Element:

Here's your chance to let your creative juices flow! In order to put everything together you have learned from this chapter, you will make an atom model for one element on the periodic table. You will be required to use common household and/or craft materials to create atom parts such as protons, neutrons, and electrons.

Use any material you want as long as it's safe and within reason! There is no need to buy materials – just use things you find around the house (styrofoam, light clay, paper mache, paperclips, foil, paper, etc.). Please avoid food items that will cause odor and rot later in time. Because there are several elements with extremely high atomic numbers, you will be required to choose one of the elements listed below for your model:

Lithium	Boron	Argon	Sodium	Aluminum	Helium
Carbon	Neon	Magnesium	Nitrogen	Calcium	Phosphorus
Chlorine	Potassium	Oxygen	Sulfur	Fluorine	Silicon

Basic Guidelines & Expectations:

- Your model should be about the size of a sheet of printer paper. Make sure that your final product has the ability to be hung from the ceiling (paperclips and fishing line can be made available upon request). Size and weight should be considered – nothing too big or heavy!
- 2) Your model should use different colors and/or types of materials to represent each of the 3 major subatomic particles (protons, neutrons, and electrons). If you use beads to represent the protons, you should use a different material/color to represent the neutrons, and a third to represent the electrons.
- 3) Your model should have the correct number of electrons, protons, and neutrons present. Use your periodic table and ask me if you have questions.
- 4) Your model must also include an attached information tag that <u>clearly</u> identifies the following (as shown below):

Side 1	Side 2		
Atomic #	<u>Key</u> :	N	
Atomic Symbol	Protons: Neutrons:	Pe	
Element Name Atomic Mass _{Your Name}	Electrons:]	

Note: Notice Side 1 resembles an element square on the Periodic Table. On Side 2, you should provide a key that will help distinguish between each subatomic particle.

- 5) You will need to do research either on the internet or in a book to determine the positions of electrons for your element (all electrons are orbiting outside of the nucleus, but amount of electrons in each "orbital" is different).
- 6) Be creative in your use of materials and construction. It is very easy to tell when students put forth great effort to create their models; likewise, it's very easy to tell when someone threw their model together at the last minute. DON'T PROCRASTINATE! Be sure to ask questions if you have them.

Names _____

Element _____

ATOM MODEL SCORING RUBRIC

This rubric will be used to assess your atom model and information card. This rubric is required to be handed in with your project or your grade will be held until it is submitted to me.

			0		
MODEL	MODEL	DESIGN/MATERIALS	INFO CARD	INFO CARD DESIGN	POINTS
ACCURACY	CREATIVITY		ACCURACY		
6: The number of	6: The model	6: Well constructed,	6: All required	6: The information on the	
protons, neutrons	includes at least 3	demonstrates creative use	information is	card is very organized, easy	
and electrons are	different materials	of materials, and is a	present and correct.	to read and clearly	
correct.	and is very neatly	reasonable size. Can hang		identified/labeled	
	crafted and	from ceiling.			
	organized.				
4: There is an	4: The model	4: Generally well	4: There are 1-2	4: The information on the	
error in ONE of	includes at least 2	constructed, creative use of	errors in the required	card is generally organized,	
the atom particle	different materials	materials, and is	information.	readable and labeled	
totals.	and is neatly	reasonable size. Can't			
	crafted and	hang from ceiling as is.			
	organized.				
2: There is an	2: The model	2: Construction, OR use of	2: There are 3-4	2: The information card is	
error in TWO of	includes at least 1	materials, OR size does not	errors in the required	lacking in one of the above	
the atom particle	different material	meet expectations.	information.	areas	
totals.	but lacks creativity				
	or organization.				
0: All three atom	0: Serious lack of	0: Overall failure to meet	0: There are 5 or	0: The information card is	
particle totals are	creativity or	expectations; haphazard	more information	not organized, not easy to	
incorrect.	organization.	material use and lack of	errors.	read and not clearly labeled.	
	Model does not use effort is evident				
	any materials.				

Comments:

TOTAL POINTS = /30