

The Engineering Pick 'n' Mix

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Abstract

This paper describes how London South Bank University (LSBU) and the London Engineering Project (LEP) set up the Engineering Pick 'n' Mix in order to engage young people in science, technology, engineering and mathematics (STEM).

Background

The LEP has been set up to engage young people in STEM with a particular emphasis on engineering. At the point of writing, the LEP has been running for four years in schools in South and East London. The project has introduced innovative activities in primary and secondary schools, with the aim of improving the eventual uptake of engineering and science subjects in higher education. This paper will examine one of these activities, 'The Engineering Pick 'n' Mix'.

Processes and practices

The Engineering Pick 'n' Mix is a hands-on, interactive activity that illustrates how creative engineering can be, it also supports work-related learning and encourages enterprising ideas.

This event is aimed at Year 9 students. The day begins with a presentation which introduces some of the different types of engineering. Pupils are then split into teams of around 4 – 5 and given a brief they have to:

- Invent a new product
- Plan a marketing strategy
- Make a prototype from a range of materials which they 'buy', within a budget, from an 'engineering store'.
- Present their enterprising ideas to their classmates and judges

The students are supported by LEP student ambassadors (students studying in the Faculty of Engineering, Science and the Built Environment at LSBU). For this event the LEP requests ambassadors from a range of subjects such as product design, electrical engineering and mechanical engineering – this means that students get to see how different types of engineers have to work together.



The LEP also invite STEM Ambassadors (volunteers from a range of engineering professions) to Engineering Pick 'n' Mix. The STEM Ambassadors often act as judges at the session; the teams present their final ideas and products to the STEM ambassadors and they select the winning teams. This is useful for students and teachers as it makes it more engaging for them – during the judging session students can talk to the ambassadors who are solving exactly the same problems in the real world as the students encountered during the day

This STEM Day encourages students to use their imaginations - there are no restrictions on what can be made! It also helps pupils to develop the transferable skills in areas such as team work, presenting and time management and working within a budget.



The LEP Approach

The LEP aims to engage girls in engineering and always aim to have an equal representation of male and female participants at events. The fieldworkers encourage teachers to bring at least 50% of girls along to this activity.

The LEP also aims to provide a range of roles for pupils and tries to ensure that ambassadors come from a range of backgrounds and that at least 50% are female. The ambassadors are trained to in ensuring that female participants are fully involved in activities.

References

For more information, please visit:

www.thelep.org.uk