Biol 1440, Principles of Biology I

Tips for Scientific Writing

References
A Guide to Improving Your Lab Reports

H.W. Ambose & K.P. Ambrose, 1995, A Handbook of Biological Investigation, 5th edition. Chapter 10-11
D.S. Vodopich and R. Moore, 1996, Biology Laboratory Manual, 4th edition.

The Elements of Style (3rd ed.), by W. Strunk and E. B. White (New York: Macmillan, 1979) is an excellent, quick reference on English usage.

A Few Simple Rules for Writing Effectively

Informative sentences and well organized paragraphs are the foundation of' a good scientific paper. Listed below are a few rules to help you write effectively. Following these rules won't necessarily make you a Hemingway, but it will probably improve your writing.

1. Write clearly and simply. For example, " the biota exhibited a 100% mortality response" is a wordy and pretentious way of saying "all of the organisms died." Remember, keep it simple and straightforward.

2. Keep related words together. Consider the following sentence taken from a scientific publication:

> "Lying on top of the intestine, you perhaps make out a small transparent thread." Do we really have to lie on top of the intestine to see the thread? The author meant trial "a small transparent thread lies atop the intestine."

3. Use active voice. Write "Good writers avoid passive voice," not "The passive voice is avoided by good writers." Here are some other examples of passive voice:

> Poor: My first lab report will always be remembered by me. (passive)
>
> Better: I'll always remember my first lab report. (active)
>
> Poor: Examination of patients was accomplished by me. (passive)
>
> Better: I examined patients. (active)

4. Write positively. For example, write "The rats were always sick" instead of "The rats were never healthy." Use definite and specific sentences. For example, write "it rained every day for a week" instead of "a period of unfavorable growth conditions set in."

5. Know the meaning of every word, and write exactly what you mean. Use a dictionary and thesaurus to ensure clarity and proper word usage.

> For example:
> You allude to a book, and elude a pursuer.
>
> Something nauseous is sickening to contemplate, whereas a nauseated person is sick. (You can't be nauseous unless you're capable making someone sick.)

6. Delete unnecessary words. For example:

Replace the left side	with the right side
the question as to whether……..	whether
advance notice……..	notice
at this point in time……..	now
be that as it may……..	but
in the event that……..	if
general consensus…….. ..	consensus
young juvenile……..	juvenile
student body……..	students
due to the fact that……..	because
chemotherapeutic agent……..	drug

7. Use metric measurements in expressing units and decimals to express numbers. Rather than .5, use a zero before the decimal point, 0.5, to avoid confusion with a punctuation mark.

8. Each paragraph should convey a single major idea and have a topic sentence. The topic sentence should state the main idea of the paragraph.

9. Proofread your report before finalizing it. Have a friend or lab partner read a draft of your writing and suggest improvements.

10. Don't plagiarize. Learn to summarize and be sure to cite all references from which you extracted information.

A neat and typed presentation is a must to communicating effectively. If you use a word processor, remember to use the spell checker. Carefully proofread to catch mistakes. Put your work aside for at least 24 hours before you proofread.