**Element Poster**

Each student will choose an element from the periodic table complete this project independently. The poster should be neatly organized and colorful.

|  |  |
| --- | --- |
| **Required Information** | |
| Name of Element  Symbol  Atomic Number  Atomic Mass  Number of Neutrons in the most common isotope  Person who discovered the element (if known)  When the element was discovered  Location on the periodic table  How the name was derived | Where geographically the element is found  How it is found in nature  How it is obtained from its source in nature  Uses of Element  Oxidation states/Possible charges  Chemical reactivity  Physical Properties  Unusual facts or superlatives about the element  Accurate Bibliography of resources |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Grading Criteria** | **Superior** | **Above Average** | **Satisfactory** | **Needs Improvement** | **Substandard** | **Not Present** |
| Inclusion of Required Information | 40 | 34 | 28 | 22 | 15 | 0 |
| Accurate Bibliography | 20 | 18 | 16 | 14 | 12 | 0 |
| Organization of Information | 20 | 18 | 16 | 14 | 12 | 0 |
| Neatness | 10 | 9 | 8 | 7 | 6 | 0 |
| Creativity | 10 | 9 | 8 | 7 | 6 | 0 |
| Total |  |  |  |  |  |  |

**Famous Scientist**

Students will choose a famous scientist to complete research. This information will be complied into a poster that is neatly organized and colorful. Students will work independently on this project.

**Required Information**

* Name of Chemist
* Country of Origin
* Life Span
* Discovery
* Brief Summary of Research
* Notable Awards
* Factors that Contributed to Fame
* How his/her discovery or research has impacted today’s chemistry
* Interesting Fact
* Picture
* Accurate Bibliography

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Grading Criteria** | **Superior** | **Above Average** | **Satisfactory** | **Needs Improvement** | **Substandard** | **Not Present** |
| Inclusion of Required Information | 25 | 23 | 20 | 18 | 15 | 0 |
| Accurate Bibliography | 20 | 18 | 16 | 14 | 12 | 0 |
| Organization and Neatness | 20 | 18 | 16 | 14 | 12 | 0 |
| Creativity | 15 | 14 | 13 | 12 | 11 | 0 |
| Presentation | 20 | 18 | 16 | 14 | 12 | 0 |
| Total |  |  |  |  |  |  |

**Teaching Creatively**

Students will work in pairs on this project in which they choose a topic listed on the project sheet previously taught this semester. Students will create a short, 5-7 minute, mini-lesson to review the topic with the class. The students will present this lesson to the class at the end of the semester as a review prior to exams.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Grading Criteria** | **Superior** | **Above Average** | **Satisfactory** | **Needs Improvement** | **Substandard** | **Not Present** |
| Creativity | 25 | 23 | 20 | 18 | 15 | 0 |
| Accuracy of Information | 25 | 23 | 20 | 18 | 15 | 0 |
| Depth of Information | 25 | 23 | 20 | 18 | 15 | 0 |
| Overall Presentation | 25 | 23 | 20 | 18 | 15 | 0 |
| Total |  |  |  |  |  |  |

**Science Fair Project**

Students are to independently designa science experiment in which he/she completes over the semester. This project should reflect the thought level of an honors high school student and present a valid idea to experiment. Students are allowed to design their own experiment or use one found on the internet. All ideas must be approved by the teacher prior to beginning the project. On the assigned day, student will present the project to the class. Student can either use a tri-fold display board or poster board to display the information. The following points of the scientific method should be included on the poster:

* Hypothesis: stating the idea or purpose behind the experiment
* Materials and Safety: what materials were used and any safety procedure that should accompany them
* Procedure: a step by step outline of how to complete the experiment
* Data: raw numerical results organized in a chart and/or graph
* Result: interpretation of the data in regards to trends, averages, and maximum/minimum values
* Conclusion: the results are explain in regards to what they imply and if the hypothesis is correct and possible errors in the experiment
* Picture: a picture of the experiment being performed

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Grading Criteria** | **Superior** | **Above Average** | **Satisfactory** | **Needs Improvement** | **Substandard** | **Not Present** |
| Hypothesis | 10 | 9 | 8 | 7 | 6 | 0 |
| Materials and Safety | 10 | 9 | 8 | 7 | 6 | 0 |
| Procedure | 10 | 9 | 8 | 7 | 6 | 0 |
| Data | 10 | 9 | 8 | 7 | 6 | 0 |
| Graph or Chart for Data | 10 | 9 | 8 | 7 | 6 | 0 |
| Results | 10 | 9 | 8 | 7 | 6 | 0 |
| Conclusion | 15 | 13 | 11 | 9 | 7 | 0 |
| Presentations | 25 | 23 | 20 | 18 | 15 | 0 |
| Picture | +5 | +4 | +3 | +2 | +1 | 0 |
| Total |  |  |  |  |  |  |

**Research Paper**

In correlation with your science fair project, you will independently write a research paper. The paper should be at lead 4 pages of text and no more than 10 pages. It should be in 12 point font, Times New Roman, double spaced with 1 inch margins. The first page should have your name, course name, and date in the right hand corner, single spaced.

Karen Collier

Honors Chemistry

9/29/2010

The consecutive pages will have your last name followed by the page number. This will be on one line in the right hand corner.

Collier 2

Do not procrastinate! Pick a topic and start completing your research. Use valid sources, not Wikipedia. One of your sources must be a scientific journal and you must have at least five sources total. Include a bibliography at the end of your research paper. Use MLA format to cite your sources correctly. It would be a good idea to create an outline before you begin your paper. This will help you know where to go next in your writing. I have a very simple outline below. You need to proofread and need to have other people proofread your paper. Read your paper out loud to yourself and others. If you are struggling, please come see me before it’s too late!

**Topic: *Asbestos Poisoning***

1. **Introduction**
   1. Definition of Asbestos Poisoning
   2. Significance of the Study
   3. Definition of Terms
2. **Body**
   1. Symptoms of Asbestos Poisoning
   2. Effects of Asbestos Poisoning
   3. Treatments
3. **Conclusion**
   1. Conclusion
   2. Recommendations
      1. How to Deal with Asbestos Hazards

Below are a few websites that could be helpful:

* <http://www.esc.edu/esconline/across_esc/writerscomplex.nsf/0/ccf81b03ecdc507c852569c3006589e0>
* http://www.ruf.rice.edu/~bioslabs/tools/report/reportform.html