

Abstract Submitted
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Incorporating design-based lab concepts in General Physics

MATTHEW BELLIS, Siena College — There is a belief among some instructors that many General Physics labs are too "hand-holding" and procedural. In these labs, students work with a check-list of questions and prescribed directions. This approach generally emphasizes reinforcement of the lecture material at the expense of experimental design and application of the scientific method. In Spring 2017 and Spring 2018, we ran/are running a section of General Physics I labs that were re-designed to eliminate much of the procedural approach of previous labs and give the students more agency in how they built, operated, and analyzed their experiments. We developed a lab book, pre-lab exercises and reading material, and an instructor's manual. The results and impressions from faculty and students regarding this lab section were variable and will be presented.

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