

***The hourglass approach to writing a research paper** (Adapted from C. Schlichting, UConn EEB)**

Imagine that your paper will be an hourglass. You will construct it in such a way that your themes are the broadest at the top and bottom, i.e., the Introduction and the Discussion. The Intro should begin by placing the work you will present in a broad context. From this point, you focus more narrowly on issues closer to your experiment/study, until you end the Intro with a brief statement of the specific questions you are attempting to answer (=your thesis statement!!)

You will move on from the Intro to increasingly specific information, e.g., description of the organisms in the studies considered, the materials of study, and results of the studies you are using to address your thesis statement. These central sections of your paper will have little, if any, speculative content. Also, here it is critical that each paragraph is structured around an IDEA, not a single reference. Hint: If your paragraphs refer to only a single source, you're doing something drastically wrong!

From the Introduction, you lead into the Body of the paper. This may start with a discussion of results of your own interpretation of the studies' results, and then expand to place that work in the broader context of similar studies done on that taxon/species or related species.

Finally, you will conclude your paper with the implications of your work for the broader issues that you outlined in the Intro.

Thus the top and bottom of the hourglass can be thought of as mirror images. In the Intro you start with the broadest context and move to the specific. You move from interpreting specific results to how they affect our understanding of the broader issues:

Intro: broadest context

Intro: more local

Intro: specific

Body: Examples of studies that support or refute your thesis statement (A key here is to compare results across studies!)

Overall conclusions: from specific ones to the broadest context

Writing in the sections on the top of the hourglass typically move from general to specific, while those on the bottom, from specific to general

Some language for writing scientifically (adapted from From the New College Writing Centre-University of Toronto, revised 2000. (Deborah Knott).):

It is sometimes challenging to find the vocabulary in which to summarize and discuss a study. Here is a list of some verbs for referring to studies that you might find useful:

account for clarify describe exemplify indicate question analyze
compare depict exhibit investigate recognize argue
conclude determine explain judge reflect assess
criticize distinguish frame justify refer to assert
defend evaluate identify narrate report assume define
emphasize illustrate persuade review claim demonstrate
examine imply propose suggest

For example:

The evidence indicates that . . .

These studies assess the effect of . . .

The author identifies three reasons for . . .

The study questions the view that . . .