Element Project

Objective(s):

🌟 Research an element and become an expert
🌟 Make a “fun” project representation for your element
🌟 Present information and model to the class through a Scientific Symposium

Expectations:

1. Project Learning Contract: daily grades in class for participation and productivity

2. Research Guide: research topics to be completed and submitted

3. Project: physical product to be graded on content (see information sheet) and creativity!
   IDEAS: Look at how your element is used in your life.
   - Diorama: represent how your element is used in your everyday life
   - Game: board game, be creative, and include information learned.
   - Mobile: pictures, facts, items containing your element
   - Book: Create a children’s book/ photo album to teach about your element.
   - Model: Be creative, make it relevant to how it is used in real life!
   - Posters are good supplements but will NOT receive full project credit
   - All projects MUST INCLUDE PICTURE of YOUR ELEMENT!
   - All projects will have an actual sample of your element and/ or a substance containing your element

4. Bibliography: created using Noodle Tools or another method to be submitted electronically on Classroom
   - Must have at least one book source.
   - Must have a minimum of three sources. More is recommended.

5. Symposium: class presentation similar to college research poster session
   - WOW your classmates and teacher with fascinating/bizarre facts and news about your element
   - ENTHUSIASM!!!
   - Be Interesting, Be Serious, Be ready to entertain questions

Grades:

- Project Learning Contract – 30 points Classwork category
- Research Guide – 10 points Classwork category
- Project – 100 points Assessment category
- Bibliography – 10 points Assessment category
- Symposium – 100 points Assessment category
Research Guide

Use this worksheet to organize your research. This completed guide is a 10 point Classwork grade. Include all this info on project! See attached RUBRIC.

Name of Element:  
Symbol:  

**Why did you choose this element?** Make it relevant to your everyday life.

**Physical Properties:** make sure you include a picture on project!

- Atomic number: ________________
- Atomic Mass: ________________
- Density: ________________
- Melting Point: ________________
- Boiling Point: ________________
- State / Appearance at STP (photo): ___________________________________________
- Periodic Table family(# and/or name): _________________________________________
- Classification (metal, nonmetal, metalloid): ____________________________________

**Discovery:**

- Who: ________________________________________________________________
- When: ________________________________________________________________
- Where: ________________________________________________________________
- How:

- Source of Element in Nature and how obtained: ______________________________

- Origin of Name and Symbol:
Other Information: Unique properties..... etc....

Safety Concerns or Hazards:

WOW! Use more paper if needed! Make sure this interesting info is on project!

Practical uses/applications: Provide details!!

Your element in the news: current event

Other interesting facts, come on... WOW the teacher and your classmates!

How does your element pertain to something in your life? You learned more since I asked this first question. So continue here.
# Project Rubric:  
(Scored by your instructor ONLY!)

