



[COMMUNICATION IN THE BIOLOGICAL SCIENCES](#)
[Department of Biology](#)

LITERATURE REVIEW PAPER

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WHAT IS A REVIEW PAPER?

The purpose of a review paper is to succinctly review recent progress in a particular topic. Overall, the paper summarizes the current state of knowledge of the topic. It creates an understanding of the topic for the reader by discussing the findings presented in recent research papers.

A review paper is not a "term paper" or book report. It is not merely a report on some references you found. Instead, a review paper synthesizes the results from several primary literature papers to produce a coherent argument about a topic or focused description of a field.

Examples of scientific reviews can be found in:

- Scientific American
- Science in the "Perspectives" and "Reviews" sections
- Nature in the "News and Views" section
- Compilations of reviews such as:
 - Current Opinion in Cell Biology*
 - Current Opinion in Genetics & Development*
 - Annual Review of Plant Physiology and Plant Molecular Biology*
 - Annual Review of Physiology*
 - Trends in Ecology & Evolution*
- Almost every scientific journal has special review articles.

You should read articles from one or more of these sources to get examples of how your paper should be organized.

Scientists commonly use reviews to communicate with each other and the general public. There are a wide variety of review styles from ones aimed at a general audience (e.g., *Scientific American*) to those directed at biologists within a particular subdiscipline (e.g., *Annual Review of Physiology*).

A key aspect of a review paper is that it provides the evidence for a particular point of view in a field. Thus, a large focus of your paper should be a description of the data that support or refute that point of view. In addition, you should inform the reader of the experimental techniques that were used to generate the data.

The emphasis of a review paper is interpreting the primary literature on the subject. You need to read several original research articles on the same topic and make your own conclusions about the meanings of those papers.

CHOOSING A TOPIC

Click [here](#) for advice on choosing a topic.

RESEARCHING A TOPIC

Click [here](#) for advice on doing research on your topic.

HOW TO WRITE THE PAPER

Overview of the Paper:

Your paper should consist of four general sections:

- Introduction
- The body of the paper
- Conclusion and future directions
- Literature cited

Review articles contain neither a materials and methods section nor an abstract.

Organizing the Paper:

Use topic headings. Do not use a topic heading that reads, "Body of the paper." Instead the topic headings should refer to the actual concepts or ideas covered in that section.

[Example](#)

What Goes into Each Section:

Section of the paper	What it should contain
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<p>Introduction & Background</p>	<ul style="list-style-type: none"> • Make it brief (~1/5 of the paper's total length). • Grab the reader's interest while introducing the topic. • Explain the "big picture" relevance. • Provide the necessary background information.
<p>Body of the Paper</p>	<ul style="list-style-type: none"> • Experimental Evidence: Describe important results from recent primary literature articles and • Explain how those results shape our current understanding of the topic. • Mention the types of experiments done and their corresponding data, but do not repeat the experimental procedure step for step. • Examples • Point out and address any controversies in the field. • Use figures and/or tables to present your own synthesis of the original data or to show key data taken directly from the original papers.
<p>Conclusion</p>	<ul style="list-style-type: none"> • Succinctly summarize your major points. • Point out the significance of these results. • Discuss the questions that remain in the area. • Keep it brief.
<p>Literature Cited</p>	<ul style="list-style-type: none"> • Your instructor will give you a minimum number of references that you must use and cite in your paper. Typically, at least 8-10 references are required. • Click here for how to handle citing sources.

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