

The Department of Biology Statement on Plagiarism

Plagiarism is presenting someone else's thought, ideas, or work as your own.

Why not plagiarize?

Learning when and how to acknowledge someone else's contributions to your work is a skill all scholars must develop. This is because scientists formulate and test new hypotheses only after reviewing the literature to find out what is already known about a given topic. Therefore, scientists are constantly building on the work of other scientists. Failure to properly acknowledge this work undermines the very nature of science, which is a collective enterprise. These acts also rob you of a chance to practice and receive valuable feedback on a skill you will use the rest of your professional life.

Consequences of plagiarism at UMD

Plagiarism can also have a long term negative impact on an undergraduate career. **Students caught plagiarizing by faculty or Graduate Teaching Assistants in the Department of Biology at UMD, will receive zero points for the paper and, at the end of the term, their final course grade will be lowered by one full letter grade. In addition, students will be reported to the academic integrity office and can be referred to the Student Behavioral Judiciary Committee for a hearing potentially resulting in expulsion.**

There are also consequences to the credibility and reputation of your fellow students, your department, and to UMD. Faculty in the Department of Biology care about plagiarism not because we want to catch and punish students but because we want to train students to be good scientists and because we want degrees awarded by our department to be respected by other scientists, potential employers, and members of the community.

What constitutes plagiarism?

Copying the whole text

The most obvious type of plagiarism is submitting someone else's work under your name. Buying a paper or using a paper that someone else submitted in a different semester is plagiarism.

Using the same wording

Using exactly the same words as another without giving proper credit is also plagiarism. Examples include cutting and pasting blocks of text or images from electronic sources or copying sentences from a text book or from scientific papers.

Using the same ideas

While most students can understand and agree that it is wrong to copy someone else's work or to submit someone else's work under their own name, there is a more subtle form of plagiarism that involves the use of someone else's thoughts or ideas without proper citation. This form of plagiarism is sometimes unintentional. However, whether intentional or not, the consequences of plagiarism are the same. To avoid all types of plagiarism, it is necessary to properly cite your sources.

How do we detect plagiarism?

Software

These acts of plagiarism are easy to detect using software available to all members of the biology faculty

Experience

Faculty have been reading student papers long enough to recognize the difference between student writing and writing performed by professionals in the field.

How to avoid plagiarism

The following passage taken from the 2006 Prentice Hall Textbook *Biology: Science for Life* by Colleen Belk and Virginia Borden will be used to provide some examples that constitute plagiarism. This passage is used with the author's permission.

Original Source Text:

By comparing monozygotic twins to dizygotic twins, researchers can begin to separate the effects of shared genes from the effects of shared environments. However, the heritability value arrived at through the twin studies described above has been criticized by other scientists. They argue that monozygotic twins and dizygotic twins do differ in more than just genotype. In particular, identical twins are treated more alike than nonidentical twins. This occurs both because of the greater similarity in appearance of monozygotic twins, and because of the expectation by parents, relatives, friends, and teachers that identical twins are identical in all respects.

1) Cite direct quotations.

Keep in mind that scientists don't normally use direct quotes when writing scientific papers or grant proposals. Likewise, students should not typically use direct quotes in laboratory reports. However, quotes can be used in limited numbers when writing essays and term papers. If you repeat someone else's words, you must enclose the words in quotation marks and provide a citation. It is not enough to just name the source if you are quoting directly you must also place the quoted words in quotation marks.

Plagiarism Example I: Scientists can try to determine the relative importance of genes and environment. **By comparing monozygotic twins to dizygotic twins, researchers can begin to separate the effects of shared genes from the effects of shared environments.** Differences between these twins that share an environment might be due to genetic differences.

Note that the bold text is lifted directly from the original passage without quotations or a citation. This is plagiarism. Simply adding quotation marks and a citation would solve the plagiarism issue but it is much better to restate the passage in your own words. This is because your job in writing a paper is to synthesize the relevant literature and restate your findings in your own words. To do this without directly quoting requires an understanding of how to restate another person's ideas in your own words, a technique called paraphrasing.

