



STEM Newsletter

Welcome to the third CYC STEM Newsletter.

Following the success of the first newsletter in September 2012 this one aims to again showcase some of the many exciting and innovative projects and experiences being offered to students in York to increase young people's engagement and motivation for the study of Science, Technology Engineering, & Mathematics. These subjects both enrich the curriculum and help students recognise how what they study at school can lead to rich and varied career pathways.



Amidst the many recent changes being proposed to the school curriculum by the Government it is clear that the study of Mathematics and Science remains a national strategic priority. As Michael Gove said in his speech to the Royal Society *'we unequivocally believe that maths and science education are at the heart of improving our society and our economy.'*

A recent Government survey has found a sharp rise in the number of young people considering a career in engineering.

A BIS-commissioned survey has found that the number of 11 to 14 year olds thinking about working in engineering has jumped by 6%. Significantly, the survey showed a 6% rise in the number of girls saying they would consider an engineering career, an industry that acknowledges the need to recruit more women. More parents (a rise of 4%) also said they would encourage their children to become engineers. The increases followed Tomorrow's Engineers Week, which ran from 4 to 8 November 2013, when government, employers and educators came together to enthuse young people, particularly girls, about the rewarding careers on offer in engineering.

Secretary of State for Business Innovation and Skills Vince Cable said:

'It is encouraging to see that our efforts to highlight the importance of engineering as a career has had a positive affect and that more women and girls are seeing it as an exciting career.'

'As a country we excel in hi-tech industries but we need the engineers to maintain our competitive advantage.'

Government alone cannot solve this. We need to work with industry, universities, colleges and schools to keep momentum and guarantee the pipeline of talent so that businesses are not disadvantaged.'

Government and industry launched Tomorrow's Engineers Week following the 'Perkins Review of Engineering Skills', which focused on the need to shore up the pipeline of skills throughout the whole engineering sector. Professor John Perkins found the challenges start when pupils are still at school and choose subjects following GCSEs. Engineers must have a strong foundation in maths and science, especially physics but the number of young people choosing these subjects post-16 is relatively low, especially among women. The government is addressing this problem through a redesign of the curriculum and teacher development.

BIS also announced a number of additional measures last year (2013) to address the shortage of engineers including:

- £30 million fund for employers to address skills shortages in sectors with specific need
- £250,000 of seed funding to enable Tomorrow's Engineers to accelerate the nationwide roll-out of its employer engagement programme aimed at encouraging children in school to consider engineering Careers.
- £40,000 to support the Daphne Jackson Trust to develop a new fellowship to support people returning to professional engineering jobs after a career break

STEM subjects remain integral to the UK's success: the UK is the world's sixth largest manufacturer, engineering turnover is around £800 billion per year, and whilst the UK makes up only 1% of the world's population, we produce 10% of the world's top scientific research. Despite this, it is remarkable to note that even though STEM graduates have the potential to earn amongst the highest salaries of all new recruits, employers are finding it difficult to recruit STEM skilled staff. And alongside our need for a skilled STEM workforce, it is crucial that all young people, regardless of their future career pathway, have the STEM knowledge and skills they need to be an informed citizen in an increasingly scientific and technological society.

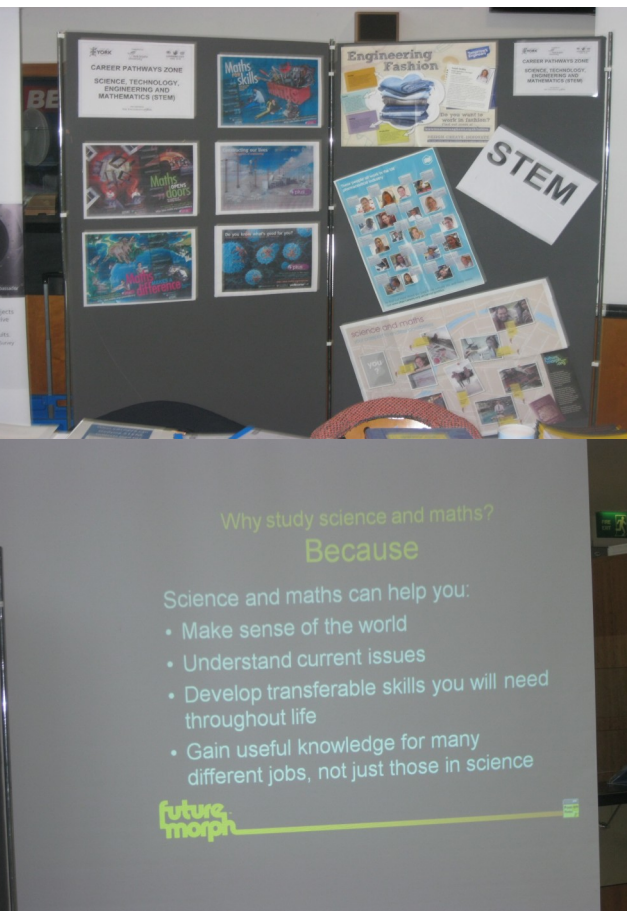
York is very fortunate to be a leading city in the UK for STEM, being home to York Science Park, Science City York, the National STEM Centre, and the National Science Learning Centre to name but a few. Local partners, including NYBEP (as our local STEMNET provider), the University of York, Hull York Medical School, University of York St John, Askham Bryan College, the STEM Ambassador Programme and many local industries all offer excellent support and resources for local schools.



