**Atom Model Project**

**This project is designed to illustrate the many different forms of atoms that exist in nature. The student will research and depict the atomic structure of an atom of an element.**

**Directions:** The student will be assigned an element by the instructor. The student will complete the element report before beginning work on the model. The instructor must sign-off with initials on the Bohr Model drawing.

**Grading Rubric**: **Model Due: 9/11 thru 9/12**

|  |  |  |  |
| --- | --- | --- | --- |
| Criteria for Success | High Performance 22.5 - 25 pts. | Satisfactory Performance 20 – 22.5 pts. | Low Performance  < 20 pts. |
| 1:The model is 3D  2:Dimensions between 1ft2 and 1.5 ft2  3:Model is made to be hung from the ceiling | All three requirements met | Two requirements met | < Two requirements met |
| 1:All subatomic particles shown in correct number  2: All subatomic particles are labeled with correct charges  3: All subatomic particles are in accurate size ratios (the protons and neutrons will be larger than electrons) | All requirements met. | Two requirements met | < Two requirements met |
| 1: The two main parts of the atom are labeled.  2: The two main parts of the atom are in accurate size ratios (the electron cloud will be larger than the nucleus) | All requirements met. | One requirement met | < One requirement met |
| 1: The project is neatly done and well made (parts don’t fall off)  2: A complete heading is attached to the project  3: Students are creative with materials (keeping cost low) | All requirements met. | Two requirements met | < Two requirements met |

**The student may earn the points allotted for each of the four sections of criteria in the grading rubric shown above. The element report is below on this page and will count as a separate grade from the model.**

**Element Report**

The model portion of the project and the element report must be completed on the student’s own time. If the student has issues getting supplies to create the model, please see instructor before or after school, or during advisory.

Name of Element \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Symbol\_\_\_\_\_\_\_\_\_\_\_

Atomic Number \_\_\_\_\_\_\_\_\_\_\_\_

Atomic Mass (weight) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Group name and number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period number \_\_\_\_\_\_\_\_\_\_\_\_

Where in the natural world is the element usually found? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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How is the element mined/recovered from it’s origin? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What are the general physical properties of the element? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What are the general chemical properties of the element? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What are some uses of the element or compounds involving the element? \_\_\_\_\_\_\_\_\_\_

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Number of Protons \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Number of Neutrons \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of Electrons \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Number of Energy Levels \_\_\_\_\_\_\_\_\_\_\_

Number of Valence Electrons \_\_\_\_\_\_\_\_\_\_\_

Draw and attach a Bohr Model of your element on a separate sheet of paper.