



## Do you know about **Kent & Medway STEM?**

Kent & Medway STEM, part of Canterbury Christ Church University is pleased to confirm that we have agreed new arrangements with STEMNET with effect from 1 July 2011, to manage the Schools STEM Advisory Network and STEM Ambassadors Programme in Kent and Medway.

We will keep schools in Kent and Medway informed about high-quality activities they can access to enrich and enhance the STEM curriculum and enable them to use a range of STEM Ambassadors so that teachers can incorporate into their teaching exemplary links to the world of work.

STEM directories provide enough information for teachers to pinpoint quickly, which activities and events provided by organisations across the UK will enrich their school curriculum. You can find out more about the STEM Directories by visiting

[www.stemdirectories.org.uk](http://www.stemdirectories.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 generally not trained teachers, but people who can bring the real world to life for your class. For more information:

[www.stemnet.org.uk/content/stem-ambassadors](http://www.stemnet.org.uk/content/stem-ambassadors)

For tailored advice and request for Ambassadors, please email [stemnet@canterbury.ac.uk](mailto:stemnet@canterbury.ac.uk)

### **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, CPD and other specifically tailored events.

A wealth of STEM club-related ideas and resources can be accessed, without cost, online at [www.stemclubs.net](http://www.stemclubs.net)

To affiliate to the STEM Clubs Network simply send an email to [join@stemclubs.net](mailto:join@stemclubs.net) stating your name (title, first name and surname), school name and school address. We'll do the rest.

## **STEM Ambassador/Teacher Networking events to be held across Kent and Medway**

- **Tuesday 11th October 2011 at Powell-Cotton Museum, Birchington**
- **Wednesday 12th October 2011 at the Royal Engineers Museum, Gillingham**
- **Thursday 13th October at Tonbridge School, Tonbridge**

Choose the venue most convenient to you.  
All sessions run from 4.00 – 6.00 pm  
The purpose of the events is to give teachers and STEM Ambassadors the chance to network, make contacts and glean some good ideas about how to work together effectively. Each event will be a mixture of talks, speed-networking and workshops. Sessions include: Innovative CPD tailored to your needs, Enrichment and Enhancement opportunities for STEM

Ambassadors and details of Grants and bursaries and STEM Clubs ideas for grants to get started and National framework of support, guidance provided. These events are great opportunities to learn more about how teachers would like support, share stories with other Ambassadors and to make contacts for future visits!

If you would like to attend one of these events, please email [stemnet@canterbury.ac.uk](mailto:stemnet@canterbury.ac.uk)



# Fundraising for STEM Clubs



The UK Association for Science and Discovery Centres website includes a database of funding bodies that support STEM activity in schools. There's also advice on how to write a grant application, and inspiring information about what other schools have done. It's focused on

clubs, but much of the information is relevant to other activity too.

<http://sciencecentres.org.uk/resources/stemclubs>

## STEM Challenges

Inspired by London 2012, STEM Challenges provide a contextual and cross-curricular approach to studying the STEM subjects at KS3. The challenges will take teams up to four weeks to complete in a typical club setting. There are big prizes to be won. For more information about the latest challenge and to register your students, visit [www.stemchallenges.net](http://www.stemchallenges.net)

### STEM Challenge 6 - The Cisco Website Challenge

The winning team of STEM Challenge 6 was "Little People" from Dartford Technology School. Teams were asked to design an official website for Rachel Morris a gold medal winner of hand cycling road events both at the World Championships and 2008 Beijing Games. "Little People" worked well together as a team and their entry showed good use of ICT and resources including a video.

### STEM CHALLENGE 7 – The BT App Challenge

The judging session will take place on the 28th of September 4:00 to 6:30, Medway Campus and 5th of October 4:00 to 6:00 pm, Canterbury.

## Faraday Challenge Days Launch

### Monday 12 September 2011

The Faraday Challenge Days are one day activities, designed for six teams of six students aged 12-13 years, delivered in your school by the IET. The event gives students the opportunity to research, design and build prototype solutions to genuinely tough engineering problems, and are completely FREE.

