

The TeenTech Awards 2013 unveil Britain's Innovators of the Future

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The winners of The TeenTech Awards 2013 have been revealed at an exciting Grand Final at The Royal Society In London before a packed audience of top academics and science celebrities.

The eleven winning teams have been invited to Buckingham Palace by HRH The Duke of York so he can present them with their prizes personally.

Ideas ranged from a computer game with 220,000 lines of code (all written by one pupil) and a smart fridge which can tell you when it needs restocking. Other pupils came up with a wearable bracelet for Diabetics to test their blood sugar levels.

Over a hundred young people representing almost every region in the UK travelled from as far as Greenock in Scotland in the north and Truro in Cornwall in the south to present their science ideas to an eminent board of judges in London. The event was also supported by broadcast celebrities and scientists. Professor Brian Cox and James May looked at the young peoples' work and science presenters Liz Bonnin and Dallas Campbell joined academic judges such as Theoretical Physicist Professor Al-Khalili and space scientist Maggie Aderin-Pocock.

Of the thirty-six teams who made it through to the Finals, the judges selected eleven winners (on Monday $24^{\rm th}$ June). They are:

Communication Category sponsored by HP:

The Hayfield School, Doncaster, South Yorkshire for **"Dimension"** – a 3-D Projector -"Our idea is a holographic projector which could be used in schools, the medical profession, in the military and in industry."

Construction Category sponsored by Atkins Global:

Archbishop Sentamu School, Hull for **"Future School"** – "A design for a sustainable school of the future. We had to research the needs of the community, investigate sustainable building techniques and materials and learn about net-zero energy buildings. We went on to use industry standard software to ideate and develop designs using Building Information Modelling techniques."

Education Category sponsored by Google:

Loughborough Grammar School, Leicester for "**Project E.A.G.L.E**" - an app that will have many features designed to make school life for the pupils and teachers easier. We will try to cover a vast range of subjects in which pupils can learn about topics, play educational games and quizzes, and access resources such as worksheets, revision sheets, homework planner and calendar."

Entertainment Category sponsored by JVC:

Birkdale School, Sheffield, South Yorkshire with "Deep Focus". "Our idea is a Graphic and Game Design project called Deep Focus – incorporating the project's first game, "Infection". We wrote 220,000 lines of code and have set up our own business. We are also using our computer knowledge to broaden our portfolio of products in graphics, music production, social media sites, 2D and 3D logos and marketing/promotional media. Infection took months of programming and coding. We have constructed all the maps, invented all the game ideas, and lots more!"

Environment Category Sponsored by Cummins:

Notre Dame High School, Greenock, Scotland with **"Chargicle"** - "Our idea is a bike attachment which charges your iPad or Tablet through pedal power."

Future of Food Category Sponsored by Heinz & The Institute for Food Science & Technology:

Luckley-Oakfield School, Wokingham, Berkshire with "A Fridge With Attitude". "Our idea is a fridge which uses technology to scan the food and take in information e.g. the expiry date and the original weight (before it was used). The fridge can also weigh this food so it knows when a food is starting to run out and how much has been used."

Healthcare Category Sponsored by Shire Healthcare:

Loreto Grammar School, Altrincham, Cheshire with "QuickCheck". "We formed a company JSS Ltd and are creating a bracelet that is a blood glucose checker. It is made for diabetics so that they don't need to carry the huge acu-check around with them."

Sport Category Sponsored by Cranfield University:

Wirral Grammar School, Bebington, Merseyside with "Sporting Commandos – The Creative Court" - "A court which uses lights to set lines for the sport that the person wishes to play. The lines are very simple to change with the use of the remote that comes with the court projector system."

Transport Category Sponsored by Airbus:

Luckley Oakfield, Wokingham Berkshire with "Truly You" - "A car that can be personalised like all your gadgets. Better still, it can detect your mood and make your driving experience safer."

Wearable Technology Category Sponsored by CPC:

Welland Park Academy, Leicestershire for "Pressure Boots" - "A shoe which harnesses power while you walk to charge up a mobile device, like a phone or an MP3 player. People like to listen to music while they run, so this will mean they never run out of power, or the inspiration to keep on running!"

<u>**Journalism - Sponsored by City University London:**</u>

Parkside Federation Academies, Cambridge for ""Descending Under the Ice – A Snowball Earth" (an article on the causes & effects of the snowball earth theory)

A special award for outstanding global collaboration was also presented: **Best International Collaboration**:

Loreto Grammar School, Altrincham, Cheshire for collaborations on their Quickcheck insulin bracelet - with international schools in Finland, Czech Republic, Airbus, Shire Healthcare, University of Hull and the University of Manchester.

In order to win, students had to show original ideas and entries demonstrating thorough research, excellent presentation and a clear understanding of the potential market. They were also asked to prove that they had sought-out and contacted industry experts and worked with them, in the spirit of global collaboration.

