Nationally coordinated by STEMNET

"It's been a lot of hard work having so many projects on the go at once but the club was really buzzing."

An after school STEM Club

Connah's Quay High School

Flintshire

Introduction

Connah's Quay High School is a co-educational 11-18 comprehensive school with 1003 learners from surrounding areas of Flintshire. The school is proud to offer a welcome to students and parents of all abilities, with facilities and activities, recreational, sports and creative classes, to support the whole community.

Brief Summary

Teachers in the science department set up an after-school club for years 7 and 8 in Autumn 2012 with grand plans from the start. Club members chose their own projects, and explored them through the year, each working towards a CREST Award. Depending on the level of complexity of the project and commitment to the work, students all achieved Bronze or Silver CREST. The club put on a science showcase evening for Yr 6 pupils from feeder schools and their parents as a finale to their work.

Links to Curriculum

- Solve a relevant, science-based problem, set within a context
- Work in pairs or small groups, independently of adults
- Take part in practical, hands-on science activities
- Think and talk about science
- Share ideas using a variety of media

Quick facts for teachers

What is a STEM Club?

Although they complement the curriculum, they are not designed to be about writing, tests, or exams. Activities may involve practical experiments, investigation, discussion and reflection. Most of all, they should be fun.

They can motivate and build confidence in young people who struggle with STEM subjects, and provide an extra outlet for children who already show aptitude and are interested in furthering their learning.

The aims of STEM Clubs are to:

- enrich, enhance and extend the secondary school curriculum
- improve attainment in, interactions with, and experiences of, the STEM subjects among pupils
- improve collaboration between schools and also between schools and industry
- encourage pupils to continue their education in STEM beyond GCSE and Diploma (or equivalent qualification) level.

"I'd still do it the same next year because the atmosphere was so good and everyone saw a lot more than if we had all done the same project."

Details of Club activity

At the start of the club science teachers Alison Frost and Sara Thirlwell used links to websites provided by their STEMNET coordinator to help students gather ideas for they would like study. Some students chose ready-made projects from stemclubs.net and British Science Association CREST Awards; some designed their own projects based on questions of their own they would like to answer through research and experimentation. As a result, 15 different CREST Award projects were undertaken by 30 students.

The club also invited STEM Ambassadors to drop in the club – this gave members the opportunity to make some connections with how their research manifested itself in the workplace; it also gave them contact with new people to present their findings to and to hear new perspectives on their work.

To give club members an addition goal to work towards, an open evening for the club was offered to the parents of members and to Yr 6 pupils from feeder schools who would like to see the more of the science department in action. Club members created a display board to present each project and developed hands-on experiments for visitors to try out. The evening was well attended by primary aged children and their parents.

Benefits and Impact

Students chose their own projects from a range already available on the web. Although there is a wealth of off-the-peg ideas to choose from, teachers were pleased to see many of the students creating ideas and wanting to explore their own avenues of interest. The ready-made projects helped them to form their own ideas into viable projects, showing them what would be an appropriate level of work for the CREST award scheme and helping them understand what could be achieved in the time and with the facilities available.

Sara Thirlwell has moved on to a new teaching post in Blacon High School in Chester for 2013 and was keen to carry this successful clubs format with her. We wish her the very best of luck in her new school and look forward to seeing what the Cheshire pupils get up to under her guidance.

Having so many projects on the go at once has required a big commitment from the teachers and students but Alison Frost said she would do again all the same. She was however, very interested in the idea of encouraging sixth formers to help run the club in 2013 to ease the strain and provide mentors from the upper school.

What are STEM Ambassadors?
STEM Ambassadors are volunteers of all ages and from all backgrounds working in STEM related roles from apprentices to geologists and nuclear physicists to zoologists.

Have they received any training to work in schools?
All STEM Ambassadors are registered and have been checked by the CRB, and have each received an induction into working in the classroom.

What do they do?
STEM Ambassadors provide a wide variety of services such as careers talks, mentoring, helping with school events or clubs and facilitating workplace visits. Past activities have included: building rockets, farm walks, mock job interviews, rat dissection and speed dating!

How much does STEMNET charge?
Absolutely nothing.

Sounds great – how can I book my STEM Ambassador?
Simply log on to www.stemnet.org.uk to find your local contact.

Inspire young people in science, technology, engineering and maths (STEM)

Become a STEM Ambassador
For further information visit:
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