

Success Stories

The Faraday Challenge

King Ethelbert and **Tunbridge Wells Grammar School for Boys** school were among the 19 participating schools this year, and both teams did very well. The Challenge days were run by a team of STEM education professionals at the lead school.

FREE TEACHING RESOURCES - classroom activities for students aged 11-19 years with film clips, online games and quizzes. Search for resources to use in your classroom and ideas for extension and homework. You can use these resources on their own, with related resources, and as part of the cross-curriculum.

For more information please visit <http://faraday.theiet.org/>

4 x4 in Schools Technology Challenge

The programme is aimed at young people aged 11 – 19 years old (key stages 3, 4 and 5) and involves 4 to 6 team members. It sets out to raise awareness, interest and enthusiasm in STEM subjects through the practical application of design and technology, mathematics and science. For more information <http://www.4x4inschools.co.uk/>

In the recent competition NEBULA from **Simon Langton Girls Grammar** School were presented with the Innovative Thinking Award.

STEM Challenge 8 – The Deloitte Paraspport Challenge

STEM Challenge 8 was challenging 11-14 year olds to find out where and how more disabled people could take part in Paralympic sports. Students worked in teams to complete tasks directly connected to the UK curriculum for their chance to win top prizes including money for STEM Club equipment and an experience prize provided by Deloitte and Paraspport. The National winning team was from **Whitstable Community College**.

STEM Challenge 9 – The Paralympic Torch Relay Challenge

The Challenge was to design a spectacular human-powered invention for creating the spark which lights the Paralympic Flame. Pupils were required to produce a design for their device and present to a panel of judges. 5 schools from the region took part, and **Canterbury High School and Harvey Grammar School** were selected to present their ideas at the Big Bang Event.

STEM CLUBS NETWORK

Whether your STEM club has been established for years, or you are only just thinking of starting a STEM club, the STEM Clubs Network is for you.

Managed by STEMNET, it enables you to explore ways of making your STEM club something really special! Through the network, club leaders get the chance to collaborate with other STEM club leaders via the web, via CPD and via other specifically tailored events.

A wealth of STEM club-related ideas and resources can be accessed, without cost, online at www.stemclubs.net

To affiliate to the STEM Clubs Network

Simply send an email to join@stemclubs.net stating: Your name (title, first name and surname); School name; School address and we'll do the rest.

New events and activities with money for schools

STEM Conference 6 July 2012

After the successful conferences of 2010 and 2011, the 2012 conference will continue to provide opportunities for teachers to learn about enrichment and enhancement activities in Science, Technology, Engineering and Mathematics. There will be separate Primary and Secondary Workshops run by nationally recognised speakers on ways to engage students in exciting and interesting ways. There will also be a number of sessions focused on the New National Curriculum.

Key note Speaker will be Mr Jon Tickle who is a graduate of the University of Leicester. He has been co-presenter of Brainiac: Science Abuse which is a series of science based shows on Sky One. His best known stunt was walking on a pool full of custard powder and water. He has had many ideas, one of his most famous being the "time delay toaster" "What's the problem with toast? Two slices pop up, you whip one out, and spread some margarine on it. But by the time you get the second, the consistency has changed. Why not have a time delay?"

This is followed by optional sessions with a choice of practical workshops both for Primary and Secondary.

Please email kentandmedwaystem@canterbury.ac.uk to enrol, there are early booking reductions, as well as reductions for multiple attendance from one school. Each school will also get a "goodie Bag" to support STEM in the classroom.

Chemistry at Work - 11 July 2012

Time: 09:30 – 12:30 | 1:30 - 5:30

Kent & Medway STEM is hosting Chemistry at Work Event at Canterbury Christ Church University, Canterbury involving 10 to 15 students in Y9 or 10 from 10 Schools. There will be two sessions, morning and afternoon. Places are limited please let us know if you are interested at kentandmedwaystem@canterbury.ac.uk

Chemistry at Work Events are sponsored by the Royal Society of Chemistry and offer school students the opportunity to appreciate the place of chemistry in everyday life and the world of work, with particular emphasis on what is happening in their local area. They aim to show a positive image of the chemical sciences as exciting, interesting and wealth creating activities that were worth considering as a career.

