



We love competition!

Junior Saltire Prize Award

Marine renewable energy competition

Prizes of up to £750 are available for school science and technology resources.

This competition, to help raise the awareness of the opportunities that Scotland has to exploit its marine renewables potential, is open to all primary P5-P7 and secondary S1-S3, S4-S6 schools pupils in Scotland.

Registration of team(s): by **31 January 2012**
Submission of blueprint: by **29 February 2012**
Finished model: by **30 April 2012**

<http://www.skillsdevelopmentscotland.co.uk/junior-saltire-prize-and-green-energy-awards-2012.aspx>

See www.stemnorthofscotland.com/buzz for more details

Salter's festivals of Chemistry

Practical chemistry challenges

The Salters' Institute, in partnership with the RSC, will be holding **54 Salters' Festivals of Chemistry** between **March** and **June 2012**. These provide the opportunity for enthusiastic young students to spend a day in a university department and to take part in practical chemistry activities which are fun! Prizes are awarded to the winning teams and all students receive participation certificates and fun prizes. Schools may enter one team of four students from S1.

Closing date for entries : **31 January 2012**

<http://www.salters.co.uk/festivals/about.html>

Royal Society for Chemistry

Bill Bryson Prize for Science communication

The Bill Bryson Prize 2012 offers the chance to welcome the Olympics to the UK. In support of this major event the 2012 competition theme will be **Science and Sport**. This offers the opportunity to celebrate the role that science and chemistry plays in supporting sport around the world. The competition is open to students aged 5-18 and entries can be submitted in all formats, from posters to power points to puzzles! The best entries will receive a cash prize of £500 for their institution, and £100 for the winning students to share.

The closing date for entries: **31 March 2012**

<http://www.rsc.org/Education/BillBryson/index.asp>

Institute of Civil Engineers (ICE)

West Point Bridge Design Contest

Win up to £150 amazon vouchers for each team member!

The Challenge: A new bridge is required to cross a steep sided Highland glen and reach a remote community. Teams will use a free bridge design software package to try and design the most cost effective bridge which satisfactorily carries the design loads across the glen.

This contest is open to all schools in Scotland, and each school can field as many teams of two from S1, S2 and S3 as they like. ICE will also organise a school visit to talk about engineering and introduce the competition.

The contest will open on **20 January 2012**, with a closing date of **27 March 2012**.

For further information, please **contact:**
John McPartlin

West Point Bridge Design Contest Co-ordinator
Institution of Civil Engineers - Scotland
Email: John.McPartlin@virginmedia.com
Tel: 44 (0)141 221 5276
<http://www.ice.org.uk/scotlandwestpoint/>

Mid Yell Junior High School in Shetland have won this competition twice in the last three years! Could your school beat them to the top spot this time???

See www.stemnorthofscotland.com/buzz for more details

The Great Global Adventure

Invention competition

WIN Nintendo 3DS for 11-14 age group and £25 book vouchers!

This out-of-the-box poster competition is a simple way to take part in National Science & Engineering Week, either as homework or a class project.

Pupils need to invent one method of transportation that can carry themselves and two friends across a range of challenging terrains in their global adventure! The race could last many weeks, so vehicles will need to be large enough to carry supplies.

Racers must be presented in the form of a poster with a drawing of the invention accompanied by an explanation of how it works.

Closing date for entries: **2 April 2012**

<http://www.britishecienceassociation.org/web/NSEW/GetInvolved/NSEWActivities/SchoolCompetition2012.htm>

ISSUE

01

January 2012

Quarterly newsletter
of STEM North of
Scotland

STEMtalk

STEM NORTH OF SCOTLAND Argyll & Bute Highland Moray Orkney Shetland Western Isles

Upcoming events

9-18
March

National Science and Engineering Week

The theme of National Science and Engineering Week 2012 is **our world in motion**. To find out what's happening and how to take part, together with access to activity packs, quizzes and competitions, please visit www.nsew.org.uk

12-23
March

I'm a Scientist / Engineer, Get me out of here!

Online X factor-style competition where students are the judges. This event is designed to get teenagers talking to real scientists and engineers. The students can ASK questions, live CHAT to them in an MSN style text chat, and VOTE for who they think deserves to win the £500 prize to communicate their work.

