Newton’s 3 Laws of Motion Inquiry Activity

Student Directions:
In this activity you will find out more information about Newton’s 3 Laws of motion. Then you will select one of the laws to teach the class about.

Part 1
Your Assignment: Using the available reading selections and internet sources, you will answer the questions below about all 3 of Newton’s laws. You may complete this independently or in pairs.

You will need to use at least 1 reading source and at least 1 internet source. Be sure to properly cite each source.

Newton’s 1st Law of Motion
1. What is the 1st law?

2. What are two real world examples of this law? Explain how they are the 1st Law.
   a. 
   b. 

3. What are at least 3 vocabulary words that associate with the 1st law? Explain how they are fit.
   a. 
   b. 
   c. 

Newton’s 2nd Law of Motion
1. What is the 2nd law?

2. What equation goes along with Newton’s 2nd Law?

3. What are two real world examples of this law? Explain how they are the 2nd Law.
   a. 
   b. 

Name:

Period:

Date:
4. What are at least 3 vocabulary words that associate with the 2nd law? Explain how they are fit.
   a. 
   b. 
   c. 

Newton’s 3rd Law of Motion

1. What is the 3rd law?

2. What are two real world examples of this law? Explain how they are the 3rd Law.
   a. 
   b. 

3. What are at least 3 vocabulary words that associate with the 3rd law? Explain how they are fit.
   a. 
   b. 

Rubric for Part 1:

**Advanced= 4**
- Used 4 sources and 2-3 different ones of each source
- All answers cited
- All ?’s correct and answered
- Very detailed answers and research on all ?’s
- All complete sentences

**Proficient= 3**
- Used at least 1 reading & internet source
- All answers cited
- All ?’s answered
- 1 question incorrect

**Basic= 2**
- Used only 1 source (reading or internet)
- 1-3 ?’s not cited
- 1-2 ?’s not answered
- 2 ?’s incorrect

**Below Basic= 1**
- Used 0 sources
- 4 or more ?’s not cited
- 3 or more ?’s not answered
- 3 or more ?’s incorrect
Part 2:

Your Assignment: You will now become an EXPERT on one of Newton’s Laws. Prepare to teach the class about one of Newton’s 3 Laws. You will need to complete the tasks below to prepare. You will be placed in groups for your presentations.

Presentations begin Friday, March 15th.

1. Your group will have 15-20 minutes. These are the components you will need to include in your lesson.
   a. Discuss the information you researched in part one, for the law you are teaching.

   b. Develop a demonstration or insta-lab that shows your law at work and have an explanation to teach the students WHY it shows your law.
      i. This can be demonstrated to the class to watch or it can be an insta-lab that students can try in small groups themselves.

   c. Class participation- This could be in the form of:
      i. notes for students to write in their journals
      ii. questions for students to answer in class
      iii. acting out an example of the law you gave them
      iv. in small groups finding their own examples of the law and sharing with the class

   d. Lesson ends with a mini quiz or small worksheet to see what the students learned from you about your law.
      i. This quiz or worksheet will then need to be graded to see how everyone did.
      ii. Results shared with Mrs. Genetti
      iii. Quiz or worksheet passed back to the students and glued in their journals.

This portion may use any of the teaching tools I use in class. (Projector, Elmo, white boards, lab equipment etc) Please discuss with Mrs. Genetti what tools you would like to use prior to teaching the lesson.
# Part 2 Teaching Rubric:

## Accuracy of Information:

<table>
<thead>
<tr>
<th>Advanced:</th>
<th>Proficient:</th>
<th>Basic:</th>
<th>Below Basic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>All facts and examples are accurate, detailed, and show understanding above expected 6th grade level.</td>
<td>Facts and examples are accurate with no more than one minor error.</td>
<td>Facts and examples are accurate with no more than two minor errors.</td>
<td>Contains at least 1 major error or three or more minor errors in the facts and examples.</td>
</tr>
</tbody>
</table>

## Demonstration/Insta-Lab:

<table>
<thead>
<tr>
<th>Advanced:</th>
<th>Proficient:</th>
<th>Basic:</th>
<th>Below Basic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The demo/insta-lab accurately demonstrates the correct law and contains a detailed and descriptive explanation to the class.</td>
<td>The demo/insta-lab accurately demonstrates the correct law and contains an accurate and clear explanation to the class.</td>
<td>The demo/insta-lab partially demonstrates the law and contains a partial and somewhat unclear explanation to the class.</td>
<td>The demo/insta-lab does not demonstrate the law and contains an unclear explanation to the class.</td>
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## Mini Quiz or worksheet:

<table>
<thead>
<tr>
<th>Advanced:</th>
<th>Proficient:</th>
<th>Basic:</th>
<th>Below Basic:</th>
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<tbody>
<tr>
<td>All questions are well related to the lesson taught. Questions are detailed and require thought, but are not too difficult.</td>
<td>All questions are related to the lesson taught. Questions are clear, but are not too difficult.</td>
<td>Most questions are related to the lesson taught. Questions are slightly unclear. Some are either too easy or difficult.</td>
<td>Some or none of the questions are related to the lesson taught. Most questions are unclear and either too easy or difficult.</td>
</tr>
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## Class Participation:

<table>
<thead>
<tr>
<th>Advanced:</th>
<th>Proficient:</th>
<th>Basic:</th>
<th>Below Basic:</th>
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<tbody>
<tr>
<td>Group uses all four (or more) types of participation accurately.</td>
<td>Group uses three or two types of participation accurately.</td>
<td>Group uses one type of participation.</td>
<td>Group uses one type of participation inaccurately or uses no participation types.</td>
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## Lesson Timing:

<table>
<thead>
<tr>
<th>Advanced:</th>
<th>Proficient:</th>
<th>Basic:</th>
<th>Below Basic:</th>
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<tr>
<td>Students complete their lesson within the 15-20 mins time frame</td>
<td>Students complete their lesson over or under that time frame by at least 3 minutes.</td>
<td>Students complete their lesson over or under the time frame by at least 5 or more minutes.</td>
<td></td>
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