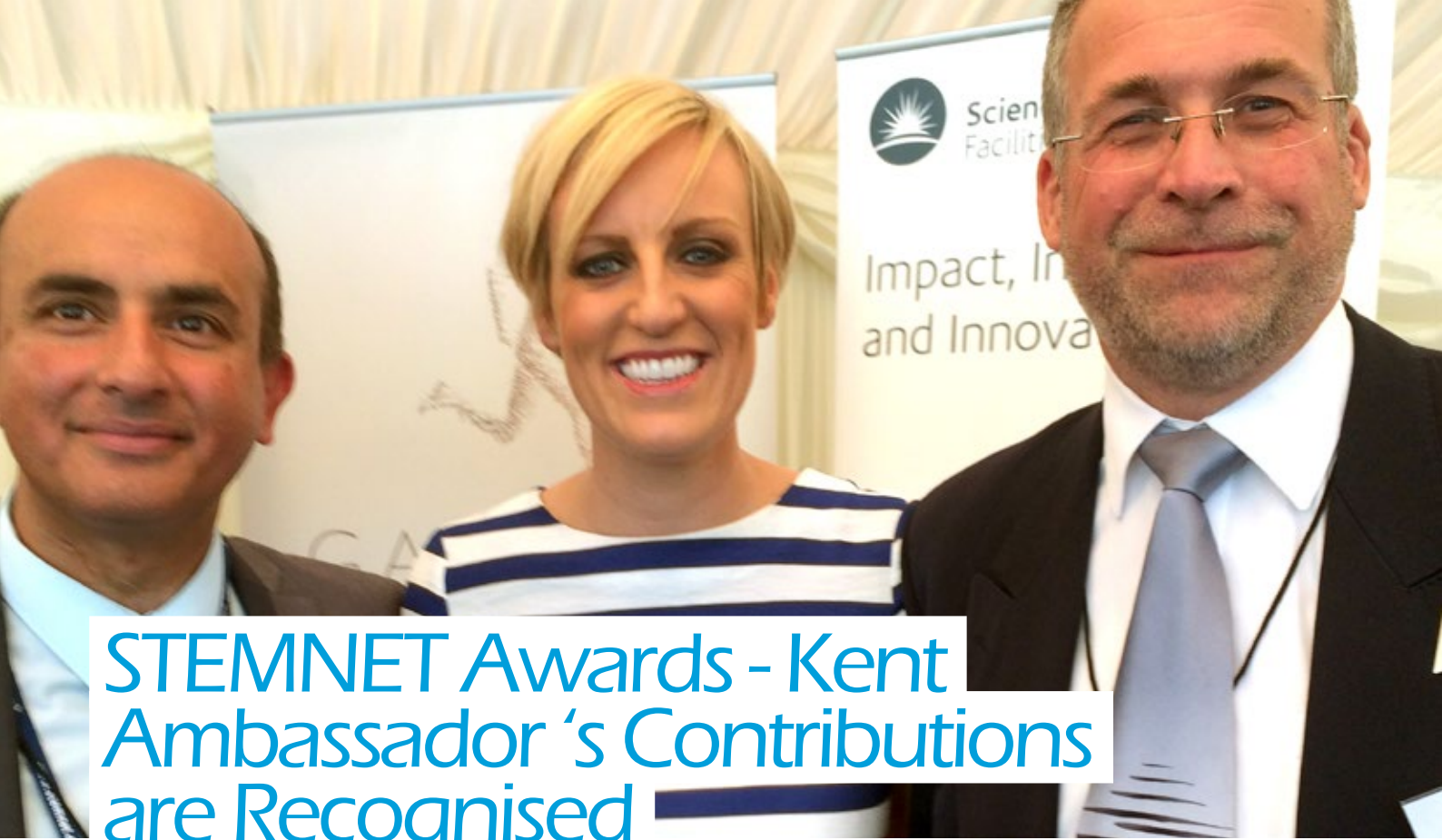




SCHOOLS
UPDATE

Autumn
2015



STEMNET Awards - Kent Ambassador's Contributions are Recognised

Celebrating the most dedicated Ambassadors at the House of Lords

On October 6 2015 STEMNET recognised the work of teachers and Ambassadors by celebrating the most dedicated people involved in its programmes in a ceremony at the House of Lords. Awards were presented by Lord Sainsbury and Stephanie McGovern from BBC breakfast.