For more information visit <http://imascientist.org.uk/>
<http://imanengineer.org.uk/>



New partnership

Highlands and Islands Enterprise (HIE) and the University of the Highlands and Islands (UHI) have formed a partnership to run the STEMNET contract for 2011-2015. This includes managing the STEM ambassador programme and schools advisory service across the region.



University of the
Highlands and Islands
Oilthigh na Gàidhealtachd
agus nan Eilean



Highlands and Islands Enterprise
Iomairt na Gàidhealtachd 's nan Eilean

Research scientist Dr Kathleen McDougall has recently been appointed by the University of the Highlands and Islands as an adviser for the STEM curriculum.

Kathleen will be visiting schools across the region, providing support and information on STEM resources. She will also be encouraging teachers to incorporate the expertise and enthusiasm of local volunteer STEM ambassadors.

Ambassadors represent all STEM disciplines and at all levels, from apprentice engineers to chief executives. They act as a free resource to all secondary schools across the region and can help with many activities including classroom projects, STEM clubs, educational visits or by giving careers talks.

Kathleen has research experience in both biomedical and environmental sciences and as a STEM ambassador herself, she will be championing the opportunity to bring STEM subjects alive through real life experience.

Kathleen can be contacted on 01463 279351 or email STEM@uhi.ac.uk

this issue

- New STEMNET partnership **P.1**
- Highland Olympics in Technology **P.2**
- STEM ambassadors **P.3**
- Notes for the diary / Competitions **P.4**

Janice Wallace, based within Highlands and Islands Enterprise, manages the STEM Ambassador Programme.

The Programme consists of volunteers from industry and academia who give up their time to enthuse the next generation of STEM professionals.

Janice has been managing the Programme for three years now and has enjoyed many successes over this time, including ambassadors winning both Scottish and National awards for their work with schools.

Ambassadors are matched to school requests to support teachers in the delivery of the curriculum - Janice almost acts like a 'matchmaker' where expertise of the ambassador are linked to requirements of the school!

Coming from a business background herself, Janice aims to support schools in making those vital business links, helping teachers to put learning in a real world context.

Janice can be contacted on 01463 234171 or email ambassadors@hient.co.uk

Send Us your NEWS

If you have a project that you have completed and you would like to shout about it please send us your article and pictures and we will put it in STEMtalk. It can be anything from winning a competition to doing a project that the students enjoyed. The newsletter comes out each term and if you send in articles we will try to publish them in future newsletters. We would love to hear what you have all been doing out there!

Contact the STEMNET team at STEM@uhi.ac.uk



Highland Olympics in Technology



HOT North Heat winners: Wick High School

The North Heat of the Highland Olympics in Technology program took place in the new Energy, Technology and Engineering Centre at North Highland College -UHI in Thurso on Thursday the 24th of November 2011. Twelve teams took part in the event from Farr, Golspie, Thurso and Wick High Schools. In total, around 55 pupils were involved.

Please see www.stemnorthofscotland.com/buzz for the full article on this event. More information on the HOT challenge can be found at <http://highlandolympicsintechology.moonfruit.com/>

Congratulations to the winning teams who were:

1. The Tanks from Wick High School; 2. Funny Farm 2 from Farr High School; 3. Funny Farm from Farr High School. All three teams will go on to take part in the main Highland Olympics in Technology Event in March 2012 at Eden Court Theatre, Inverness.



Young Engineers and Science Clubs

Highlands & Islands Showcase,
Eden Court Theatre, Inverness
16 March 2012

This event gives primary and secondary school students the chance to showcase their activities, share best practice and compete in a series of STEM challenges. Students, teachers and companies from all over the Highlands and Islands are expected to attend the event. This event will also host the final of the Highland Olympics in Technology Challenge.

Please contact Melanie Riddell at SCDI for further information:

melanie.riddell@scdi.org.uk

Tel: 01463 231878

www.yescotland.co.uk

Teacher's Prize

The Lloyd's Register Educational Trust Teachers Award 2012

Open to all teachers of STEM, the prize is intended to recognise and reward a teacher's passion and commitment to STEM education.

