

Understanding and Avoiding Plagiarism

"The integrity of a liberal arts education depends on the principle of academic integrity"
(Swarthmore College Bulletin, 2001-2002).

Swarthmore students are encouraged to consult with other Swarthmore students at many places in the curriculum (*e.g.*, in seminars, in the writing program, in laboratories and in study groups). The emphasis on cooperative learning and the general absence of competition among students are sources of pride in our community. This is an especially appropriate way to study science, as collaboration has become the *modus operandi* among researchers. Most original research papers are authored by research teams, which often include scientists from more than one institution. Such collaboration, however, puts students in greater danger of plagiarism than a system of education that champions isolated learning.

Plagiarism is presenting someone else's work as one's own. "Work" may be ideas or ordered words (*i.e.*, phrases, sentences, paragraphs). Plagiarism, like cheating on an exam, is a form of academic dishonesty. The teaching staff in the Department of Biology is committed to helping students learn how to avoid plagiarism, and also to identifying instances of plagiarism whenever they occur. Cases of plagiarism will be forwarded to the College Judiciary Committee (which will hear the case and can recommend failure in the course and/or expulsion from the College).

The fortunate thing about plagiarism is that it is simple to avoid. In scientific literature and in Biology 001 reports, it is customary to *generously* acknowledge the sources of information on which you have based your understanding of a topic. There are three ways that this credit is given:

1. The first is "in-text" citations, where you attribute ideas and facts by placing the source in a parenthetical clause at the end of the sentence. The usual format for citing published sources is (Pechenik, 2010). The format for citing information from lecture notes or conversations is: (K. Siwicki, personal communication).
2. The second place is the *Acknowledgments* section, where you can graciously acknowledge any discussion, including things cited earlier as a personal communication, that helped clarify your thoughts, focus your writing, or improve the sophistication of your analysis.
3. The final place is in the *Literature cited* section, where all in-text citations of published works (journal articles, book chapters, internet sites, etc.) must be fully detailed, and formatted according to the specifications in the 'Citing References' section of the Bates scientific writing site (Andersen, 2004) available at <http://tinyurl.com/sciwrite> or as described on pages 71-81 in Pechenik (2010).

There are many flavors of plagiarism that are less blatant than stealing somebody else's laboratory report and replacing their name with your own:

- “Patchwork plagiarism” involves the theft of ideas or wording from multiple sources, followed by minor modifications to weave the passages together in a coherent paragraph.
- “Paraphrase plagiarism” is when an author replaces most words from a source's sentence with cognates but still replicates both the style and original order of ideas. To avoid this you must completely rework the structure of sentences and paragraphs.
- “Lazy plagiarism” occurs when an author lifts wording and *does* supply a citation at the end of one or more of the plagiarized sentences. *This is still plagiarism*, because quotations were not used to identify the wording as somebody else's.

As students have begun to rely on electronic documents for their source material, these more subtle forms of plagiarism are arising with increasing frequency. To minimize the risk of plagiarizing we strongly recommend that you never, ever use the “copy/paste” feature when simultaneously reading electronic materials (internet sites, journal article PDFs) and working on your laboratory write up. Even when taking notes, do not use the copy/paste function, instead use your own language to summarize information and concepts. By independently synthesizing the material you are reading, you will strengthen your writing ability and deepen your understanding.

The internet and social networks have also made it easier to share documents with fellow students. We strongly recommend that you do not ask for or share written work with other students when you are expected to generate them for yourself. If you want a model illustrating the format of a lab report or other assignment, make sure to use a report that was focused on a different topic and once again do not use copy/paste in taking notes on proper formatting. You should also feel free to discuss lab and course material with your classmates but if helpful ideas come up in discussion, make sure to use your own language when taking notes on these ideas.

Scientific writing and formal citation style are admittedly difficult to learn. They are very different from that of other disciplines and may also be very different from how you were told to write in high school. If you have questions or would like more information, please feel free to ask any of the Bio 001 personnel, or consult the very useful discussion at the following web site: <http://www.plagiarism.org/>

Literature cited

Anderson, G. [internet]. 2004. *How to Write a Paper in Scientific Journal Style & Format*. Lewiston, Ma: Bates College. [cited 2011, August 19]. Available: <http://abacus.bates.edu/~ganderso/biology/resources/writing/HTWtoc.html>

Pechenik, J. A. 2010. *A Short Guide to Writing About Biology*, 7th edition. Pearson Education, Inc, New York.

Understanding Plagiarism Exercise

Read the excerpt below from Campbell and Matthews (2005), then indicate which parts (if any) of the numbered sentences constitute plagiarism by circling or underlining the offending phrases. Also try to identify what specific type of plagiarism is illustrated by each circled phrase. You may work with others on this take-home assignment.

“After returning from the Beagle in 1836, Charles Darwin suffered for over 40 years from long bouts of vomiting, gut pain, headaches, severe tiredness, skin problems, and depression. Twenty doctors failed to treat him. Many books and papers have explained Darwin’s mystery illness as organic or psychosomatic, including arsenic poisoning, Chagas’ disease, multiple allergy, hypochondria, or bereavement syndrome. None stand up to full scrutiny. His medical history shows he had an organic problem, exacerbated by depression. Here we show that all Darwin’s symptoms match systemic lactose intolerance. Vomiting and gut problems showed up two to three hours after a meal, the time it takes for lactose to reach the large intestine. His family history shows a major inherited component, as with genetically predisposed hypolactasia. Darwin only got better when, by chance, he stopped taking milk and cream. Darwin’s illness highlights something else he missed—the importance of lactose in mammalian and human evolution.”

1. Charles Darwin endured four decades of puking, stomachaches, migraines, fatigue, dermatological issues, and moodiness.
2. Charles Darwin endured four decades of puking, stomachaches, migraines, fatigue, dermatological issues, and moodiness (Campbell and Matthews 2005).
3. Darwin exhibited a variety of ailments for most of his life (Campbell and Matthews 2005).
4. It has been said that Darwin suffered for over 40 years from vomiting.
5. Darwin only got better when, by chance, he stopped taking milk and cream.
6. Darwin only got better when, by chance, he stopped taking milk and cream (Campbell and Matthews 2005).
7. “Darwin only got better when, by chance, he stopped taking milk and cream” (Campbell and Matthews 2005).

Literature cited

Campbell, A.K., and S.B. Matthews. 2005. Darwin’s illness revealed. *Postgraduate Medical Journal* 81:248-251

