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A 'scientific journal' framework for introductory biology CURE reports

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Abstract

The implementation of CUREs in laboratory courses has allowed students to engage in scientific inquiry at a level not commonly found in traditional lab activities. However, scientific writing (and experimental design) are undeveloped skills for many freshman science majors; as such, it can be challenging for them to establish context for their work and communicate their findings in a clear, precise manner. Here, we focus on applying a 'scientific journal style' format to communicate data from a series of lab experiments involving *Tetrahymena*, using text adapted from Bates College. Participants of this workshop will survey a series of assignments and activities that currently comprise the CURE project and term paper for our Introductory Biology course (BIOL 1A) at California State University, Fresno. We begin with an overview of these CURE activities and an introductory assignment that asks participants to identify different types of variables within each experiment. After a brief primer on how to survey a scholarly article, participants will create a 'Research Plan' where they state hypotheses and establish the context, purpose and rationale of their experiments while concurrently performing each of the activities in the CURE project. The final portion, a 'writing workshop', will provide a framework for writing the report and address common issues students encounter in the report writing process. The workshop will conclude with a discussion of how these scaffolded assignments can be applied to other CURE activities.

Keywords: scientific writing, Tetrahymena, CURE

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