**Math/Physics Workshop**

**Template for Group Activity**

**Title of Activity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Content Area: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Short description of the activity:

**Connection to common core and standards:** list the common core and standards that are connected to this activity. List all specific to each discipline; can be more than three. Are there any overarching common cores (overlapping) that fit for both disciplines?

Overarching:

1.

2.

3.

Math:

1.

2.

3.

Science:

1.

2.

3.

**Level of complexity:** Define what grade level and how complex the project will be. Are you expecting student to develop their own experimental process or will you provide them stop-by-step instructions? Will this be performed in one class period or in multiple class meetings?

**Description of the project:** This is a longer description that includes all necessary information for implementing the project including: pre-lab, list of equipment, experimental process, data collection charts, data analysis, etc…

**Assessment component:** This section includes the types of assessments you will conduct during the project. This includes pre, formative, and summative assessments. Be sure to include a grading rubric where appropriate.

**Student Handouts:** Create the necessary handouts you would provide to your students while they are gathering data and performing the project. This should include: instructions, safety statements, instructions for analysis, etc…

**Math/Physics Concepts and Skills** – Make a list of physics and math concepts and skills necessary to complete the project. Define and explain the concepts and skills.

**Math/Physics** **Instructional Time Line** – Create an instructional timeline related to the math/physics concepts and skills necessary to complete this activity in your classroom. Identify when the skills and content are learned and/or introduced. Decide if they are pre-knowledge to if they will be taught/learned in your classroom.

**Math/Physics Language**– Make a list of terms and definition used in this activity that relate to each discipline (Math and Physics) individually. What are the differences and similarities? What could you do in your teaching to make sure students understand these differences and similarities?

**Instructor Reflection:** Develop a 1-page instructor’s self-reflection tool. This should give the instructor opportunity to reflect on the instructional process and the student action part of the project. What worked well? What should be improved? What could be changed and why? **Math/Physics Concepts and Skills** – Make a list of physics and math concepts and skills necessary to complete the tasks in the math modeling section and the physics investigation. Define and explain the concepts and skills.

|  |  |
| --- | --- |
| Math Concepts:  | Math Skills: |
| Physics Concepts: | Physics Skills: |

**Math/Physics** **Instructional Time Line** – Create an instructional timeline to introduce the math and physics concepts and skills necessary to complete this activity in your classroom.

|  |  |  |
| --- | --- | --- |
| Order of concepts and skills | Math  | Physics  |
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**Math/Physics Language Sheet** – Make a list of terms and definition used in this activity that relate to each discipline (Math and Physics) individually. What are the differences and similarities? What could you do in your teaching to make sure students understand these differences and similarities?

|  |  |
| --- | --- |
| Math | Physics  |
| Differences  | Similarities  |

Notes: