Scientific Research Paper & Presentation

The assignment is a 4-5 page scientific research paper and a 5 minute presentation. Collectively, the paper and presentation will count for 10% of your final BIO 101 course grade.

DEADLINES

Topic Selection & Outline: Fri Oct 4
Draft: Mon Nov 4
Final Draft: Mon Dec 2

Presentations (your date will be assigned in lab):
LC3: Mon Dec 2 or Mon Dec 9
LC4 / BL: Wed Dec 4 or Wed Dec 11

TOPIC SELECTION

The first step in writing your paper is to choose a topic. You should choose a scientific topic that interests you AND is relevant to BIO 101. You should do some preliminary research to determine if there is enough information (you need a minimum of 5 different sources) available to write 4-5 pages on your topic of choice. It is a good idea to start with a few options, do some research and then make a decision based on what you are able to find on each of the prospective topics.

When you choose your topic, it is important to select an appropriate level of detail for a 5 page paper. If you choose a topic that is too broad, you will not be able to cover everything in 5 pages. If you make your topic too specific, you will not have enough information to fill 5 pages. Thus, it is critical to settle on a scientific topic of the appropriate scope. Here are some examples:

<table>
<thead>
<tr>
<th>Too Broad</th>
<th>Just Right</th>
<th>Too Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td>Recent advances in the development of an HIV vaccine</td>
<td>The results of the Phase 1 clinical trial of Sumagen’s vaccine</td>
</tr>
<tr>
<td>Alzheimer’s Disease</td>
<td>Proteins involved in the progression of Alzheimer’s Disease</td>
<td>The Beta amyloid Protein.</td>
</tr>
<tr>
<td>Arsenic</td>
<td>The neurotoxin Arsenic: Where it is found in the environment and how it affects the brain</td>
<td>Arsenic in Rice</td>
</tr>
</tbody>
</table>
On or before **Friday, October 4**\(^{th}\) you should hand in a typed outline that identifies your topic and includes a brief summary of the subtopics that you will cover (how your paper will be organized). Once I receive this outline, I will approve your topic, or make suggested changes to your topic and/or outline.

Keep in mind that the assignment is to write a **scientific** research paper. Scientific research papers should be written in an unbiased manner and do not include your opinion. All of the sources that you use (research articles, newspaper articles, magazine articles, books, etc.) should be evaluated for scientific validity.

**Below are some resources that may help you start exploring scientific topics:**

- [North Shore Community College Library](http://library.northshore.edu/)
- **Trustworthy websites** that update frequently with new findings in scientific research:
  - [National Institute of Health - Research Matters](http://www.nih.gov/researchmatters/)
  - [Smithsonian Magazine](http://www.smithsonianmag.com/)
  - [Science Friday - NPR](http://sciencefriday.com/)
  - [PBS Nature](http://www.pbs.org/wnet/nature/)
- **“Apps”** that you may want to download on your phone/electronic device (do NOT pay for these, they should be FREE):
  - SciFri (NPRs Science Friday)
  - BBC News (see: Science & Environment Section)
  - Science Mobile
  - Nature.com (Nature Publishing Group)
  - Scientific American
LENGTH & FONT
Your paper should be typed in Times New Roman, 12 point font with one-inch margins (standard) and double spacing. The text of your paper (NOT including title and references) should fill a minimum of four, full pages. Your text may continue on to the next page (page 5).

FORMAT
You do NOT need to label each section in your paper, but you should follow the general organizational format outlined below:

Introduction (1/2 – 1 page): Your paper should begin with an introduction of your topic. This should include an explanation of the significance of your topic, a brief overview of what you will discuss in the body of your paper, and an introduction to the area of biology that you will be discussing.

Discussion of your Topic (3 – 4 pages): This is the bulk of your paper. You should thoroughly explain and discuss your topic. Your paper should be well organized with clearly developed ideas. You must include in-text citations for all sources (APA format).

Conclusion (1/2 – 1 page): Your paper should end with a summary of your main points and the “take home” message of your paper.

References: You should list all of the sources that you used to write your paper. Follow APA guidelines.

WRITING STYLE
College-level writing is expected. Ideas should be clearly articulated. Grammatical and spelling mistakes will negatively influence your grade. You should plan to utilize the tutoring center. On the Lynn campus, the tutoring center is located at LW 219. They also have e-tutoring.

North Shore Tutoring Center
http://www.northshore.edu/tutoring/schedule.html

FINDING RESOURCES:
There are numerous resources available through the NSCC library. You will learn about many of these at the mandatory library seminar. You will be required to select at least five sources for your research paper.

You should take care in selecting resources, particularly those that you find on the internet (e.g. Wikipedia and personal websites/blogs are NOT acceptable sources for a scientific research paper). At least four or your five sources must be non-website sources. Furthermore, for each website that you utilize as a source for your paper, you should evaluate the purpose, authority, currency, accuracy and content of the site. For additional guidance on internet source evaluation see:

Evaluating Websites
http://www.northshore.edu/tutoring/schedule.html
NOTES ON PLAGIARISM

Plagiarism will NOT be tolerated. If you plagiarize, you will receive a ZERO on your paper. Recall that when using another person’s ideas or opinions you should **paraphrase, or summarize**, their ideas. This involves completely rephrasing the idea. If you do not paraphrase correctly, then you are **plagiarizing**. You **must** also cite (APA format) the source of the paraphrased information. If you do not cite the source of the information, that is also plagiarism.

Direct quotations should not be used in this paper, unless absolutely necessary. The only time to use a quote is if the specific wording used by the author is so important that if you rephrase the sentence yourself, then the meaning will be lost.

*Papers lacking in-text citations and/or the list of sources will NOT be graded and will receive a “zero”.*

PRESENTATION

You will be required to give a 5 minute presentation on your chosen topic. You should plan to use powerpoint slides, or the online presentation tool “Prezi”. If you and a peer (MUST be in the same lab section) decide to write papers on similar topics you may choose to **present together** (1 poster/powerpoint, TWO distinct papers).

GRADE

Points will be assigned as follows:

<table>
<thead>
<tr>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Attendance at library seminar</td>
</tr>
<tr>
<td>5</td>
<td>Topic Selection &amp; Outline received on time</td>
</tr>
<tr>
<td>5</td>
<td>A brief, informative title</td>
</tr>
<tr>
<td>10</td>
<td>Introduction</td>
</tr>
<tr>
<td>30</td>
<td>Detailed and relevant discussion of topic</td>
</tr>
<tr>
<td>10</td>
<td>Conclusion</td>
</tr>
<tr>
<td>10</td>
<td>Proper grammar usage and correct spelling throughout paper</td>
</tr>
<tr>
<td>10</td>
<td>In-text citations and formatted references page (APA format)</td>
</tr>
<tr>
<td>15</td>
<td>Presentation</td>
</tr>
</tbody>
</table>

Total = 100*

*Late assignments will have 10 pts deducted from the total grade for each day late.