Final Exam Performance Assessment

* Choose your experiment and inform me on the google form sent to you.

PBA final exam directions:

- All projects must use the scientific method (see below)
- Only one project is allowed per student.
- Students must take full responsibility for the safety of all parts of their experiments/demos.
- Students will create a google presentation with a title slide, a slide for each part of the scientific method, with images or video of the project being assembled, conducted, etc., resources used, and a conclusion

The Scientific Method

1. Determine your problem that needs to be solved from making an observation.
    a. What is the purpose of your project?
    b. What question are you trying to answer?
2. Develop a hypothesis
    a. This is a speculation or guess about how something happens. Based on your hypothesis, you can predict what outcome you expect for a particular experiment that you do.
    b. Your hypothesis does not need to be proved correct.
3. Test your hypothesis
    a. set up a plan and procedures
    b. Make a list of materials that you will need
    c. Conduct some research
4. Record your observations
    a. collect your data
    b. Did your experiment prove your hypothesis?
    c. Create graphs or data charts to support your evidence.
    d. Don't forget to take pictures or video!!!
5. Draw a conclusion
    a. Interpret your data and findings.
    b. The conclusion presents your interpretation of the results of the experiment that you performed. If your experimental results agree with your original prediction, then they support your hypothesis. If not, you need to tell why you think your prediction differs from your results. Was there a problem in the way that you did your experiment? Or do you need a new hypothesis to explain what resulted?
6. Communicate your results
    a. Complete your presentation showing all parts of your experiment. This will be presented in class.

Some things to think about . . .

What is the purpose of your project?

- What is the scientific problem or question you are trying to answer? When you have that figured out, the scientific method comes into play. What observations will you be making? How will you develop a hypothesis? Make sure that you're following the scientific method every step of the way.

Develop a plan for carrying out your project.

- How much time do you have to organize your project? How much time will you need? (Don't wait until the last minute to do this!!!) How are you going to gather your information? (Your project will be a lot more interesting if you can include some background information about it.) What kind of experiments will you conduct, and how much time will they take? Decide on a plan of action for every stage of your project, and write your plan down on paper.

Grading Rubric

Description	Points available	Points received
Google form submitted with your project choice	**5 pts**	
Google presentation shared with the teacher.	**5 pts**	
Resource page at the end of the presentation	**5 pts**	
Title slide includes your name, period, name of your experiment, and the date	**5 pts**	
Brief summary of your experiment	**10 pts**	
Material List (items used for your experiment)	**5 pts**	
Scientific Method used (slide(s) to represent)		
- Determined the problem	**10 pts**	
- Hypothesis stated	**10 pts**	
- Steps and procedures showing how you tested your experiments	**10 pts**	
- Show your data	**10 pts**	
- Interpretation of data (conclusion)	**10 pts**	
Use photo images, drawings, or video recordings	**15 pts**	
Total Points	**100 pts**	