National, Regional & Local Partnership Events

'Steps to Success' Event:

It is estimated that almost 1800 people attended this successful annual event at York Racecourse on 22nd October 2014, including 589 students from Y9 and Y11, along with their parents/carers. The event targeted those young people moving into KS4 or Post-16 Education and Training. This year, the STEM stand in the highly successful Carers Pathways Zone was again extremely popular. Youngsters were able to explore a variety of interactive resources to find out more about where the study of STEM subjects in school could lead to. Advice was available from the LA Science Consultant, NYBEP, and the Institute of Civil Engineers. An extended area of ICT provision allowed pupils to explore the FutureMorph website to investigate the huge variety of career pathways that the study of STEM subjects opens up.



FutureMorph Website:



Want to promote STEM Careers with your students?

This website provides a wealth of information, case studies, videos and hands-on interactive quizzes and games for pupils to explore the more innovative and unusual careers and information on the routes to Higher Education that the study of STEM subjects opens up. Links to other websites and providers makes this a 'one-stop shop' for STEM Careers advice. Go to www.futuremorph.org.uk

St Peter's School:

St Peter's School has continued to host a wide range of STEM events over the last year and has been very proactive in promoting regular, exciting, challenging and thought-provoking events offered to young people across the city. These have included:

- In October 2013 a group of teachers from York and surrounding area visited **Boulby Underground Mine Facility** to learn about the Search for Dark Matter.
- **The Guy Fawkes Lecture** in November 2013: *'The Large Hadron Collider and the Higgs Boson: News from the Energy Frontier'* by Professor Jon Butterworth from University College London
- **Star Gazing Live Event:**



Mark Thompson, co-presenter of the BBC show Stargazing Live, delivered a lecture at the annual Stargazing event held at St Peter's School which was attended by the Lord Mayor. The lecture was part of an evening of entertainment that included a full exhibition by various science

organisations, an inflatable cosmodome, an array of telescopes, the School's 'cloud chamber' and plenty of scientific tests and games for guests to grapple with. Their cloud chamber has also been out on loan to Fulford School for a parents' evening

Other Events:

- **York Schools Science Quiz:** 13th March 2014 6pm
An interschool science quiz for teams of Y11/12 students from all York schools, who will compete to win prizes. See page 5 for further details, and photos of the event.
 - As part of National Science & Engineering Week, on Thurs 20th March 2014 St Peter's School will host a public lecture on **"Quicksilver – Britain's World Water Speed Record Challenge"**, and will be delivered by Nigel Macknight, Driver and Team Leader of the project.
 - May 16th Lecture by Dame Jocelyn Bell Burnell
 - June 13th Lecture by Ned Boulting
 - June 16th Lecture by Professor Monica Grady
- These lectures are part of a programme of events and tickets are free to all and available from events@stpetersyork.org.uk

York Ogden Trust Schools Science Partnership:

St Peter's School is the Hub School for this partnership. The aim of the partnership is to enhance the delivery and uptake of physics by promoting the subject within the partnership schools. Supported by the Institute of Physics and the University of York Physics Department it provides funding and resources to promote Physics. School members of the partnership include St Peter's, Fulford, Joseph Rowntree's, Archbishop Holgate's Manor Academy, Selby High School, and more recently Canon Lee School, making the partnership seven schools strong.

