What will the workshop include?

The workshop is aimed at pupils in Year 5 or 6. Mixed year groups are also more than welcome to participate. Please note that ideally the maximum pupils per workshop session is 30.
Workshops normally run from 10:00 – 14:00 with appropriate breaks for lunch etc.

During the workshop the children will:

- learn how to programme the buggy not just to move but to turn on lamps as and when required.
- develop their own programmes
- use the programme to move the buggy around
-be set a variety of challenges
-take part in positive and constructive hands-on learning opportunities

The programme has been evaluated by Lancaster University. To see the report visit the STEM Activities for school section on our website:

www.cumbriastemcentre.co.uk/stem.asp

How will pupils benefit from the Robolab Workshop?

The pupils will increase their knowledge and understanding of:

Control Technology and Remote Operating Skills.

The pupils will develop and apply;

- ICT skills
- Maths and Literacy skills.
- Programming skills
-Team Working skills
-Problem solving skills

Pupils will also HAVE FUN.

Cumbria Stem Centre Ltd is a not for profit registered charity. Activity costs cover time, travel and materials only, therefore Robolab is charged at £190 per day.

All equipment is provided. Access to an interactive whiteboard is useful.

For further details contact;-
Cumbria STEM Centre Ltd
Tel: 01539 814617
www.cumbriastemcentre.co.uk

Robolab Key Stage 2

Robolab Control Technology Workshop

Cumbria STEM Centre Ltd

Cumbria STEM Centre Ltd
Promoting Science, Technology, Engineering & Maths

The Robolab Workshop.

Robolab uses a Lego RCX 'smart' brick (built onto a Lego Mindstorms buggy) that can be programmed by a computer, via an infrared tower, using Robolab software.

This is an introduction to Control Technology. The software uses simple icons and pupils work in groups of three with a laptop and buggy per group. The brick has three outputs that turn on motors and lamps, along with three inputs that receive information from, for example, touch or light sensors.

Different challenges will be set for the children to programme the buggy to do different things, eventually combining each of the icons and using the inputs and outputs.

This leads to a greater understanding of step-by-step programming through practical application.

'Robolab' in action!

Curriculum Links.

Developing Ideas and Making Things Happen
KS2 2b Pupils will be taught how to create, test, improve and refine sequences of instructions to make things happen; to monitor events and to respond to them

Reviewing, Modifying and Evaluating
KS2 4c Talk about how they could improve future work

Control Technology Level Descriptors

1c They recognise that many everyday devices respond to signals and instructions. They make choices when using such devices to produce different outcomes

2c They plan and give instructions to make things happen and describe the effect

2d They use ICT to explore what happens in real and imaginary situations

3c They use sequences for instructions to control devices and achieve specific outcomes

4f They use ICT systems to control events in a predetermined manner and to sense physical data

5e They understand how ICT devices with sensors can be used to monitor and measure external events.

5d They create sequences of instructions to control events and understand the need to be precise when framing and sequencing instructions

6d They develop, try out and refine sequences to monitor and control events and show efficiency in framing these instructions