

## LEP Schools Have a Smashing Time with Project Eggs Factor

In June, 36 Year 8 and 9 students from LEP schools, including St Saviours & St Olaves School, The Charter School and The London Nautical School, visited London South Bank University (LSBU) to compete in their first ever Project Eggs Factor.

The schools entered teams of six students in to the Young Engineers/Airbus challenge, which is running nationally in schools across the country.

The teams had to design and build an aircraft, powered by an air propeller motor, that was capable of carrying an 'egg passenger' the furthest distance.

The students arrived early at LSBU for a project briefing before they "got cracking" on their designs. All teams were given a resource box of different materials, one air propeller motor and a pump. They then had four hours to design and build their aircrafts, before all the constructions came together for the big fly off.

Each team was allowed two flight runs to see which design could fly the furthest distance after the all important take off from the runway.

Throughout the day, judges assessed the teams, judging them in three categories - design & build, team work and distance flown, and the day ended with the



Team LNS from London Nautical

judges awarding prizes and certificates to the winners. An AutoCAD Inventor software package worth £1,500 was also awarded to the winning school in each category.

And the winners were:

- **Design and build:** Team LNS, London Nautical School
- **Team work:** Team Humpty Dumpty, The Charter School
- **Furthest distance flown:** Team SSO Girls, St Saviours & St Olaves (with a distance of 190 cm)

Each team will have their distance recorded and entered onto the Project Eggs Factor

leader board on the Young Engineers web site ([www.youngeng.org](http://www.youngeng.org)) to see how they compare to the other entries from around the country.



Team Humpty Dumpty, The Charter School.

## LEP gets involved in National Science and Engineering Week

LSBU hosted National Science and Engineering Week (NSEW) for the LEP this year. Doris Ntow and Israt Jahan from STEMNET and Ahmed Kotb from The Smallpeice Trust delivered successful sessions throughout the week, including a Science Circus event. The university was also proud to hold the first celebration for the Engineering Development Trust's GO4SET project during NSEW. After launching the project at LSBU, the university provided an ideal location for its first celebration day. One of our very own LEP schools (Little Ilford School) was awarded 'Best Teamwork' prize.

As part of NSEW, the LEP's Ahmed and Shireen devised a new STEM session on rockets too, which was 'launched' at Lilian Baylis Technology School. The session was a huge success. Pupils were able to design and make rockets that flew 800 feet into the air - at least five times higher than the school itself. It was caught on camera as the BBC was on hand to film it.



# University Challenge

**The past few months have been very busy for the LEP in London South Bank University (LSBU), with Shireen Ali-Khan organising and delivering some novel and exciting events.**



The month of May saw a second Chemistry Festival held at the university, with academics and staff from the Engineering Faculty taking part alongside the LEP and the Salters' Institute.

Pupils from Years 8 and 9 were invited to compete in teams against each other, participating in various chemistry-related challenges in the morning. After lunch,

they were treated to a stunning act called 'Chemistry Magic' which illustrates the chemical fun that can be had using everyday household items. Later, members of the Engineering Faculty rewarded the pupils and the winning teams for their efforts. The students enjoyed the day immensely and were amazed that so much chemistry and fun could be experienced in one day.

Shireen has also been in schools delivering a new STEM session called 'Wonderful World of Engineering'.

Aimed at Year 7 pupils, the session is designed to provide a solid introduction to the concept of engineering, enabling pupils to delve into an almost untapped world. It is made up of a number of small workshops in which the participants first have to place pictures of engineering feats on to a world map, then discuss sustainability and their own roles in preserving the environment, look at role models and examine careers in engineering including exploring salaries. Finally, they are asked to imagine

themselves as engineers in 20 years time and produce an image illustrating what type of engineer they would be and what tools they would be using.

The next few months will see Shireen leading other new activities for the LEP at LSBU. There is to be a Year 9 Lambeth Summer School to be held at the university and an event in July celebrating the university's commitment to its local community for which the street is to be 'blocked-off' for the day and dressed in village fête fashion.

Two other summer schools also running over the coming months are aimed at Year 10 students from London and at girls from Pakistani and Bangladeshi backgrounds, with the LEP running a session on robotics.

We would like to thank the following members of the Engineering Faculty for their support of the Salters' Festival and their commitment to the project: Dr Rob Best, Richard Cadbury, Kenneth Spears, Kishor Unadkat and Dr Tony Clark.