National, Regional & Local Partnership Events (continued)

Institute of Engineering and Technology's Faraday Challenge Day:

PUPILS from across York and North Yorkshire converged on Fulford School to take part in a UK engineering challenge.

Pupils from six schools – Selby High, Joseph Rowntree, Manor CE, Canon Lee, St Olave's and Fulford – became real-life engineers for a day, researching, designing and building solutions to real engineering problems.

The event was part of The Institution of Engineering and Technology's (IET) Faraday Challenge Day, which saw 45 schools across the country chosen to host events.

Teams raced against the clock to solve a genuine engineering problem, putting their engineering and technology knowledge and skills to the test.

Paul Davies, Fulford's head of physics, said: *"The day was focussed around giving pupils the full experience of being a real-life engineer. They developed skills in team work, accounting, electrical engineering and project management. While some designs worked better than others, they all persevered and produced a working prototype. The day was summed up by one pupil saying 'that was amazing, when can we do it again?'"*

The Faraday Challenge Days are part of a wider Faraday education programme, made up of a whole range of teaching resources and activities to inspire and attract the engineers of tomorrow.

Gareth James, IET head of education, said: *"There is huge demand for new engineers and technicians and we're confident that this will challenge young people's perceptions of engineers and hopefully make them consider engineering as a career choice."*



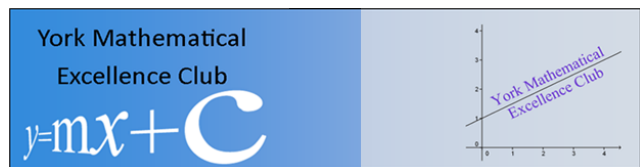
Science technician Martin O'Brien with from left, James Leaf of the teachers' team, Sam Biddlestone (Manor CE), Tom Halliday (Canon Lee), Tom Carr (Joseph Rowntree), Georgina Edwards (St Olave's), Tom Huggins (Fulford) and Keir Bennie (Selby High)

The winning group in York were from Joseph Rowntree School. They were Thomas Carr, Emma Franklin, Jamie Davies, Daniel Berry, Imogen Bell and Caitlin Gough. Each pupil were awarded a prize and a trophy for their school. The top three teams from across the UK will receive an all-expenses paid trip to the national final in Oxford to compete for a cash prize of up to £1,000 for their school.



The winning team from Joseph Rowntree School.

New club for able mathematicians:



Most school students will recognise $y=mx+c$ as the equation of a straight line. For thirty two Y8 and Y9 pupils from schools across the City it stands for something extra: the York Mathematical Excellence Club.

The club has been set up to support our very able young mathematicians in working together on a range of problems and puzzles, and to raise aspirations about their future mathematical pathways. They meet once each half term after school and continue working together between sessions using a dedicated VLE.

Pupils work in groups of 4 or 5, all from different schools, and each group is led by a University of York mathematics student as part of the YSIS scheme. These group coaches support their teams through the problem solving (without giving away the answers!) and are powerful role models for the young people with whom they are working.

During the summer term the club members will select and research a mathematical topic that is beyond their usual school curriculum, and then work with their coaches to prepare a presentation on it. The year will culminate in a 'Dragons' Den' evening held at the University of York, when parents will be invited to watch the groups pitch their findings to a team of mathematical experts including University professors of mathematics.

$y=mx+c$ is supported by the Independent State School Partnership (ISSP) and draws pupils from independent, maintained and academy schools across York.

National, Regional & Local Partnership Events (continued)

STEM Ambassadors programme:



Nationally coordinated by STEMNET

Ambassadors are an invaluable and **free** resource for teachers and schools. They offer their time voluntarily to enthuse and inspire students within schools about STEM subjects. They can do this through a variety of activities such as clubs, careers talks, helping with school events, lessons and competitions, and much more. Your local STEM Ambassadors Management contract holder can help you decide how best to employ an Ambassador.

All STEM Ambassadors:

- Have a STEM background – they are usually professionals and experts in their field
- Are volunteers and therefore free
- Have been checked by the Disclosure and Barring Service (DBS)
- Have had a basic induction about how to approach the classroom

Benefits to teachers include:

- Access to skilled resources to support staff in the classroom
- Gaining extra support for extra-curricular clubs
- Developing a varied teaching and learning style
- Networking with local companies and gaining further opportunities

ambassadors@nybep.org.uk

www.stemnet.org.uk/content/teachers

CREST Awards:

Primary & Secondary

CREST Awards and CREST Star are nationwide easy-to-run STEM enrichment schemes.