Kent & Medway STEM Ambassador Don Clarke was nominated in the category of the Most Dedicated STEM Ambassador and was one of three Ambassadors from across the country who was invited to the House of Lords' event.

Don Clarke, a lab-based analytical chemist, became a STEM Ambassador seven years ago through his employer, Pfizer. Over the last year he has single handedly developed lab-in-a-box, is the driving force behind community lab-in-a-box, has written funding applications to the analytical arm of the RSC as well as undertaking many inspirational activities.

Picture above - left to right

Dr A Sharman (STEMNET Regional Manager South East), Stephanie McGovern (BBC Breakfast) and Don Clarke (Pfizer)



Free 3D Printing Training Attracts Teachers & Ambassadors

Kent & Medway STEM hosted a free twilight CPD on 3D printing at the Discovery Park in Sandwich. The world of 3D printing has been evolving rapidly with potential solutions in nearly every field from replacement body parts to lighter more efficient plane components.

At the end of September NASA announced the winners of its 3D Printed Habitat Challenge Design Competition, a challenge which asked participants to develop 3D printed architectural habitats for the future population of Mars.

To enable schools to access this exciting technology Kent & Medway STEM recently added two Ultimaker 2 Go printers to its catalogue of resources available for schools and STEM Ambassadors to borrow FREE of charge.

On Thursday 24 September 2015 Kent & Medway STEM invited Ambassadors and teachers to learn more about the Ultimaker 2 Go's, common troubleshooting problems and the free software available.

An Ambassador from Delphi Diesel Systems even printed a real-life part to fit on a component at the event. Along with some networking opportunities over tea and cake, the event was also an opportunity for teachers to link with STEM Ambassadors and discover the support available to their schools.

Kent & Medway STEM regularly hosts free CPD events for teachers and STEM Ambassadors, please visit the website events page to browse the upcoming events.

www.kentandmedwaystem.org.uk/events

If you are interested in using the 3D printers please email kentandmedwaystem@canterbury.ac.uk to find out more.



What's My Line? Chemistry Has Students Guessing Job Roles

Kent & Medway STEM hosted What's My Line: Chemistry where students gained an insight into the wide range of careers involved with Chemistry.

Ambassadors from various Chemistry backgrounds were asked to bring 'props' or tools of their trade to prompt discussion and help demonstrate their occupation.

Students had 10 minutes to question ambassadors about their careers and their current role in an attempt to guess their title.

At the end of the session the Ambassadors revealed their job roles to the students and the winning group received book tokens.

If you are interested in this type of event why not join us for What's My Line? Biology on Tuesday 24 November, 3.30-5.30pm at Medway Campus.

STEM Clubs 6 Week Challenge Launched with Free Kits for Schools

Kent & Medway STEM launched the STEM Clubs 6 Week Challenge providing teachers with practical ideas and supporting them in setting up a STEM Club in their school.

The interactive workshop based on Cosmetic Chemistry was designed to provide enjoyable and easily achievable activities to use within a STEM Club.

The CPD session enabled the teachers to see first-hand how these activities can be used and were provided with free resources to take away to use with their STEM Club.



Read more by visiting: www.kentandmedwaystem.org.uk/index.php/events/report/694



IET Christmas Family Lecture

THURSDAY 3 DECEMBER 2015

6pm -7.30pm, Free

Old Sessions House

Canterbury Christ Church University

North Holmes Road Canterbury CT1 1QU

This will be an exciting and entertaining evening, appealing to all members of the Family – especially Secondary school students, STEM Ambassadors and teachers. The IET Christmas Family Lecture is organised by Kent & Medway STEM, made possible with funding from The Institution of Engineering and Technology (IET) and Canterbury Christ Church University.