Solar Car Challenge Teachers and STEM Ambassadors Twilight Session - 9 May 2012 at 3:45

Hall Place Enterprise Centre, Harbledown By Pass, Harbledown, Canterbury, Kent CT2 9AG

This challenge involves University of Kent and Canterbury Christ Church University - Kent & Medway STEM staging a Solar Car Challenge competition and engaging local schools to take part, with support from STEM ambassadors.

The challenge is run as a short project for school teams (usually 5 in a team) in years 8 & 9 during the summer term. Each school team is provided with a construction kit and STEM ambassadors who will visit their teams to guide them.

Free Solar Kit available to all attending the Twilight session, For more information or would like to get involved please email us on kentandmedwaystem@canterbury.ac.uk

Super Speedy Car Challenge at King's School Canterbury

Inspired by the Bloodhound supersonic car project to build the world's fastest land vehicle, the King's School, Canterbury, is launching a project for School pupils to design and make a super-speedy car. This uses a model aircraft Electric Ducted Fan and high-technology Lithium Polymer Batteries.

The competition will be held at The King's School on Tuesday 5th July 2011. If you need more information or would like to get involved please email Graham J. Swindley

gjs@kings-school.co.uk

Putting Business into STEM Education

31 May 2012

Dartford Technology College, Dartford. 4:30 – 7pm

Join us for a free twilight session bringing together teachers and businesses to inspire students with the excitement and potential of STEM subjects.

Meet people from industry to:

- Gain insights into how STEM knowledge and skills are used at work
- Learn how STEM Ambassadors can help inspire students at your school free of charge
- Create projects and challenges for students to develop vital employability skills
- Help students understand the career opportunities and paths open to them and find out what free support is available from STEMNET and others

It is part of a national series of events and outcomes will be captured in a Good Practice Guide for schools and business. To book your place:

<http://dartford.eventbrite.co.uk>

STEM Challenge 10 – The Maths and Science Challenge 2012

STEMNET and Cisco are challenging 11-16 year olds to use their Maths and Science skills to plan a major sporting event in their local area. The Challenge is to plan a major sporting event that would transform your local area and showcase local and national talent. Teams of 4-6 students must choose a sport and a venue or location and work out what resources facilities and equipment would be needed for the event.

The closing date for team entries is 15 May 2012.

To register or find out more information visit:

www.mathsandscience2012.co.uk/challenge-2012

YSJ Photography prize 2012

Students aged 18 and under are invited to take photos using any camera, phone or other device to compete for prizes according to their age group, related to a scientific theme. There will be one prize (see link below) awarded per winner and runner-up of each category in the form of Amazon vouchers. The winning photographs, along with the runners up and other highly commended, will be published in a forthcoming issue of Young Scientist Journal.

Visit www.butrousfoundation.com/ysjournal

Chemistry Clubs

The funds are targeted at activities run at schools/colleges outside the normal science timetable which may be focussed on generating interest in chemistry in all ability levels or which may provide opportunities to stretch and challenge the already able and motivated. Applications from existing chemistry clubs looking to expand/ enhance activities would be welcome as would those from colleagues interested in starting a club. An application would need to indicate how the longevity of the proposal was ensured and how best practice and experience from it might be shared within and between other (perhaps feeder) schools. The application will be made by a teacher at a primary or secondary school for sums up to £1000.

Visit <http://tinyurl.com/cymtusx> for more.

Special Leaders Awards for Tomorrow's Engineers

Special Awards are awards that have a particular focus, with prizes attached. They are sponsored by various organisations and we are currently running 6 Special Awards for students and one Special Award especially for teachers, our NCETM Special Teachers Award.

Interviews can be submitted into up to two Special Awards in addition to the general Leaders or Reporters Award. Don't worry if you don't know which Special Awards to enter! We will automatically enter you into up to two Special Award categories if you're not sure.

The Special Awards are currently: -

Primary Engineer Special Leaders Award for STEM- Scientists, Technologists, Engineers and Mathematicians: "What did you want to be when you were growing up?"

Deadline: 31 May 2012. Open to all Primary students from 5-11 years.

Resources you may not be aware of...

STIXX Machine

Kent & Medway STEM have three STIXX machines to be used by Schools and STEM Ambassadors free of charge.