CREST Awards allow 11-19 year olds to link their personal passions with curriculum-based learning through creative projects.



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. These are available through an online membership.

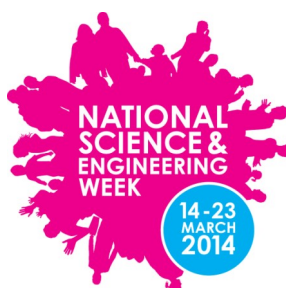
Registration costs just £40 with an annual renewal fee of £20 payable after the first 12 months. **Already bought the packs? CREST Star schools can join for free!** And there are **10 new investigations** not included in any pack.

NYBEP is your local coordinator for both schemes:

Contact Catherine@nybep.org.uk

National Science & Engineering Week 2014:

14th – 23rd March 2014



National Science & Engineering Week (NSEW) is a ten-day national programme of science, technology, engineering and maths events and activities across the UK aimed at people of all ages. *Explore the future* will be the common theme across competitions, new resources and online projects.

Visit their website at

<http://www.britishtscienceassociation.org/years-nsew>

to find out more about local events, activity packs, challenges and competitions.

National STEM Centre:



Support for the New National Curriculum 2014:

The National STEM Centre has collated a wealth of resources on its e-Library to support the introduction of the new National Curriculum for Maths, Science and D&T in September 2014.

Resource packages to support the new primary and secondary science and mathematics curricula:

The pages are organised into topic areas and contain resource packages which pull together a wide range of high quality resources selected by subject specialists, including:

- Activity ideas
- Worksheets
- Interactive games
- Film clips
- Lesson plans

- [Primary Science 'landing page'](#)
- [Primary Maths 'landing page':](#)
- [Secondary Science \(11-14\) 'landing page'](#)
- [Secondary Science Practicals landing page:](#)
- [Secondary Maths \(11-14\) landing page:](#)

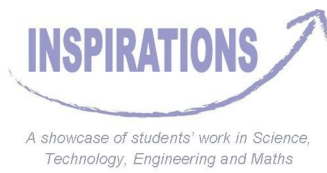
Community groups:

In addition there are subject support groups which you can join, in the community area, where schools can network to share resources and best practice:

- [Primary Science, Maths and D&T:](#)
- [Secondary Maths:](#)
- [Computing:](#)
- [Secondary Biology:](#)
- [Secondary Chemistry:](#)
- [Secondary Physics:](#)
- [Triple Science Biology](#)
- [Triple Science Chemistry](#)
- [Triple Science Physics](#)

'Inspirations' Education Showcase Event 2014

Thursday 26th
June 2014 at
Yorkshire Air
Museum,
Elvington



This major annual event will be showcasing young people's Science, Technology, Engineering and Maths (STEM) project work.

Inspirations is an annual event involving approximately 500 students of primary and secondary school age, and over 100 teachers. It is designed to celebrate their achievements and raise their awareness of the careers available in the STEM sector, and give the young people the opportunity to practise their skills, and display project work.

A major part of the event is the opportunity for students to enter their projects into a competition. Judges work in small teams to assess the projects, and prizes are given to individuals and groups of students demonstrating flair and skills in fields such as electronics, engineering, graphics, investigations and sustainability.

York Schools Science Quiz

On March 13th 2014 St Peter's School invited York schools to compete in its annual Science Quiz. Teams of 4, comprising of two Y11 and two Y12 students (or teams of four Y11 students for 11-16 schools) took part in an enjoyable evening in the Memorial Hall. The schools that were there were: Millthorpe School, Scarborough College, Archbishop Holgate's School, Huntington School, Fulford School, Canon Lee School, Manor School, Bootham School, All Saints RC School, Selby High School and St Peter's School, making 21 pupil teams alongside 3 teacher teams.

Huntington School won (after a tie break, photo number 145 to follow), with Archbishop Holgate's Second (photo number 142) and Bootham School Third (photo number 139). Selby High School Won the category of highest scoring school without a sixth form (photo number 138).

The winning team received 4 x £20 Amazon vouchers with the winning team without a sixth form getting 4 x £10 Amazon vouchers.



Thanks to the Ogden Trust for the funding for the 8GB memory sticks that each pupil got and the Rotary Club of York Vikings for paying for the water bottles.



The overall winning team from Huntington School.



Selby High School won the prize for the highest scoring team without a Sixth Form.



