

STEM NEWS –June 2015

(Science, Technology, Engineering and Maths.)



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

CREST Star

Hands on science investigations for Primary Schools 5-11yr olds.

“CREST creates enthusiasm, independent learning and a greater interest in STEM”

Secondary school teacher 2014.

Register for our [online membership scheme](http://www.britishecienceassociation.org/creststar)
www.britishecienceassociation.org/creststar.

CREST Star investigators in now available as a new online membership scheme. Registration costs just £40 with an annual renewal fee of £20 payable after the first 12 months.

About CREST Star

CREST Star is a UK-wide award scheme enabling children, usually aged 5 - 11, to solve science, technology, engineering, and maths (STEM) problems through practical investigation.

Launched in 2007 CREST Star is used in over 3000 primary and special educational needs schools across the UK as well as several international schools overseas.

CREST Star is supported by URENCO:

STEM Ambassadors.

Available to all

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

STEMNET
Science, Technology, Engineering
and Mathematics Network



Ambassadors all work and represent industry and companies such as Sellafield, BAE Systems, TFP, Croppers, Innovia, Glaxo Smith Kline.

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.



News

[Picademy is coming to the North](#)

The National STEM Centre is hosting Picademy North, a free professional development day designed to help you discover the many ways the Raspberry Pi can be used in the classroom.

[Our new robotics lab is up and running!](#)

The studio is a hands-on space, free for teachers to use, and comes with heaps of teaching resources, tips and advice from our curriculum specialists.

[Design and Make the Future 2015](#)

Teach Design, in partnership with the National STEM Centre, is pleased to invite you to attend this annual event, jam packed with activities and ideas to help develop your D&T curriculum.

Resources

[Astro Pi](#)

Leading UK space organisations have joined forces with British ESA Astronaut Tim Peake and Raspberry Pi to offer students a chance to devise and code their own apps or experiment to run in space. This collection of teacher guides and resources, for primary and schools beyond, assists the teaching of background knowledge that will help entrants to be creative and solve real-world problem

[Brompton Bicycle](#)

The resources in this collection were produced by Brompton Bicycle to support design and technology teaching in primary schools, to promote the teaching of product design and set learning in the context of a real-life company.

[British Nutrition Foundation](#)

This collection supports learning about healthy eating, cooking and where food comes from. It links to many aspects of physical development, understanding the world and communicating ideas, whilst also aiding vocabulary development and group work.

For further information contact;

The National STEM Centre team

Web: www.nationalstemcentre.org.uk Twitter: [@NtlSTEMCentre](https://twitter.com/NtlSTEMCentre)

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)

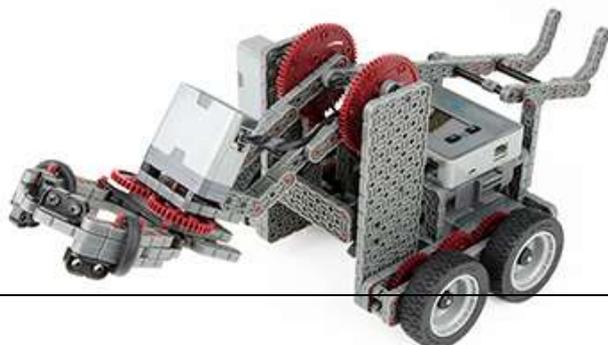
Workshops available

KS1/2

At STEMCumbria we offer a selection of workshops suitable for KS1/2.

Robotics.

We offer planned programmes of activity that will support the delivery of control technology education by providing robotics outreach activities to primary and secondary students in



Cumbria, using a state of the art 'VEX Robotics IQ' platform and LEGO NXT kits.



The 'Bright Sparks' Electricity Workshop is supported by Electricity North West Ltd & STEM Cumbria Ltd.

This programme supports/delivers the Key Stage 2 curriculum electricity topic and also provides an in class opportunity for the class teachers to improve and develop their knowledge and confidence to teach the Key Stage2 electricity topic.

The day is divided into 4 sections one based on the electrical circuits section of the curriculum, one based on extension challenges based on the basic circuits, a work related role play showcasing engineering and technician jobs in the electricity industry and a final section based on electrical safety with the showing of a DVD "Dangerous Close Up" high lightly the dangers from the public electricity system.

The day is delivered by an experienced member of the STEM Cumbria Ltd team Fran Ward.

The programme has been running very successfully in Cumbria for over 11 years now, with over 22,000 pupils benefitting from the experience.

