

# Designing Effective Introductory Biology Labs: Part I – Fostering a Spirit of Inquiry

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Consider the experiences of students enrolled in your college's introductory biology labs. Do your students come to value the spirit of scientific inquiry? By this, I mean; do they have diverse opportunities to experience the creativity involved in scientific discovery? Do they come to value the collaborative nature of science? Does that which motivates scientists to explore nature also motivate your students? Traditional guided & concept-focused labs (the follow directions and answer questions approach) often ignore these questions, simply assuming that just because labs are "hands-on", and mimic "the scientific method" that students will come to appreciate scientific inquiry. In this first of a two-part workshop, participants will experience labs and associated pedagogies designed to foster student engagement, a creative mindset, independence of thought, and effective collaboration. At the end of the workshop, participants will be able to examine the entire inquiry-based lab approach utilized in our large-enrollment introductory biology labs along with samples of instructional resources provided to our graduate (Masters-level) lab teaching assistants.

## **Mission, Review Process & Disclaimer**

The Association for Biology Laboratory Education (ABLE) was founded in 1979 to promote information exchange among university and college educators actively concerned with teaching biology in a laboratory setting. The focus of ABLE is to improve the undergraduate biology laboratory experience by promoting the development and dissemination of interesting, innovative, and reliable laboratory exercises. For more information about ABLE, please visit <http://www.ableweb.org/>. Papers published in *Tested Studies for Laboratory Teaching: Peer-Reviewed Proceedings of the Conference of the Association for Biology Laboratory Education* are evaluated and selected by a committee prior to presentation at the conference, peer-reviewed by participants at the conference, and edited by members of the ABLE Editorial Board.

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Peters J S. 2018. Designing Effective Introductory Biology Labs: Part I – Fostering a Spirit of Inquiry. Article 50 In: McMahon K, editor. *Tested studies for laboratory teaching*. Volume 39. Proceedings of the 39th Conference of the Association for Biology Laboratory Education (ABLE). <http://www.ableweb.org/volumes/vol-39/?art=50>

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