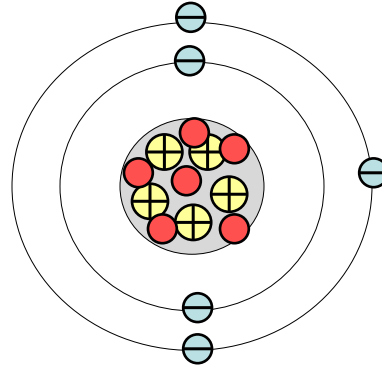


Atomic Basics

**Glue the worksheet on page 26 FAF Left.
Complete the worksheet as we discuss it during class.**

Part A: Atomic Structure

1. Draw five protons in the nucleus of the atom. Label them with their charge.
2. Draw six neutrons in the nucleus of the atom.
3. Draw two electrons in the first energy level and label them with their charge.
4. Draw three electrons in the second energy level and label them with their charge.
5. What element is represented by the diagram? **B or Boron**



Part B: Periodic Table

6. Label the information provided in the periodic table.

8	Atomic #	=	P	or	E
O	Ch Symbol	=	+	=	-
Oxygen	Name	=	P	+	N
15.999	Atomic Mass	=	P	+	N

7. How would you figure the number of protons or electrons in an atom?

$$A^{\#} = P = E$$


8. How would you figure the number of neutrons in an atom?

$$A^{\#} - P^{\#} = N$$

$16 - 8 = 8$

Part C: Electrons & Diagrams

9. How many electrons can each level hold? 1st = 2 2nd = 8 3rd = 18

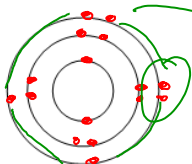
10. What term is used for the electrons in the outermost shell or energy level? VALENCE 

11. Scientists use two types of diagrams to show the electron configuration for atoms. Follow your teacher's directions to complete the diagrams.

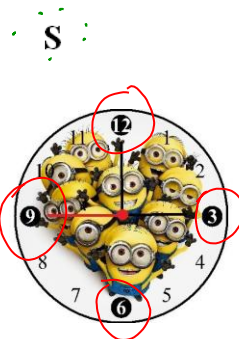
Sulfur

Atomic # = 16
 Atomic Mass = 32
 Protons = 16
 Neutrons = 16
 Electrons = 16

Bohr Diagram
Shows ALL electrons



Lewis Structure (Electron Dot Diagram)
Shows VALENCE electrons



A# = P = E

M# - A# = N

Go to mrstomm.com
 → Assignments
 → Textbooks
 → JLab Periodic Table

Part D: Atomic Calculations - Calculate the missing information and then draw the Bohr Diagram AND Lewis Structure for each.

Element's Symbol	Li	Cl	He	Ne		
Element's Name	Lithium	Chlorine	Helium	Neon		
Atomic Number	3	17	2	10	13	
Atomic Mass	7	35	4	20		16
Protons	3	17	2	10		
Neutrons	4	18	2	10	14	8
Electrons	3	17	2	10		
Bohr Diagram						
Lewis Structure	Li	Cl	He	Ne		