

Biology Literature Research (BioLitRes) 101 - How to write a Library Research Paper

Goal of assignment:

Your paper should summarize recent work and provide a historical perspective (remember science does not occur in a vacuum but builds on earlier results and observations). Follow the guidelines below.

The paper should include:

- I. A **synthesis** of information on your topic. (Your discussion must integrate the various sources that you found; it should not be a series of summaries of individual articles without a discussion of the relationships among them.)
- II. An **organization** that develops the topic clearly. Usually this involves:
 - a. A **Title**. You must convey significant information
 - b. An **overview** (1-3 paragraphs in length). This is your opportunity to develop the idea(s). Use *reference materials* and *secondary literature* to establish context and to introduce existing hypotheses. By the end of this section your reader should know where you are heading (what are your goals).
 - c. A **presentation of recently published results**. Use new data from *primary literature* (data papers). Give summaries of the observations or experimental results that support specific ideas/hypotheses/conclusions in your overview. In other words, you must support your assertions with concrete examples. (Don't ignore studies that run counter to your expectations.)
 - d. A **summary** paragraph. Here you will summarize the current state of knowledge and suggest avenues for further research.
 - e. A **literature cited** section. You must include all the references you cited in your paper. (Do not include those that you read but did not cite.)

Mechanics of writing the paper (expectations):

1. **Don't quote** but **clearly attribute** each concept, idea, definition etc. to the literature source from which you got it. Do this using **in-text citation** of the sort you see in the laboratory manual.
2. **Each reference** you cite in your paper should have its full citation in your **literature cited** section. Only references used in your paper should be in your literature cited section.
3. All references in the literature cited section should be in the **correct citation format**.
4. You should use at least **six sources**: two sources from the primary literature(original data papers), two sources from the secondary literature (books and reviews) and two web resources. Each source should relate directly to the topic you have selected. The literature cited section should be in **alphabetical**

order by the first author's last name; do not separately list the primary, secondary and web resources.

5. Write **clear, concise** statements about the topic. You will need to understand the topic and the literature very well before you will be able to summarize it effectively.
6. Provide **clear summaries**.
7. Always distinguish your ideas from those presented in the papers.
8. Plan to finish a first draft at least several days before the final paper is due
9. Revise a day or two later so that you **present your thoughts logically, succinctly and clearly**.
10. Don't forget to **italicize or underline all scientific names** and **proofread** before handing in your paper.

Source: The content of this section was based in part on this book
Pechenik, Jan A. *A Short Guide to Writing about Biology*. 6th ed. New York :
Pearson/Longman, c2007. Pages 139-150.