Writing Assignment

Spring 2017

Biology 211

Dr. Garbrecht

This writing assignment is worth **50 POINTS** and will be due to me by 3:30pm on Monday May 1st (day of our Final Exam)!!!!!

**EMAILED PAPERS WILL NOT BE ACCEPTED!!!!**

As future scientists/professionals, it is important that you become comfortable communicating in written form. One critical skill that you must develop is the use of primary literature to support information in papers that you write. As professionals, you can not include information in a paper and expect the reader to “take your word for it”. You must be able to cite a reference that can be independently located and verified so that the reader can look it up for themselves.

The primary source for a piece of information or data is the original published work. In science, this is often a book or research paper from a scholarly journal. Typically, books and research papers undergo a process called peer review prior to publication. This means that before a research paper is published, the paper and the data it contains is reviewed by several independent scientists who are experts in that particular field. This helps to ensure that published research papers do not contain data that is impossible to verify or reproduce, and that the authors have not grossly misinterpreted the data or made far-reaching conclusions that the data do not support.

**What would be considered a primary source (and more importantly, what wouldn’t!!)??**

 A primary source can be a published book, abstract, or article from a scholarly journal.

Examples of scholarly journals:

* *Nature*
* *Science*
* *Journal of Biological Chemistry*
* *American Journal of Physiology*
* *Journal of Clinical Endocrinology and Metabolism*
* There are literally HUNDREDS of scholarly journals that publish information and original research on every conceivable topic related to anatomy, physiology, medicine, and nursing.

*Not* scholarly journals:

* *Time*
* *Newsweek*
* *Popular mechanics*
* *Scientific American*
* *New Scientist*
* *Etc…*

**Additionally, websites like Google, Wikipedia, etc… are not considered primary sources since the information they provide usually cannot be independently verified.** Sometimes, Wikipedia entries DO contain citations identifying where the original data was published. If you happen to come across a piece of data on a site like this, it is YOUR responsibility to track down the original source and cite THAT SOURCE, not simply say you read it on Wikipedia (**NOTE- I can and will check these**).

**When do you need to cite something???**

 Typically, any piece of very new, or specific data, or anything that is not considered common knowledge to your audience must be cited by a primary source. Any time you directly lift a sentence from a source it needs to be in quotation marks, since they are the author’s words and not your own. (This is *very uncommon* in scientific papers and should be done VERY RARELY, if at all).

Example:

* Cigarette smoking can lead to a reduction in infant birthweight. – Don’t need to cite this since this is common knowledge to most people (it’s written on the pack of cigarettes).
* Cigarette smoke contains chemicals which inhibit the production of nitric oxide, leading to vasoconstriction of uterine arteries and reduced blood flow to the developing fetus, a major factor in low weight at birth. – This you WOULD need to cite since it talks about a specific disease process that is not likely to be common knowledge.

**How do you cite something??**

In order to cite something in a paper, you need two things :

1. **An internal citation.** This is accomplished by including a note at the end of a sentence that gives a quick reference as to where the information is found. For example, at the end of a sentence you would include the authors last name and the year the article or book was published.

Oxygen free radicals produced by the mitochondria contribute to the neuronal toxicity seen in amyotrophic lateral sclerosis (Zimmerman, 2007).

1. **A bibliography.** This is a complete list of the sources that you’ve cited in your paper. The bibliography should be sorted in alphabetical order based on the last name of the author.

Zimmerman, MC; Oberley, LW, Flanagan, SW. Mutant SOD1-induced neuronal toxicity is mediated by increased mitochondrial superoxide levels. J Neurochem. 2007 Aug;102(3):609-18.

**Citing a paper from a scholarly journal:**

Smith BT, Torday JS, and Giroud CJ. Evidence for different gestation-dependent effects of cortisol on cultured fetal lung cells. *J Clin Invest* 53: 1518-1526, 1974.

Torday JS. Androgens delay human fetal lung maturation in vitro. *Endocrinology* 126: 3240-3244, 1990.

 **Citing a book:**

Ballard, P.L., *Endocrinology of the Lung: Development and Surfactant Synthesis*, C.R. Mendelson, Editor. 2000, Humana Press: Towtowa, NJ. p. 1-44.

**Requirements:**

1. Paper must be 1 ½ to 2 pages long
	* + Margins must be not more than 1 inch on all sides
		+ Font must be no larger than 12pt
		+ Single spaced
2. You must cite **at least 3 primary sources (COPIES OF THESE SOURCES MUST BE TURNED IN WITH YOUR PAPER)**
	* + You don’t need to turn in the entire document, just a photocopy of the cover of the book or a photocopy/reprint of the first page of the article. Do not turn in a “screen shot” or print off a search page from PubMed, Google Scholar, or some other database.
		+ Can be books or articles from *scholarly journals*
		+ You must include a bibliography of your sources at the end of the paper organized alphabetically by author’s last name
		+ The bibliography does not count towards the 1 ½ to 2 page requirement
3. The paper must be EDITED
	* You must hand in an initial draft of the paper that has been edited by a classmate (hand both the initial draft and the final paper at the same time)
	* The “editor” must write comments on the paper and sign their name to the bottom of the initial draft.
4. Format:
	* The paper is broken down into 4 sections: (***include headings for each section***)
		1. Introduction: 1-2 paragraphs
		2. Body: 3-4 paragraphs
		3. Conclusions: 1-2 paragraphs
		4. Bibliography (Literature Cited) – does not count towards page length
5. Grading:
	* Assuming the paper is handed in ON TIME, each paper will receive the full 50 points
	* However, I will be deducting points for:
		1. Late papers – 5 point deduction for each day late (no emailed papers!)
		2. Less than 3 primary sources or failure to submit copies of sources (3 pts deduction for each missing source)
		3. Grammar and spelling (use a spell checker; up to 5pt deduction)
		4. Lack of citations, or citations in wrong format (3 pt deduction)
		5. Wrong format (Intro, Body, Conclusions, Bibliography) (3 pt deduction)
		6. PLAGIARISM – This is a serious offense and will result in an automatic ZERO, not to mention possible WSU action. Note, I keep previous year’s papers and can and will cross check papers if I suspect I’ve seen your paper before. Also, other Bio 211 professors will make their student’s papers available to me as well (and vice versa). So, don’t take the risk of failing a course (or worse) just to save some time!

**Tips and Suggestions:**

The goal of this project is to help you understand how to write in a professional manner and to learn to use electronic databases to locate primary literature. That being said, I encourage you to pick a topic that is interesting to you and is something you’ll enjoy learning more about. Maybe you take a medication to treat your asthma and want to learn more about its function, or maybe you’ve got a family member with Type 1 diabetes and want to learn how the disease affects different organ systems, or maybe you’re really interested in techniques used to repair ankle injuries in professional athletes, or maybe you’re interested in current nursing practices in the treatment of traumatic brain injury patients. Any topic related to human biology, nursing, or medicine is perfectly fine.

Although this paper is due towards the end of the semester, I strongly encourage you to get a head start NOW. Things have a tendency to get stressful towards the end of the semester and you will want to get going on this paper soon. Also, some sources you may need for your paper will need to be obtained through interlibrary loan from another library. Normally, this might only take a day or two, but towards the end of the semester lots of students across campus are also working on papers and interlibrary loan may take quite a bit longer, so please plan ahead!!

A major focus of this project is learning how to identify and use primary sources. If you have any questions about whether a source you plan to use is a primary source, FEEL FREE TO ASK ME!!! You don’t want to lose “easy” points on this paper due to using inappropriate sources….