Updated 11/4/14

**Annual Science Project Assignment**

**Due Date:** \_\_\_\_\_\_\_

The annual Science project consists of three components:

1. **Display Board 2- Report (must be typed) 3- Oral Presentation**

**Display Board Setup**

The illustration below indicates the proper order that the title, headings and information should appear on your display board.

|  |  |  |
| --- | --- | --- |
| **Background research**  This provides the foundation for setting up the experiment. | **Title/Problem**  This should be stated in the form of a thought provoking question that can be measured. | **Data Analysis**  Data analysis is an explanation of the results. |
| **Hypothesis**  A statement that suggests a possible answer to your title/problem. | **Experimental Data**  The experimental data are results collected during the experiment. The data should include graphs, charts and tables. | **Conclusion**  Answers the title question based on the analysis of the experimental data.  **Significance/Application**  Explains how the information learned from your experiment is relevant to society. |
| **Materials**  List the materials used.  **Procedures**  List the steps you followed in order. | **Pictures Graphs**  **Tables Charts** | **New Problem:**  What variable would you change if you were to repeat the experiment? |

**Display Hints:**

* Proofread all work.
* Be very neat and use bright colors.
* Use photographs, charts, and graphs and place them in the center section of your board.
* Make each heading noticeable with large bold print.
* Label all graphs, charts and diagrams.
* Use construction paper to add color to your board.
* Everything should be **typed**.

**Task:** You will be writing an explanatory text including the scientific procedures/experiments to accompany your science project.

1. **Research**- This section of your project consists of you conducting research. Write at least two paragraphs summarizing your findings, which will support your hypothesis. Gather information from at least two sources (digital and print); use search terms effectively; assess the credibility of each source; quote or paraphrase the data and conclusions of others. Avoid plagiarism and cite specific textual evidence. Draw evidence from informational texts to support analysis, reflection and research. If there is difficult scientific vocabulary in your summary, define the word in parentheses following the word. A bibliography must be submitted with your research. (Writing for Science 6-8.8/9)
2. **Problem**- Your problem should be stated in a thought provoking and testable question. Your problem should be something you thought about after reading the research. Include some reasons you chose the problem using scientific vocabulary. Be sure your problem is something that can be measured.

For instance, a problem that asks, “Which shampoo makes my hair softest?” is not good, since there is no scientific way we have to measure softness.

A better problem might be, “Which shampoo increases the strength of hair?” That would be fine, since it is possible to measure hair strength by using weights or a spring scale (or by some other means) and getting data that can be measured. (CCLS- Informational text #1, 2, 10 Language #6)

1. **Hypothesis-** This is an educated guess or prediction of the results of your investigation based on the research you have done. The hypothesis needs to be put into a clear statement that tests only one variable.
2. **Experiment-**
3. List all of the materials you need for your experiment.
4. List, step by step, your exact procedures (what you did).
5. Explain the controls you used and what your one variable was during the experiment. Which are your dependents and independent variables?
6. Provide simple photographs that go along with the list of what you did.

(CCLS Language 6)

**Data Analysis-** Explain what you found out, based on the data you collected. You must have a data table that displays all of the data you collected. Use graphs to make your data clear and understandable. (CCLS Language 6)

**Conclusion/ Significance-** The conclusion proves or disproves your hypothesis and answers your title question. It is based on the data you collected. The significance explains how the information in your report pertains to society. You must explain why the information you found out is important. (CCLS Language 6)

1. **New Problem-** If you were to repeat this experiment would you do something differently? If your hypothesis was incorrect, what would be your next step? If your hypothesis was correct, what new experiment would be next? Explain.
2. **Relevance-** Explain why your experiment is important and how it applies to a real world situation.
3. **Bibliography-**Written in MLQA format-Separate page titled “work cited”

**Oral Presentation**

You will be asked to present a 5 minute oral presentation to your class. When you present your assignment to the class you must be sure to present your claim and findings, sequence ideas logically and use descriptions, facts and details to highlight main ideas. Be sure to use good eye contact, volume and pronunciation. Include multimedia components (e.g. graphs, images, music and sound), and visual displays in your presentations to clarify information.

Be sure you don’t turn your back on the class or read from the board. Each student will be asked a set of questions by his or her teacher about the project. (CCLS- Speaking and Listening 4, 5, 6)

**Project Outline Requirements**

* All students are to work individually.
* All parts of this project must be completed and submitted by the due date.
* There are three parts to your project:

1. Display Board

2. Report (must be typed) with a cover page

3. Oral presentation.

All three parts will count for the third marking period.

Your science teacher must approve all project topics before you begin the project. If you turn in a project that has not been approved by your teacher, it will not be accepted.