2) Cite when you paraphrase.

When you paraphrase you must restate the sources meaning in your own words. You are guilty of plagiarism if you simply change a few words but retain the author's sentence or paragraph structure, even with a citation. In other words, substituting synonyms is not enough! The example below illustrates improper and proper paraphrasing.

Plagiarism example II: Improper paraphrasing.

By comparing identical twins to fraternal twins, researchers can begin to separate the effects of shared genes from the effects of shared environments.

This is plagiarism. Everything in blue is lifted. A few nouns were changed. This level of paraphrasing is far too light. Also, there is no citation.

An acceptable paraphrase and citation:

Scientists can try to determine the relative importance of genes and environment by comparing similarities for a given trait among identical and nonidentical twins (Belk 2006).

Plagiarism Example III: Mixing your words with the authors but retaining the sentence and or paragraph structure.

The heritability value arrived at through the twin studies has been criticized by those who argue that identical and fraternal twins differ in more than just their genes. In particular, identical twins are treated more alike than nonidentical twins. This occurs both because of the identical twins are

more similar in appearance, and because of similar expectations from teachers, friends, parents and relatives (Belk 2006).

Even though this example includes some original writing and a citation, the overall sentence and paragraph structure are the same as the original text. The flow of ideas from one paragraph to the next in the plagiarized text is the same as the original.

An acceptable paraphrase and citation:

Scientists can try to determine the relative importance of genes and environment by comparing similarities for a given trait among identical and nonidentical twins. The higher the heritability of a trait, the more the identical twins will have this trait in common. However, these results must be interpreted with a bit of caution since twins who were raised together tend to have been exposed to very similar environments (Belk 2006).

3) Cite other scientists' findings.

Students are often asked to summarize the current understanding of a particular topic for term papers. When using citations in the text of your paper you must provide proper credit for every scientific fact that you yourself did not discover. The only exception to this is when a fact is considered common knowledge. For instance if you wrote : **the enzymes of the citric acid cycle are found in the matrix of the mitochondria**, you would not need to provide a source. If you are not familiar enough with the field to know what is and is not common knowledge, you can use your source as a guide. If your source is reputable and treats something as common knowledge, it is usually safe for you to do so also.

Original Source Text:

The following text was taken from a paper written by Dr. Julie Etterson of our department and her Coinvestigator L.F. Galloway published in the Journal of Evolutionary Biology. This text is used with the author's permission.

*Populations within a species may diverge through genetic drift and natural selection. Few studies report on population differentiation in autopolyploids where multiple gene copies and the ratio of cytoplasmic to nuclear genes differ from diploids and may influence divergence. In autotetraploid *Campanula americana* we created hybrids between populations that differed in geographic proximity and genome size. Differences in genome size (up to 6.5%) did not influence hybrid performance.*

Plagiarism Example IV: Reporting someone else's findings as your own.

If you wrote: **Differences in genome size of over 6% do not influence hybrid performance** you must cite the work of Dr. Etterson or you would be committing plagiarism. You could however say that "species diverge from each other as a result of natural selection" without a citation since this is common knowledge.

Practical Tips for Avoiding Plagiarism.

Organize your notes

If you perform electronic research for a paper, open a separate file and label it "research". Color code anything that is not your own idea until you have done enough research to understand the topic and can get all of your thoughts together. Keep references with the text to insure the proper author gets credited.

Don't cut and paste text

When actually writing your paper, open a separate file and never paste anything into this file. Everything in this file must be in your own words or paraphrased with the proper citation.

Ask your instructor

If you have any questions about what constitutes plagiarism, speak to the faculty member who assigned the paper. We'd rather help you avoid plagiarism than see your academic and scientific career tarnished.