

A PROJECT-BASED, AUTHENTIC CLASSROOM EXPERIENCE FOR ENVIRONMENTAL SCIENCES

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ABSTRACT

Project-based activities and authentic classroom experiences both foster deep and relevant learning. In the environmental sciences, authentic learning is generally achieved through carefully planned and assessed field-based activities. However, these are generally a once-only exercise as they are expensive and problematic to timetable. Hence it is difficult to run project-based activities, which require repeated observations that are truly authentic. Here we present an authentic project-based module in marine science designed in collaboration with the Western Australian Museum (WAM). The project asks students to classify sections of a previously un-catalogued shell collection donated to Curtin University by a private collector within class time over 6 weeks. The mollusc curator at WAM was involved in the design of the project and the associated assessment to ensure an authentic experience. She also delivered an initial lecture and laboratory material to students including information on working as a museum taxonomist. During their involvement with the museum, students produce a catalogue of part of the shell collection in a standard museum format that can be built on by subsequent cohorts. Thus, students view the project through the prism of a long-term project with a defined goal beyond the immediate learning outcomes of the unit. While this module relied on the donation of a collection, it demonstrates a method of combining the deep learning associated with project-based learning and the engaging and relevant authentic activities preferred by students and demonstrated in the literature.

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