

Appendix 2 – Queen Mary University Funding Report

Queen Mary University of London (Ref: 13689)

Purpose of the grant: £8,500 to support the running costs of two Science, Technology, Engineering and Maths (STEM) Summer Schools in 2017 for 30 year 10 students from across London.

Activities carried out

Over two weeks in July our staff hosted a cohort of 57 school students on campus who selected to attend our inaugural STEM Summer School. The Year 10 students were split in to small groups of about 4-5 people and offered an array of exciting opportunities to experience and understand real-world applications of STEM subjects. Each group was assigned a volunteer Maths Student Ambassador and a PhD student who were available to help and guide the groups through the week.

The school students took part in academic workshops and research projects on topics such as relativity and Archimedean solids. A programme of non-academic activities, including a campus tour and sessions on student budgeting, writing university applications and interview techniques were on offer; and student enriching activities such as a scavenger hunt and bowling, which were run by our Widening Participation team. Your gift also paid for attendees to travel for free to and from the Summer School and provided them with lunch each day.

At the end of each week, the school students presented the results of their research projects in a poster which was displayed & judged by the academic staff, PhD students and Student Ambassadors. Prizes were awarded for the best work & student contributions at a closing ceremony.

The Difference the project made

The main objective of the Summer School was to create opportunities to inspire and encourage disadvantaged students to apply to university and study a STEM subject, by highlighting what degree courses, and ultimately the career paths are available in STEM industries.

The week's activities and workshops were well organised and kept the school students engaged and interested. Feedback from all participants has been extremely positive.

The results from our post-event questionnaire has highlighted that all the school students enjoyed the workshops and research projects as it helped them to gain a greater understanding of complex topics. They found the participation of the PhD students instrumental to their overall learning and experience because they often acted as a bridge between the school students and academics and gave them an invaluable insight to university-style maths and sciences. Students enhanced their personal skills such as communication skills and teamwork by working in small groups; and the enrichment activities gave them the opportunity to meet new people

and socialise outside the academic environment.

The Summer School has had an invaluable impact on our PhD students too. They have strengthened their own skills and become more confident, leading and directing the small groups of students and communicating the scientific principles underlying complex experiments in a new, simpler language is essential to learn as they develop their career in scientific research.

The STEM Summer School has been an extremely positive experience for the school students and has achieved its objective of inspiring and encouraging disadvantaged school students to consider applying to university to study STEM subjects. According to our post-event questionnaire, 88% of participating students said that they plan to apply to university, and over half of them plan to study Maths. We aim to stay connected to the cohort and to continue to help them make informed choices about higher education.

Feedback from participants

Feedback from all participants in the STEM Summer School have been extremely positive and uplifting. Here are some of the things students said about it:

'The student ambassadors and coordinators were very friendly and made the experience more enjoyable.'

'It felt as though we were actual PhDs, doing full-time research.'

'It has been a very valuable learning experience, something you can't learn in a book.'

'It was amazing. I met a lot of people and learned so many new things about maths.'

Key Challenges

Outreach work in the School of Mathematical Sciences is still a relatively new offering and we faced some challenges around generating effective and creative means to market the programmes to teachers, schools and students. We ensured we utilised the expertise of other departments at QMUL who regularly engage with schools and in the main, were able to use these contacts to reach out to key school staff whose influence we know is crucial to attracting students to these initiatives.

Interaction with the City of London Corporation

We have found the City of London Corporation to be very approachable, helpful, informative and responsive during this process.