Name: _____
Element: _____

Physical Science- ELEMENT PROJECT

Overview:
You will be assigned an element to research and to complete a written report and 3-dimensional model. You will be given the whole class periods on 4/11, 4/12, 4/13 to work in class but, some work will need to be completed outside of class. This will be counted as a summative assignment, so please do your best. Both parts of this project will be due **Monday April 17th.**

Part 1: Atomic Model
The atomic model should be a three dimensional model using the materials of your choice.

a. Some ideas may be: Styrofoam balls, beads, tacks, stick pins, pipe cleaners, clay, wire, etc. Please avoid the use of foods such as marshmallows as they draw ants and fall off. Keep in mind that the atomic models will be displayed from the ceiling after they are graded so they need to be sturdy.
b. Your model must include the following labels:
Element name, chemical symbol, atomic number, atomic mass, the correct number of protons, neutrons, and electrons.

USE YOUR CREATIVITY FOR THIS PART OF THE PROJECT!
If you need help gathering some of the supplies- I do have some available from previous years- please contact me, first come- first served.

2. Part 2: **Written Reports:** The written (poster) portion of this project needs to include the following information. This will be on a small poster accompanying your model. Again be creative!

-Element, chemical symbol) period, group, common isotopes
-At least 4 Physical Properties (melting/boiling point, color, state of matter at 20^{o} C, Density, Classification- metal, nonmetal, metalloid)
- At least 3 Chemical Properties (reactivity, corrosive, combustible, flammable, reacts violently with___...)
-Discovery- who, when, how/where, origin of the name.
- Economic uses/Value- …anything interesting… - How used by industry, Importance to living organisms, if any.
-What common/important molecules that contain the element?
-Where it is found or how is it produced (i.e. earth's crust, atmosphere, USA, Africa, Atmosphere, etc.)
- At least one picture of the element and at least one picture of it in its common use.
-Anything else you can find out. See research for further guidance.

Grading Rubric:

Category	Scoring Criteria	Points Possible	Points Scored
Atomic Model (10)	Name & Symbol	2pts	
	Nucleus shown/labeled	1pt	
	Electron Cloud shown/labeled	1pt	
	Correct number of protons (labeled)	2pts	
	Correct # neutrons (labeled)	2pts	
	Correct # Electrons (labeled)- (correct orbitals + 1 E.C)	2pts	
Poster- General (3)	Name & symbol	1pt	
	Period & group #s	1pt	
	List Common Isotopes	1pt	
Physical Properties (4)	At least 4 (Up to 1 point extra credit for more)	4pts	
Chemical Properties (3)	At least 3 (Up to 1 point extra credit for more)	3pts	
Discovery (4)	Discoverer	1pt	
	Date of Discovery	1pt	
	How/where discovered. Explain	1pt	
	Origin of Element's Name	1pt	
Uses, Sources, Importance (4)	How is this element used by industry or used biologically?	2pts	
	What are common or important molecules that contain this element?	1pt (Up to 1pt Extra Credit for extra)	
	Where is this element found naturally? Or How is this element produced?	1pt	
Images (2)	Picture of Raw Element	1pt	
	Picture of element in use	1pt	
Appearance, Organization, Creativity (13)	Author of poster is visible	1pt	
	Neatness- Easy to read?	3pts	
	Spelling	1pt	
	Unusual, eye-catching or imaginative elements to the poster	3pts	
	Images printed in color	2pt	
	Visual cues provided (examples: titles, subtitles, numbering, color coding etc)	3pts	

Total : _____/43