And finally the winning staff team!

Secondary School Events

Fulford School:

A brief history of STEM.....The Fulford STEM Challenge Cup
The STEM challenge cup at Fulford School has rapidly gained momentum over the last two years; now in its third season the challenges have got bigger and even gone global!

As HLTA for Science one of my key responsibilities was to raise the profile of STEM within the department and school. I thought it was about time I raised it even higher; so here is a brief synopsis of the last 2/3 years.

Season 1

Back in September 2011 the Science department wanted to create a club that engaged students from years 7 and 8 in a series of short challenges involving STEM.

A series of 6 challenges (one per half term) were set up involving up to teams of four pupils representing each of the four houses within the school. The general principle was all



about having fun and learning something in the process. Most students have a competitive streak so we decided to rank the teams with a points system: 1st 12pts, 2nd 8pts, 3rd 6pts and 4th 4pts; the teams accumulate points over the year, with the highest total winning the cup. In the first season the challenges were well attended and pupils enjoyed themselves although sometimes they seemed a little rushed.

Season 2

In the following year challenges gained more attendance and a higher profile within the school; pupils actively signed up and the numbers extended to six per team. Challenges ranged from creating some bullet proof vest material to making Christmas flavoured ice-cream. We also had our first season finale involving staff and technician teams to provide a bigger challenge to an already enthusiastic group of regular participants.

Towards the end of last year STEM student ambassadors were chosen represent their house and help coordinate and communicate ideas to members of staff running activities. An AGM was held with the ambassadors and myself to decide on activities and the direction of the STEM Challenge Cup for the 2013-14 season. This meeting came up with some fantastic ideas including the use of expert judges/visitors and the idea of having a STEM finale open evening where there will be a parent team (drawn at random) competing against their children. The school has been very supportive in allowing the STEM challenges to be extended

into tutor time directly after lunch this has allowed students time to discuss and redesign their ideas prior to the final test and reduced the frantic rush before the bell.

Season 3

One of the first jobs for the STEM ambassadors was to run an assembly for the new year 7 pupils joining the school. The first challenge for the year had 36 pupils in attendance so the message obviously got through. I have been overwhelmed by the numbers of pupils from the lower school asking about the next challenge. We have some very proactive sixth formers at Fulford which has facilitated the setting up of a small method development team; the sixth formers basically test ideas and possible solutions for the challenges in advance (saving any from total failure).



In September a group of visiting Head teachers/ Educationalists from the USA and Australia visited the school with a remit into looking at STEM in schools. The STEM ambassadors gave a short presentation highlighting the STEM Challenge Cup. We then decided to give our guests and the student ambassadors a challenge to complete together. Whilst this was underway I decided to table the idea of an International STEM Challenge Cup; so far we have two schools (from Seattle (US) and Townsville (AUS)) interested in running the challenges in parallel with us. The concept is simple: We coordinate and send out the paper resources (electronically), and video our students doing the challenges. The partner schools video their students completing the challenges and send to all the other schools. We can then compare the results and assign points as with the Cup at Fulford.

If anyone is interested in getting involved or wants advice on setting up a similar scheme please contact me:

Sam Lynn, HLTA for Science,

Fulford School

lynns@fulford.york.sch.uk

See video clips on Youtube of these events here:

http://youtu.be/GNwLD_1BMuY

<http://youtu.be/MUiXT0Uc348>

<http://youtu.be/QXyoUAnzCv4>

<http://youtu.be/S2lcBILF13k><http://youtu.be/USW5Nv8zmic>

<http://youtu.be/R3u2sWTvAVs>



Fulford School (continued):

Xmas Ice Cream Challenge:

In this challenge, pupils were asked to make ice cream from scratch, in just 30 minutes, flavoured with their choice of ingredients from a range of sweet and savoury 'Xmas' foods, (including such delights as turkey, stuffing, sprouts, pickled onions, fruits, brandy snaps, shortbread and chocolate, to name but a few. Amazingly all groups managed to achieve an end product which looked surprisingly appetising.

The judging panel, including the STEM Advisor from NYBEP and the Science Advisor from York LA, had the dubious pleasure of tasting the final products and voting the winners. See the challenge in action here:



- <http://youtu.be/kSszAVNDpg>
- <http://youtu.be/m5x0RxGC34w>
- <http://youtu.be/RZW2QROc1XE>
- <http://youtu.be/5jzZK8lOm5M>

The next challenge will involve catapults!