The winners take away a thousand pounds in cash for their schools, a 3-D printed trophy and will attend a Royal Award Ceremony in Buckingham Palace next month where they'll have the chance to show their ideas to TeenTech Patron, His Royal Highness The Duke of York.

The ideas, based on science, engineering and technology, ranged from the clinical management of diabetes through high-tech armbands to futuristic transport by electric motorbikes. Pupils in Cornwall have even come up with a solution to the dangers of sewage in the sea by developing a high-tech surfboard wax to warn surfers. After serious market insights, they've developed a novelty shape for the product: dog poo!

At least three youth business enterprises have been formed as a consequence of the competition and for many pupils valuable connections have been made with professional organisations, universities and corporations.

"We have been bowled over by entries demonstrating not only imagination but real commitment to projects, which some students have clearly worked on for months. Their work has been an absolute delight to judge. Many students have told us that this has been the best experience they have had in or outside school – which has been thrilling to hear. Some schools have now built the Awards into their curriculum for next year as they felt it was such a valuable experience"

Hundreds of enthusiastic teams registered for the national contest, being held by award-winning science-event organisation **TeenTech** at The Royal Society in London. Students between the ages of 11 and 16 were challenged to put forward compelling entries in eleven categories showing high levels of global collaboration with business, industry and the education sector.

Teenagers contacted NASA scientists in the USA, aviation engineers in Germany, the medical profession, universities across the world and even Britain's top Paralympic talent.

The young people also searched for scientific and technological solutions to real problems affecting their communities – from managing the impact of flooding in the North of England to harnessing the power of water to create renewable energy in the South. The challenges of disabilities were also tackled by the youngsters – from sensory books for autistic people, devices to help disabled people take part in sport to mechanised exoskeletons to rehabilitate paralysed patients.

TeenTech CIC offers one-day interactive science events to schools nationwide to engage young people in science, technology, engineering and maths (STEM) and show them a possible career path. The Awards are the culmination of TeenTech's five years of hard work in giving young people direct access to leading corporations and higher educators.

Award sponsors include leading international corporations Airbus, Atkins Global, diesel engine designer and manufacturer Cummins, CPC (distributors of Raspberry Pi), Google, Heinz, HP, The Institute for Food Science and Technology, JVC, Network Rail and Shire Healthcare. Cranfield University and City University London also sponsored the event.

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What the young scientists thought:

"The experience of working as a team to produce high quality work has changed our way of thinking to a more advanced level seeing the true science behind diabetes." **Richard Lander School, Cornwall**

"We think it was good to gain feedback from as far as Australia. Collaboration played a large role in our specific project." **Park House School, Berkshire**

"For us, the TeenTech Awards project process has been both incredibly interesting and eyeopening. Collaboration with an expert was really valuable and gave us confidence whilst making our project credible." **Parkside School, Cambridge**

"We gained a great understanding of how complex technology is and how advanced it has become. We've been inspired to have a career in business when we are older." Marple Hall School, Stockport.

NOTE TO EDITORS

A study by the Royal Academy of Engineering highlights a shortage of future graduates with 830,000 Science, Technology and Engineering graduates needed by 2020. The UK currently produces 23,000 engineering graduates a year. A key reason for this is thought to be the lack of quality careers awareness amongst young people at critical points in their academic lives such as choosing GCSE and A level Subjects.

<u>TeenTech</u> is an award winning, industry-led initiative, co-founded by Maggie Philbin (BBC Tomorrow's World) and Chris Dodson, OBE, Chairman of the Institute of Directors (South) who worked with Berkshire Education Business Partnerships, companies and business organisations to create a very special experience for young people. The first TeenTech ran in the Thames Valley in November 2008.

Thanks to the support of a prestigious list of partners and corporate sponsors, TeenTech runs regional interactive day-events at venues across the UK, introducing teenagers to opportunities in further education and employment. At each event, 300 pupils from 30 different schools benefit from hands-on exhibits and challenges run by leading organisations in the world of science, engineering and technology

Today collaboration with technology companies, as well as education, business and professional organisations, has created an immersive, interactive event that is nationwide.

The event won Best Engineering Event in Science and Engineering Week 2010 and in 2011 was the only UK organisation to receive a Google RISE award. Maggie Philbin and in 2012 TeenTech were awarded Best Outreach and Engagement by UKRC/WISE (Women in Science and Engineering)

Research from previous events shows this helps teenagers refocus their thinking about school subject choices and consider career paths they never knew existed. Two thirds of teenagers at the events say they would consider careers as engineers or technologists. At the beginning of the Berkshire event, only 40% of students were fairly or very interested in these careers. But by the end of the day 81% said they were fairly or very interested.

In 2013 TeenTech will run in twelve regions, reaching over 350 schools.

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- TeenTech is supported by leading global companies and organisations such as Airbus, Atkins, BT, Cisco, Cummins, BBC R&D, CPC, Heinz, HP, Institute Food Science and Technology, , Symantec, RIM (BlackBerry), Sony Europe, CPC, Syngenta, and Google but also showcases the work of regional companies and start-ups
- At each TeenTech event, over 120 scientists, technologists and engineers bring along their enthusiasm and their very latest technology in a mission to shift out-dated preconceptions of wild haired, middle-aged men in white coats.

