



Supporting Practical Science, D&T and Art

- in schools and colleges

CLEAPSS®, Brunel Science Park, Kingston Lane, Uxbridge UB8 3PQ
50 years of exciting and safe practical work
1963 – 2013

Tel: 01895 251496
e-mail: science@cleapss.org.uk

Web site: www.cleapss.org.uk

CLEAPSS Microcontroller Competition

Following on from the success of our annual primary school science competition, we are pleased to announce that we will be running a secondary competition for STEM subjects in secondary schools and colleges. The aim of this competition is to encourage pupils to develop creative outcomes using modern microcomputer controller systems.

We will be rolling out the competition with a soft launch in late 2015, and official launch at the ASE and BETT conferences in January 2016 with a deadline of Friday 22nd July 2016.

The brief is as follows:

Students are to design and build an electronic device which uses a microprocessor or microcontroller such as Arduino, Raspberry Pi, BBC Microbit, or an alternative.

Some ideas:

- Home, work, or school automation device (see the automatic plant waterer article in the CLEAPSS 2015 Autumn bulletin)
- Security system/Intruder Alarm
- Sound reactive lighting
- Disability aid
- Wearable technology
- LED display weather station
- Anything else which your students can think of!

This is a perfect opportunity to promote STEM subjects within your school and will be best suited to lunchtime/after school STEM club. Please circulate this information to your Head of Science/Technology, or STEM co-ordinators within your school.

We will be judging projects by electronic evidence submitted in a PowerPoint file which must include pictures, diagrams, coding, progress reports and ideally an embedded video showing the operation of the device. **The file must be limited to 20 slides, and have no more than 3 minutes of video footage.** This can be posted on a USB stick (we won't be able to return entries), or through a file sharing site like Dropbox or Google Drive.

List of prizes:

3D printing resources from Kora

e-Textiles kits from Julie Boyd

CAD Software from Techsoft

Microcontroller and electronics bundles from CLEAPSS

Criteria for judging will include:

- Uniqueness of device
- Balancing a complexity of device with efficient use of resources
- Success in solving a real world problem
- The layout and content of the PowerPoint file.

Please note, that CLEAPSS Health and Safety guidance must be followed at all times, including (but not limited to), safe use of Lasers/LEDs (see PS52) and 40V DC/28V AC limits on open circuit work (see Section 12 of the CLEAPSS Handbook).

We are happy to support schools with their entries, so if you have a query, please get in touch.

e-mail science@cleapss.org.uk