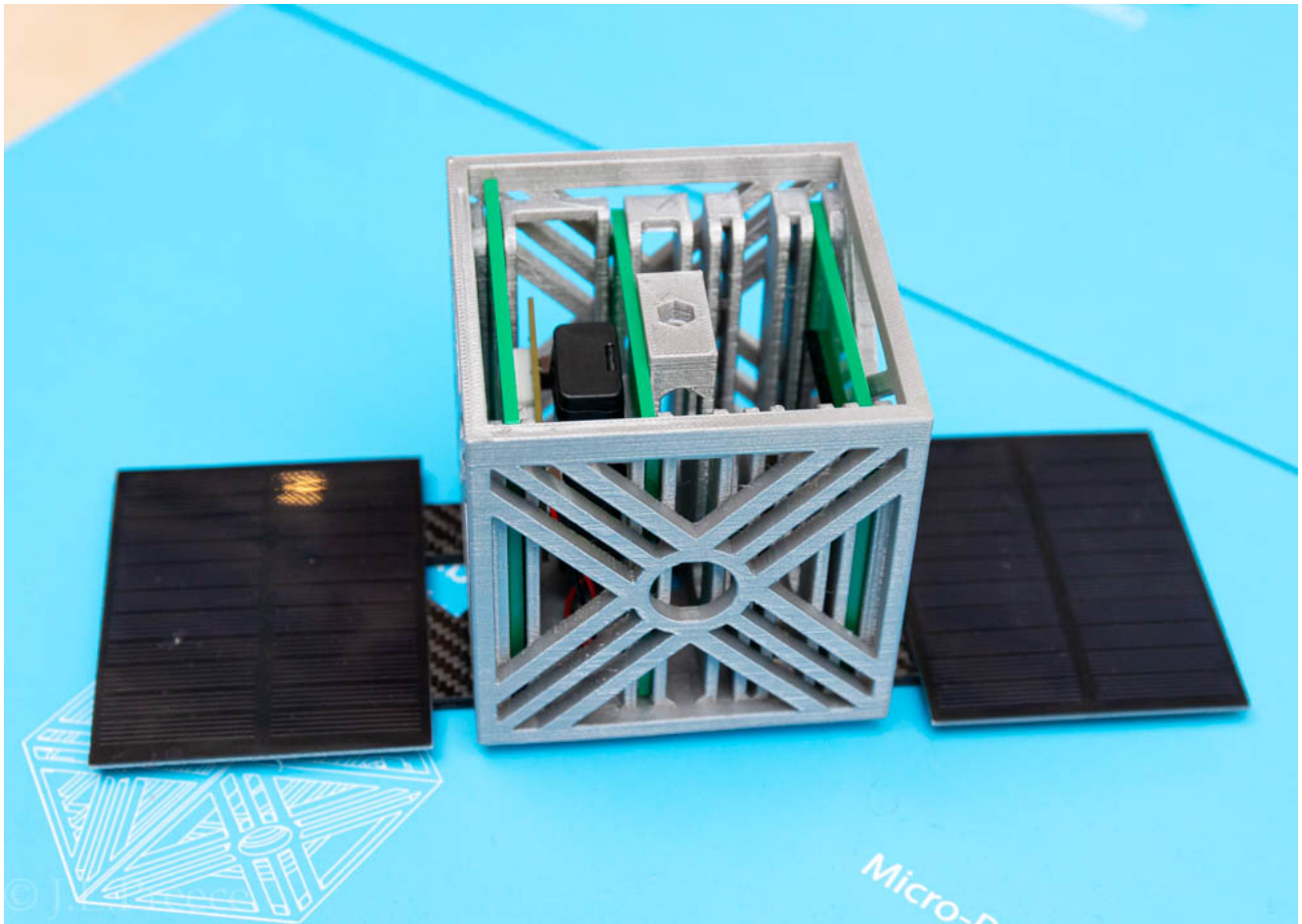
Plan the use
of the streets
and use more
public spaces

Stop
wasting
food
Recycle

How can we make our
cities a better place to live?