Part of the National Science & Engineering Competition, the finalists will be invited to attend interviews and the Awards Ceremony at the 2012 Big Bang in Birmingham in March.

Deadline for entries: **29 January 2012**

http://regional.thebigbangfair.co.uk/nsec/teachers_prize.cfm



STEM AMBASSADORS ILLUMINATING FUTURES

STEM Ambassador Roadshows

Three STEM Ambassador roadshow were held in October and November, in Thurso, Inverness and Elgin.

The roadshows provided the opportunity for teachers and STEM Ambassadors to make contacts and generate ideas for collaborative activities.

Excel spreadsheets in action!

One event that developed through a meeting at a Ambassador roadshow was a practical demonstration of working with Excel spreadsheets.

Kirsty Horrocks, principal statistician at Lifescan, carried out this activity with Higher and Advanced Higher Information Studies pupils at Dingwall Academy on 8 December

Describing the activity, Kirsty said "I put together a short presentation on what my job role involves, what type of medical devices we make and how we ensure that the product we make is fit for purpose.

"I led the class in a practical demonstration and showed them how to collate data and analyse it in Excel.

"Hopefully it was a bit different from a normal lesson but still showed that it is possible to use exactly what they are learning in a lesson in an environment such as a testing lab or manufacturing."

Computing and Information Studies teacher, Lindsey Grieve, commented "It was a very useful and worthwhile session and I'm sure the pupils got a lot out of it".

For further information on local STEM ambassadors, including who and where they are, please visit the STEM North of Scotland website at <http://www.stemnorthofscotland.com/ambassadors/> Also search for and request an ambassador through STEMNetworking at <http://networking.stemnet.org.uk>

STEM Challenges

Could your students design a human-powered invention for creating the spark which lights the Paralympic Flame?

STEMNET and the Paralympic Torch Relay Team are challenging 11-14 year olds to create a spark to light the Paralympic Flame by the energy of human endeavour.

Students will work 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 exclusive access to the Paralympic Torch Relay event.

Important dates:

Deadline for teams to be registered (via website): **23 January 2012**

Local judging sessions to determine top 8 teams: **20-28 February 2012**

Challenge Final: **17 March 2012** at the Big Bang: UK Science and Engineering Fair

www.stemchallenges.net

Nuffield Science Bursaries

The Nuffield Foundation offers up to 1000 bursaries a year, for students to work alongside professional scientists, technologists, engineers and mathematicians.

Students in the first year of a post-16 science, technology, engineering and maths (STEM) course are eligible to apply for a bursary of £80 per week to support them during their project. Placements are available across the UK, in universities, industry or research institutions. Nuffield particularly encourage students from schools in difficult social circumstances, and students who do not have a family background of higher education or STEM professions.

Closing date for applications: **30 January 2012.**

Contact Frances Chapman :
franceschapman21@gmail.com
Tel: 07894246564
www.nuffieldfoundation.org/scb

Crest Awards

Last year alone, over 28,000 CREST Awards were undertaken, giving 11-19yr olds opportunities to explore real world projects in an exciting way.

CREST can link into work experience placements, after-schools clubs or numerous other schemes, including the Nuffield science bursary scheme. Students can investigate or design and make, research a subject, or design a science communication project.

Further information is available through the BSA at <http://www.britishsociety.org/web/ccaf/index.htm>

The Institution of Mechanical Engineers opens up the world of Formula 1 to people of Inverness.

Jackie Christie, one of the many personnel responsible for keeping Bruno Senna's Lotus Renault Formula One car in race trim opened up the doors to the world of Formula One at an event at Inverness' Eden Court OneTouch theatre on Wednesday 7 December 2011.

Jackie presented on many different elements of Formula 1 including Team structure, life on the road, a typical race weekend agenda, in depth car design, logistics and the factory.

The event, the North of Scotland Prestige Lecture 2011, was a collaboration between the Institution of Mechanical Engineers (IMechE) and the Institution of Engineering and Technology (IET). In addition STEM North of Scotland were represented at the event. Please see www.stemnorthofscotland.com/buzz for the full article on this event.



Contact the STEMNET team

Schools advisory service



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