



STEM News – January 2012

Dear Colleagues

Welcome to the January STEM Newsletter – packed with opportunities and exciting STEM events that aim to raise students awareness of the rich choice of fulfilling and well-paid STEM Careers.

In 2012 we are looking forward to the following STEM delights, in no particular order:

- National Science and Engineering Week – March 9th to the 18th 2012
- The Olympics!!
- Reading the student applications for the Nuffield Bursaries
- Women into Science and Engineering Visit to Loughborough University with 20 Year 9 girls and Caterpillar
- Networking with Farmers and Teachers on the 20th March 2012
- LEBC's Fabulous Fashion Show at the Athena Theatre on the 22nd March 2012

More information follows about each of these and many more...

Why not make it your New Years Resolution to request support from some of our 500 STEM Ambassadors!

Best regards

LEBC STEM Team

Judith Payne, Rachael Clarke, Danielle Wright

STEM Ambassadors

KS 3/4/5

7 Recommendations for improving STEM careers awareness in secondary schools

'Good Timing' is the final report of a three-year programme of work which sought to explore the potential to embed STEM careers awareness in the early stages of secondary education. [Click here](#) to see the full report. The report makes interesting reading and highlights the importance of good STEM careers information for young people. One way in which you can do this is direct from the person doing the job so why not talk to us about inviting in a STEM Ambassador to talk to your students about what they do. We now have nearly 500 STEM Ambassadors registered in Leicestershire that would love to come and visit your school **FREE OF CHARGE!**

As well as providing input on careers, STEM Ambassadors can:

- Help support specific areas of the curriculum
Is there an area of the curriculum that could be brought to life by a visit from an Ambassador?
- Mentor students doing projects or awards
Are your students doing a CREST Award or other project which an Ambassador could help them with?
- Help with activity days
Are you planning an off timetable STEM day? Could our Ambassadors help?
- Help with a STEM Club activity

Could an Ambassador come along and help with some of the activities?

If you would like someone to come in to your school to work with your students or talk to them about what they do, please email judith.payne@leics-ebc.org.uk with your request or you can go to <http://networking.stemnet.org.uk> where you can put your request directly on the STEMNetworking site yourself, look at profiles of STEM Ambassadors and access resources.

Careers in land-based and environmental industries

KS 3/4 Teachers

Teacher and STEM Ambassador Networking Opportunity

A workshop for Teachers or Science, Geography and Careers Advisors.

Venue: Hungarton, Leicestershire

Date: Tuesday 20th March 2012 – 9am to 5pm.

- Accredited training (5 credits at Level 4)
- **Free** to secondary school teachers and careers advisors
- Access to STEM Ambassadors who work in these industries
- Introduces the breadth of career options within the land based and environmental sector
- Enhances careers guidance

For more information please contact:

Rachael Clarke

Leicestershire Education Business Company

Email: Rachael.Clarke@leics-EBC.org.uk

Tel: 0116 240 7000

LEBC Schools Fashion Show

KS 4/5

LEBC Schools Fashion Show gives students aged 14 to 18 in city or county schools an opportunity to showcase their talents and exhibit the work that they have created, which is often used towards their coursework. Primarily textiles students, but also art, drama and dance students are invited to participate in this prestigious event that provides a unique experience and lasting memory. Students are involved with the set up of the event and are offered the opportunity to help out with the lighting and sound for those interested in technical careers behind the spotlight.

It is always a highly professional and entertaining evening, and this year we are proud to be able to offer this valuable experience to in excess of 300 students. This year will be the 10th Anniversary of the show. Last year we welcomed over 700 into the audience including civic heads, head teachers, parents and business employees and this year is set to be another fantastic event to enjoy the spectacular costumes and imaginative performances.

If you would like to get involved or buy tickets please contact Fay Wilson:

Fay Wilson

Leicestershire Education Business Company

Email: fay.wilson@leics-ebc.org.uk

Tel: 0116 240 7000

Behind the Scenes Workshops

KS 3/4/5

Interactive days for secondary students showing the STEM skills that are involved in putting on a theatrical performance.

The Curve are organising 2 workshops on the following dates:

Wednesday 21st March
9.03am to 3.00pm
Aimed at Year 9 & 10

Wednesday 25th April
9.30am to 3.00pm
Aimed at BTEC First students

These are interactive days designed to give students and staff the opportunity to meet and work alongside the professionals who work behind the scenes at Curve. The event will introduce young people **to many of the jobs within the theatre which require STEM skills** such as lighting, sound, prop making, production management and marketing, to inspire the next generation of theatre makers.

