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Community Based Research by Applying Chemistry

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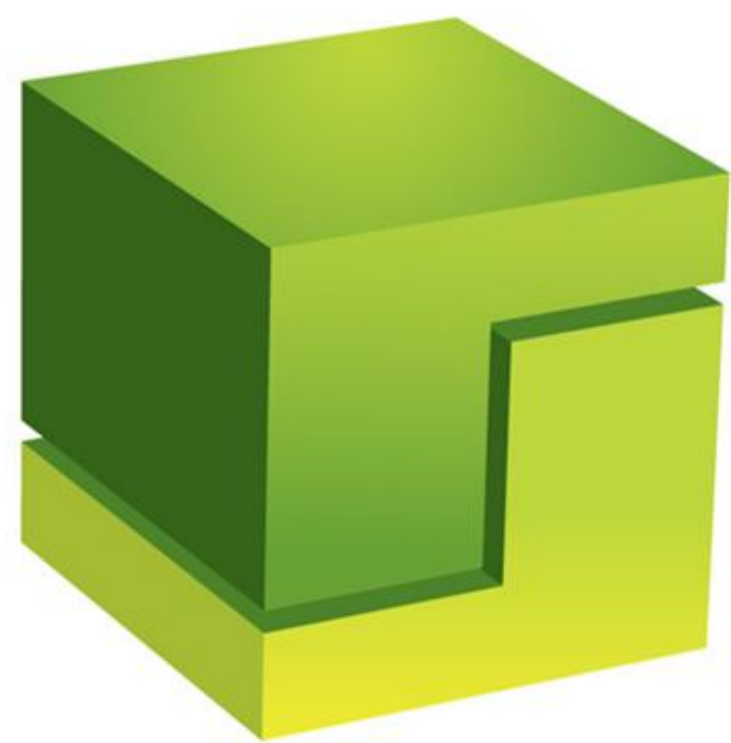
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students learning with communities

Community Based Research by Applying Chemistry



Students Learning with Communities



Road Safety Awareness - Breath & Urine Testing for Alcohol

Final year students on the BSc in Forensic & Environmental Chemistry determine alcohol concentrations in breath & urine samples provided anonymously by their peers. The purpose is to raise awareness of road safety as part of the DIT College Awareness of Road Safety (CARS) initiative. A breath test survey is also carried out with students the morning after a Rag Week event using breathalysers provided by the Garda Road Safety Unit.

(Staff involved: Dr John Fox & Dr Claire Mc Donnell)

Long-term Study of Soil Quality for a Community Garden & Grangegorman Site

This project is examining soil quality indicators and typical soil contaminants over an extended period of time for the arable portion of the DIT Grangegorman site and an adjacent community garden. A preliminary study by two students on the BSc in Medicinal Chemistry & Pharmaceutical Sciences in February 2010 established baseline levels of heavy metals & polyaromatic hydrocarbons (PAHs). The results indicated that the levels of these contaminants did not give any cause for concern. Levels in the community garden, as expected, were higher than those found on the Grangegorman site as the community garden soil is regularly disturbed while the Grangegorman soil has lain undisturbed for many years. The levels of lead detected in the community garden in 2012 indicated that some further investigation is appropriate and this finding has been communicated to the community partner.

(Staff involved: Dr Barry Foley & Prof John Cassidy)

Student Placements with Wells for Zoe Charity in Malawi

In March 2012, two students from Year 3 of the BSc in Forensic & Environmental Chemistry spent 6 weeks in Malawi with the Wells for Zoe charity. They worked with second level science teachers and tested local water and soil quality as well as helping to manufacture water pumps. The students continued their placement in DIT and performed further soil analysis and developed chemistry lab teaching and learning activities suitable for use with limited resources.

(Staff involved: Dr Claire Mc Donnell, Prof John Cassidy & Mr Ciarán O'Leary)

Why Get Involved in SLWC Projects?

Students can work in a real life environment, see how their discipline knowledge is applied and learn from their community partners. DIT staff get to work for the benefit of the community as part of their job & invariably find these assignments more rewarding, interesting & enjoyable than traditional approaches.

For further information, contact Claire Mc Donnell at +353 1 4024571 or claire.mcdonnell@dit.ie

Further Reading – Our Journal Article

C. McDonnell, P. Ennis, L. Shoemaker, (2011) "Now for the science bit: implementing community-based learning in chemistry", *Education + Training*, 53 (2/3), 218 - 236

