

The primary purpose of the Bugs in Bugs project is to measure a student's ability to go complete a research report and to observe demonstrations of key fundamental research aspects such as understanding scientific works, collecting and entering data, analyzing and creating graphs, and overall how to write a lab report. Working with Principles of Biology II and Microbiology classes, students were provided with a topic and methodology respective to their class; however, groups within the classes had the freedom to create their own hypotheses and theses, choose how to collect and interpret data, make charts and graphs, and ultimately write a lab report. Students were asked how they felt performing such tasks at the beginning and end of the Bugs in Bugs project, where they rated each aspect from 1 to 5 and wrote about any other kind of research work they may have done in the past. The results for each class involved were tabulated and analyzed to see if a student's ability to perform core research tasks had improved on average after the completion of Bugs in Bugs, data analysis being a major tool throughout the project as it involved the collection and modeling of data from over 200 students. Among the many things that could have been better, one major thing is keeping a more controlled group; many students left the research project when they dropped the class and so it was difficult to accounting for stronger evidence at the start of the project than at the end. An understanding of scientific works and research on a fundamental level is important to everyone, not only scientists, because otherwise it is difficult to engage in and discuss science-related issues; this is crucial in the modern era where science grows ever so more politicized and polarized.