

## **Promoting Student Participation in Scientific Research: An Undergraduate Course in Global Change Biology**

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Practical, or laboratory-based, learning in the biological sciences is often constrained by a model that views students as technicians, repeating tasks that are demonstrated to them. Here, we provide an overview of an alternative approach in which students are “researchers,” learning by designing and carrying out original experimentation. The approach draws on a research-based learning ethos, in which students discover disciplinary ways of working and writing through active critical enquiry and engagement. Peer review is used to develop students’ judgements of scientific writing, and an “inheritance mechanism” allows students to build on the research carried out by previous cohorts. We describe how we have developed the approach over three iterations and the kinds of reflection this has entailed for us as instructors.

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