Dr Andrew Szydlo is proof that science really isn't dull. He often disappears in a huge cloud of smoke, swings teapots of liquid nitrogen high above his head, and creates large explosions. Andrew who studied chemical engineering and industrial safety at university, immediately afterwards returned to his favourite activity; chemical experiments, by becoming a chemistry teacher.

Throughout his teaching career, Andrew has continued demonstrating experiments outside of the classroom. The IET Christmas Lecture is one of these lectures and is an event not to miss.

BOOK FREE TICKETS

www.eventbrite.co.uk/e/the-iet-kent-family-christmas-lecture-tickets-19329410788

EVENTS FOR STUDENTS

What's My Line: Biology?

For KS4 students - FREE

Tuesday 24 November 2015, 3.30pm – 5.30pm
Canterbury Christ Church University, Rowan
Williams Court, Chatham, ME4 4UF

This activity helps students to realise the variety of careers that involve biology as well as being given the opportunity to talk to STEM Ambassadors who work in biological roles.

- STEM Ambassadors bring three props or tools of their trade to prompt a short discussion about their job role with 3-5 students at a time.
- Students question STEM Ambassadors about their careers and their current role in an attempt to guess their job title.
- In groups, students try to guess the occupation of the ambassadors who at the end choose a winning team based on their skills.

STEM @ Work

For KS3 Students - FREE

Monday 14 December 2015, 9.45am – 2.30pm
Canterbury Christ Church University, North
Holmes Road, CT1 1QU

STEM at Work reveals the wide range of careers available in STEM industries to school pupils, offering an insight into the different career pathways.

The event provides exciting and engaging 25 minutes STEM workshops from local companies and organisations demonstrating how exhilarating STEM careers can be.

The interactive workshops were designed to cover all STEM areas and encourage and inspire students' interest in STEM subjects and careers.



The Big Bang
@ Discovery Park

Big Bang @ Discovery Park

For KS3 Students – FREE

Friday 18 March 2016, 9.30am to 3.00pm
Innovation House, Discovery Park, Sandwich,
CT13 9FF

The Big Bang is a celebration of science, technology, engineering and maths (STEM) for young people. The free to attend fair aims to show just how many exciting and rewarding opportunities there are in STEM related careers and further education.

- Interactive exhibits and stalls
- Workshops run by local companies
- Exciting STEM shows

To register your interest to attend the Big Bang @ Discovery Park please email kentandmedwaystem@canterbury.ac.uk



The BBC are looking for the next generation of innovators, inventors and problem solvers!

Do you know someone who's doing "A" Level Maths and would be interested in a career in Broadcasting Engineering?

Closing Date of application: 30/11/2015 for the 2016 in-take of Engineering.

For more information please visit:

www.kentandmedwaystem.org.uk/index.php/news/news-article/689

EVENTS FOR TEACHERS

STEM Clubs 6 Week Challenge CPD

For Teachers - FREE

Thursday 12 November 2015, 4.00pm – 5.30pm

Fort Pitt Grammar School, Fort Pit Hill, Chatham, ME4 6TJ

CPD session on Cosmetic Chemistry to support teachers in setting up a 6 week STEM Club in their school with practical ideas, free resources and ambassador support. Sessions include: Toothpaste Trials, Lipstick and many more. For more information please visit

www.kentandmedwaystem.org.uk/index.php/events/more-information/695/

To book your place please email: kentandmedwaystem@canterbury.ac.uk

Stimulating Physics Network CPD – Fresh Physics

For Teachers - FREE

Monday 14 December 2015, 5.00pm – 7.00pm

Tunbridge Wells Grammar School for Boys, St John's Road, Tunbridge Wells, TN4 9XB

This session involves a series of demos or class experiments offering a different approach to the usual one. Book your place by emailing dahp.twggs@gmail.com quoting 'Kent & Medway STEM website'

COMPETITIONS & GRANTS

Full details of how to access of the competitions and grants below and more can be found at the Kent & Medway STEM Website:

www.kentandmedwaystem.org.uk/index.php/resources/secondary-competitions-and-grants

PROJECTS TO USE IN STEM CLUBS OR DURING SESSIONS

Talent 2030's National Engineering Competition for Girls

Deadline: Friday 18 December 2015

The competition invites girls aged 11-18 to solve the major challenges of the 21st century, to get creative, get thinking and most of all – have fun! The 2015-16 competition is sponsored by Rolls-Royce, EDF Energy and PepsiCo and gives the chance to win £500 for each category winner and £500 for their school.

