

Encouraging Active Learning in the Laboratory

Allison Cornell, Department of Biology

Jeff Yap, Department of Biology

September 2015 and January 2016

Simon Fraser University's TA/TM Day

Brief Description: Lab sections provide students with an opportunity to gain hands on experience with the material they learn in lecture. Students can step into the role of “scientist” and explore material from a new perspective. Often, however, students will run into real-world problems with false positives, inconclusive results, malfunction of equipment, etc. This requires the TA to be ready to explain these challenges and turn problems into teachable moments. Most labs require students to work in groups or pairs, which gives TAs a unique role as a facilitator of both experiential learning and of group interaction.

Participants will learn to use 1) constructive questioning to guide students through laboratory challenges, as well as 2) how to manage problems that arise from group learning. The workshop will include both presentation of tools for lab TAs, and time to work through and discuss mock lab scenarios to troubleshoot problems that occur specifically in group learning and experimental labs.

Workshop Evaluation Scores (solicited anonymously by participants):

Average Score (+A-F): A