<table>
<thead>
<tr>
<th>Category</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esthetic</td>
<td>Creative, Pizzazz, Unique, evidence of time and relates to use of the element</td>
<td>Creative, Colorful evidence of time and effort spent into project</td>
<td>Lack of creativity. Poster cut and paste, some effort put into project</td>
<td>No evidence of time spent, lack of creativity, very little information</td>
<td>Not turned in</td>
</tr>
<tr>
<td>Organization / Presentation</td>
<td>Organized, easy to find information</td>
<td>Contains information not organized</td>
<td>Some information bulleted</td>
<td>Very little information</td>
<td>Hand written separate paper</td>
</tr>
<tr>
<td>Information</td>
<td>Full understanding of the element, All information from project guide and more</td>
<td>understanding of the element, All information from project guide</td>
<td>Little understanding of the element, Some information from project guide</td>
<td>No understanding of the element, random facts</td>
<td>Last minute written on paper Random facts</td>
</tr>
<tr>
<td>Element Symbol, Name</td>
<td>Name and Symbol of element prominent of project</td>
<td>Missing one, or had to search for</td>
<td></td>
<td></td>
<td>Not present</td>
</tr>
<tr>
<td>Images / Pictures</td>
<td>Multiple Pictures labeled</td>
<td>Missing element at STP have Other pictures</td>
<td></td>
<td></td>
<td>Not present</td>
</tr>
<tr>
<td>Physical Properties</td>
<td>Atomic#, Atomic Mass, Density, Melting Point, Boiling Point, State / Appearance at STP</td>
<td>Missing 1 or 2</td>
<td>Missing 3 or 4</td>
<td>Missing 4 or more</td>
<td>Not present</td>
</tr>
<tr>
<td>Discovery</td>
<td>Who, What Where, When, How</td>
<td>Missing 1 or 2</td>
<td>Missing 3 or 4</td>
<td>Missing 4 or more</td>
<td>Not present</td>
</tr>
<tr>
<td>Origin / Meaning of Name &amp; Symbol</td>
<td>Origin/meaning name and symbol</td>
<td>Missing one</td>
<td>Not present</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source of Element</td>
<td>Source in Nature Abundance</td>
<td>Missing 1</td>
<td>Not present</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety and Hazards</td>
<td>Concerns about handling element or compounds containing it, Health and Environmental issues. Details</td>
<td>Concerns about handling element or compounds containing it, for just one issue</td>
<td>Briefly addressed few details</td>
<td>Not present</td>
<td></td>
</tr>
<tr>
<td>Practical Uses Personal Connection WOW!!!</td>
<td>multiple ways how element is used and affects our everyday life with details</td>
<td>how element is used and affects our everyday life few details, bulleted list</td>
<td>Present one way how element is used lack details</td>
<td>No explanation as to how element affects everyday life</td>
<td>Not present</td>
</tr>
</tbody>
</table>

Total ________________ of 40 x 2.5 for GRAND TOTAL: ________________ out of 100
# Symposium Rubric:

<table>
<thead>
<tr>
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<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project</strong></td>
<td>Creative, Pizazz, Unique, evidence of time and effort put into project</td>
<td>Creative, Colorful evidence of time and effort spent into project</td>
<td>Lack of creativity (poster), cut and paste, lack color, little effort put into project</td>
<td>No evidence of time spent, lack of creativity, very little information given</td>
</tr>
</tbody>
</table>
| **Pictures**   | Multiple Pictures  
Element at STP along with name and symbol, picture of scientist, or substances/experiments used in | Single picture of the element at STP along with name and symbol | Drawing of element along with name and symbol | Elements name and symbol only |
| **Sample**     | Samples of element and substances that contains element | Shows a full understanding of the topic. All information from research in project | Shows a good understanding of the topic. Most of the information from research | Shows a good understanding of parts of the topic. Lacks information from research |
| **Content**    | Shows a full understanding of the topic. All information from research in project | Shows a good understanding of the topic. Most of the information from research | Shows a good understanding of parts of the topic. Lacks information from research | Does not seem to understand the topic very well. Little information from research |
| **Comprehension/Relevance** | Student is able to accurately answer almost ALL questions posed by classmates about the topic and relate to everyday life | Student is able to accurately answer MANY questions posed by classmates about the topic and relate to everyday life | Student is able to accurately answer a FEW questions posed by classmates about the topic no relevance to life | Student is **unable** to accurately answer questions posed by classmates about the topic. |
| **Stays on Topic** | Stays on topic all (100%) of the time. | Stays on topic most (99-90%) of the time. | Stays on topic some (89%-75%) of the time. | It was hard to tell what the topic was, lack of focus |
| **Enthusiasm** | Facial expressions and body language generate a strong interest and enthusiasm about the topic in others. | Facial expressions and body language sometimes generate a strong interest and enthusiasm about the topic in others. | Facial expressions and body language are used to try to generate enthusiasm, but seem somewhat faked. | Very little use of facial expressions or body language. Did not generate much interest in topic being presented. |
| **Preparedness** | Student is completely prepared and has obviously rehearsed. | Student seems pretty prepared but might have needed a couple more rehearsals. | The student is somewhat prepared, but it is clear that rehearsal was lacking. | Student does not seem at all prepared to present. |

**Total _______________ of 30 (potential for 2 bonus points)**