Science Clubs Programme Data

1. Overview

The BDI's After-School Science Club enables 12-14 year olds students to explore and investigate in a 'real science' environment. Emphasis is placed on the relevance of science to people's life and the application of the science in the real world, in a way that the student can enjoy.

The After-School club was piloted in late 2009. Evaluation data was collected in a variety of ways. The students were filmed and interviewed as a group at each of the science club sessions. An observer was also present during the sessions. 20 students participated in the pilot programme.

Science Club Aims

- To develop a suite of hands-on, discovery-rich workshop modules for 12-14 year old students.
- To encourage an inquiry-based approach to science education, enabling independent exploration.
- To encourage further interest in science.
- To maximise the facilities available in the E&O lab.
- To link the science encountered at school to real-world situations.
- To highlight the multidisciplinary nature of research at the BDI

2. Impact

2.1 Knowledge and Understanding.

- Students gained a good understanding of facts and processes. They were able to build on previous knowledge, but it was also possible to address some misconceptions that the students developed before the programme.
- Previous knowledge (often from school or television) was deepened and further reinforced.
- The students developed an understanding of scientific research, and universities as a place of work and research.

2.2 Skills

- Students learnt principles of measurements (e.g. water, powders, pipetting), and especially learnt to work with different units of measuring (e.g. measuring out 100ml)
- Students also learned to handle lab equipment (pipettes, beakers, Bunsen burner), and developed the ability to work safely in a lab
- A further skill the student developed was to test predictions and use the scientific method.
- Students learned to document their experiences in the lab.
- Skills that the students developed further were team work, communication and child-adult interaction.

2.3 Values and Attitudes.

- Student developed a more positive attitude towards science (many did not like science in school, and associated science fully with the school subject).
- A career as a scientist became more attractive. Attitudes changed because of the realization that science might be a well paid profession, and a social enterprise.
- The social aspect of the science workshop changed the view of the students on science as a solitary undertaking.

2.4 Enjoyment, Inspiration and Creativity.

- The workshop was perceived as fun, and the activities as very enjoyable.
- The rapport to course leader and with each other was relished.

2.5 Activity, Behaviour and Progression.

- The experience of science as a fun activity lead to a more positive attitude, so much so that experiments were replicated at home.
- The student were interested in taking part in further after-school clubs.