



## Robot Challenge

**SCHOOL:** Brookfield, Ruffwood and St Edmund of Arrowsmith

**PHASE:** Secondary

**KEY STAGE & YEAR:** Year 10, Key Stage 4

**CURRICULUM AREA:** Technology/Science

**LINKS TO PLANS/NC:** CLC aims: 2, 3, 8 Obj: 9, 12, 14, EiC/CLC: SO2, 4/FA1, 2, 4  
ICT Strategy: CLA 1, 4, 6, EL 1, 2, ED 1, 5, 6, FS 1, 3  
EDP2 1a, b, c, d, 4, 6, 7

**DURATION:** One afternoon

### LEARNING OBJECTIVES

- ✍ To raise awareness of engineering/science opportunities.
- ✍ To offer an opportunity for families to work together and share knowledge and expertise.
- ✍ To learn the basics of control technology and it's components

### BRIEF

The BBC, Merseyside CLCs, Open University and local companies supported a series of pilot workshops that bring together families, schools and community partners together to design and build the next generation of robots.

Year 10 students and their families from Brookfield, Ruffwood and St Edmund of Arrowsmith School spent a day getting to grips with various robotic activities. Challenges included Robot Soccer, Building a Robot, meeting the Martian Robots, an opportunity to have a go at Techno Games and building Virtual Build-A-Bot.

The ultimate test came for the robots when the students were given the opportunity to race them. Which would be the fastest?

### DESCRIPTION

In addition to building a robot kit, students were able to use the BBC's 'Build-A-Bot' online program. This site helps you to build a virtual robot step by step as well as giving you information about the manufacturing processes at [www.bbc.co.uk/robots](http://www.bbc.co.uk/robots). Why not check the site out?

Anyone for Robot Soccer? The students programmed a robot using RoboLab software to play soccer. Who would win, will it be Everton or Liverpool?

Workshops included sessions on instructing Martian Robots to pick up rocks and deposit them on the moon using a remote control mechanism. Other activities included a mini motor race using radio controlled cars.

Students were also able to spend some time with Ian Watts, Expert Roboteer before he gave a finale demo with 'Big Bro', his winning robot from the Robot Wars series. The students even got to have a go with the celebrity robot!

### OUTCOMES/EVALUATION

Family Robot Days is a community learning initiative designed to capitalise on the UK's incredible craze for Techno Games, a robot Olympics that runs as an annual event on BBC2. Participants were given the opportunity to register to enter the 2003 series. Teams will be able to work towards this event with the support of the City Learning Centre who will host workshop sessions between March and October 2003. Watch this space for more details.

As a result of student requests "When's the next one?" The Centre ran a series of Robot Challenge follow up workshops as part of the WebEds programme. As part of EiC week 2004, the Centres will be running a complementary programme of robotic challenges to support the Science and Technology curriculum at Key Stage 2, 3 and 4, which include the expert tuition of a science engineer and Robot Wars celebrity – watch this space!

