

Name: _____

Date: _____

Notes: Understanding Electrons

Describe the structure of atoms: _____

Atoms have the same number of which 2 subatomic particles?

Why don't we identify elements based on electrons? _____

Determine how many electrons are in each of the elements below:

magnesium _____

sulfur _____

titanium _____

palladium _____

lanthanum _____

krypton _____

lithium _____

chromium _____

Periodic Table of the Elements

H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt									
		Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu		
		Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr		

Sublevels:

_____ holds up to _____ electrons
_____ holds up to _____ electrons
_____ holds up to _____ electrons
_____ holds up to _____ electrons

Energy Levels:

1st Energy Level holds _____ electrons
2nd Energy Level holds _____ electrons
3rd Energy Level holds _____ electrons
4th Energy Level holds _____ electrons

Filling in electrons:

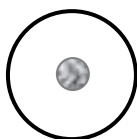
Step 1: _____

Step 2: _____

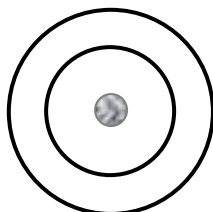
Step 3: _____

Step 4: _____

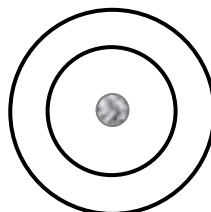
Correctly add electrons to each of the diagrams below.



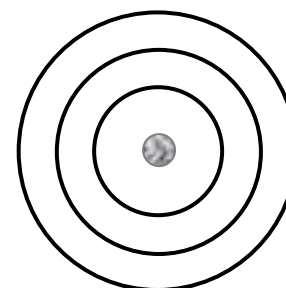
Hydrogen



Boron



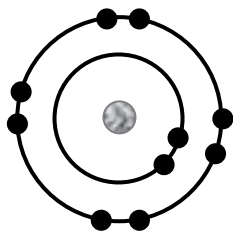
Nitrogen



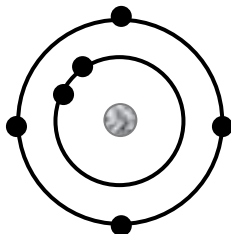
Sulfur

What are valence electrons? _____

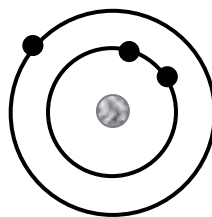
How many valence electrons are in each of the following atoms?



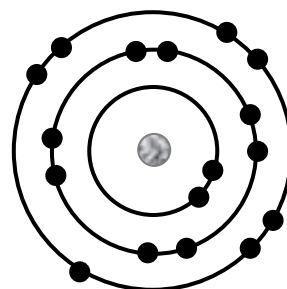
Neon
____ valence
electrons



Carbon
____ valence
electrons



Lithium
____ valence
electrons



Chlorine
____ valence
electrons

How can the periodic table be used to predict valence electrons? _____

Why do elements in groups have similar physical and chemical properties? _____

Carbon has ____ valence electrons

Nitrogen has ____ valence electrons

Krypton has ____ valence electrons

Zinc has ____ valence electrons

Calcium has ____ valence electrons

Iodine has ____ valence electrons

What do Lewis dot diagrams show? _____

Which Lewis diagrams are correct:



When are atoms most stable? _____

Which group on the periodic table has this electron configuration? _____

What is the name of this group? _____

What does *inert* mean? _____

Why is Helium a noble gas? _____