Archbishop Holgate's CE Academy:

CERN trip: A group of 18 pupils from Y12/13 plus two Physics teachers will be travelling to Switzerland in April 2014 to visit the CERN Institute for They will visit the ATLAS detector, and have a guided tour (3hr) of the detector and the maintenance area, where pupils can see into a section of the accelerator and understand the physics of how it works. They will then visit the Microcosm exhibition and, of course, the gift shop! There will also be time for sightseeing in Geneva and a visit to the History of Science museum.

Annual Open Lecture Series:

As part of their Science College community programme AHS, in conjunction with the National Science Learning Centre (NSLC) National STEM Centre and the University of York, is promoting a lecture on 'Dark Matter' entitled : **Deep underground science at Boulby Mine—the search for Dark Matter and beyond** by Dr Sean Paling, University of Sheffield On 19th March 2014 19.30 at the NSLC, this lecture is open to all.

Millthorpe School:

Science Club at Millthorpe School started up again in January, for KS3 students (about 10 Y7/8) running a range of experiments each week. So far we have made some messy baking soda volcanoes, some flame testing and fire writing, as well as staging a fake crime scene and dusting for finger prints. The students enjoy the practical side to science, getting to play with some of the equipment they don't get to use every lesson, as well as making requests for next weeks club (eg. if there's anything they've seen on TV that they would like to try!) We are hoping the science club will continue to grow throughout the year, and we are looking forward to getting outside during the summer months for bug collecting and coke rockets!

We are hoping to reward attendance at the club with a visit to the National STEM centre at York University at the end of the year.

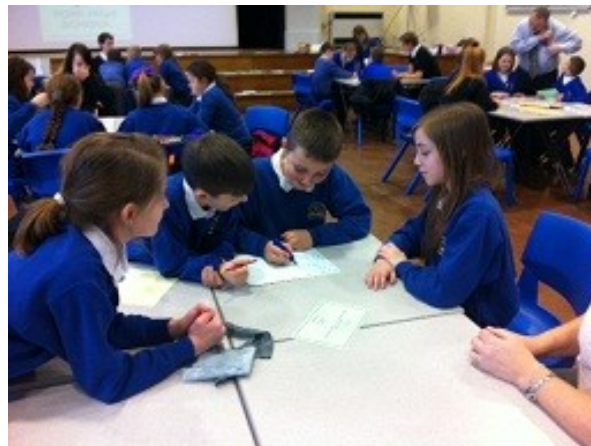
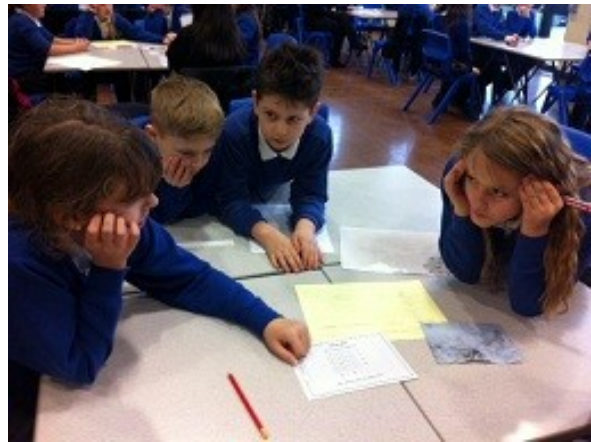
York High School:

Annual Maths Puzzles Day:

In February 2014 YHS once again hosted this very popular event. About 300 Year 6 pupils from 7 primary feeder schools spent the day at York High School. The schools involved were Carr Junior, Hob Moor, Westfield, Woodthorpe, St Barnabas, Poppleton Road and Acomb Primary.

Pupils worked in teams of 4 or 5, to solve a range of Maths problems over the course of the day. Each team was supported by York High School pupils.

Teachers were extremely impressed by the pupils' Maths skills, enthusiasm and fiercely competitive spirit, and hope to see many of them back at York High School in September as year 7 pupils.



