

Scientific Journal Summary

An essential skill, whether you enter a scientific field of study, is to be able to summarize and evaluate empirical research. Empirical research refers to research articles that present novel research findings (*as opposed to providing an opinion or review*). Over the course of the year, you will read a number of empirical research articles in order for you to learn more about how scientific research is conducted – in other words, how do we know what we know about your topic of interest? These readings will provide an overview of the breadth of the research already done pertaining to your area of interest. By contrast, your Science Research Project is intended to give you an opportunity to delve deeper into this specific area of interest. As a first step towards completing a literature review for this project, you will need to: find an empirical research article related to your topic, read and summarize the introduction, methods, results, and conclusions, and provide a critical analysis of the article and its relation to your topic via an article summary. A well-written Scientific Journal Summary should cover the following main points:

- (1) **stating** the research question and **explaining** why it is interesting.
- (2) **stating** the hypothesis being tested.
 - *How does the independent variable affect the dependent variable?*
- (3) briefly **describing** the methods.
 - experimental design
 - participants
 - materials
 - what was manipulated (*independent variable*)
 - what was measured (*dependent variable*)
 - what was controlled (*constants*)
- (4) **describe** the data and results.
 - how was the data organized (*data tables*)
 - how was the data presented (graphs)
 - how was the data analyzed (*statistics*)
- (5) **explain** the key implications of the results.
 - the results and their key implication should relate directly to the hypothesis
 - what further research could be done
- (6) **follow** basic writing mechanics.
 - grammatical, punctuation and spelling errors RARE and do not distract
 - sentence structure is solid (avoids run-on sentences)
 - accurately cites the article in APA format