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Data Logging and Data Modelling: Using seismology and seismic data to create challenge in the academic classroom.

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In 2012 Computing and Information Technology was disapplied from the English National Curriculum and therefore no longer has a compulsory programme of study. Data logging and data modelling are still essential components of the curriculum in the Computing and Information Technology classroom. Once the students have mastered the basics of both spreadsheet and information handling software they need to be further challenged. All too often the data used with relation to data-logging and data-handling is not realistic enough to really challenge very able students. However, using data from seismology allows students to manipulate "real" data and enhances their experience of geo-science, developing their skills and then allowing them to build on this work in both the science and geography classroom.

This new scheme of work "Seismology at School" has allowed the students to work and develop skills beyond those normally expected for their age group and has allowed them to better appreciate their learning experience of "Natural Hazards" in the science and geography classroom in later years. The students undertake research to help them develop their understanding of earthquakes. This includes using materials from other nations within the European Economic Area, to also develop and challenge their use of Modern Foreign Languages. They are then challenged to create their own seismometers using simple kits and 'free' software – this "problem-solving" approach to their work is designed to enhance team-work and to extend the challenge they experience in the classroom. The students are then are asked to manipulate a "real" set of data using international earthquake data from the most recent whole year. This allows the students to make use of many of the analytical and statistical functions of both spreadsheet software and information handling software in a meaningful way.

The students will need to have developed a hypothesis which their work should have provided either validation for or against. They are required to document their progress throughout the project and submit their work as an electronic portfolio for marking and this thus challenges their organisational abilities.

Finally through the project it is hoped to develop and extend partnerships with other schools in the European Economic Area so that the students are able to work with students from these areas to further appreciate the teaching of "Natural Hazards" in other cultures within the EEA.