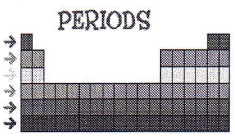
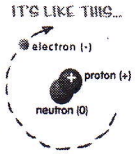
Study Guide for Atoms and Periodic table





Name: _____

Date: _____No. ___ Per: _____

1. Draw and label a Helium atom:
(Show the nucleus with protons & neutrons and the correct number of orbiting electrons using the symbols below)

N Neutron

⊕ Proton

⊖ electron

2. Atomic mass comes from adding _____+ _____ (in nucleus).

3. What is the atomic number for Tin? _____ Atomic mass? _____

How many protons _____
electrons _____
neutrons _____ show math:

50
Sn
Tin
118.69

4. Is Tin a metal, nonmetal, Inert gas or metalloid?
_____

5. Electrons have a _____ charge
6. Neutrons have a _____ charge
7. Protons have a _____ charge

8. What is the definition of an **isotope**? _____
_____

9. Draw and label 3 different hydrogen **isotopes.**
Hints: They will have different numbers of _____. They will have a mass of 1, 2, and 3 amu.

1 H 1 **H** isotope with mass=1	2 H 1 **H** isotope with mass=2	3 H 1 **H** isotope with mass=3

10. On back, Make a labelled diagram of the Rutherford experiment. Show and describe (in words) how Rutherford found evidence for: a. the atom being mostly empty space and b. the existance of a small nucleus containing most of the mass of the atom.