Bee Bots Control technology for KS1

Award winning programmable floor robot, the Bee-Bot's simple and child friendly layout is a perfect starting point for teaching control, directional language and programming to young children. For a booking form contact Amanda@stemcumbria.co.uk

Computing C.P.D for KS1 and 2 teachers

Alongside our workshops we have also run a number of very well received twilight C.P.D sessions for teachers, based on requirements for the new curriculum . For more information contact Amanda.

THE
ROYAL
SOCIETY

Do you have a great idea for bringing research alive in schools?

Partnership Grants of up to £3,000 are available to enable students, aged 5 – 18, to carry out science, technology, engineering or mathematics (STEM) projects in UK schools.

The project must be investigative and supported by teachers and STEM professionals (research or industry) working in partnership.

Benefits for students and teachers include:

- Better understanding of the latest developments in STEM;
- Improved perceptions of those working in STEM professions;
- Pride and ownership from participation in the investigative process.

Application rounds are open twice a year. For dates of the application rounds, guidance on how to plan your project and to make an application, visit royalsociety.org/partnership



Dr Diane Aston.

Making a Difference with Modern Materials

This is the sixth event in a series designed to improve teachers' knowledge and understanding of the materials topics in the 11 to 19 STEM curricula.

Our next event, in Grantham on 01 July, features presentations on graphene, biomimicry, 3D printing, hydrogen and smart textiles. The sessions will be delivered by experts in their field and the day will end with a session on how you can use your new knowledge in the classroom. The

conference is **FREE** for **SAS** members and there is no limit on the number of teachers that can attend from one school. There are 50 places available and spaces are allocated on a first come first served basis.

Magic of Materials

This is a new **FREE** three day residential summer school for 14-15 year olds (end of year 10 or equivalent), that is being run at St Paul's School in London in partnership with IOM3 from 07 to 09 July. The course will feature lectures, lab classes and fun workshops which have been designed to bring materials to life and inspire young people to consider a career in STEM. Pupils will stay at the school's boarding house with full pastoral care and all meals are included. The sessions will be led by teachers from the school and staff from Imperial College and small groups of pupils will be mentored by young materials scientists from industry and academia (all of whom are DBS checked). We would encourage any pupil with an interest in STEM to apply. The course is **free** to attend and travel bursaries are available.

Polymer Study Tours

The Polymer Study Tours are now in their 28th year and continue to provide teachers with an in-depth insight in to the polymer industry. The **FREE** four day courses are open to 11 to 19 teachers from across the UK and feature labs, workshops, lectures and industry visits. They are an ideal way to boost your knowledge, reinvigorate your teaching of polymers and network with experts and other teachers.

The courses will be running in Edinburgh (21-25 June), London (28 June-01 July) and Manchester (05-08 July) and there are still spaces at all three venues.

Inspire your students with SPACE science!

KS2-4

In November 2015, British ESA astronaut, Major Timothy Peake is due to launch to the International Space Station on a 6-month scientific mission. Many educational resources have been developed and many more are in development to engage, educate and enhance the National Curriculum.

Derbyshire Education Business Partnership have compiled a searchable list of mission-related resources that would be most suitable for a **6-week STEM Club** for you to deliver at your school (Primary and Secondary). This list of resources is available to download from the DEBP website at: <http://www.debp.org/schools/?/STEM-clubs> The resource links have been collated from several online sources (National STEM Centre, ESA, ESERO and NASA)

We would like to encourage you to **Start a 6-week (cross-curricular) STEM Club during your autumn 2015 term** using these resources as your inspiration/activities.

TWO simple steps to start organising your STEM Club:

1. Choose 6 activities from the list of resources [Tim Peake resources for Autumn 2015](#) (0.02 MB) Each activity details whether it is Primary or Secondary and the main subject links

2. Decide when you want to start your STEM Club We suggest beginning during w/c 14th Sept 2015 and ending at Half term OR begin during World Space Week (4-10th October) and run for 3 weeks before half term and 3 weeks afterwards, which would mean your 6th week will coincide with Tim's current* launch date. (*subject to launch delays).

There are more Tim Peake resources being developed by the UK Space Agency, especially for schools that will run throughout his 6 month mission, which means your STEM Club and Space-science enhancement can extend throughout the 2015/16 school year.

If you have any questions or would like advice on **How to develop a 6-week World Space Week/ Tim Peake themed STEM Club**, please contact Victoria Southgate at: vix.southgate@bis-space.com

Grants between £500 and £1000 are available to help support a Tim Peake related activity such as a 6 week STEM Club. The grants are available from ESERO-UK and the deadline for applying is 22 July 2015. <http://www.esero.org.uk/news/esero-uk-tim-peake-grant-scheme>

That's all folks! Please let us know if you get involved with any of these projects,

Best wishes

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