

# PreAP Chemistry

## 2008 Summer Science Fair Topic Assignment

May 12, 2008

Dear Incoming Pre-AP Chemistry Student,

For the 2008-2009 school year, all students enrolled in Pre-AP Chemistry will be required to complete a science fair project. **Choosing an idea** and exploring the feasibility of the idea are perhaps the **most critical of the steps** and should be completed as soon as possible. Your summer assignment is to spend time at the library and/or on the internet gathering ideas and securing resources for your science fair topic. This assignment will be **due during the first week of school on Thursday Aug. 28<sup>th</sup> (A Day) or Friday Aug. 29<sup>th</sup> (B Day) 2008** (no exceptions).

You may complete a project in any of the 12 approved categories (listed below).

### Categories:

Behavioral/Social Science

Botany

Computer Science

Engineering

Medicine and Health

Physics

Biochemistry/ Microbiology

Chemistry

Earth/Space Science

Environmental Science

Zoology

Mathematics

Throughout the project, points will be awarded based on the level of difficulty and creativity of the project. It is therefore imperative that your project idea be reflective of the high school level. While there are many books with titles such as “101 Science Fair Ideas” be aware that these books are generally geared toward elementary and middle school students. These are good starting points for general ideas, but the **projects will generally have to be brought to the high school “senior division” level by having a novel project, collecting additional data, using more sophisticated analytical equipment and procedures, or broadening the scope of the investigation.**

There are some great general resources out on the Internet for ideas and methods for completing a science fair project. I have listed a few of them below.

<http://www.super-science-fair-projects.com>

<http://www.cdli.ca/sciencefairs/>

<http://www.ipl.org/div/kidspace/projectguide/>

During Cycle 1 of the 2008-2009 school year, your science fair project grade will consist of a composite of three phases. You will complete phase one as described below during the summer. **Phase One is due on Aug. 28 / 29, 2008 (no exceptions).**

### **Phase One: General Articles (20% of total test grade)**

- Look through recent (no more than 2 years old) general science literature (includes popular magazines or newspapers such as Newsweek, Time, Popular Science, Discover, Houston Chronicle, New York Post, etc. These do NOT include articles that originated on an internet website.).
- Choose 5 articles that interest you and more importantly involve different topics that you personally could investigate. (Keep in mind that your project must be based upon one of these articles so take some time in choosing and analyzing this literature.)

For example, you are interested in nutrition and find two interesting articles: one relating to colon cancer and another relating to academic performance. Although cancer is important, it is probably impossible for a student to develop a science fair topic on colon cancer. A more feasible topic is to broaden the scope of nutrition on test scores in teenagers. (By the way, this project has already been extensively done!)

- Turn in **copies of the 5 articles** and provide a **typed summary sheet** containing the following items.
  - 1) Bibliographic citations for each article **ranked in order** according to your level of **interest** in the topic. Format of bibliography should be: Author. "Article Title". Magazine Title. Year: vol. (issue) pp.
  - 2) Under each citation write a 4-5 sentence summary **in your own words** AND answer the following questions about that article:
    - a) In a brief sentence or two, explain what specific idea(s) about this topic interest you.
    - b) List something specific about this idea or topic you are curious about.
    - c) Write one specific question you would like to see answered about this topic and that you personally could test. (This question could ideally be developed into your science fair project. It should contain one variable to test and the specific outcome.)
    - d) What additional specific background information would you need to research to be able to pursue your above question.

We have had good success with our science fair projects at the District and Regional level. We anticipate similar and even greater success in the coming school year. We know that science fair projects can be trying on you as well as your parent, but we hope that the benefit and experience that you gain will be well worth the time and effort.

If you have any questions about this summer assignment, please ask me before this spring semester ends. I look forward to teaching you PreAP Chemistry in the Fall!

Sincerely,  
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