

One way to gain an understanding of how science works is to read about experiments that have been done. In this course you are presented with theories and facts in biology that have already been tested to some degree. Even though we seem to know a lot about biology, new theories are always being tested and new "facts" may be presented in classes like this in the future. The process by which new theories are tested is the scientific method. Part of this process is to analyze the results of your experiments, reach some conclusions and present the results. These results and conclusions are sometimes published in scientific journals.

For this assignment you need find a recently published (after 1995) journal article to review. You may find the article by looking through some of the current scientific journals or by using computer research methods. If the entire text of the article is not found online, you will need to visit a college library (SF State, UCSF, UCB, Stanford, Skyline, etc) to find a copy of the journal. You should find an article that both interests you and is written at a level that you can understand (you may have to read the article several times to understand it). The article must be an experiment (not a letter, note, summary, or abstract) and report experimental results. If you are not sure if the article you have selected is appropriate, talk to me about it. Popular magazines, such as National Geographic, National Wildlife Magazine, Scientific American and others do not have articles in scientific format and would not be appropriate. The article should match your topic for your organism paper. It must be an experiment involving a multicellular organism.

There are many appropriate scientific journals from which to choose. To evaluate the appropriateness of a Journal, the following should be true:

- Is the Journal associated with a professional society?
- Do the articles list the author's references?
- Are the articles written by the researchers, not a news reporter?
- Do the articles include data in tables and graphs?

Once you have found an acceptable article, the following should be written in your own words and included in a 2-3 page double-spaced typed paper.

1. Summary of the article. Look at each section of the article and give a few sentences in response to these questions:

- I. Introduction. Why was the experiment done? What was the purpose?
- II. Materials and Methods. How was the experiment done? Could another researcher repeat the experiment?
- III. Results. Copy one table or graph and in your own words, describe what these data show.
- IV. Conclusions. What conclusions were reached? Were the conclusions valid based on the data obtained?

2. Finally, give your impression of the experiment and the article. What was the scientific value of this work being done? Did the results benefit humans in any direct way, or did this add to the base of knowledge known about a certain species of animal or plant?

3. References (done in the correct format-see sample below). This paper will only have one reference—the one you reviewed.

Garshelis, D. L., Johnson, A. M. and Garshelis, J.A. 1984. *Social organization of sea otters in Prince William Sound, Alaska*. Can. J. Zool. 62: 2648-2658.