Cost: £15 per student

For more information or to book a place please contact Danielle Wright at LEBC:

Danielle Wright
Leicestershire Education Business Company
Email danielle.wright@leics-ebc.org.uk
Tel: 0116 240 7000

Under the Microscope with NHS Scientists

KS 5

Opportunity for Year 10 and 11 students to meet NHS Scientists Wednesday 14th March 2012

This event is aimed at:

- All students in Years 11 and 12 with an interest in Science and Healthcare
- Teachers of Careers, Science, Maths and Health and Social Care
- Parents of students in Years 11 and 12

More information can be found on the LEBC website: http://www.leics-ebc.org.uk/news_events/events/247/

Nuffield Science Bursaries

KS 5

Do you have year 12 students that would be interested in a research project over the summer? If so then they should apply to the Nuffield Science Bursary Programme...

The programme is aimed at year 12 students studying or having an interest in a STEM related subject (Science Technology Engineering and Maths). Successful students will gain hands on experience in a research environment and this will allow them to gain a valuable insight into the careers that they could follow. Whilst on placement students will meet new people and learn new skills which will help with whatever they choose to do next, whether this is a university application, a job or further training.

Students don't need to have finalised their decision on what they want to study or what career they want to follow they just need to have a passion for one of the STEM areas. We have placements in many areas of STEM. Projects in the past have been held at British Geological Survey, 3M Healthcare, University Hospitals of Leicester, Bombardier Transport, Nottingham Trent University, Queens Medical Centre and many more.

If you would like further information please contact:

Sally Hollier
Leicestershire Education Business Company
Email sally.hollier@leics-ebc.org.uk

Tel: 0116 240 7000

National Science and Engineering Week

KS 3/4/5

9th – 18th 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. Watch out for the popular LEBC programme of FREE Ambassador talks for the week which will be released shortly.

[Click here](#) for more information

NSEW Event Awards

KS 3/4/5

If you have a quirky, original or innovative event planned for NSEW then you can nominate yourself for an NSEW Event Award! NSEW Event Awards aim to reward the passion of event and activity organisers and showcase the very best in public engagement during NSEW.

Prizes

£600 cash prize to the winner in each category.

£200 cash prize to one runner-up in each category.

For more information please visit:

<http://www.britishsociety.org/web/NSEW/GetInvolved/NSEWEventAwards/NSEWEventAwards.htm>

The Big Bang East Midlands

KS 3/4/5

This free event is a great opportunity for your students or children to experience science, technology, engineering and maths up close in a fresh new way.

Following on from the success of The Big Bang East Midlands last year, we're looking to make this year's event bigger and better. It will once again be held at the East Midlands Conference Centre, University of Nottingham – this time on Thursday 28th June 2012.

For more information please visit <http://regional.thebigbangfair.co.uk/eastmidlands/index.cfm>

The Big Bang Fair 2012 – Additional Project Showcase Opportunity

KS 3/4/5

Saturday 17th March 2012

There is an opportunity to showcase some of the excellent work being done in schools at The Big Bang Fair. The deadline for submissions is **Monday 23rd January 2012**.

Being part of The Big Bang Fair is a fantastic, unique and a not-to-be-missed opportunity to get noticed! The Big Bang Fair is now inviting schools involved in any **extra-curricular schemes involving any science, technology, engineering or maths (STEM) activities** to be part of 2012 The Big Bang Fair. You can have a part in The Big Bang Fair by putting on an inspiring one-day showcase of their best school STEM projects. This opportunity applies to just 12 places on the Saturday only (17th March).

To be considered as a showcasing school, a nominated school representative (either a teacher or the scheme delivery organisations working directly with that school) should email clubs@thebigbangfair.co.uk outlining why their nominated school is a suitable candidate for this unique opportunity. This should be no more than 250 words and be as explicit as possible.

Applications are welcomed from any school or educational organisations that are doing a great job in encouraging students to undertake extra-curricular activities related to any or all of the STEM subjects, and who will be prepared to engage with up to 15,000 visitors who will attend the Fair on Saturday.

All submissions must be sent by **Monday 23rd January 2012**. Please detail in the email:

- Contact details for the school
- Age of students involved in the project
- Number of students that would attend
- Short paragraph or two on why this project should be showcased.

