



CORE

Creative Outreach for
Resource Efficiency

Engaging young people in world-class science

Creative Outreach for Resource Efficiency (CORE) supported the delivery of a vibrant and creative outreach programme helping academics to “get out of the lab” and communicate world class science to new audiences.

One of the outreach activities supported by the CORE project was a series of innovative STEM workshops for secondary school pupils.



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CORE established a partnership with Leicestershire Education Business Company (LEBC) which specialises in creating successful links between business, universities and education.

Two research projects, Cleaning Land for Wealth (CL4W) and CLEVER worked with LEBC to develop workshops that would communicate their research to school children in engaging and interesting ways. LEBC provided training for the academics to ensure that they were prepared for working in a school environment.

The students were able to see first-hand how scientists from leading Universities were working together to solve real-world problems.

The CL4W workshops demonstrated how bioengineering can be applied to clean contaminated land and recover valuable resources. Students were given the opportunity to explore what is in our soil, and how different scientific methods – including bioengineering – can be applied to clean contaminants from the land. The hands-on activities included using Lego bricks to show how bacteria can be used to extract metals contaminating the environment, observing how plants like celery take up materials out of the earth, dissecting mushrooms to find out more about the role of fungi in cleaning biomass, and investigating the causes of land contamination in the UK.

The CLEVER workshops included looking at why people keep electronic devices such as mobile phones after they have been replaced by new ones, the hidden value of the components that make up a mobile phone, and also the environmental impact of mining, manufacturing and transporting these valuable resources.

Key to success

The key to the success of the workshops was working in partnership with education experts who could provide the essential bridge between the University research projects and the schools and their pupils. This ensured that the workshops were pitched at the right level and fitted in with the curriculum. LEBC also provided training for the academics so they were equipped to deliver workshops to school age young people.

→ **A teacher commented:**
“The workshop was perfectly pitched for the work we have been doing in class. We would definitely like to use the resources for our school in the future.”



A researcher commented:

“The training was useful for challenging the preconceptions about working with audiences of school children and also as a way to work out some of the problems we would have on the day.”

The teams decided to create resources that would ensure that the legacy of the project would go beyond the two day workshops. Toolkits (based on the content of the workshops) have been distributed to local schools. Electronic versions can be downloaded from the STEM Net website (www.stemnet.org.uk). This will ensure that the resources can be shared nationally. A case study has been published on the National Coordinating Centre for Public Engagement website www.publicengagement.ac.uk.

Our recommendations

If you are thinking of working with local schools, consider:

- **Work with education partners who have links with local schools and teachers.**
- **Contact your University's Schools and Colleges Liaison Team.**
- **Train your researchers / academics. Do not assume that they are comfortable with working with younger age groups.**
- **Make the workshops engaging, interesting and appropriate to the curriculum.**
- **Create materials that can be used by a wider audience.**

Led by Loughborough University, Creative Outreach for Resource Efficiency (CORE) was a collaboration between the Universities of East Anglia, Cranfield, Edinburgh, Loughborough, Manchester, Surrey and Warwick.

→ **Impact is about reaching new audiences as well as bigger audiences**