

Name: \_\_\_\_\_

**Due:**

Element: \_\_\_\_\_

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:

- 1) 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,. 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 clearly identifies the following (as shown below):

Side 1	Side 2
<p>Atomic #</p> <p><b>Atomic Symbol</b></p> <p>Element Name</p> <p>Atomic Mass</p> <p>Your Name</p>	<p><u>Key:</u></p> <p>Protons:</p> <p>Neutrons:</p> <p>Electrons:</p>

**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.

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