## Lab Meetings

Lab meetings are held approximately every two weeks. During the lab meeting, each student or group of students presents their results since the last meeting. Lab meetings work best when the data (and gel images) can be projected for the whole class to see, which is easy to do if the data has all uploaded to the BioStudio database. Each student or group must stand in front of the class, discuss their results, how they interpret their results, and any changes that they have made to alter the protocols, and then answer questions.

Lab meetings have several advantages:

1. They introduce a more professional, graduate school atmosphere, which confirms for students that they are performing authentic research.
2. They provide students with valuable experience in public speaking and presenting their data
3. They allow the instructor to gauge students’ knowledge and understanding of the principles of gene synthesis
4. They force students to critically evaluate their data, rather than simply moving on to the next experiment
5. They introduce students to the process of scientific research, including the analysis of experiments followed by troubleshooting and the planning of alterations to experimental protocols
6. They allow students to demonstrate their expertise by offering advice to other students. Often when one student has successfully altered experimental protocols, they can offer their opinions to others on the best way to proceed with an experiment. This can build a tremendous amount of confidence as students demonstrate that they have become experts in the techniques.