

CBL/CBR Case Study Template for campusengage.ie

Community-based learning and research are academic approaches that seeks to engage and accredit students, within the curriculum, for working in partnership with civic and civil society organisations (CSOs) to act on local societal challenges.

Environmental Protection

Project Title: Teach to Learn – Seashore Science Project

Community Partner(s): Trinity Comprehensive School

Trinity Comprehensive School is a secondary school located in North Dublin in a neighbourhood characterised by above average levels of social and economic disadvantage. Many of the student population in Trinity Comprehensive School come from backgrounds under-represented in higher education and may have experienced social and educational exclusion.

Faculty: BSc in **Environmental Science and Technology**
School of Chemical Sciences
Faculty of Science and Health
Dublin City University

Community-based learning/research activity (Module Outline):

This annual project aims to promote science to a class of second year students from Trinity Comprehensive School in Dublin by introducing them to scientific concepts through seashore and environmental monitoring with a strong emphasis on the “teach to learn” approach.

Second year EST students at DCU receive lectures and training, including preliminary field trip to learn the concepts of seashore science.

The Trinity Comprehensive School pupils are invited into DCU, where they receive structured and tailored tuition from the EST2 class. This informative workshop series precedes the field study and lays the foundation for a successful seashore investigation.

Following that, a field trip is organised for the secondary school pupils, who are then encouraged to learn by participation in a field study in a seashore location supervised by the university’s EDT students.

The results of the seashore survey are recorded each year. In this way, the field trip can feed into the “citizen science” concept that seeks to encourage science among the community while also gathering valuable data.

There are three main aims of the Teach to Learn Project:

1. to promote science to secondary students through environmental field-work; introduce the students to basic scientific concepts to help them appreciate environmental science;

	<ol style="list-style-type: none"> 2. to promote the concept of “teach to learn” among university students by allowing EST students to teach the secondary students; to expose EST students to teaching which opens up another dimension in their learning; 3. to promote third level education in STEM as an option for secondary school students from disadvantaged backgrounds.
Student learning outcomes	<p>For many DCU students the project is the first time they are exposed to teaching which gives them a new outlook on the teaching and learning of science. The project stimulates university students to transform from student to teacher and allows them to develop DCU graduate attributes.</p> <p>University students gain confidence through teaching and seeing their efforts realised. This project exposes university students, many for the first time, to a situation where they are given responsibility for the well-being of somebody who may be more vulnerable than them.</p>
Community outcomes:	<p>Apart from learning about the importance of sustainability, the technologies used to analyse the environment and the impact of changes on natural environment, Trinity Comprehensive pupils are provided with role models that can inspire them into studying STEM subjects at third level in the future and to see university as an open, accessible place where they can learn about and contribute to the world around them.</p> <p>Trinity Comprehensive pupils gain confidence through interacting with university students, completing the seashore survey and realising that there are many ways to view the natural world.</p> <p>The promotion of science and learning through student-student interactions is a way to inspire young pupils that do not have the supports that most of university students take for granted.</p>
Further details:	<p>A major aim of this project is to show that Dublin City University is not an inaccessible “Ivory Tower” and to encourage young students from socio-economically disadvantaged backgrounds to pursue future education options in STEM subjects.</p> <p>The reaction from both sets of students over the past years has been extremely positive. Both university students and secondary school pupils found the interactions rewarding and both groups indicate that they learned significantly more when compared to the usual lecturing/teaching approach.</p> <p>The project won a Special Merit Award at the 2016 DCU President’s Award for Engagement.</p>
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Additional materials:

Teach to Learn Project Video: <https://www.youtube.com/watch?v=RbIDJeo-t9o>

High quality photo/logo from project:

Annual DCU-Trinity Comprehensive School, Ballymun, Seashore Science Programme
(Brian Kelleher & Vincent Hooper [DCU], Sineád Henegan [TCB])
School of Chemical Sciences DCU

Scope:
This annual project aims to promote science to a class of second year students from Trinity Comprehensive School, Ballymun (TCB) by introducing them to Scientific concepts through seashore and environmental monitoring with a strong emphasis on the "teach to learn" approach.

The school pupils are encouraged to learn by participation in a field study in a seashore location (Sutton). A very important component of this initiative is that the secondary pupils are taught by the second year Environmental Science and Technology (EST) students from DCU

The TCB pupils are invited into DCU where they receive structured and tailored tuition from our EST2 class. This informative workshop series precedes the field study and helps lays the foundation for a successful seashore investigation.

Aims:

- By allowing EST2 students to teach the TCB students the project promotes the old concept of "teach to learn" among our students. Exposing EST students to teaching opens up another dimension in learning.
- This collaboration helps to raise the profile and further promote the TCB Scholarship Class.
- This collaboration has created an added incentive for all of those pupils within TCB not already part of this scholarship programme, encouraging these students to achieve their maximum potential.
- Introduces the students to basic scientific concepts that encourages them to appreciate environmental science.
- The interaction between the DCU and TCB students (and in particular the pre-field trip workshop series) allows the secondary students to see that third level is not inaccessible and with a genuine interest in a subject, anything can be achieved.
- Promote science to secondary students through environmental field-work.

Please see the DCU Youtube clip (3-4 minutes) that includes interviews with students, teachers and academics.
<https://www.youtube.com/watch?v=RbIDJeo-t9o>