



**Tyne and Wear  
Science and Technology  
Challenge Day -  
for high achieving Year 8 and  
Year 9 students**

## What are Science & Technology Days for?

They are regional competitions, which raise enthusiasm for STEM subjects and encourage young people to consider studying them at College and beyond.

In 2025, MCS Projects Ltd held 28 Challenge Days, involving 179 schools.

## What happens?

12 Year 8/9s are invited from each school. Working together in mixed school teams of four, they undertake activities that give them an insight into some of the topics they could study at College and beyond.

Activities are also designed to develop skills such as planning and team work that will be essential to their success in further education.

Throughout the day young people complete three of our four activities, each lasting for 75 minutes.

Plaques are awarded to the winners for each activity, and the overall winners receive trophies. A local V.I.P is invited to present these prizes. The overall winning team from each event proceeds to a regional Final.

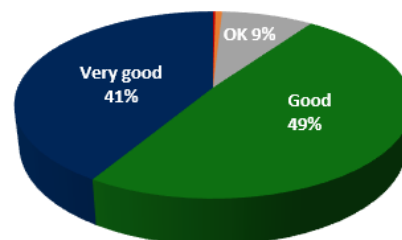
At the end of the day, young people can also put forward any questions they have about College / University to our team of staff.

## How are they rated?

Evaluations of last year's events indicated that:

99% of the teachers and 90% of the young people considered their Challenge Day to have been 'good' or 'very good'.

YOUNG PEOPLE'S OVERALL EVALUATION RESULTS



## 2025 Results

Additionally, 85% of young people said that their event had given them more information about the opportunities that exist in STEM subjects



## Importance of STEM events

The UK engineering and manufacturing industry employs 5 million people. Despite this, the Institution of Engineering and Technology estimates that there is a shortfall of workers in the STEM sector, which equates to an average of 10 unfilled roles per business.<sup>1</sup>



## The Robotics Challenge

Each team is provided with a Lego Mindstorm EV3 robot, which they programme in order to navigate around a course. Each robot is equipped with colour and infrared sensors.

## The E-FIT Forensics Challenge

Having witnessed a simulated crime, each team uses the latest E-FIT 6 facial recognition software (as used by more than 90% of UK police forces) to create a computer image of the thief. They also consider problems associated with memory and facial recognition



## The Vehicle Challenge

Each team designs and constructs a simple battery powered vehicle from kit pieces, considering power transmission, speed and torque. Each team's vehicle is timed between starting and finishing lines.

## The Medical Challenge

Each team undertakes the role of a doctor diagnosing a patient. They consider how to take a history, assess a patient's vital signs, examine X-rays and listen to breathing. They then learn about how to respond in an emergency using CPR dummies.



## I am interested, how do I book?

The Tyne and Wear Science & Technology Challenge Day will be taking place at **New College Durham [DH1 5ES]** on **Tuesday 14<sup>th</sup> July**.

It will begin at 9.30am and finish at 3pm.

The cost for a school to enter twelve young people to the event is **£438 + VAT**. Costs can be adjusted pro-rata. Places are allocated on a first come first served basis.

To reserve a place for your school please email us to confirm that you'd like to attend.

| <b>John Waterworth</b>                                                                         | <b>Paul Waterworth</b>                                                                         |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Project Manager                                                                                | Director                                                                                       |
| Science and Technology Challenge Days<br>and Medical Careers Days                              |                                                                                                |
| <a href="mailto:john.waterworth@mcsprojectsLtd.co.uk">john.waterworth@mcsprojectsLtd.co.uk</a> | <a href="mailto:Paul.waterworth@mcsprojectsLtd.co.uk">Paul.waterworth@mcsprojectsLtd.co.uk</a> |
| 07725 817009                                                                                   | 07702 221 938                                                                                  |

