

How to Write an Introduction

The purpose of an introduction in a technical paper is to frame the subject of the paper, and give the reader a road map to the structure of the paper. It is your chance to orient the reader to the way you want them to think about your topic.

Many of you were taught the inverted triangle intro, where you start general and focus in to the specific thesis statement in the last sentence. This style is almost never used in the professional or technical world. Instead, start strong. Your very first sentence needs to convince me to read the paper. So there should be no bland, "Many factors are important in thinking about mass extinctions" kind of openings.

DO:

- Use the intro to frame the problem or question that the paper addresses
- Be very direct – no suspense or hinting around
- Make sure that all the topics addressed in the paper are mentioned in the intro **IN THE ORDER** in which you talk about them in the paper

DO NOT:

- Use your introduction to review the history of the controversy. That gets its own section.
- Use your introduction to review the basic biology of your creature. Assume your reader knows the basic biology, and anything more advanced gets its own section.
- Use a catchy or dramatic first sentence. Scientists hate drama.
- Talk about your paper as “this paper will”. Just do it, don’t talk about it.

Your introduction should do **three** things, in this order:

1. **Frame the problem in strong, direct language.** The point of the essay should be right there in the first two sentences or so.

During the Jurassic and Cretaceous periods, bizarre morphologies appear in many different lineages of ammonites. Rather than the coiled forms of other Mesozoic ammonites, these creatures had shells that were uncoiled, open coiled, or even knotted. Clearly these organisms had different life habits than their coiled, streamlined kin.

2. **Provide context for the thesis:**

While heteromorphs share many characteristics with their coiled relatives, they also have a distinct set of unique characteristics in common with other heteromorphs. Since heteromorphy arose independently in many different lineages, these characteristics must be due to convergent evolution related to the common life habits of these organisms.

3. **Preview the structure of the paper.**

Do not do the studenty thing of saying, "this essay will discuss this issue. First it will do this, then it will do that, then finally it will do this other thing." That is acceptable writing, but it is not sophisticated writing. It is preferable to preview the structure of the paper by actually making the arguments very briefly, in the order you will discuss them in the paper:

There are several lines of evidence that help shed light on how heteromorphy ammonites lived. First, these organisms tend to be found in similar facies that suggest a nekto-benthonic life habit. Second, the pattern of muscle scars indicates an ability to shift the body within the body chamber, much like modern Nautilus. This adaptation would allow adjustments in the center of gravity consistent with life near the ocean floor. Finally, analyses of center of gravity across an array of lineages show some common patterns that could be explained by a planktonic or nekto-benthonic habit.

Here I have told you exactly what the paper is about, what arguments you can expect to read, and the order you will read them in. Aim for 3/4 to 1 page long for the entire intro.