

## Science Research Honors Summer Assignment - for incoming Juniors and Seniors only

Science research classes in 11th and 12th grades are open to students who have demonstrated a commitment to conduct independent research during the school year and in the summer. All Junior and Senior students are required to present their research at local, regional, and/or national scientific competitions as well as at the High School Science Symposium at the end of the year. Over the spring, you have been asked to plan future experiments that can be carried out in the following ways:

- *at a mentored research laboratory;*
- *in the school district or another setting with signed pre-approval from the school's Institutional Review Board (IRB); such as a psychological or behavioral study;*
- *in the field, such as collecting water and soil samples.*

In order to present at science competitions, you will need to write a 2-3 page document called a "Research Plan". Guidelines for writing a research plan are located on the Intel International Science & Engineering Fair Website at <http://www.societyforscience.org/isef/document>. Scroll down until you find the research plan form. It is called **Form 1A Student Checklist/Research Plan**.

Your summer assignment will be to write a research plan. **Even if you are not conducting independent research over the summer, you must *propose* a set of experiments that you intend to work on starting in the fall.**

The research plan is required for both the Long Island Science & Engineering Fair (LISEF) and the New York State Science & Engineering Fair (NYSSEF). **The best projects will be selected for participation in these and other competitions.**

Here is a brief description of what the research plan should include:

- 1) Goals/Expected Outcomes/Hypotheses. **20%**
- 2) Detailed description of method or procedures. **20%**
- 3) Procedures: Detail all procedures and experimental design to be used for data collection. **20%**
- 4) Data Analysis: Describe the procedures you will use to analyze the data that answer research question or hypothesis. **20%**
- 5) Bibliography: List at least five (5) major references (e.g. science journal articles, books, internet sites) from your literature review. If you plan to use vertebrate animals, one of these references must be an animal care reference. **20%**

**The research plan will count for 5% of the first quarter grade. Follow all of the guidelines listed above to receive full credit.**

**The research plan is due on September 15, 2022.**

Good luck and please send me any questions at [gordons@gcufsd.net](mailto:gordons@gcufsd.net).  
Dr. Gordon