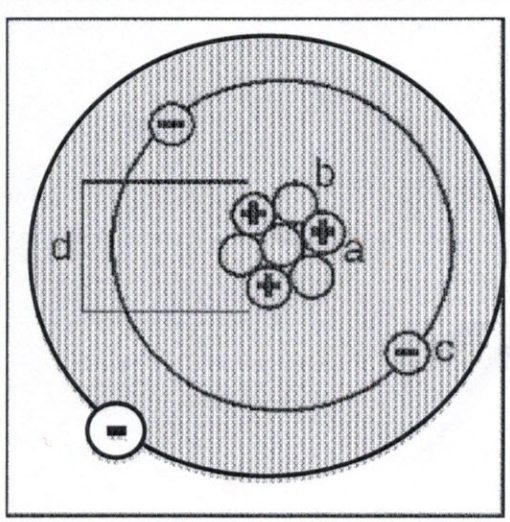
Guided Notes- The Structure of the Atom Name/Date

Atom Composition 	✓ The atom is mostly _____ _____ ✓ Protons and neutrons in the _____ ✓ The number of _____ is equal to the number of _____ ✓ Electrons in space around the nucleus called an _____ _____ ✓ Extremely small.
What is a **Proton**? (+)	• Found in the _____ • Positive charged particles, _____/proton • _____ _____ than an electron • Number of _____ _____ the atom • Number of protons is called the _____ _____
What is a Neutron? (0)	• Found in the _____ • _____ charge, so called _____, _____/neutron • Same mass as a proton • Neutrons _____ _____ and help _____ the nucleus
What is an **Electron**? (-)	▪ _____ the nucleus in _____ energy levels Called the electron cloud ▪ _____ charged particles, _____ /electron ▪ (Their negative charge is attracted to the positive nucleus) ▪ _____ is so small it __ _____ ▪ Electrons are the _____ of _____ _____
Diagram of a Lithium (Li) Atom lithium 3 **Li** 6.941	Color code the particles a. _____ b. _____ c. _____ d. _____ Electron energy _____ Level one has _____ electrons Level two has _____ electron – maximum _____



Neutral Atom *ZERO Charge*	➢ Neutral means _____ _____ _____ ➢ _____ atom has _____ numbers of positive _____ and negative _____ ➢ Ex. Lithium: (____ protons) + (___ electrons) = 0 charge = neutral atom ➢ Atoms are listed on the periodic table as neutral atoms
What is the Atomic Number? lithium 3 **Li** 6.941	• Every atom has a _____ _____ _____ • Atomic number = the number of _____ = the number of _____ • *(remember: neutral atom the charges = 0)* • Listed on the periodic table
Mass,amu	_____ is set as the standard as having a mass of _____ Other elements are compared to carbon-12. Using this method: ✓ One _____ has a mass of 1.0073 use _____ amu ✓ One _____ has a mass of 1.0087 use _____ amu ✓ One _____ has a mass of 0.0006 use _____ amu
What is amu?	✓ _____ _____ _____, amu ✓ Simplified _____ for the mass of protons and neutrons
What is the Mass number?	❖ Protons and neutrons have all the mass ❖ _____ is found in the _____ ❖ Simply count the number of protons + neutrons and you get the mass of an atom in amu! ❖ Mass number = _____ + _____
(Average) Atomic Mass lithium 3 **Li** 6.941	_____ mass of the _____ of an atom as found in nature. It is never a whole number. This is the Mass listed on the periodic table for an element (atom)
Periodic Table Square Information	8 O Oxygen 15.999
Summary ***Use notes to complete***	

Particle	Location	Charge	Mass
Proton			
Neutron			
Electron			