© 2014 Greece



- Energy and Environment focuses on finding the right mix of energy sources from the environment, smarter ways to distribute energy and technologies that help create clean and green energy; and an augmented reality mapping activity to show how windfarm sites are developed and an activity measuring the infra-red radiation escaping from models to show how we can reduce the carbon footprint of our buildings.

- Heal and Feed examines technology in health and well being and the challenges around getting water where it is needed, feeding a growing population and dealing with disease and epidemics. As part of this, pupils will perform knee, head or abdomen surgery using real-life surgical equipment in E.R. Scottish Water will also be presenting a new activity showing how water gets to our taps and how to deal with waste.

At the centre of the exhibition the Think Tank, supported by Wheatley Foundation, hosts a 'speed meet-up' careers activity where students get face-to-face with those in the early stages

of a STEM career, giving them the chance to hear about experiences and ask questions.

LIFE AFTER LEAVING SCHOOL supported by Royal Bank of Scotland

Students partake in a panel discussion with young STEM professionals to learn about their jobs, break stigmas and have their own say on important issues in the industry today.

Among others, this year's line-up includes:

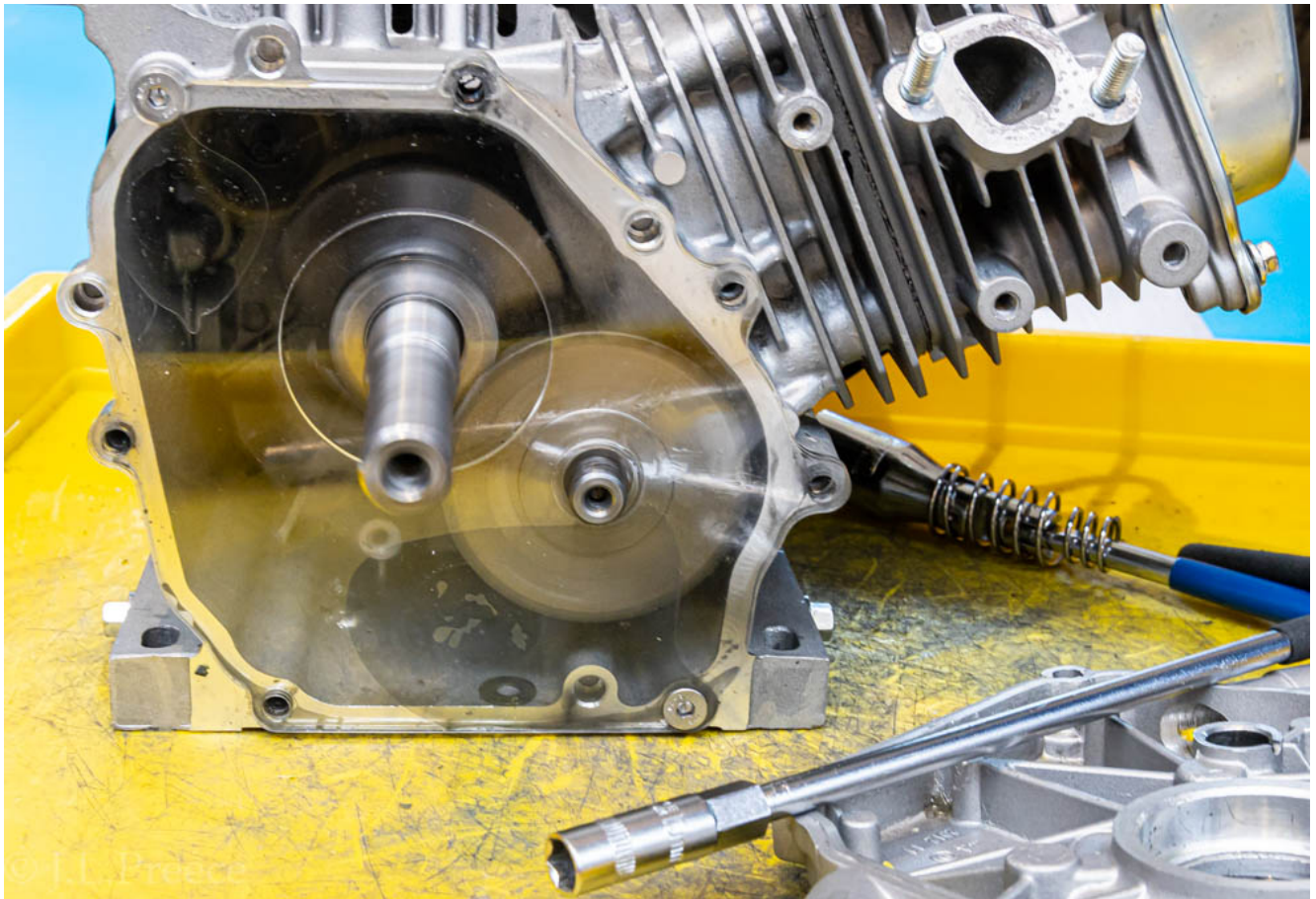
- Yanik Nyberg, founder of Seawater Solutions. After seeing the destructive impacts of conventional agriculture and the threat of rising sea-levels in Scotland, Africa and Asia, Yanik came up with the idea of growing food with seawater to address the degradation of land and the loss of biodiversity. This system of farming creates wetland ecosystems on which food can be grown, while carbon is captured at a rate of up to 40 times higher than the same area of rain forest, and profits are over eight times more profitable than the average potato field.

