# Spotlight on online learning and teaching in sciences and technology

**Daniel Carroll,** USyd eLearning, The University of Sydney, Australia
d.carroll@usyd.edu.au

***Abstract****: The purpose of the Sciences and Technology Spotlight web site is to showcase examples of online learning and teaching at The University of Sydney. Organized by themes and discipline areas, it contains working examples, with details of the need they address and the reflections of the practitioners. These exemplar projects were supported by or are consonant with The University of Sydney elearning support initiative (2004). This initiative focuses on enhancing student learning and encourages sustainable learning technologies which would promote innovative approaches to learning and teaching.*

# *Physclips*: multi-level, multi-media resources for teaching first year university physics

**Joe Wolfe and George Hatsidimitris**, School of Physics, The University of New South Wales, Australia
J.Wolfe@unsw.edu.au georgeh@unsw.edu.au

***Abstract****: In an AUTC project (2005), the Physics community within the Australian higher education sector identified the pooling and development of resources as a long term objective. This poster outlines the development and use of a project, called Physclips, that contributes to this objective.* Physclips *is a suite of online interactive learning and teaching resources for mechanics at the late high school or university level. The project was funded by the Carrick Institute for Higher Education and is the outcome of a collaboration between a physicist and an educational multimedia developer. Topics are introduced in multimedia modules using video clips, animations, and graphics, with a narration. The modules are segmented and have pause and replay for user control of delivery. At key points, the rich-multimedia modules use contextually embedded hyperlinks to accompanying web pages that promote deeper understanding through more detailed conceptual discussion and analysis. A range of user feedback from an earlier project informed a revised approach that provided increased flexibility: the various learning objects utilised in the multimedia modules are also incorporated into the detailed support sites, whence they may be downloaded by educators, or appreciated in detailed context by student users. Initial student feedback suggests that the resource is both engaging and instructive. Further evaluation is required to investigate fully student performance and the efficacy of the design.*

Physclips *is at www.physclips.unsw.edu.au*

## Reference

AUTC (2005) *Project Learning Outcomes and Curriculum Development in Physics* http://www.carrickinstitute.edu.au/carrick/go/op/edit/pid/21.

# *Glimpses of Science*: 'Multimedia-assisted' science activities for primary school teachers and their students

**George Hatsidimitris, Joe Wolfe** and **Jacinda Ginges,** School of Physics, The University of New South Wales, Australia
georgeh@unsw.edu.au J.Wolfe@unsw.edu.au ginges@phys.unsw.edu.au

***Abstract****:* Glimpses of Science *aims to deliver science activities into the primary school classroom by a student-centred approach that utilises hands-on activities accompanied by instructional multimedia resources. The project is a work in progress funded by Australian School Innovation in Science, Technology and Mathematics (ASISTM) and represents a collaborative effort between the School of Physics at the University of New South Wales and a cluster of primary schools in the Sydney metropolitan region. Several modules are to be developed in conjunction with the teachers and will consist of a number of inexpensive hands-on activities accompanied by illustrative material in the form of teacher's notes, film clips, animations and so forth. The multimedia resources are presented in a manner akin to an interactive slide show,*

*whereby each slide acts as an instructional aid that is followed by class participation in the hands-on activity under investigation. The first module was on the topic of sound and can be viewed at http://www.phys.unsw.edu.au/ASISTM/catalogue.html. Early verbal feedback from both teachers and students suggests that the activities are engaging and enjoyable. The next stage of development will involve designing a further four modules in conjunction with the school teachers through a series of workshops.*

Glimpses of Science *can be viewed at http://www.phys.unsw.edu.au/ASISTM/*