## LEP Students get a Taste of Challenge Final

**In March, around 38 students and their club leaders, all from London Engineering Project Young Engineers clubs, got away from 'the big smoke' and enjoyed a fun packed day at the Young Engineers Royal Navy Challenge Final, at HMS Sultan in Gosport on the south coast. The schools represented by the group were: Lilian Baylis Technology College, Harris Academy, Forest Hill Boys School and Little Ilford School.**

The schools were invited to the Young Engineers Royal Navy Challenge National Final. The competition was called Operation Enigma, and the school pupils were able to experience the atmosphere and take part in some of the many activities. They cheered on the finalists and watched as their specially designed and constructed amphibious vessels bravely attempted to complete Operation Enigma by retrieving a top secret fallen satellite.

The students got to meet and work with other Young Engineers clubs and share their experiences.

Overall, the day was a huge success and a good networking experience for

both the students and the teachers.

We look forward to seeing some more LEP club members at next year's final - and hope that some will be there as competitors as well as visitors.



# A taste of real engineering

During the two week Easter break, schools from across south London were invited to attend two 4-day residential courses for Year 10 and Year 11 students. Co-ordinated by Ahmed Kotb, these residential courses were held at the University of Winchester in Hampshire.

A key part in the success of The Smallpeice Trust residential courses is the participation of graduate engineers from industry who take time out of their busy lives to facilitate and run part of the course. The challenges they set are similar to their day to day work, so the students get a real insight into the world of engineering.



The Year 10 residential was facilitated by Arup and United Utilities. Two young engineers from Arup, Ruth and Andrew, set students the task of creating a sustainable house design, anywhere in the world, for a very wealthy client. David and Chris from United Utilities set a challenge to develop new electricity pylons within a budget and using limited resources.

The Year 11 residential had graduates from The Home Office Scientific Development Branch set a challenge based on the upcoming 2012 London Olympics. Students had to design and build a miniature buggy that could be remotely controlled from a safe distance. These buggies had to navigate a darkened room using an onboard miniature camera and lights.

■ For more photos and details about similar courses please go to [www.smallpeicetrust.org.uk](http://www.smallpeicetrust.org.uk) and click on the LEP Link or contact Ahmed at the LEP: [ahmed@thelep.org.uk](mailto:ahmed@thelep.org.uk)

Ruth from Arup has expressed her thoughts on her experience on the Year 10 residential:

*"One of the reasons I was keen to help out at this course is because I attended courses with The Smallpeice Trust when I was a student, and they are one of the reasons I chose engineering as a career."*

*"What really impressed me about the course was the inventiveness of the students. We deliberately gave them a very open brief to encourage them to be creative and we weren't disappointed."*

*"The house designs ranged from a log cabin in the Rockies through to a glass pyramid in the jungle."*

*"I think the real advantage of the course is it gives the students a chance to talk to us, and to find out what it is like to be an engineer and what our job involves on a day to day basis."*

*"I was happy to work on this residential and would like to work on many more!"*



# Another Engineer joins LEP staff



**Hannah Collie has now joined the London Engineering Project. She will work alongside David Lakin as a Young Engineers Fieldworker in primary and secondary schools in south London.**

She has been working on the Project since April. Hannah has a background in civil engineering and immense enthusiasm for the subject.

During this summer term, Hannah will be supporting existing clubs and helping staff and pupils with a wide variety of engineering activities. Both Hannah and David will also be promoting Young Engineers to those schools not currently engaged in the programme, ready for the start of the new academic year.

# LEP Mentoring gets underway

**LEP mentor training is now underway as part of the London Engineering Project.**

Suzanne Garn is the LEP's fieldworker in charge of mentoring. She says,

*"LEP mentors are an integral part of the project and are essential to inspire and motivate students about higher education and engineering. They are able to relate to students and positively promote the London Engineering Project's aims. The mentors provide a link between school and higher education which is important not to leave unfilled."*

The mentors, who are STEM students from London South Bank University, will

provide important support and guidance at Young Engineers clubs, carry out role model talks and have already been working with students on study support sessions in the lead up to exams.

Also active at LEP events and activities, including those held during National Science and Engineering Week, the mentors complement individual sessions by supporting students on a variety of workshops.

One LEP ambassador, Abioye Oyenuga, says, *"Working as an Ambassador on the London Engineering Project has been loads of fun. It's great to have a chance to inspire students about a subject I have a passion for."*

The LEP is currently recruiting more ambassadors. If you are a science or engineering undergraduate or graduate, have lots of charisma and a little spare time, please contact us at: [contactus@thelep.org.uk](mailto:contactus@thelep.org.uk)

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