For more information please visit:

www.kentandmedwaystem.org.uk/index.php/resources/secondary-competitions-and-grants

Take on the Ultimate STEM Challenge

Submit your Entry by 15 January 2016

Could your students develop energy efficient solutions to real-world challenges?

BP has launched the Ultimate STEM Challenge, a competition in partnership with the Science Museum and STEMNET. This year, students aged 11-14 across the UK are being challenged to use their STEM skills to develop energy efficient solutions to real-world challenges and compete for some exciting prizes!

To find out more visit:

www.kentandmedwaystem.org.uk/index.php/news/news-article/658

Raspberry Pi Competition

Project Submission Deadline: Until 26th February 2016

The Competition has three categories: Primary School, Secondary Award for Years 7-11 and Sixth Form and College Award for Year 12-13. To create their projects, teams of up to seven students can use a Raspberry Pi computer, additional hardware up to the value of £100 and any software modules available as source code. Winners of each of the three categories will receive £1000. The first 100 teams to enter the competition will be supplied with a starter kit of equipment worth £75, which includes a Raspberry Pi computer. To register for the competition more information: www.paconsulting.com/events/raspberry-pi-competition

Can You Connect the Unconnected?

Wednesday 25th November for 30 minutes at 12:30pm.

The Little BIG Awards will launch to schools through an online TV programme.

We use the internet every day: on our computers, on tablets and mobile phones. You can watch TV, make phone calls, send photos, and shop - all on the internet.

STEMNET and Cisco invites your school to take part in the Little Big Awards to show us how you think your life could be made better by connecting everyday things together.

For more information please visit:

www.kentandmedwaystem.org.uk/index.php/news/news-article/698

Royal Society Partnership Grants

The next round will open for applications on 23 November 2015 and close 1 February 2016.

Do you have a great idea for bringing research alive in school? Partnership Grants of up to £3000 are available to schools to enable students, aged 5 – 18, to carry out science, technology, engineering or mathematics (STEM) projects.

RESOURCES

Full details of how to access all of the resources below and more can be found at the Kent & Medway STEM website:

www.kentandmedwaystem.org.uk/resources

3D PRINTERS

The Ultimaker 2 Go is one of the most powerful and portable printers around. The compact design is perfect for makers on the go or those just getting started in the 3D world. Regular twilight CPD's will be held to offer teachers training of both the 3D Printers and the software.

DYNAKAR

The DynaKar is a unique product that simplifies dynamics investigations in Science, eliminating the need for lightgates and trolleys. The Dynakar has the ability to create distance and velocity graphs via a wireless device connected to the computer.

K'NEX ROLLERCOASTER PHYSICS

The K'NEX® Education Roller Coaster Physics Set brings physics to life. The roller coaster is designed to enable students to learn how to design and conduct scientific investigations, identify variables of the problems and select the appropriate independent and dependent variables for investigations.

K'NEX DNA, REPLICATION AND TRANSCRIPTION

The K'NEX® set is designed to assist teachers in teaching the structure and function of the nucleic acid molecules that make up DNA (deoxyribonucleic acids) and RNA (ribonucleic acids). The resource provides lessons designed to take students through three instructional modules.

KAPLA

KAPLA is an effective educational resource containing elements of arts and craft architecture and construction. The KAPLA kit contains 1000 planks where each plank is identical has a unique ratio that enables incredible creations to be constructed without the need for any fixings, yet to have the stability of stone.



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