NATIONAL
STEM
CENTRE



The Big Bang



NYBEP

nurturing talent for successful futures

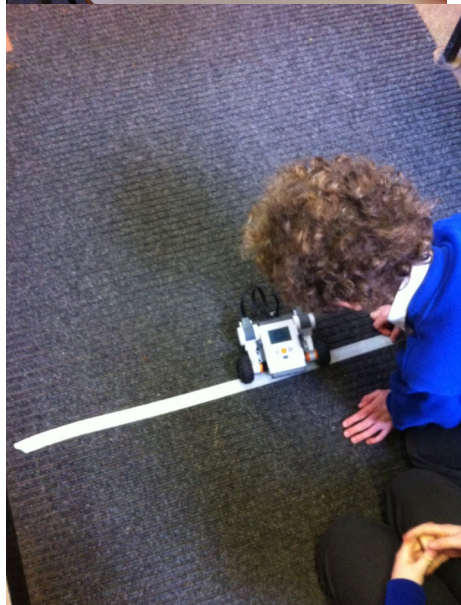


Hempland Primary School:

ROBOT WORKSHOP AT HEMPLAND PRIMARY SCHOOL

As part of their creative curriculum, the children in Year 3 at Hempland Primary School have been studying a topic entitled "The Rise of The Robots." Many of the literacy lessons were based around the novel *The Iron Man* by Ted Hughes. In Topic lessons the children have learnt about the different roles of robots in industry and society as well as the developments in robotics over time. During art and design lessons, the classes have been designing and making 3D robots and looking at the artwork of Eric Joyner. On 3rd February, the children enjoyed a robot workshop provided by "Stretching Minds". During the day robots were built using LEGO®MINDSTORMS® technology. The children then programmed the robots to output sound, move, change speed and direction. Everyone had a great time, the children learnt some basics of computer programming and there were many links to the ICT, D&T, maths and science curriculum.

From Dianne Barnes and Jill LePla
Year 3 teachers



Hempland Primary School (continued)

STAR PARTY JANUARY 2014

Hempland Primary School teaching assistant, Sam Richardson, who is a member of York Astronomical Society, organised a Stargazing event at the school. Sam invited her friends at the Society to bring along their impressive telescopes for everyone to view the evening sky. Several activities were available for the children to try and members of YAS gave an informative talk to all those present. The YAS members were impressed with the questions and interaction that they received from everyone. Unfortunately the weather wasn't ideal. However we had great feedback from the children and parents who attended and hope to have another event soon. Meanwhile, information about public star parties, which take place on The Knavesmire



every month, can be found on the YAS website.

Scarcroft Primary School:

Mission to Mars

The Year 5 and 6 Topic this term is 'Mission to Mars'. We have been finding out about the planets and our solar system. We are looking at the key features of Mars and comparing it with Earth. In D&T, we are designing and building a base for humans on Mars. In ICT we are using a Control program to operate a 'Mars Rover'. We have also visited the Yorkshire Museum to participate in a number of Space-related workshops.

Science Club

Throughout the spring term, Mr Cole has been running a Science Club for Year 3 and 4 pupils. They have looked at: changing states of matter; acid/alkali reactions; two-stage rockets and surface area and its importance to chemical reactions. They have also tried to make as much of a mess as possible and to blow a few things up!

In July 2014 the school be holding its own Science/STEM Week!

Sarah McClure—Science Coordinator

Primary School Events (continued)

Stockton-on-the-Forest Primary School:

Science Enrichment Family Event: The school invited Dr Alex Brown from York University's outreach department to run some after school sessions. The sessions were for parents with their children, with the aim of giving parents ideas of how they can support their children with Science at home. The sessions also looked at new aspects of the new curriculum: evolution and inheritance.



Space 'Cosmodome':

We were also lucky to have Dr Katherine Leech from the University of York's Physics Department to join us with the exciting cosmodome.



All children had the opportunity to experience the simulation and ask questions about space to our visiting expert.

Acomb Primary School:

Science Week:

Exciting events and activities throughout the week, helped to raise the profile of science in school. Delivered by a range of local 'experts' these included:

- Space Cosmodome - Dr Katherine Leech from York University Physics Department.

'Year 6 Leaving the cosmodome after a lot of spacey learning.'



- Annie Hodgson from York University Chemistry Department:

A 'Superscientist' who delivered an assembly with lots of experiments on liquid reactions involving 'whizz bangs'!



Denna, a pupil at Acomb Primary said *'This is Annie from York University showing us how chemicals and liquids react with gases, such as Carbon Dioxide reacting with citrus powder.'*



- Year 3 pupils carried out investigations into 'un-popable bubbles':
- John - a 'robot specialist' - worked with Y6 to design a vacuum cleaner and bought some amazing robots in!
- John - made microbes from D&T materials to show how antibodies attack viruses.