- Pooja Jain came to Scotland in 2011 to do a bachelor's degree in Biomedical Sciences, followed by a master's degree in Neuroscience by Research at the University of Edinburgh. Her research interests focused on "cognitive characteristics and interventions for neurological disorders", including lab-based research into various aspects of Alzheimer's disease. This interest now drives her business, Edinburgh-based CogniHealth, which is developing a "digital companion" called 'CogniCare' for helping people with dementia and their carers.

- Lauren Leisk is the founder and director of award-winning food start up Fodilicious Ltd. The young entrepreneur and Business Management graduate has valuable experience in the food industry. After suffering from Irritable Bowel Syndrome (IBS) for many years, Lauren started Fodilicious to bring the UK's first certified convenience foods to market helping those with IBS and gut health to find products for their diet that

are also delicious and healthy for anyone to enjoy, thus fulfilling a huge gap in the UK free from food industry.





• Michael Harkins, the Founder of Turtle Pack, an award-winning swimming aid for children 2+. Having graduated from Heriot-Watt University and worked as a swimming instructor for over a decade, Michael started Turtle Pack in 2015. "Swimming

isn't just a sport – it's a life skill. I've always been passionate about teaching children to swim, whether that's in lessons or by using Turtle Pack. The tools out there for parents and swimming instructors haven't really changed in decades, but we understand so much more now about how children best learn new skills.”

An important goal of 'Careers Hive' is to raise awareness amongst young people that there is not a set education or career path they have to follow to work within STEM industries. Many STEM professionals may have a background in something completely different, but they can still use those skills towards a successful science, tech, engineering or maths career.

There will be several speakers from Royal Bank of Scotland at the event, some of whom have not entered their current roles in tech through traditional career paths.

For example, one speaker, Michaela, originally graduated with a degree in Classical Music but after spending time working in university recruitment and admissions, she decided to begin to study towards a Computing and IT degree with the Open University in her spare time. She now works in the bank's Digital A.I. team as a technical analyst.

SKILLS GATEWAY

The skills gateway workshop will see students explore how the strengths, skills and interests they have and will develop at school will help them tackle challenges in their future workplaces, and get them to think about how to relate the jobs of the future to the challenges of the years to come.

The informal environment simulates a fun and innovative workplace, where people with different strengths and skills work collaboratively and creatively to share ideas and solve challenges.