This workshop highlights how to effectively read, understand & critique primary peer reviewed scientific articles. Then students will learn techniques on how to best incorporate scientific literature into their own writing, presented from the perspective of the biological sciences.

In this workshop the technical paper will be broken down into relevant sections, the relevance and importance of each section will be discussed. We will suggest ways that students can best approach both reading and writing a scientific experiment or report. The goal is to better understand the task at hand, implement proper protocols, and report their scientific projects in a clear, accurate, precise, and professional manner. A clearly-written, well-organized and researched paper will increases overall learning by students, which translates into better laboratory grades and overall understanding of course objectives and scientific principles.

I. Understanding Peer Reviewed Scientific Literature
   - Sources of scientific articles
   - The peer review process
   - Anatomy of a primary journal article/laboratory report
   - Overall plan for understanding main ideas of an article.
   - Interpreting figures in a results section, including graph interpretation

II. Scientific Writing
   - Steps to take when given a scientific project/experiment to conduct and report on
   - Laboratory notebook
   - Working with laboratory partners/how to report when in group work
   - How to properly cite primary literature

Assessment:
1. What are characteristics of all scientific articles?
2. Why would you want to look at when a paper was written?
3. What possible mark-ups come to mind when reading the passage from the Biochemistry article?
4. Why would it be important to include error bars or standard deviations?
5. What are your thoughts on the table from the New England Journal of Medicine?
6. What problem did you find with the “common problems” example?
7. What do you think are some potential challenges associated with working with others?