



Students Sample Science and More at The Big Bang Fair @ Discovery Park

Twenty secondary schools from the Kent and Medway area attended this exciting free event which hosted a variety of activities to engage students in the world of STEM.

Organised by Kent & Medway STEM, the ambitious event invited big names such as The Institute of Engineering and Technology, Pfizer and The Royal Academy of Engineering to run sessions with the students.

From carrying out forensic investigations to testing whether caterpillars go faster when they're hot or cold, students were busy carrying out their own research. Students also enjoyed growing their own crystals and viewing them under the microscopes with East Kent College and learning about momentum from the Institution of Mechanical Engineers using cars on a scalextric track.

A teacher from Sandwich Technology School said, "It's great to see the students

so excited about learning. They are the scientists of the future and this event gives them a valuable opportunity to see how science works outside of the classroom."

Read more by visiting

www.kentandmedwaystem.org.uk/index.php/events/report/580/

Changes to Requesting STEM Ambassadors

All STEM Ambassador requests must now come through an online system introduced by STEMNET.

This is quicker and easier than the old form format. To request a STEM Ambassador simply use

<https://db.stemnet.org.uk/requests/add> and register as a School User.

STEM@Work at Skinners' School



Kent and Medway STEM Ambassadors from industry offered students opportunities to explore hands-on activities and experience the creativity, problem-solving and employability skills that STEM subjects offer.

The interactive workshops were designed to cover all STEM areas including determining material identification using infrared spectroscopy, making glowsticks, Forensic investigation, Mathematical subject of Topology using Play dough, Head Scan using 3D Printer, A day in the life of a Weather Forecaster, Guess my Job, 'what do Engineers' Do?' and many more.

Read more by visiting www.kentandmedwaystem.org.uk/index.php/events/report/594/

Lord of The Rings Science- STEM Ambassadors in The Local Paper

PGCE Secondary Maths and Science STEM Ambassadors from Canterbury Christ Church University, delivered two weeks of free interactive maths and science activities in a range of Kent and Medway schools.

These one hour workshops for Year 7 and 8 students used innovative ways to enrich learning in Science and Maths. Read more by visiting

www.kentandmedwaystem.org.uk/index.php/events/report/561/

National Women in Engineering Day - Tuesday 23 June 2015

Anyone can get involved and help encourage girls and women into engineering careers: whether you host an engineering-based event for young people, recruit a female engineer to speak at a local school, or simply tweet about NWED, we can all unite to break down gender barriers and increase diversity and equality in the engineering sector.

Kent & Medway STEM encourages schools to request female STEM Ambassadors to support activities on this date. For more information, visit www.nwed.org.uk and request a resource pack.

EVENTS FOR TEACHERS

Teachers Conference - Bringing Small Solar System Bodies to the Classroom

Friday 22 May 2015, FREE

School of Physical Sciences, University of Kent, Canterbury Campus, CT2 7NZ

Funded by a grant from the Science Technology Facilities Council this one day CPD conference will introduce participants to the cutting edge and topical research into comets and asteroids carried out within the Centre for Astrophysics and Planetary Science at the University of Kent. To find out more and book please visit: www.kentandmedwaystem.org.uk/index.php/events/more-information/579/

Teaching GCSE & A-Level Physics Support

CPD sessions available free of charge thanks to sponsorship from the Ogden Trust. Tailor-made packages on specific curriculum areas available for half or full day.

Departmental workshops, teacher development, free resources and/or individual support. To be put in touch please email kentandmedwaystem@canterbury.ac.uk quoting 'Ogden Trust'.

COMPETITIONS & GRANTS

Full details of how to access all 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/

Robots vs Animals Competition

'What amazing animal ability would you use to design a useful robot?'

Students can submit written design proposals or videos of built prototypes. Prizes include Rover 5 Raspberry Pi, robotics kits and parts from Dawn Robotics educational robotics. Entrants must be aged 11-18.

Closing date: Monday 18 May 2015

Google Science Fair 2015

Students around the world aged 13-18 can submit projects online across all scientific fields, from biology to computer science to anthropology and everything in between. Incredible prizes available.

Closing date: Tuesday 19 May 2015

Small grants for schools to run a Gopher Science Labs day

Biochemical Society and the Society of Biology are offering offer grants to schools to host either: A Gopher Science Lab day at their school or, a lab day followed by hosting and leading a training session for surrounding schools.

Secondary schools can train students to deliver workshops to feeder primary schools. Simple household items, familiar analogies, simple language and fun are used to encourage children's natural curiosity to find out how and why everyday things work.

Closing date: Monday 25 May 2015

Diamond Scholarships for Engineering Students

Are your students planning to study engineering at university?

There are approximately 60 scholarships available of at least £1000 per year for students starting their first year of an IET accredited Bachelor's or Master's degree course in the UK in Autumn 2015.

