

Modeling the Atom Web site guided questions. Name/P. _____

What is matter? _____

What is an atom? _____

What is an element? _____

Common Element –

1. What elements are in these common items? Write one in each box.

Possible answers: Neon, Aluminum, Iron, Gold, Helium, Silicon, Silver, Lead.

What kind of atoms make up the penny? _____

2. **After mousing over each particle in the model:** List the three subatomic particles that make up atoms. Give the mass and charge of each one.

Particle	Mass (AMU)	Charge

3. Fill in the information for elements on your chart on the next page. Record the number of protons, neutrons, and electrons for balanced atoms of each element indicated.

If the nucleus were the size of a basketball, the electrons would be _____ miles away?

Go through the tutorial about constructing the atom first. Then begin. The isotopes are labeled differently with a number. Do not list isotopes you made.

Element	Protons	Neutrons	Electrons

How many electrons could you put in energy shell, K _____ L _____ & M _____

4. Which particle controls what element an atom is? Describe how you used the model to come up with your answer. _____

5. What do you get when you change the number of neutrons in the nucleus? _____

6. What controls the "weight" of an atom? Describe how you used the model to come up with your answer. _____

7. Try to cluster the electrons together or move them into another level. Describe the behavior of the model electrons. _____

8. What do you get if the number of protons and electrons in your model is not equal? _____

9. Fill out the chart for these elements: oxygen, neon, aluminum, iron, and gold.

8 (atomic #)	_____	_____	_____	_____
O	_____	_____	_____	_____
Oxygen	_____	_____	_____	_____
16.00 (AMU)	_____	_____	_____	_____