

## Case Study – Queen Elizabeth High School, Hexham The Engineering Education Scheme

### Background about the school

Queen Elizabeth is a community high school with over 450 students in the sixth form. It is situated in Hexham, Northumberland and attracts students from Hexham itself and the surrounding rural area.

### What we were trying to achieve

QEHS decided to take part in the Engineering Education Scheme to help develop student interest in science as a career, while at the same time trying to embed enterprise into the subject. It was hoped the scheme would allow students to improve enterprise skills while working on real life problems related to science.

### What we did

The scheme is run nationally and about 250 students from 50 schools are taking part in our area. By taking part in the scheme the students will gain an insight into the careers available in the different engineering sectors. They will also develop their independence and initiative, improve their communication skills and learn to work to deadlines.

Eight students are involved, working in two groups. Each group was assigned to an engineering company that set them a problem to solve. One group had to design a clamp to hold a missile whilst the other challenge was to design a ground source heating system for a school. The teams met regularly with an engineer to develop their solutions. In December a residential course was held at Newcastle University. This allowed the teams to focus fully on their project for three days. They were able to complete practical work in the laboratories and one team spent a full day at the engineering company's offices using their design software. The residential also enabled the students to meet participants from other schools. At the end of the course each team gave a presentation of their work so far.

The scheme finishes in April with a formal presentation of the teams' work.

### What worked well

The students are finding the scheme challenging and rewarding. Their confidence and communication skills have improved and they have enjoyed organising and planning their own activities. They now have a much greater awareness of the range of careers available and what routes they might take into those careers.

### What we learned/What other schools can learn

There are many benefits of this project including links to industrial enterprises, work related opportunities for students using their innovation and enterprise skills and the chance for some students to see their ideas and designs implemented by real companies. As a means of engaging students it has been fantastic – they have really risen to the challenge, giving a huge amount of their own time to support their team in producing the best possible solution.