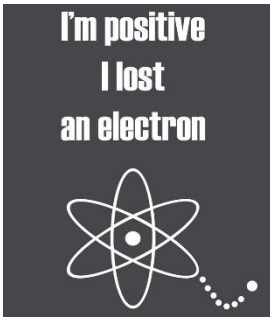
2.2 Notes Name_____Date_____

Warm Up: Copy the definitions from the board.



i.PERIODIC

ii.PERIOD

iii.GROUP

iv. Identify the element found in Group 16 and Period 3 - Identify the element found in Period 5 and Group 3

_____ _____

Valence Electrons

Elements are arranged in Groups on the Periodic Table based on their _____ properties

This includes how the elements will react in nature and what other elements they will or will not react with.

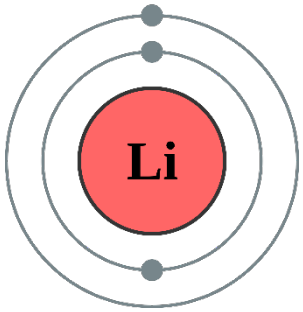
For example, the elements in Group 1 react very similarly with _____ and often form positive ions.

An element's Chemical Properties are determined by their number of _____.

Definitions

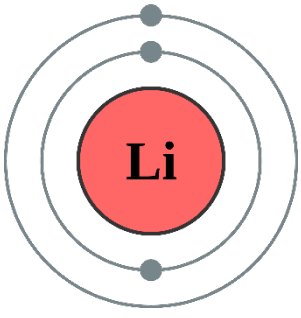
- Valence Electrons

Example - Li: 2 – 1
Na: 2 – 8 – 1
K: 2 – 8 – 8 – 1



- Kernel Electrons

Example - Li: 2 – 1
Na: 2 – 8 – 1
K: 2 – 8 – 8 – 1



Identify an element that is similar to _____

Lewis Dot Diagrams

Just to make sure you remember how…Draw the Bohr Diagram for Chlorine

Sure, that wasn't that bad. Now, what if I asked you to draw the Bohr Diagram for Francium which has 87 electrons??

The electron configuration is Fr: 2 – 8 – 18 – 32 – 18 – 8 – 1

Because the _____ electrons are the ones that determine an atom's reactivity, aka the *MOST IMPORTANT* electrons, it's not always necessary to draw a complete representation of the atom including the Kernel Electrons.

Lewis Dot Diagrams

If you aren't sure how many valence electrons there are, look at your Regents Periodic Table for the element's ground state electron configuration. The _____ number is the number of valence electrons.

Element	# val. e^-	Lewis Dot Diagram
H		
Cl		
Fr		

Element	# val. e^-	Lewis Dot Diagram
O		
Rn		
Au		

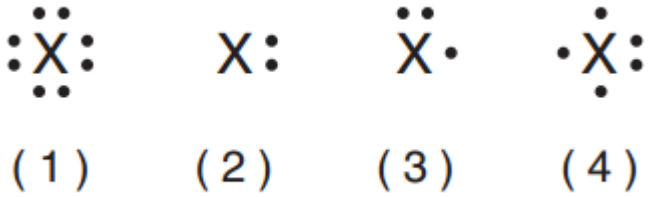
Match the following elements with their Lewis Dot Diagrams below. X represents a random element.

i. Strontium _____

ii. A group 16 element _____

iii. A Noble Gas _____

iv. Aluminum _____



(1) (2) (3) (4)