Supporting Quotes from Sponsors

Richard Doyle, Director of Human Resources for Network Rail: "We use technology to help four million people travel by train every day. We have engineers and technicians using smart phones and apps to help them fix problems and get people moving again. We have state-of-the-art signalling centres; the air traffic control of the railways and systems to feed up to the minute timetable information to passengers across the country. Technology is in everything we do and we need more smart and ambitious people to join us to deliver a bigger and better railway for Britain. Supporting TeenTech is supporting the next generation of people who will drive this country to success. We're proud to be involved."

Colin Sirett, Head of R&T, Business Development & Partnerships at Airbus: "TeenTech® and the Teentech Awards are a great way of inspiring young people to become involved and share their innovative and creative ideas to solve a range of complex challenges. Airbus is delighted to be part of Teentech to help raise awareness of the amazing career opportunities available for young people who choose to study STEM subjects at school."

Sue Cooper, UK HR Director, Atkins: "Atkins has been really impressed with the standard of entries for the TeenTech Construction Award – it's wonderful to see such commitment, innovation and energy shine through on the projects. We're now looking forward to judging in the final, although it's going to be very difficult to choose a winner."

Professor George Brock, Head of Journalism, City University London: "In a world where technology is driving the decentralisation of news, the need for qualified journalists to bear witness, investigate, analyse and verify information has never been greater. City University London's world-leading Department of Journalism is therefore delighted to sponsor the Journalism category of the TeenTech Awards 2013. We are keen to inform and enthuse young people about the exciting possibilities that lie ahead."

David Deventer, Marketing Director, CPC: "In this world of technology, it's not enough for our young minds to just switch on a PC; they need to understand the science behind it if the UK is to be at the forefront of innovation. It's why CPC sells products like Raspberry Pi, which help educators teach key skills such coding - and it's why we support TeenTech and the amazing work they do to inspire the technological creativity at an early age."

Professor Rajkumar Roy, Head of Manufacturing and Materials Department, Cranfield University: "Cranfield is honoured to be involved in the TeenTech Awards in support of the next generation of science and technology entrepreneurs. Technology innovation is a core value for Cranfield and with a reputation for producing the largest number of engineering postgraduates in the UK, Cranfield is a keen supporter of initiatives which inspire young people to get involved in technology and see what a

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difference their ideas can make in the real world. From developing special coatings to improve the performance of a tennis racket to designing ways of capturing energy from sporting activity, the possibilities for innovation in sports are endless."

Steve Nendick, Communications Director, Cummins: "Working with students to promote STEM subjects as a first step into engineering based careers is important part of Cummins' long-term recruitment strategy. We are pleased to support TeenTech® and be involved in an initiative that allows our employees of today to work with and inspire our employees of tomorrow."

Alison Daniel-Cutler, Pre-University Education Outreach for Google: "Google is pleased to support the Teen Tech Award for Education. Technology is enabling major innovations in education from open courseware for self-paced learning on a global scale to inter-school teaching platforms. At Google, we believe that everyone, regardless of socio-economic status or geographic location, should have access to the best in education. We are excited to see what the next generation of young entrepreneurs will envision and create to transform education globally."

Susan Bowen Chief of Staff, UK & Ireland Office of the Managing Director, HP: "The TeenTech Awards are a great opportunity to showcase the impressive innovation coming from the young people of today. Being involved in these Awards is part of HP's overall commitment in the UK to inspire and prepare tomorrow's generation of IT leaders and experts. We wish the best of luck to all the finalists in the Communication category and look forward to unveiling the winner."

Jon Poole, Chief Executive, Institute of Food Science & Technology: "We have been amazed and delighted at the quality of the ideas of all of the Future of Food category entries to this, TeenTech's first Awards event. The final promises to be a great day for all those involved – whoever is the eventual winner. I'm looking forward to following the career paths of some of these students who, I really hope will go on to become some of our technical leaders of the future."

Nick Perkins, Events and Brand Manager, JVC Europe: "Having been involved from the early stages in promoting STEM to numerous schools from a wide variety of backgrounds, JVC is proud to be judging the Entertainment Category at the first TeenTech Awards. It has been very encouraging to see a huge response to the TeenTech Competition with some brilliant ideas from the inventors of tomorrow. Thank you to all of those who have taken part and we look forward to judging the final three. Moving forward, JVC will continue to support this very important cause."

Jessica Mann, SVP Communications and Public Affairs, Shire Healthcare: "Shire is proud to support the first TeenTech Awards and to be judging the Health Care Category. Having been involved with TeenTech for the past few years and seen firsthand how inspirational and important Teen Tech has been in promoting science to young people, it is a pleasure to be involved with helping to find some of Britain's most promising new scientific ideas."

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