



GeoBus: sharing science research with schools

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GeoBus (www.geobus.org.uk) is an educational outreach project that was developed in 2012 by the Department of Earth and Environmental Sciences at the University of St Andrews, and it is currently sponsored by industry, NERC, The Crown Estate, and the Scottish Government. The aims of GeoBus are to support the teaching of Earth Science in secondary (middle and high) schools by providing teaching support to schools that have little or no experience in teaching this subject. This is, in part, done through the sharing of new science research outcomes and the experiences of young researchers with school pupils to provide a bridge between industry, higher education institutions, research councils and schools. Since its launch, over 40,000 pupils will have been involved in experiential Earth science learning activities in 190 different schools (over 400 separate visits) across the length and breadth of Scotland: many of these schools are in remote and disadvantaged regions. A new GeoBus project is under development within the Department of Earth Sciences at UCL in London.

A key aim of GeoBus is to incorporate new research into our workshops with the main challenge being the development of appropriate resources that incorporate the key learning aims and requirements of the science and geography curricula. GeoBus works closely with researchers, teachers and educational practitioners to tailor the research outcomes to the curricula as much as possible. Over the past four years, GeoBus has developed 17 workshops, 5 challenge events and extensive field trips and each of these activities are trialled and evaluated within the university, and adjustments are made before the activities are delivered in schools. Activities are continually reviewed and further developments are made in response to both teacher and pupil feedback. This critical reflection of the project's success and impact is important to insure a positive and significant contribution to the science learning in schools.

Two case studies will be introduced in the presentation: 1) an overview of the working relationship between GeoBus and a researcher from the School of Physics and Astronomy at St Andrews, Dr David MacFarlane, which resulted in the development of the Monitoring Volcanoes workshop for Level 3 (Curriculum for Excellence, Scotland) and Key Stage 3 (England, Wales, Northern Ireland) pupils; and 2) the development of two new all-day activities on Carbon Capture and Storage that closely involved two of our sponsors (Shell and The Crown Estate).