For more information please email kentandmedwystem@canterbury.ac.uk and for project ideas please visit <http://tinyurl.com/c5sxfq4> and <http://tinyurl.com/d36boov>

Making K'Nexions Kits

Kent & Medway STEM has K'Nexion Kits to be used in STEM Club Environments and with support from STEM Ambassadors. For activity ideas please visit www.youngeng.org

Institute of Physics activity pack

This Institute of Physics activity pack contains ideas, resources and activities to occupy and entertain your science, technology, engineering and maths (STEM) club and it has been put together with help from club leaders. They are available at

www.stemclubs.net/resources/ase-2011

Explore physics the exciting way, by trying out a simple and fun experiment, new ideas every month available at:

www.physics.org/marvinandmilo.asp

Engineering Engagement Project

The Engineering Engagement Project resources from the Royal Academy of Engineering are to support teaching and learning in schools and widening participation in the areas of Science, Technology, Engineering and Mathematics (STEM). They are all available at:

www.stemclubs.net/resources/eenp

DO YOU KNOW ABOUT

Kent & Medway STEM?

Working with young people and teachers

Canterbury Christ Church University announced in July that we were the new STEMNET contract holder, for the Schools STEM Advisory Network and STEM Ambassadors Programme in Kent and Medway Region.

Our remit is to work with schools and colleges in Kent and Medway, helping young people and their teachers access a range of STEM Enhancement & Enrichment opportunities including STEM Clubs, links with STEM Ambassadors and activities featured in the STEM Directories.

Teachers can contact Kent & Medway STEM for free advice on STEM Enhancement & Enrichment (E&E), and assistance in identifying what STEM E&E can most benefit them and their students. By working with local experts, Kent & Medway STEM can provide tailored advice and assistance quickly and easily to schools and colleges across the region. For more information please visit:

www.kentandmedwaystem.org.uk

STEM Ambassadors

STEM Ambassadors are an invaluable and free resource for teachers and schools. They offer their time voluntarily to enthuse and inspire students within schools about STEM subjects. They each hold a current CRB certificate and have attended an induction session discussing how to approach volunteering in schools. They are not trained teachers, but people who can bring the real world to life for your class.

Kent & Medway STEM can help you decide how best to employ an Ambassador.

www.stemnet.org.uk/content/stem-ambassadors

In the Kent & Medway STEM region currently there are more than 800 Ambassadors available to work with young people. The occupations of STEM Ambassadors are very wide ranging, including environmental scientists, chemists, civil engineers, marine biologists, medical physicists, pharmacists, apprentices and energy analysts to name but a few. Anyone who uses STEM in the world of work and who is willing and able to enthuse young people about STEM subjects, can apply to become a STEM Ambassador.

The Programme is funded by the Department for Business, Innovation and Skills and is already supported by employers in every part of the UK who encourage their staff to become STEM Ambassadors as part of their outreach activities.

Contact us

STEM Administrator

Faculty of Education

Canterbury Christ Church University

North Holmes Road

Canterbury, Kent - CT1 1QU

Tel: **01227 767700 ext 2662**

Contact Email: kentandmedwaystem@canterbury.ac.uk

STEM Ambassadors: ambassadors@canterbury.ac.uk

Whynot ChemEng - Top 10 Flash Bang Demos

This resource has been produced to encourage the inclusion of fun, safe and relevant demonstrations to the Key Stage 4 curriculum

Visit

<http://tinyurl.com/cc2s69l>

The Changing Futures Website

www.changing-futures.co.uk is developed by teenagers for teenagers – exploring cystic fibrosis (CF) and gene therapy has just been launched. This project has been led by Nowgen (a centre for excellence in public engagement, education and training in biomedicine) and supported by the Wellcome Trust. It includes a range of free resources such as interviews with scientists, animations and video diaries.

UK Power Networks

www.ukpowernetworks.co.uk

powerup presents the KS2 and KS3 National Curriculum (Electricity Units) in an interactive and fun way.

In The Zone: Olympic Inspired Science Kits for Schools

Have you got your free kit? If not visit:

<http://tinyurl.com/4xc7p9w>

The Wellcome Trust has sent a free In the Zone kit to every UK school in 2012. These kits will provide experimental equipment, teaching materials and resources to ensure you have everything you need to bring the science of the human body to life in your classroom.

Each activity has been tailored to meet curriculum requirements for Science and PE for ages 4-19 years. If you need a STEM Ambassador to support this activity please let us know.