Chemistry Honors Project

Student Name:

Heritage High School, Fall 2016

***Project Objectives:***

***Identify a Question***

***How can it be modeled?***

***Judges can grasp***

***Include assumptions, approximations, information***

***State the Question and Potential Solutions***

For this section, state your topic or problem under investigation. Use the time in the beginning in the media center and/or outside resources to discover a real world problem that you, as a group, wish to collaborate together to solve. You will be taking this situation and break it down (see flow chart above) to present this to non-chemistry major judges. This means you will have to break down the concept, vocabulary, assumptions. As a group, come up with a general situation and break down questions that will help aid to a solution to this problem. From here, you will individually tackle solutions to this problem in a research report and then will communicate to each other for assistance during the process. At the end of this project, you will come together and present an ultimate discussion about this topic and present this to judges.

*GROUP WORK*

***Part I: Research***

**DUE: September 15th**

Find a situation you wish to explore. Pose your questions and potential solutions to this situation. Create a brief paragraph explaining your situation and questions..

This will be a pass/fail. If you create questions that are not supported with adequate research, then you will have to go back and recreate this question.

**Topic:**

**Problems or Questions within the Topic:**

INDIVIDUAL into GROUP

**Part II: Research and Bibliography**

**DUE: September 23rd**

Each group member will need to have two sources to contribute to the whole. Each group will then turn in a minimum of six sources in alphabetical order **in MLA format**. (You may use EasyBib.com to put your sources into the correct format). Underneath each source, write a paragraph summarizing (in your own words) information obtained from the source AND the value in using this source. Sources should be relevant and respected by the scientific community, Use google docs to create one shared document and include each group member's name to which source they researched.

**Topic:**

**Problem or Question within the Topic:**

**Source:**

**Summary:**

**Source:**

**Summary:**

**Source:**

**Summary:**

**Source:**

**Summary:**

**Source:**

**Summary:**

INDIVIDUAL WORK:

***Part III: Interview***

**DUE: October 14th**

Here, list your scientist or community member interviewed. List the questions asked and their provided answers. You must include at least five questions and answers, but you may include more. Beneath the questions and answers, write your interview as a source in MLA format. Your source should not be a teacher at Heritage High School or an immediate family member.

Include a brief individual reflection of what you have discovered through this interview (i.e. further questions, conflictions, etc). This should be at least two paragraphs.

**Expert Name:**

**Job Title or Area of Expertise:**

**Date and Location of Interview:**

**Describe the process of setting up the interview:**

**Insert Transcript:**

**Source in MLA format:**

INDIVIDUAL WORK

***Part IV: Research Paper***

**DUE: November 10th**

You will write a typed paper describing the topic in detail. The paper can be informative or an argumentative paper.The paper should include a minimum of three chemical concepts that apply to their topic. Students will follow proper writing and grammar conventions (MLA Format). Students will turn in a bibliography including any additional sources that were used in their paper. You may use your peers sources from Part II as part of your bibliography but should not be word for word from what has already been submitted. You can also collaborate on what sources you may have discovered in addition to writing this report, but please make sure you follow integrity.

GROUP WORK

***Part V: Collaboration***

**DUE: Dec. 9th**

In this section you will gather all your findings and present this as one whole. Here you can be creative on how you wish to piece all the findings together. For example, you can use a dry erase board for brainstorming on individual discoveries. What did each group member bring to the table? Practice the exercise of active listening. Either a picture or save the brainstorm ideas to be submitted for a grade. From here, you can also plan how you wish to present this to your judges (ex. Define roles, final product, model, etc). Complete the planning guide to turn in to the teacher.

GROUP WORK

**Part VI: Communicate to the Community**

**DUE: December 15th**

Formal presentation where you will collaborate and communicate to your community creatively. You will take part five and present this to judges in the classroom. Make sure you know who will be talking and when.

***Works Cited***

In this section, create a complete alphabetical list of the sources used in parts I and II and add any sources that have been added throughout part III and IV.

INDIVIDUAL

**Part VII: Portfolio**

**DUE: JANUARY 6th**

Students will ***individually*** complete a portfolio of their project that includes parts 1-6. The portfolio will be graded for completeness.