Improving Scientific Writing

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Effective written scientific communication is a major goal of science education, however undergraduate students typically report difficulty in how to approach and plan scientific writing. To support and develop student writing skills and lessen this difficulty, I have created a series of worksheets designed to guide student writing for each component of a scientific article including support around the structure and logic of scientific arguments/explanations. This study explores student perception of these worksheets in an undergraduate introductory molecular biology lab. Student perception was collected via a series of surveys on each individual worksheet as well as a longer end-of-term survey on all of the worksheets as a whole. Analysis of these surveys indicated that students appreciated these worksheets and found that the worksheets helped them organize their thoughts prior to writing, felt more prepared to write their research paper, and will use some techniques noted/demonstrated in these worksheets in future scientific writing. This study shows that scientific writing worksheets can scaffold student learning when there is a clear and specific structure to follow with integration between the worksheets and the writing process.

1

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