

Four Common Pitfalls to Avoid in your Scientific Writing



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1. **Failure to follow instructions.** Always read the assignment prompt carefully as soon as you receive it. DO NOT put this task off—reading the assignment right away will save you time, stress, and problems later. As you read, highlight key words and tasks, make note of any new skills you may need to complete the assignment, and jot down any questions you have. Do not be afraid to approach the instructor with these questions—they would prefer to set you straight before you hand in your paper.
2. **Too many main ideas in one paragraph.** Every paragraph should have just ONE main idea. This main idea should be expressed in the topic sentence, which is typically the first sentence of the paragraph. The rest of the paragraph must be unified around this main idea, with the supporting sentences providing detail and discussion. Consider the following example:

TOPIC SENTENCE: *The central place theory is used to describe animals that collect food and store it in a fixed location in their home range, the central place (Jenkins, 1980).*

SUPPORTING DETAILS/DISCUSSION: *The factors associated with the optimal foraging theory also apply to the central place theory. The central place theory predicts that retrieval costs increase linearly with distance of the resource from the central place (Rockwood & Hubbell 1987). Central place feeders are very selective when choosing food that is far from the central place since they have to spend time and energy hauling it back to the storage site (Schoener, 1979).*

The supporting sentences above all link back to the main idea expressed in the topic sentence: An explanation of central place theory.

3. **Lack of cohesion or “flow.”** To make your writing more cohesive, begin each sentence with familiar/old information and conclude sentences with unfamiliar/new information. Which of the following two paragraphs has stronger “flow”?

Farmers try to provide optimal growing conditions for crops by using soil additives to adjust soil pH. Garden lime, or agricultural limestone, is made from pulverized chalk, and can be used to raise the pH of the soil. Clay soil, which is naturally acidic, often requires addition of agricultural lime.

Farmers try to provide optimal growing conditions for crops by using soil additives to adjust soil pH. One way to raise the pH of the soil is an additive made from pulverized chalk called garden lime or agricultural limestone. Agricultural limestone is often added to naturally acidic soils, such as clay soil.

The second paragraph above is much more cohesive because each sentence begins with information that the readers recognize from the end of the previous sentence. In other words, each sentence begins right where the previous sentence ended.

4. **Wordiness.** Concise and direct sentences are a hallmark of good scientific writing. As you revise your work, eliminate wordy phrases like the following:

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- *In regards to the data found about ...* ? Instead, write, *The data indicates ...*
- *Considering the fact that ...* ? Instead, write, *because ...*
- *Regardless of the fact that ...* ? Instead, write, *although ...*
- *Under circumstances in which ...* ? Instead, write, *when ...*
- *There is a need for ...* ? Instead, write, *X must ... or X should ...*