Using virtual fieldtrips and experiments

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Abstract
Practical work in Science is seen as an integral part of a good Science education. This is reflected within the syllabus requirements and the mandatory hours that are assigned to the Stage 6 Science course (35 hours per year) and with the inclusion of a student research project for both Stage 4 and 5 students.

However, there are individual circumstances such as distance education students, where it is not always possible to carry out practical investigations. In these cases the use of virtual experiments and fieldtrips can be a valuable addition to an overall Science foundation education.

Within this project a series of virtual experiments using online materials have been produced. These include fieldtrips to a Mangrove swamp, Primates at the Zoo, and a Rock platform (Draft). Virtual experiments include dissection of an eye and a sheep’s brain, and using a Lightbox.

While many of these resources can be found elsewhere on the Internet these have been specifically written to match the NSW Science syllabus with careful mapping of the outcomes to the material. This transparent relationship between the syllabus and the materials is beneficial for students and teachers who can easily fit the materials into their programming. The disadvantage of this closeness to the syllabus is the frequent syllabus changes that have occurred in NSW have meant that the materials have to be changed in response.

Biography
Jane West studied Zoology and Botany at Sydney University with an Honours degree in Botany. She is an experienced teacher of Science and in particular Biology. For the past fourteen years she has been working as a writer and a teacher of distance education students. She represented NSW as a member of the Expert Focus Group for the Le@rning Federation Project. This large project ($68 million) produces online materials for Australian and New Zealand students. She has marked the HSC Biology paper for the past ten years and is currently a Senior Marker. She is the node coordinator for Biology HSC Online and is a leader for the Science group for the Webwiz project. She has written a study guide for the HSC Biology published by Macmillan in 2003. Recently she had an article published in the Sydney Morning Herald as part of the HSC Survival Skills series. This article will be republished in 70 local papers throughout the state. She has spoken at numerous conferences on the use of technology in teaching.

Sample activities
See attachment -Virtual mangrove swamp scaffold.