Applications will then be evaluated by a panel of club support specialists drawn from the British Science Association, STEMNET and Young Engineers. Schools that have been successful in the selection process will be invited to showcase on Saturday 17th March 2012 and will be informed by Friday 27th January 2012.

Please email any questions regarding this process to clubs@thebigbangfair.co.uk.

Careers event opportunity – Chilwell MOD

KS 4/5

A fantastic opportunity has come up for some students to visit the army base at Chilwell to learn more about using science in careers with the military.

The visit would be:

- free to students (although you would have to get there)
- can be arranged at a mutually agreeable date
- is available for students year 11 upwards
- can be for one, or two groups of up to 20 students in each group (maximum of 40 students either from one, or two schools)

If you are interested in this opportunity please contact:

Heidi Dobbs

University of Nottingham

heidi.dobbs@nottingham.ac.uk

Tel: +44 (0)115 9513287

CREST in a Day

KS 3/4/5

Available throughout the academic year

Students in Key Stage 3 can gain a Bronze CREST award in a day through this exciting programme of science and technology activities.

[Click here](#) for more information.

STEM Clubs

KS 3/4/5

If you are thinking of starting up, or already run an out of lesson time Science, Technology, Engineering or Maths club for students then you can receive free support including CDP, ideas and networking opportunities.

[Click here](#) to find out more.

Promoting Dynamic Careers in Engineering - Smallpeice Trust

KS 3/4/5

Places still available on some courses

The Smallpeice Trust run residential courses for young people interested in a career in Engineering during

school holiday periods. On the courses students get the opportunity to learn more about engineering, design and technology through fun and challenging tasks. They will gain experience of university and industry that will accelerate their personal development and their potential for greater academic achievement.

For more information [click here](#).

STEM Directories

KS 3/4/5

Looking for information on Science, Technology, Engineering and Maths related schemes? The STEM Directories comprise a huge variety of schemes and activities provided by organisations from across the UK that aim to enhance and enrich the STEM curriculum.

[Click here](#) for more information.

Biology Challenges

KS 3/4/5

British Biology Olympiad

Open to all post-16 students in the UK.

Challenging the most talented young biologists.

Registration forms must be submitted before 17th January 2012.

[Click here](#) to view the challenge flyer.

[Click here](#) to visit the challenge website.

British Biology Olympiad

Open to all Year 9/Year 10 students.

Encouraging an interest in biology beyond the school curriculum.

Stimulating curiosity about the natural world.

Registration forms must be submitted before 31st January 2012.

[Click here](#) to view the challenge flyer.

[Click here](#) to visit the challenge website.

The British Council and Rolls-Royce launch The Big Science Challenge!

KS 3/4

Calling UK secondary schools! Are you ready to take on The Big Science Challenge? The British Council and Rolls-Royce invite you to research and design a solution to a local, national or global problem concerning water. The winning teams will be brought together in London to meet their international counterparts and present their work. In addition, one UK team will visit Dubai for an exciting programme of educational and recreational activities. The competition closing date is 3rd February 2012.

For competition details, visit <http://schoolsonline.britishcouncil.org/the-big-science-challenge>

6th Form Chemistry Workshop

KS 5

Hands Free, Hands On 6th Form Chemistry Workshop Event 14th March 2012

This is a fabulous event that is a collaboration between a number of the East Midlands' Universities and includes a CPD session for accompanying teachers, a chance for students to talk directly to the Universities about their courses and admissions, a talk from an A-Level examiner **and** hands on chemistry workshops.

This event is **FREE** to attend. *Booking is open now so please get in there whilst there are spaces!!*

How to Book

Contact the Science Learning Centre on 0116 252 3771 or e-mail: slcem@le.ac.uk with "Hands Free" in the subject line.

The Lloyd's Register Educational Trust Teachers Award

KS 3/4/5 Teachers

The Lloyd's Register Educational Trust Teachers Award is open to all teachers of STEM and is intended to **recognise and reward a teacher's passion and commitment to STEM education**. It's part of the National Science & Engineering Competition, so the finalists will be invited to attend interviews and the Awards Ceremony at the 2012 Big Bang in Birmingham.

Nomination forms plus more details are on the Competition website:

www.thebigbangfair.co.uk/nsec/teachers_prize.cfm

The deadline for entries is the **29th January 2012**.

