



# **Evaluation of Tomorrow's Engineers Core Funded Activities 2015 Key Findings**

**Prepared for EngineeringUK**

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## INTRODUCTION

Tomorrow's Engineers is more than a one stop shop for information and resources about the amazing careers available in engineering it also includes a schools programme help inspire the next generation of engineers.

Working in partnership with businesses, not for profit organisations and charities, the programme is made up of a number of initiatives, such as industry visits, workshops, Science, Technology, Engineering and Maths (STEM) Ambassador partnerships and careers resources, to help schools to incorporate engineering into the current curriculum and plant the seeds needed to grow local engineering talent required by businesses.

Tomorrow's Engineers is led by EngineeringUK and the Royal Academy of Engineering, with support from other organisations. The overarching aim of the Tomorrow's Engineers programme is to increase the pipeline of future engineers by:

- improving awareness about engineering and what engineers do among pupils and their teachers
- enthusing young people about engineering and the career opportunities available
- encouraging young people to make the subject choices that keep open the routes into a career in engineering

The impact of programme is evaluated and where possible compared to the "KS3 UK" responses identified through EngineeringUK's annual Engineers and Engineering Brand Monitor (EEBM). This report summarises the key results from the post event survey completed by students and teachers after participating in the Tomorrow's Engineers funded activities. There is a separate report for the Tomorrow's Engineers Energy Quest events.

For the Tomorrow's Engineers programme 2015 the objectives were:

- to understand student knowledge, perception and likely future choice of STEM subjects
- to ascertain the level of desirability and knowledge of science, technology and engineering careers and aspirations towards them
- to determine how much students know about where to find out more about engineering careers

The research was designed to evaluate the activities in terms of overall perception and knowledge of engineering and attitudes towards engineering as a career amongst both young people and teachers, so that we could ascertain:

- the perception and knowledge of engineering that young people have following the activity
- the level of desirability amongst young people and recommendation amongst teachers of engineering careers
- how attitudes towards engineering amongst young people and teachers compare to those surveyed in the EEBM

In total, 2667 responses (903 female and 1691 male) were collected, amongst just over the 30,000 Key Stage 3 students who participated. Additionally, we collected 542 responses from their teachers.

## KEY FINDINGS

- There looks to be the right balance between an enjoyable activity style maintaining pupil attention and engaging content that encourages learning about STEM and engineering
  - Tomorrow's Engineers activities were deemed to be enjoyable, rated better than a normal lesson and about the right length as only a few pupils stated that they were too long or too short
  - The people running the activities were well liked and 4 in 10 pupils got to meet an engineer as part of the activity that they took part in
  
- Importantly, the responses from students provides evidence of positive impact of the Tomorrow's Engineers programme on their views, knowledge of STEM and the desirability of related careers:
  - While positive views of science, technology and mathematics is in line with national levels, views of engineering are statistically significantly higher
  - Knowledge of what people working in science and technology are also significantly higher, knowledge of what people working in engineering do, at 60%, is twice the national level
  - Students' perception that a career in science or engineering is desirable, at 59%, is statistically significantly higher than the national level
  - The level of agreement that they know what to do next to become an engineer, at 59%, is also statistically significantly higher and more than double the national level
  
- In terms of having a positive view of STEM subjects as well as the level of knowledge and desirability of Science, Technology and Engineering careers Tomorrow's Engineers appears to be having a particularly positive impact amongst girls
  
- Teacher's feedback on Tomorrow's Engineers is positive, although confidence in giving advice about careers in science, technology or engineering could be higher
  
- Some variation in scores between delivery partners is to be expected, though it is desirable to reduce the degree of variation so that impact on the different measures is consistently high

## NEXT STEPS

The findings of this impact evaluation are broadly positive although there remain opportunities to increase the positive impact of the programme. The suggested next steps are:

- Identify good practice among delivery partners to emphasise messages on what people who work in science, technology or engineering do and what to do next to get there
- Hold a peer learning workshop with delivery partners to share these good practices
- Share these identified good practices to benefit other strands of the Tomorrow's Engineers programme and employer engagement work