Unit 7 - Topic 1 Atomic Structure & Periodic Table - Review						
1. Match each Scientist's name or atomic model to the proper description.	Match each Scientist's name or atomic model to the proper description.					
Dalton Thomson Rutherford Bohr Quantum I	Mechanica					
A. Electrons were described as existing in orbits (energy levels) around a positive nucleus. Often referred to as the "planetary model." (1913)	ly charged					
B. Discovered electrons using Cathode Ray Tubes (1897). He envisioned the elect imbedded in a positively charged mush of matter. His model is often referred t 'plum pudding' model (like electron 'raisins' imbedded in a positively charged 'oatmeal').						
C. Discovered that the nucleus was the positive part of an atom and that it was smal dense in mass. Most of the atom is composed of empty space (1909). Experiment called the 'Gold Foil Experiment'. His model would show a positively charged nucleith the electrons around it (but in no particular orbits).						
D. Electrons are viewed as existing in probability zones known as 'orbitals'. Orbitals are similar to the orbit/energy level idea, except they are not necessarily spherical orbits but have other shapes as well. Other names include: Electron Cloud Model, Wave Mechanical Model, Modern Model.						
E. All matter is made up of atoms that are hard spheres, like 'billiard balls'.						
Based on the results of his experiment, what two conclusions did Rutherford make about he structure of the atom?  1						
2						
3. Construct Bohr diagrams for the following:						
Na O						
electron configuration: electron configuration:						

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

Date: \_\_\_\_\_

Name:	Date:

4. Fill in the following table.

Element / Ion	# Protons	# Neutrons	# Electrons	Mass #	Nuclear Charge
Ca-41					
<sup>42</sup> Ca <sup>+2</sup>					

5. How many protons and neutrons are in each of the following?

<sup>23</sup> <sub>11</sub> <b>N</b> a		arsenic-75		<sup>33</sup> S		sodium-24	
protons	neutrons	protons	neutrons	protons	neutrons	protons	neutrons

6.	Which of the atoms in question #5 are iso	topes of each other? Explain how you know, using
	the definition of isotope in your answer.	

7. Draw Lewis structures for all of the following:

Ne	Li	S-2	Al+3	2-8-5