A Level Afternoon

KS 5

A series of informative talks and chemical demonstrations at the School of Chemistry, the University of Nottingham!

Wednesday 25th January 2012

13:00 Arrival and Welcome

13:30 "The Periodic Table of Videos" - Prof. Martyn Poliakoff

14:00 "How to Become a Chemist" - Prof. Chris Hayes

14:30 "Nanoscience" - Prof. Neil Champness

15:00 Refreshment break/ 'Treasure Hunt' on the A Floor

16:00 "Exciting Chemistry!" - Dr. Jon McMaster and Dr. Darren Walsh

To book places for your school group (students and accompanying staff) please contact Dr. Samantha Tang, Public Awareness Scientist:

Email samantha.tang@nottingham.ac.uk, or Tel. 0115 8467229.

Places are limited and will be allocated on a first come, first served basis.

Funding Opportunities

KS 3/4/5

Looking for a cash boost to get your projects and ideas up and running? Use the following links to find out what's available:

- For projects that link to community cohesion, addressing students achievement and attainment or working with disadvantaged groups then [click here](#).
- For projects that link to Science, Technology, Engineering or Maths then [click here](#).

Chemistry Teacher Network Meetings

KS 3/4/5 Teachers

An opportunity to network and share ideas for Chemistry teachers at the University of Nottingham

Wednesday 28th March 2012

Contact:

Heidi Dobbs

University of Nottingham

heidi.dobbs@nottingham.ac.uk

Tel: +44 (0)115 9513287

Partnership Grants

Do you have a great idea for bringing science to life in schools?

The Partnership Grants scheme provides grants of up to £3,000 for science projects run at a primary or secondary school or college in partnership with a professional scientist or engineer. LEBC can link you to a local scientist through the STEM Ambassador programme free of charge. More information about the grants

can be found here: <http://royalsociety.org/education/partnership/>

AS Level Spectroscopy Workshops

KS 5

The aim of this workshop is to supplement the students' understanding of spectroscopic techniques and interpreting spectra studied at AS level Chemistry. The students will engage in sessions about nuclear magnetic resonance spectroscopy, mass spectrometry and infrared spectroscopy. Using these analytical techniques, they will deduce the structure of the unknown compound.

We have no dates fixed for the 2012 workshops so would be very open to advance bookings/suggestions of appropriate dates from any school as I know that it can take some advance planning for you to take a group out of the normal school routine.

Our aim is always to group participant schools such that we have a minimum of 20 students enrolled in any one workshop – and because it relies on our teaching laboratories being available they have to be held on Wednesday afternoons. They are run from 1pm-4pm.

If you are interested please contact Samantha.tang@nottingham.ac.uk who co-ordinates these events.

Current science research for teachers and students

KS 3/4/5

An evening with... Prof. Ken Pounds CBE,FRS *"BLACK HOLES ACROSS THE UNIVERSE"*

Wednesday 18th January, 6pm
Department of Physics and Astronomy, University of Leicester

Prof Ken Pounds is a pioneer in space research in Great Britain and in the World. He is best known for his research in X-ray Astronomy, which led to the discovery that massive Black Holes can be found at the centre of many galaxies throughout the Universe. With more than 50 years of experience, Ken Pounds will give an insight of the past, present research and future of astronomy and space science.

Please see contacts below for more information and to book an evening

www.le.ac.uk/departments/interdisciplinary-science

Catarina Fernandes Email: i-scienceoutreach@le.ac.uk Tel: 01162523506

Free STEM outreach resources

KS 3/4/5

Free STEM outreach resources that have recently become available through the National HE STEM Programme that might be of interest to you.

The 'Becoming a STEM Enthusiast' project (see: <http://www.hestem-sw.org.uk/widening-participation/wp-projects/?p=24&pp=summary>) has produced a total of 32 video clips of STEM staff and students discussing issues such as:

- Why choose STEM subjects at HE level?
- Studying STEM Subjects at University
- Why choose Maths / Physical Sciences / Engineering?
- Research in STEM subjects

These resources are open and free to use by all - they are not linked to any specific university.

Clips can all be accessed, downloaded and embedded for free from:
<http://www.hestem-sw.org.uk/widening-participation/wp-projects/?p=24&pp=Video+Resources>.

For more information contact: Judith Payne, STEM Manager

Email: judith.payne@leics-ebc.org.uk

Tel: (0116) 240 7000

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