

## Introducing Students to Scientific Literature\*

*Nora Ann Bennett*

The Governor's School for Government and International Studies  
4100 West Grace Street  
Richmond, VA 23230  
(804) 780-6155  
Email: NABennett@aol.com

The goal of this activity is to provide first-year biology students with a structured introduction to the primary scientific literature. By directing students to specific articles, and guiding them through a critical reading of the article, it is intended that they will gain an understanding of and appreciation for this crucial aspect of scientific study.

Articles were selected for their straightforward experimental design and results, accessibility to introductory students with little scientific background, and moderate length. Instructors may want to select articles that directly relate to course content and/or touch on current events and recently announced findings.

Students in each lab section were divided into groups of four or five. During the first week of this exercise, each group was assigned a different article (the same articles were used for all lab sections). The articles were placed on reserve in the university library. When students arrived in lab the following week, each group was given a list of questions pertaining to its paper. These questions included items to check for basic comprehension of the article's content, and questions designed to require student analysis and evaluation of the paper's methodology and results. The students spent 45 minutes discussing the paper and answering the questions. Written answers were turned in for a grade.

Each group also received a list of generic questions, to be answered in the next portion of this exercise: the oral presentation. After the discussion, each group came to the front of the room and presented its paper. In most cases, each group member discussed a different portion of the paper. To encourage audience participation, each student was required to turn in a comment card or to ask a follow-up question during the presentations (this varied among the graduate assistants teaching the lab sections).

We found that, for this activity to be successful, students needed instruction in oral presentations. Otherwise, many presenters were unable to convey effectively the information in their paper. This activity probably should not be the first oral presentation in a class.

---

\* Developed when the author was at the Department of Biology, College of William and Mary, Williamsburg, VA 23187

We found this activity a useful addition to our process-oriented lab curriculum. Students left with a greater understanding for this important, yet often overlooked, component of the process of scientific research.

For specific examples of journal articles and questions, please contact the author.