

Complete and study the following for the upcoming test!!!

**Define and give examples of the following terms:**

- 1) Protons: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 2) Neutrons : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 3) Electrons: : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 4) Atomic Number: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 5) Atomic Mass: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 6) Isotope: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 7) Atom: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 8) Nucleus: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Describe what the following people found/discovered and how:**

- 9) Bohr
- 10) Rutherford
- 11) Dalton
- 12) Thomson
- 13) Lavoisier

**Answer the following short answer questions that will be on the test on a separate sheet of paper:**

- a. Thomson's model of the atom pictured electrons embedded in a ball of positive charge. Analyze why Rutherford's gold-foil experiment led to a change in this model.
- b. The isotopes of carbon (carbon-12, carbon-13, carbon-14) have different mass numbers. Each isotope has six protons. Calculate the number of neutrons in each isotope.
- c. Define the law of conservation of mass. Use an example to help define the law.
- d. Table salt is made from a sodium ion,  $\text{Na}^+$  and a chloride ion  $\text{Cl}^-$ . Represent with symbols how the two ions form to create a compound and explain how this occurs.
- e. Be able to draw an atom from the periodic table with its electron orbitals and nucleus!