Gas Law Project

Directions

In this project, your goal is to illustrate one of the three gas laws discussed through designing and conducting of your own experiment then demonstrate understanding of the gas law and kinetic theory of gases by discussing the relationship between the experiment and molecular motion of gases. Finally, you will apply this to something in the real world as an extension of your experiment.

You will complete this with a partner or 2. **No larger groups will be accepted**. Sharing or collaborating on an experiment will be considered cheating and will be reflected in your grade. Participation will be included in your final grade for each day of the project. Failure to meet deadlines mentioned below may result in a deduction in your participation grade.

You must adhere to the restrictions and guidelines outlined in the layouts/checklist for each of the media you can chose as well as the rubric provided.

This is due April 20, 2018. **There will be NO extensions, NO late work accepted, NO absent excuses accepted.** If technology fails you, you must address this BEFORE the due date, not the day of. Pick your media (poster/slides/video) wisely with this in mind. This is the digital age and you have multiple tools at your disposal. Collaborate with your partner if you are absent.

Timeline

Monday & Tuesday 4/16 & 4/17	**TO DO:** 1. Create Group 2. Complete Planning Guide 3. Receive Teacher Approval
Wednesday & Thursday 4/18 & 4/19	**TO DO:** 1. Perform experiment, record data and observations 2. Complete 90% of poster
Friday 4/20	**TO DO:** 1. Finalize poster 2. Turn in poster 3. Gallery Walk

Student 1: _____ Student 2: _____

Project Name:
Brief Description:

Gas Law:

Procedure and Materials Brainstorm:

Explanation Rough Draft:

1. What is the relationship between _____ and _____?

2. How does your experiment show this?

3. What is happening in your experiment at the molecular level?

4. What is another example of this gas law that we looked at in class?

5. Conclusion.

Title of Project

Gas Law Used

Picture of experiment that models molecular motion

Procedure and materials

Gas Law studied
Relationship between variables
What a graph of the relationship between these two variables would look like

Explanation paragraph

Real world examples of where this gas law applies

Category	4	3	2	1
Procedure and Materials	Student(s) include a clear procedure that lists all the steps necessary for completing their experiment and all the materials needed are listed	Procedure is unclear but may list all the steps necessary for completing their experiment and all the materials needed are listed	Student lists some of the steps necessary for completing their experiment and some of the materials needed are missing	Procedure is incomplete and materials list is missing
Model of Molecular Motion	Model clearly shows how the motion of the molecules in the experiment change as they manipulate one of the gas variables	Molecular model included, with small mistakes	Molecular model included, but it does not fully represent what is happening.	Molecular model included, but inaccurate
Relationship and Graph	Students state whether the relationship they are looking at is direct or inverse. They include a graphical representation of that relationship and briefly	Students state whether the relationship they are looking at is direct or inverse. They include a graphical representation of that relationship	Students state whether the relationship they are looking at is direct or inverse. The graphical representation is incomplete, unlabeled, or	Students state whether the relationship they are looking at is direct or inverse.
Explanation pt. 1	Paragraph includes an introduction and conclusion. Material is presented in a logical order. Two sources are cited.	Paragraph includes an introduction and conclusion. Material is presented in a logical order. One source is listed	Paragraph includes an introduction and conclusion. Material is presented, but may be hard to understand. No sources	Any part of the paragraph is plagiarized
Explanation pt. 2	Observations from the experiment are clearly explained using the gas law relationship that was chosen	Observations from the experiment explained using the gas law relationship that was chosen, but explanation is unclear	Observations from the experiment are explained using the gas law relationship that was chosen, but is inaccurate	Any part of the paragraph is plagiarized
Real World Applications	Students list three real world applications of their gas law	Students list two real world applications of their gas law	Students list one real world applications of their gas law	Real world examples are not relevant
Appearance	Product has a polished look and all elements are included	All elements are included but product looks rushed	Elements are missing or unreadable	Incomplete