



Methods of Science Research Honors (Rising Sophomores)

Summer Assignment

Welcome to the Science Research Honors course! We hope that you will find the journey through science research rewarding, enriching and inspiring!

During the summer you will have the following three tasks to accomplish as an introduction to the course.

*****All assignments are due on the first day of school!

Be prepared to present your work on the first day of school*****

Task 1

Read and summarize 10 scientific magazine articles (magazines can include The New Scientist, Scientific American, National Geographic, etc). These are not peer reviewed articles but are articles directed to a general public audience. Select articles that you understand and are interested in. You must include articles from the categories listed below.

One method to find articles is to go to the Public Library. Another is to use Google or a database search engine such as EBSCOhost. This is accessible at school in the THS Library website under "Databases". It is also accessible from home through the Tenaflly Public Library site: <http://catalog.bccls.org/polaris/search/misc/esources.aspx> (you will need a public library card to login). Instructions for EBSCO Host: After you enter the website, go to the bottom of the page it select "EBSCOhost" or "EBSCOhost Web". You will be asked to select a Database so chose either "Academic Search Premier" or "GreenFILE". A search box will appear in which you may type your key word. Many results will be listed and you will see on the left side "Refine Results". Select "Full Text". Under "Source Types" select "Magazines" and "Trade Journals" only. This will narrow down your search to general audience articles.

Select 10 scientific research articles from the categories listed below:

- 2 Biology/Life Sciences
- 2 Chemistry
- 2 Physics
- 2 Engineering
- 2 Computer Science/Math/Statistics/Robotics

Create a google doc with the following for each paper that you read

- the reference of your articles and the category
- a one paragraph summary of the paper (up to 200 words).

Task 2

Select a peer-reviewed article by a high school student from one of the following journals:

<https://nhsjs.com/> - National High School Journal

<http://cjsjournal.org/> - Columbia Junior High Journal

<http://www.isjos.org/> - International Scholastic Journal of Science

Prepare an 8-12 slide Powerpoint presentation of the article as follows:

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| Section 1 | Title of paper, authors and your name and date (1 slide) |
| Section 2 | Introduction (1-2 slides) |
| Section 3 | Review of Literature: list the main References used in the article, if available at the end of the article (1 slide) |
| Section 4 | Purpose/Hypothesis of the Research (1 slide) |
| Section 5 | Methodology (if available in the paper, this section describes the experimental equipment and methods used.) (1-2 slides) |
| Section 6 | Results (if available, here you can cut and paste data tables, graphs as shown on the article) (1-2 slides) |
| Section 7 | Discussion (discuss the main findings) (1-2 slides) |
| Section 8 | Conclusion (1 slide) |

Upload it to Google Classroom and be ready to give a 5-10 minute presentation in class.