



British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Geoscience for decision-making

Earthquakes in the Classroom - Wednesday 30 May 2007

Earthquakes provide a source of fascination for all students. Get them hooked with interactive lessons that are practical and fun and this may nurture a future generation of earth scientists.

A project designed to 'shake up' science lessons will be launched by The British Geological Survey on Wednesday 30 May 2007 at the Institute of Physics in London.

Students across the UK are being invited to measure minute vibrations in their own classrooms that travel through the Earth from earthquakes that have happened thousands of kilometres away. Schools in the UK will be able to compare and exchange the data they record with schools in the USA. The sheer amazement of detecting signals from such distant events never fails to produce a 'wow moment', not only in the classroom but on occasion even in the staffroom!

The UK School Seismology Project aims to make science lessons more exciting for students of all ages by using earthquakes and seismology as a unifying theme. A comprehensive set of classroom activities are now available to enable students to study how earthquakes happen, build their own seismometers and ultimately set up a seismic monitoring station in their own school. These stations can detect signals from earthquakes greater than magnitude 6.5 that happen anywhere in the world and occur between 30-40 times per year.

The aims of the project are to:

1. Make science more interesting - introduce a 'WOW' factor
2. Improve participation rates in physical sciences
3. Promote the inclusion of Earth Science into the science syllabus
4. Increase awareness of Earth Science as a career option

Dr Brian Baptie, Project Manager at the British Geological Survey said: "*The sheer destructive power of earthquakes holds a deadly fascination for all of us*".

Professor Peter Styles, Director Environment, Physical Sciences and Applied Mathematics Research Institute at Keele University stated: "*Being able to see live the vibrations of earthquakes arriving from distant parts of the world, and then, if thankfully rarely, appreciating the environmental, sociological and economic consequences of these geohazards is a true integrated educational experience*".

Chris Butlin, Curriculum Developer and Science Writer observed: "*The key in science education is the development of a curriculum that can excite and*

stimulate both students and teachers - the UK School Seismology Project is an example of this. These resources provide an opportunity for examination boards to develop new areas of their examination specifications”.

The project is a collaborative venture between the British Geological Survey (BGS) and the Science Enhancement Programme (SEP) with funding from the National Endowment for Science, Technology and the Arts (NESTA). Assistance has been provided by the Science Learning Centre, East Midlands and many science teachers across the UK. The project is also supported by the Institute of Physics and the seismometers are designed and manufactured by Middlesex Universities Teaching Resources (MUTR).

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Notes for Editors

- To arrange media interviews please contact Dr. Marie Cowan at BGS Press Office, Tel.: +44 (0)28 9038 8462, Mob: 0781 4212644, E-mail: mtc@bgs.ac.uk
- The project involves amateur seismologists, Chris Chapman and Stewart Bullen, and engineers from Middlesex University Teaching Resources (MUTR) in collaboration with the Science Enhancement Programme (SEP) to modify a century old seismometer design. The result is the SEP seismometer system, a simple horizontal pendulum seismometer based on the Milne-Shaw design (as seen in the Science Museum). This has been updated with tungsten carbide bearings, rare-earth magnets for detecting the motion and providing eddy-current damping, and modern digital electronics to capture and digitise the signal for easy monitoring on a PC.
- The project WebPages may be found at www.bgs.ac.uk/schoolseismology/.
- To get involved in the UK School Seismology Project or seek more information please email: schoolseismology@bgs.ac.uk
- The British Geological Survey (BGS), a component body of the Natural Environment Research Council (NERC), is the nation's principal supplier of objective, impartial and up-to-date geological expertise and information for decision making for governmental, commercial and individual users. The BGS maintains and develops the nation's understanding of its geology to improve policy making, enhance national wealth and reduce risk. It also collaborates with the national and international scientific community in carrying out research in strategic areas, including energy and natural resources, our vulnerability to environmental change and hazards, and our general knowledge of the Earth system. More about the BGS can be found at www.bgs.ac.uk.
- NESTA is the National Endowment for Science, Technology & the Arts. With endowed funds of over £300 million, its mission is to transform the UK's capacity for innovation. It does this in three main ways: by working to build a more pervasive culture of innovation in this country; by providing innovators with access to early stage capital; and by

driving forward research into innovation, with a view to influencing policy. www.nesta.org.uk

- The Science Enhancement Programme (SEP) was set up in 1998 to develop innovative practical activities for secondary science education, and to provide support for science teachers at all stages of their career. It works in partnership with Middlesex University Teaching Resources to offer low-cost equipment and materials that are often unavailable from other sources. SEP is funded by the Gatsby Charitable Foundation to help achieve one of the charity's key aims of improving education across science. www.sep.org.uk