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Author(s): Andrew Lee

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Real World Science

Andrew Lee, Project Manager, Real World Science. andrew.lee@nhm.ac.uk

The Real World Science project provides museum-based activities to support and enrich the secondary science and geography curricula. The project aims to:

- To support and enhance students' learning at the secondary level and to inspire students to progress in scientific learning at secondary and higher level
- To enable students to understand the impact that science has on their lives
- To provide role models to inspire students to consider studying science post-16 and beyond
- To support the development of creative, critical thinking and communication skills

The four museums in the partnership; the Natural history Museum, The Manchester Museum, the Oxford University Museum of Natural History and the Hancock Museum provide a range of curriculum based activities for Key Stages 3-5 (11-19yrs) giving students the opportunity to engage with museum and university scientist, to handle objects from the museums' collections, go behind-the-scenes to see science in action and to participate in fun and inspiring science shows and practical workshops. Over 11,000 students a year are now participating in these activities. The project is funded by the Strategic Commissioning Education programme (DCSF/DCMS) and has been running since 2005.

The Real World Science programme brings breadth, stretch and depth to the curriculum and helps children make sense of it by using the authentic science and science communication expertise of natural history museums. The museums' considerable educational advantages are used to enhance understanding of science curriculum concepts:

- awe-inspiring specimen collections
- exhibitions designed by specialists in science communication
- interactive exhibits and props designed to support science concepts
- museum staff skilled at capturing students' interest and engaging them in discussion
- links to the history of science and society.

The museums provide a real-world context for the science the students encounter in the classroom. Students see the importance and status science has within our society, by the museums' very existence and the quality of the displays and science on show. Students see that in this public place, science is for all, and meet enthusiastic museum scientists who counter stereotypes and open students' eyes to career possibilities. Some science encountered on a museum visit will fall outside the curriculum, providing background knowledge, context and complementing school science.

Responses from students involved in the programme allow us to monitor the overall impact of the programme. For example, students attending the A-Level Biology Study Day at the Natural History Museum are asked 'Has your visit [to the museum] affected any plans you may have for studying science further?' This has enabled us to report that in 07/08 that 27% of students attending this session stated that their visit has positively affected their plans to study science further.

Teachers' evaluation responses help to ensure that the programme meets their objectives in terms of both the content, quality and the practical logistics of the visit. Teachers are also provided with the opportunity to suggest areas for improvement. In the project year 05/06 we published the result of our consultation with Teachers *'How can natural history museums support secondary science teaching and learning.* Some examples of this feedback from teachers:

'They were fascinated. Very successful, linked in well with current syllabus.'
(Cardinal Vaughan Memorial School)

'Some excellent ideas here. Good lively presentation. Physical modelling was fantastic.'
(Icknield High School)

'They [students] looked fascinated! Great stuff. We'd like our teachers to teach like this!' (Richards Lodge High School)

‘I thought the interactive nature and use of technology was very well used and created an exciting visual and kinaesthetic learning environment.’ (Thornden School)

‘All the students were really engaged. Some were truly inspired.’ (St Martha’s R C School)

‘There was a tremendous depth and breadth of science presented in an accessible way.’ (Henry Box school)

The changes have been made in response to our evaluation. Alterations have been made to the timing and frequency of programmes; for example extra shows have been scheduled due to high uptake, and A-level programmes with increased capacity have been, and are being developed. Workshops have been scheduled later to allow for transport problems. The length of workshops has changed in response to feedback; a workshop was lengthened, for example, to allow for more time for students to search for microfossils under a microscope. Some teachers suggested that we include more practical demonstrations in our science show which we have done.

Real Earth Science - the partnership has just completed a 6 month feasibility study to facilitate a three-year project supporting the teaching and learning of earth sciences through on-site programming in museums (with natural history collections), video conferencing, online interaction and Continuing Professional Development of secondary science teachers. This bid is now awaiting a funding decision from a commercial sponsor.



Re-living the Great Debate; on of the interactive sessions with secondary school pupils engaged in Real World Science at the Natural History Museum, London.

The partnership has also been in discussions with museums, MLA, STEM, Science Learning Centres and other regional based organisations regarding the establishment of a national network to support secondary science teaching and learning with an overall desire to support museums wanting to provide programming for this audience. We are now considering the next steps to take this forward.

Aren’t Birds Brilliant – in Glasgow

Naila Akram, RSPB

Aren’t birds brilliant! In Glasgow is a two-year project that was set up to help inspire people about the amazing wildlife that inhabits the heart of this buzzing city.

It is based at Kelvingrove Museum, situated in the west end of Glasgow, which is currently Scotland’s most popular visitor attraction, with over 3.5 million visitors each year. Kelvingrove has a deep-rooted significance to many Glaswegians, who visit it time and time again throughout their lives, and it was recently voted Glasgow’s favourite building.