

STEM NEWS –Jan – Feb 2016

(Science, Technology, Engineering and Maths.)

Dear Teachers,

Welcome to STEM Cumbria's latest newsletter, packed with opportunities and exiting STEM events that aim to raise student's awareness of the rich choice of fulfilling and well paid STEM careers.

Please contact me on amanda@stemcumbria.co.uk for booking and getting one of our inspirational co-ordinators into your school.

**STEM Ambassadors.
subject to availability.**

Available to all

A blog from one of our enthusiastic young engineers from BAE Systems who visited St Bernard's School on 3rd Dec,

“My first visit as a STEM Ambassador was at St. Bernard's School where we were tasked with helping a group of students in constructing a ping-pong ball launcher and a tower to place the launcher on. The aim of the task being to launch a ball into a tower of cups in order to knock them over. Initially, I didn't think I would be able to bring much to the role but I quickly realised how much working knowledge I could impart to students to encourage them to try new ideas.

Students were quickly able to identify theories in their own Maths and Science lessons which could help the ball travel that little bit further, whether it is using triangular frames to strengthen the foundations of their tower or changing the angle of their launcher to better its trajectory. The best part of the day for me was seeing young people try out their own theories about how to make the project work more effectively based on ideas that they had developed with me. Some ideas worked, some didn't but that's the beauty of Engineering!

Students were able to identify why certain ideas weren't working and were able to adapt their project to make it work more effectively. One of the students said to me ‘So if it works first time, it isn't good enough?’, I found this to be a very powerful statement and one that I will take back to my workplace, no matter how good something this, you can always make it better!”

Visit www.stemnet.org.uk for STEM Ambassador information

In Cumbria we are fortunate to have just over 900 STEM Ambassadors registered who are a free resource, depending on availability, accessible by all schools to help in delivering STEM subjects in schools and to offer hands on careers advice and to share their experiences where possible. Our Ambassadors all work and represent industry and companies such as Sellafield, BAE Systems, TFP, Croppers, Innovia, GlaxoSmithKline.

STEMNET

Science, Technology, Engineering
and Mathematics Network



STEMNET

STEMNET creates opportunities to inspire young people in Science, Technology, Engineering and Mathematics (STEM). This enables young people to develop their creativity, problem-solving and employability skills, widens their choices and supports the UK's future competitiveness.

STEMNET helps encourage young people to be well informed about STEM, fully in debate, and make decisions about STEM related issues.

STEMNET has received funding from the Department of Trade and Industry since 1996 and now continues to enjoy support from the Department for Business, Innovation, and Skills and the Department for Education. As a national organisation, it works hard to ensure that no region of the country is disadvantaged, by comparison with any other, with respect to STEM opportunities.

STEM Clubs Week 2016

STEMNET is pleased to announce the second annual STEM Clubs Week, taking place Monday 01-05 February 2016.

For those schools with an existing STEM Club, this is an opportunity to celebrate their accomplishments and discoveries. For those schools without an operational STEM Club, this is the perfect time to start one.

By mid-December, the STEM Clubs Website (www.stemclubs.net) will be updated with information for the 2016 STEM Clubs Week. On the website, there will be tips for starting new STEM Clubs and ideas for STEM Clubs activities. On the STEM Clubs webpage, we will direct teachers to their local STEMNET Contract Holder for advice on creating a new STEM Club or activities for their existing STEM Club.

STEM Clubs Week will include a national photo competition, promoted through Twitter. There will be three photo categories, aimed at widening participation, engaging new students in STEM, and broadening the perception of what a STEM Club entails. The categories are:

- Most unusual type of STEM Club
- Best use of a STEM Ambassador in a STEM Club
- Most original STEM Clubs Activity

From Monday 01 – 05 February 2016, we invite STEM Clubs to take part in the competition by sending a photo or video, and a 50 word description to stemclubs@stemnet.org.uk or tweet us at @STEMClubs. All pictures and videos will be shared on the STEM Clubs website in an effort to showcase the hard work of all involved.

Please note, that while STEM Clubs Week is a celebration for all STEM Clubs, the competition will only be open to STEM Clubs from state funded, secondary schools throughout the UK. Representatives from STEMNET and the Science Museum will choose the finalists. Publicity will start this week over Twitter.

STEM Clubs Week aims to broaden the perception of what a STEM Club is while engaging students in fun, inspiring and exciting activities. It is also a great opportunity for STEM Clubs to showcase their hard work and commitment on a national level.

Salters' Festivals of Chemistry

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Entries for the **2016 Salters' Festivals of Chemistry** are **NOW LIVE**.

48 Salters' Festivals of Chemistry are planned at Universities and Colleges throughout the UK and Ireland between March and June 2016. **One** team of **four** students per school are welcome to participate from:

- Year 7 and/or 8 in England and Wales
- Year P7 and/or S1 in Scotland

Students will experience 2 hands-on practical Chemistry challenges, exciting chemical demonstrations, a Prize giving ceremony with prizes for winning schools and fun prizes and certificates for all participants

Entry costs **£25 per school** (non-refundable) plus travel expenses.