Closing date: Tuesday 30 June 2015

EVENTS FOR STUDENTS

Slugs and Snails Lecture

Friday 8 May 2015, 1pm-2pm, FREE

Canterbury Christ Church University, North Holmes Road, CT1 1QU

'Molluscs' include the slugs, snails, clams and squids. They are one of the oldest and most abundant groups of animals on earth. In this talk, Professor Dussart will



describe the life and times of some molluscs and also show how these pests can be pets. Free pet snail samples will be awarded to the first twenty applicants to attend the talk! Suitable for KS3.

To find out more and book email:

kentandmedwaystem@canterbury.ac.uk

SMALL SCIENCE - BIG FUTURE

By Dr Annela Seddon

Tuesday 23 June 2015, 2pm-3pm, FREE

Canterbury Christ Church University, North Holmes Road, CT1 1QU

To mark National Women in STEM Day, Kent & Medway STEM in collaboration with Royal Society of Chemistry, ChemNet, have organised an interactive lecture for Key stage 3 and 4 students on Small Science - Big future. Dr Annela Seddon, is a Lecturer in the School of Physics and the Bristol Centre for Functional Nanomaterials. Her research interests are in the interplay between biology, physics and engineering on the nanoscale, as well as science communication and outreach with schools.

To find out more and book visit: www.kentandmedwaystem.org.uk/docs/small-science-big-future-flyer.pdf

www.kentandmedwaystem.org.uk/docs/small-science-big-future-flyer.pdf

Chemistry at Work

Thursday 2 or Friday 3 July 2015, FREE

Canterbury Christ Church University, North Holmes Road, CT1 1QU

Continuing the success of previous years Kent & Medway STEM is once again hosting Chemistry at Work. There will be interactive presentations from various local companies as well as STEM ambassadors showing students the part the chemistry plays in their job. This is a great opportunity to encourage students to consider Chemistry at higher education and/or as a career. Suitable for Year 9/10 students. To read about last year's event please visit. www.kentandmedwaystem.org.uk/index.php/events/report/379/

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Register interest for 15-20 student spaces by email:

kentandmedwaystem@canterbury.ac.uk

FREE 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

Spectroscopy in a Suitcase

Funded by the RSC this outreach scheme teaches pupils about spectroscopy through hands-on experience. Workshops cover the principles of spectroscopic techniques and real-life applications. Free sessions are delivered by university staff and students, so have a strong emphasis on encouraging pupils to study chemistry and consider the career opportunities available. The equipment is also available as a short-term loan.

ESERO-UK Tim Peake Grant Scheme

ESERO-UK with funding from the UK Space Agency will have grants of between £500 and £1000 available for primary and secondary schools. The money should be used for innovative projects to celebrate British ESA astronaut Tim Peake's mission to the International Space Station.

Space Talks from ARES in your School

Use "space" to get kids interested in STEM subjects. ARES can provide presentations to large groups and or small classes. Talks can be adapted to complement work already underway in the school and to address a range of themes and topics.

Dyson Free Engineering Box

This Engineering Box is a reverse engineering kit that takes students through the design process by disassembling a Dyson machine – understanding how a machine works by taking it apart. They ship and collect the box free of charge.

Survival Rivals

Hands-on experiments inspired by Darwin and free of charge. Plus free online resources.

Engaging Children with the History of Biology

The Society of Biology has produced free teaching resources and practicals to engage children with the eminent and sometimes unsung heroes of biology. A free app is available to introduce great biologists who lived/ worked nearby and the biological discoveries made in the area.

The screenshot shows the 'RESOURCES' page of the Kent & Medway STEM website. The page features a navigation bar with links for Home, Ambassadors, News, Events, RESOURCES, About us, and Contact us. The main content area is titled 'RESOURCES' and includes a large image of students working with a STEAM machine. Below the image, there is a list of resource categories: Online resources, Primary, Secondary, and Competitions and Grants. Each category has a link to 'Free Scheme Providers and Resources' and 'Charged Scheme Providers and Resources'. There are also links for 'Professional Bodies' and 'Competitions and Grants'. A section titled 'CAREERS ADVICE & GUIDANCE' includes a link to 'Download our "What We Do" pocket sized teachers'. A testimonial from a science teacher at Herne Bay High School is included, stating: "The students really enjoyed the event and were engaged in building their STEAM bridges. They gained knowledge about STEM careers and were able to apply their knowledge of forces to a fun and engaging activity." The page also features a 'STEM AMBASSADORS' section and a footer with contact information and logos for the Kent & Medway STEM website, the University of Canterbury, and STeMNET.

MARSBalloon Project

Teachers can send student's space experiments into the stratosphere for free. The MARSBalloon project is a Thales UK funded venture, run by young space engineers from Thales Alenia Space UK, that will test student ideas for technologies that could one day be destined for Mars. The aim is to test anything that humans or robots will be doing on Mars in the future.

CONTACT US

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