

Introduction to Reading Scientific Journal Articles

To receive full credit for this assignment you must complete ALL italicized questions and tasks. Download the appropriate Word document in which to write your responses. You must submit your written responses via Safe Assign, on Blackboard, as a single Word document. Additional instructions can be found under the Assignments menu on Blackboard.

1. Scientific journals are usually considered the most important primary sources of information. A scholarly scientific journal contains a collection of articles, usually published on a regular schedule, written by scholars reporting the results of experimental investigations. The intended readers of scholarly journal articles are other experts in the field. Although they can be tricky to read, there are some techniques that will help you to make it through!

2. Begin by skimming the article, *Fine scale temperature effects on cricket calling*, which was published in the Canadian Journal of Zoology in 2000. Highlight or underline words that are unfamiliar to you. ***Look up these terms in a dictionary or biological dictionary online and write the definitions on a separate sheet. Keep these terms handy as a reference while you're reading.***

3. Read the title and the abstract of the paper. From this section, you should be able to write down:

A. What was being investigated in this study?

B. What were the general conclusions that the authors came to?

4. Read the introduction section. A good author will give you any background information that is necessary to understand the research, including terminology and prior research done on the topic. ***Make a list of facts and information that you feel is significant and may help you in understanding the rest of the paper.***

5. Skip to the end of the paper and read the discussion section. This where the authors discuss the conclusions that their evidence has led to, as well as the significance of their findings and any research they are planning on extending. As you read this section, underline the key finding and evidence made by the author. ***In your own words, summarize those findings.***

6. Many readers of scientific articles choose to skip the methods and/or results section, at least at first. They may or may not go back and read them at the very end, especially if the article is closely related to their own research. Scientific papers are published in *peer reviewed* journals, where other experts in that particular field are asked to read and evaluate the methodology used prior to publishing. However, there may be times when you have to read the methods section and evaluate them. Take your time and don't panic. Often, techniques and technical jargon that are unfamiliar to you will be utilized in these sections. You can look these things up individually, but try to focus on grasping the main steps that the researchers took. ***Read through the methods section and describe the methods*** by which they collected data and manipulated the variable to gain the data on cricket chirps.

7. Lastly, read the results section. ***Do the data presented support the conclusions made by the author? In your opinion, what is the quality of the evidence presented?***

8. After reading the article about cricket chirps for practice, it is your turn to review an article on your own. To find an article, first go to the libraries website at <http://lib.asu.edu/>. Click on the Research Databases link. Use the dropdown menu to select the subject “Biology/Life Sciences” and press “Go.” This gives you a list of all of the journal databases in this subject area that you have access to as an ASU student. I recommend that you use Science Direct as a starting point, but you can access any of the databases to find your article of choice. In Science Direct you can enter key search terms in the “all fields” text box and then hit “Go.” This will produce a list of journal articles containing your search terms. You can also choose to only search the title of the article for key terms.

9. Pick a topic of choice related to human biology and search the databases of your choice. Find a full-text, peer reviewed journal article to read. Print the article and repeat the above assignment you performed for the cricket article with your article of your choice. You will be handing in the answers to the questions bolded and italicized above on the due date noted on the laboratory website.

10. If you are having difficulty searching a particular database or finding an article on your topic of interest, try using the Get Help menu, where you'll find several choices. Do not put off completing this assignment until the last minute, which will be obvious and will cause you to lose points.