Phusikos 3 Notes AND Practice 1: Name _____ Date _____

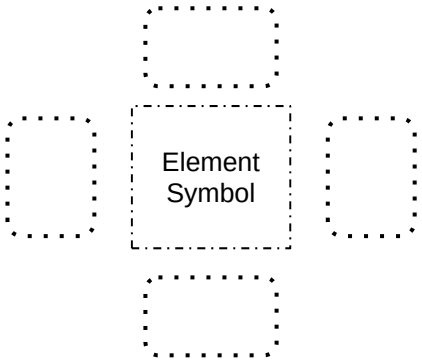
Target	1	2 (all of 1 plus)	3 (all of 2 plus)	4 (all of 3 plus)
LE 5.7 Preparedness	Does not complete formative or summative in an effortful and timely manner, is not engaged, does not arrive on time with class materials ready to learn, does not communicate when issues arise	Completes formative or summative in an effortful or timely manner, is sometimes engaged, sometimes arrives on time with class materials ready to learn, sometimes communicates when issues arise	Completes formative or summative in an effortful and timely manner, remains engaged, arrives on time with materials ready to learn, communicates when issues arise	Completes formative or summative in an effortful and timely manner, remains engaged, arrives on time with materials ready to learn, communicates when issues arise, and is reflective on strengths and challenges within your preparedness skill
LE 5.6 Precision	Recognizes the importance of products that are planned, edited, and completed with care	Attempts products that are planned, edited, and completed with care	Creates products that are planned, edited, and completed with minimal errors	Creates products that are planned, edited, and completed free from errors or need for revision
Phusikos 3	I can **recognize** a Lewis dot diagram	I can **draw** a Lewis dot diagram for an atom when given its shell diagram	I can **draw** a Lewis dot structure for atoms of elements in the first three rows of the periodic table	
MP2 Atoms, Bonding	I can diagram the shell structure of an atom and an understanding of valence electrons	(all of 1 plus) I can use the periodic table to predict properties of atoms of elements based on patterns of electrons in atoms	(all of 2 plus) I can predict and diagram bonding between atoms	(all of 3 plus) Nailed it!

Lewis Dot Structures

Lewis Dot Structure	

How to create a Lewis dot structure

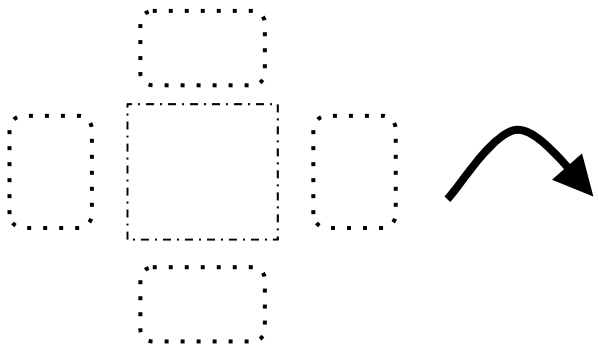
1. Identify the valence electrons of the atom based on patterns in the Periodic Table.
2. Write the symbol for the element
3. **Imagine** four areas around the element symbol.
    a. Each of those areas represents an orbital.



b. Indicate the valence electrons by placing dots into the "orbital" (areas) around the element symbol. *(Remember electrons want their own orbital before they share orbitals (pair up))*

Practice as a class….

Oxygen: Valence Electrons _____



Name: _____ **Phusikos 3 Practice 1**

Create a Lewis dot structure for atoms of the following elements.

1. Fluorine (F)

2. Aluminum (Al)

3. Lithium (Li)

4. Nitrogen (N)

5. Sulfur (S)

6. Magnesium (Mg)

7. Silicon (Si)

8. Neon (Ne)

Neon is in what column of the Periodic Table?

What is special about the outer shell of the atoms of the elements in the last column of the Periodic Table ? _____

That means that these atoms have _____ valence electrons.

What about Helium? Draw the Lewis structure for an atom of Helium:

How many valence electrons ? _____

So, why is Helium grouped with the elements in the last column of the PeriodicTable?