In order to be eligible to host a Faraday Challenge day, schools need a school hall or large classroom for the day, and six teams of six students to take part (36 students in total). For more information, visit: <http://email.ietinfo.org/c/16JxmdXTf48zwb8t>

Application forms to apply to be a host school can be downloaded from: <http://email.ietinfo.org/c/16JxnoPMwConmTGk>

## The 4x4 in Schools Technology Challenge 2011/12

### Registration is now open

The challenge is aimed at young people aged 11 – 19 years old (key stages 3, 4 and 5), and involves 3 to 6 team members working together to design and build a radio controlled 4-wheel-drive (4x4) vehicle to set specifications, that can successfully negotiate a specially designed test track that emulates that of real life and what a full scale 4x4 vehicle can do. To Register to compete in the 2011/12 challenge and to receive your FREE copy of the 4x4 in Schools Curriculum Material and for more information please visit:

[www.4x4inschools.com](http://www.4x4inschools.com)



## Student competition to plan and star in your own careers interviews!

**Closing date for entries is 7th October 2011**

Future Morph ([www.futuremorph.org](http://www.futuremorph.org)) is asking you to develop your own interview where you will plan a set of 10 questions to ask your choice of healthcare or medical science staff.

This competition is open to all students aged 11-16 years and the winning interview will be included in our new 'Beyond Medicine' section on the Future Morph website.

'Beyond Medicine' will target young people considering studying medicine and will highlight the range and variety of job roles within the field of medicine, taking them beyond the idea of being a doctor.

There are so many branches of medicine available but often young people are unaware of the options available to them.

Students may want to combine their science and engineering skills as a medical engineer designing the next artificial limb, they may want to help babies overcome jaundice using medical physics, or they may want to work towards finding a cure for disease in a clinical trials setting, to name but a few.

For more information please visit: <http://tinyurl.com/3pko344>

# Success Stories

## Kent & Medway STEM Conference Canterbury Christ Church University

The 2nd annual STEM Conference took place on 10th June at Canterbury Christ Church University. It began with an inspirational keynote address by Keith Gibbs and ended with a fun workshop presentation on the science of leadership by Sue Martin.

There were a number of workshops for both Primary and Secondary educators. 90 people attended, with 90% of those who attended rating their experiences throughout the day as very good or excellent.

## Big Bang

Sixth form students from Chaucer Technology School were awarded Gold Crest award at the South East and London Big Bang Event at the Science Museum on 22nd June.

The project involved the students working with engineers to solve real world problems. They were set a challenge by engineers from Cummins Power Generation to reduce their school's carbon output by 10%.

The final report and findings have identified ways to reduce the CO2 output by over 50% and resulted in successful bids for funding to implement some of the suggestions.

## Solar Car Challenge

The final took place at the University of Kent involving 12 teams from 5 schools. Three prizes awarded:

- Innovation and Design:  
**Simon Langton Grammar School for Boys**
- Speed:  
**Simon Langton Girls' Grammar School**
- Overall Winner:  
**The Harvey Grammar School**

## Water Design Challenge

The Pupils from Fort Pitt Grammar School in Chatham, Kent were awarded the first prize £8,000 in prize money to develop their idea further, as well as £1,000 for the school to spend on educational resources of their choice.

Thomas Aveling School from Rochester were awarded £1,500 to make their concept, a futuristic sink equipped with a dial to show how much water is saved or used, a reality.

They were also given £1,000 to spend on educational resources. For more information on the Water Design Challenge, please visit:

[www.designcouncil.org.uk/waterdesignchallenge](http://www.designcouncil.org.uk/waterdesignchallenge)

## National Science and Engineering Week – 9-18 March 2012

National Science & Engineering Week shines the spotlight each March on how the sciences and engineering relate to our everyday lives and helps to inspire the next generation of scientists with fun and participative activities.

The programme of science, engineering and technology events and activities across the UK is aimed at people of all ages.