Primary School Events (continued)

Acomb Primary School (continued):

- Marjan and Pegine - two Microbiologists - used Petri dishes to culture germs from hand-swabs from pupils.



At the end of science week all the pupils showed off their experiments to the whole school:

Year 4:



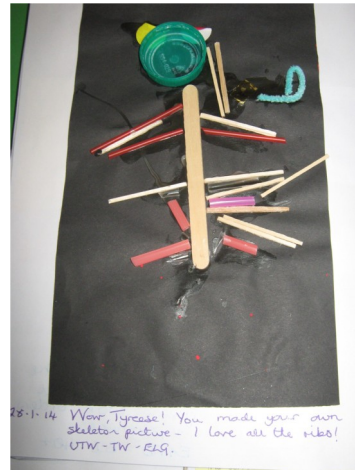
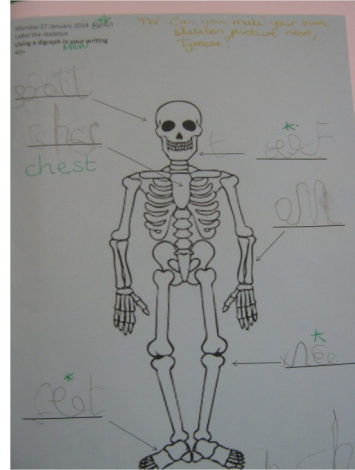
Reception class:



Westfield Primary School:

Pupils in the Early Years, learning about 'The World', showed evidence of good progress in learning about science:

Having labelled his skeleton, Tyresse was challenged to make his own skeleton:



In the EYFS really good progress often comes from problem solving and persisting until a solution is reached. Here, Maddison was deeply puzzled as to why her torch would not work. Using trial and error, she succeeded and was able to draw her own conclusions.



Dates for your diary:

'Inspirations' Education Showcase Event
Thursday 26th June 2014 at Yorkshire Air Museum, Elvington

Inspirations is an annual event involving approximately 500 students of primary and secondary school age, and over 100 teachers. It is designed to celebrate their achievements and raise their awareness of the careers available in the STEM sector, and give the young people the opportunity to practise their skills, and display project work.

A major part of the event is the opportunity for students to enter their projects into a competition, so .

CPD Opportunities from York LA for 2013-2014:

Primary Subject Leaders Conferences:

Subject	Autumn	Spring	Summer
Maths	25/09/2013	05/02/2013	01/07/2014
Science	09/10/2013	06/02/2013	24/06/2014

Secondary Subject Leaders:

Subject	Autumn	Spring	Summer
Maths	21/11/2013	25/03/2014	09/07/2014
Science	06/11/2013	18/03/2013	03/07/2014

Primary Curriculum Support Groups

Subject	Autumn	Spring	Summer
Maths	05/12/2013	27/03/2014	22/05/2014
Science	28/11/2013	06/03/2014	13/05/2014

Summer term courses:

- **Science: Cross phase moderation of teacher assessment levels (KS2-3 teachers)**
1st May 2014 13.00—16.00
- **Primary Maths: Improving Maths Subject Knowledge (the new National Curriculum)**
7th May 2014 13.00—16.00
- **Primary Science: Supporting the teaching of hard-to-teach areas of science in the new National Curriculum**
21st May 2014 9.00 to 12.00
- **Primary Maths: Maths in the Environment**
19th June 13.00—16.00
- **Primary Maths: New Maths Curriculum**
KS1: 8th July 2014 13.00—16.00
KS2: 15th July 2014 13.00—16.00

For further details of all these courses please see the To apply for any of these courses contact York LA's Workforce Development on www.yor-ok.org/wdu

Where to go to find out more about resources and events in York?

If you would like to know more about STEM support (or about any of the items described in the bulletin), or would like to share and celebrate events from your school in 2014-2015 in the next Newsletter, please contact Sue Atkinson on:

Sue Atkinson: Science Consultant (Cross-phase)

Email: sue.atkinson@york.gov.uk
 Mobile: 07748 657936

City of York Council Website: Resources for Teachers

For resources, information and updates, visit the Curriculum Support page at the City of York website at

http://www.york.gov.uk/info/200690/curriculum_support/1151/

Next STEM Newsletter:

The next STEM Newsletter will hopefully be scheduled for the Autumn term 2014.

We would particularly like more contributions to celebrate good practice in Maths, Technology & Engineering, as well as Science!

