



## Providing students with peer review for laboratory assignments: a first-year lab course assessment tool that could work for you

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### Abstract

We have implemented a peer review platform, Peerceptiv, in our large enrollment (>1000 students) introductory biology laboratory course. Students anonymously submit their written works for peer review using any rubric the instructor creates. Following submission, students then review assignments of their peers, get feedback on their work, and with the proper scaffolding, incorporate the feedback to improve their own work. These learning gains can be accomplished with as much or as little instructor involvement as desired. The benefits of this iterative approach to assignment design are well documented. The practice of peer review provides all students with a true taste of how what a scientific career entails, better preparing and providing them the transferable skills they will require. Here, we present the feasibility of using peer review in a large enrollment laboratory course, to offer students formative feedback before a final submission, graded by instructor. Specifically, we have found that final lab assignment grades were significantly higher, by an average of 18%. We also found significant improvements in our first-year course without TA feedback, students in the low draft scoring set (usually below 50%) improved significantly, by 35%, for the final submission ( $t = 5.19$ ,  $p < 0.001$ ). Our results show that peer review in biology labs increases student performance and can be an effective tool to provide formative and summative feedback also minimizing instructor grading time. This poster will highlight ways to incorporate peer review into laboratory assessments, from short assignments to full length lab reports. We will share student feedback, instructor implementation thoughts, and recommendations.

**Keywords:** peer review, introductory biology, assessment

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