CLOSING DATE: 31 JANUARY 2016. For further information and to enter online for the **Salters' Festivals of Chemistry 2016**, please visit the website: www.festivalsofchemistry.co.uk

Science4society week

14th-20th March 2016

Follow the link for a set of inspiring science education activities for young people organised by Scientists for Global Responsibility. The activities focus on the positive contribution that science, design and technology can make to peace, social justice and environmental sustainability.

Science4Society Week 2016 will run from 14-20 March 2016. New for this year is our ['Design an Eco-Community'](#) competition. Additionally we have teaching resources and there will be trips and tours.

British Science Week

13th March-22nd March 2016

British Science Week (BSW) is a ten-day celebration of science, technology, engineering and maths - featuring fascinating, entertaining and engaging events and activities across the UK for people of all ages.

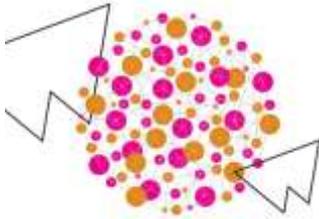
BSW provides a platform to stimulate and support teachers, STEM professionals, science communicators and the general public to produce and participate in STEM events and activities.

Anyone can organise an event or activity, and the British Science Association helps organisers plan by providing free activity and support resources. We welcome and support any type of organiser, from schools to community groups, from parents to large organisations. The resulting programme of events is a hugely varied and eclectic mix.

British Science Week 2016 will take place 13 - 22 March.

[To discover more on how you can get involved with British Science Week, including registering your event or finding an event near you please visit our microsite - \[www.britishscienceweek.org\]\(http://www.britishscienceweek.org\)](#)

Register your British Science Week event



Register your British Science Week event, sign up for our marketing packs, and add your event to our map!

Why get involved?

British Science Week 2015 was a huge success, with over **5000 events** and activities taking place across the UK, engaging over **1.6 million participants**.

Everyone from children to research scientists got involved in everything from policy debates and science fairs to witnessing the solar eclipse. **Help us make British Science Week 2016 even bigger and better!**

[Get set for Demo day 2016](#)

If you're a secondary school science teacher or technician, pledge to run a demonstration during British Science Week! Explore new concepts, provoke discussions and generate excitement with the power of a demo.

Demo day this year is Thursday 17 March!

[Find out more](#)

Forensics Outreach

14-16yr olds

In late February 2016, *Forensic Outreach* are launching a free worldwide STEAM competition for schools in partnership with Ward's Science (who are providing the prizes). The competition is hoping to involve nearly 2,000 schools and is aimed at students aged 14-16.

The competition

The premise of the competition, which is based *online*, involves Leonardo da Vinci's real-life missing painting: The Battle of Anghiari.

Every week for three weeks, a teacher will download a challenge bundle. This bundle contains a lesson plan, worksheets and other resources required to deliver a 20-minute activity. A given group or classroom must work through the challenge provided and submit answers to questions accessible through a virtual classroom.

The competition is designed to encourage students to apply their knowledge of art history, science, mathematics and cryptanalysis to “solve” the mystery of the missing painting.

More information

To register your interest and to learn more, please visit the website:

competition.forensicoutreach.com

If you have any questions, contact Daniella Afeltra at d.afeltra@forensicoutreach.com.

PROMYS Europe

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PROMYS Europe is a partnership with the Mathematical Institute of the University of Oxford; the Clay Mathematics Institute (CMI); Wadham College, University of Oxford; and the Program in Mathematics for Young Scientists (PROMYS). Closely modelled on the 27-year-old PROMYS programme at Boston University, PROMYS Europe had an extremely successful first summer in 2015.

Need-based financial aid and travel reimbursement are available thanks to support from our partners.

We seek European students aged at least 16 who would benefit from the opportunity to delve deeply into fundamental mathematical questions within a richly stimulating and supportive community of fellow first-year students, returning students, undergraduate counsellors, research mentors, faculty, and visiting mathematicians. First-year students focus primarily on a series of very challenging problem sets, daily lecture, and exploration labs in Number Theory. Advanced seminars and numerous mini-courses and guest lectures tackle a wide range of topics. Guest lecturers in 2015 included Professors Sir Andrew Wiles and Ben Green.

The application deadline is 31 March. The application is available [HERE](#) on the PROMYS Europe site (www.PROMYS-Europe.org) and includes a challenging problem set. PROMYS Europe 2016 will run from 10 July to 20 August at Wadham College, University of Oxford.

Big Bang North West – Save the date – 5th July 2016



We are incredibly pleased to be able to finally announce that we have an amazing new home for **Big Bang North West 2016**.

We are moving to the awesome, brand new venue that is **The Exhibition Centre Liverpool** on the city's iconic waterfront!

Register your initial interest in bringing a group along now! Over the coming months we'll be giving you regular updates about what to expect on the **5th July** & how to confirm a booking.

JULY 2016

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REGISTER
YOUR
INTEREST NOW

Best wishes

Amanda Contact us for advice and guidance on amanda@stemcumbria.co.uk.