“**our world in motion**” will be the theme for this year's National Science & Engineering Week (NSEW) to broadly encompass many aspects of science and engineering under the banner. For more information and resources see:

<http://tinyurl.com/c9dnts>

## Special Leaders Awards for Tomorrow's Engineers

The Leaders award caters for all key stages and has been created to give pupils the opportunity to discover more about available careers and career paths by talking to professionals engaged in those fields. For more information or to apply for this award please visit the Primary, Secondary & Advanced Leaders Award website:

<http://tinyurl.com/3dc2w8d>

## The Primary Secondary and Advanced Leaders Award for STEM

This project aims to give students between the ages of 5-19 the opportunity to be leaders for STEM subjects in the school and meet and interview professional from a range of STEM backgrounds. The Award is tracked to the BTEC STEM Leadership Qualification. For more details visit:

[www.leadersaward.com](http://www.leadersaward.com)

## IET Education Funding up to £5000 available

**Applications between 1st January – 9th March 2012**

The institution of Engineering and Technology is committed to promoting enthusiasm and understanding of STEM subjects in young people. The IET Education fund is an annual fund supporting local education projects, involving more than one educational establishment. They will be accepting bids for projects taking place between 1st May 2012 to 30th April 2013. Awards up to £5000 can be offered. For more information and an application pack go to:

[www.theiet.org/education](http://www.theiet.org/education)

## £3000 Partnerships for excellence in science and engineering

**The Partnership Grants scheme applications closing date 4 November 2011**

Funds up to £3000 are available for projects working with students aged between 5-19 to work with scientists and engineers on creative investigations that inspire students with the excitement and wonder of cutting-edge science or engineering research.

For more information and application, go to:

[www.royalsociety.org/education/partnership](http://www.royalsociety.org/education/partnership)

or to find more ideas for projects by reading the case studies

[www.royalsociety.org/education/partnership/case-studies](http://www.royalsociety.org/education/partnership/case-studies)

If you have a great idea for a project, but need help in finding a partner, then please contact the Royal Society staff who are happy to discuss ideas for projects, and can be reached on

[education@royalsociety.org](mailto:education@royalsociety.org)

## More Project Ideas for CREST

- The British Science Association's range of Science, Technology, Engineering and Maths (STEM) enrichment activities aim to inspire and engage 5-19 year olds. Please visit [www.britishecienceassociation.org/web/ccaf/index.htm](http://www.britishecienceassociation.org/web/ccaf/index.htm)
- The Science Museum offers a wide range of free resources that are tried and tested in schools. We also sell great products designed to bring science and STEM to life. [www.sciencemuseum.org.uk/educatorsresources](http://www.sciencemuseum.org.uk/educatorsresources)
- Planet Science provides free and fun science resources for children, young people, teachers and parents. [www.planet-science.com](http://www.planet-science.com)
- TES (Times Educational Supplement) online features a huge range of resources on all curriculum subjects – great to browse for inspiration: [www.tes.co.uk/teaching-resources](http://www.tes.co.uk/teaching-resources)

### STIXX Machine

We have three STIXX machines to be used by Schools and STEM Ambassadors free of charge. For more information please email [stemnet@canterbury.ac.uk](mailto:stemnet@canterbury.ac.uk) and for project ideas please visit [www.jeremykingengineeringinschools.co.uk](http://www.jeremykingengineeringinschools.co.uk)

### Young Scientists Online Journal

Young Scientists Journal is an online science journal, written by young scientists for young scientists (aged 12-20). For more information please visit [www.ysjournal.com](http://www.ysjournal.com) or email Christina Astin, [cma@kings-school.co.uk](mailto:cma@kings-school.co.uk)

## Engineering Engagement Project

### Supporting teaching and learning in schools

By supporting teaching and learning in the areas of science, technology, engineering and mathematics (STEM), the Engineering Engagement Project aims to widen participation in STEM by helping teachers and pupils realise the significance of engineering to their everyday lives.

**What's on offer to schools:**

### Free engineering activities and resources

Use these in the classroom to illustrate engineering and the role engineers play in society

<http://tinyurl.com/3wnj8p5>

### CPD for Design & Technology Teachers

Courses that showcase innovative practical activities that involve modern technology which are easily transferable to the classroom

<http://tinyurl.com/3cd33yg>

### Access to practising Engineers

Link your school to local industry and get real life engineers into your classroom

<http://tinyurl.com/42a9nu5>

### Support to set up STEM Clubs

Receive money and support to set up a club and get girls interested too

<http://tinyurl.com/435uc4p>