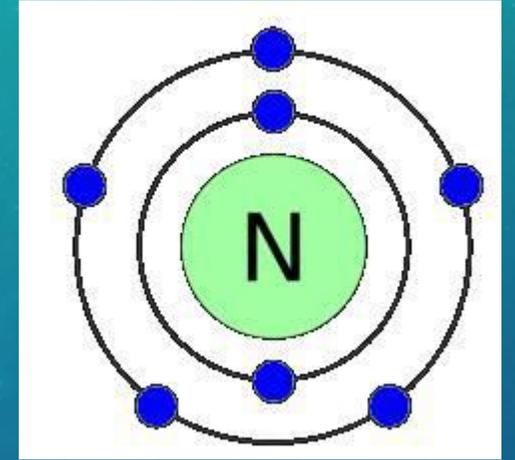


September 14, 2018

Mastery Objective: The students will describe the atomic composition of simple molecules by organizing the periodic table using periodic patterns and trends and answering analysis questions.



Drill Warm-Up:

Draw Bohr models for the following atoms:

1. lithium

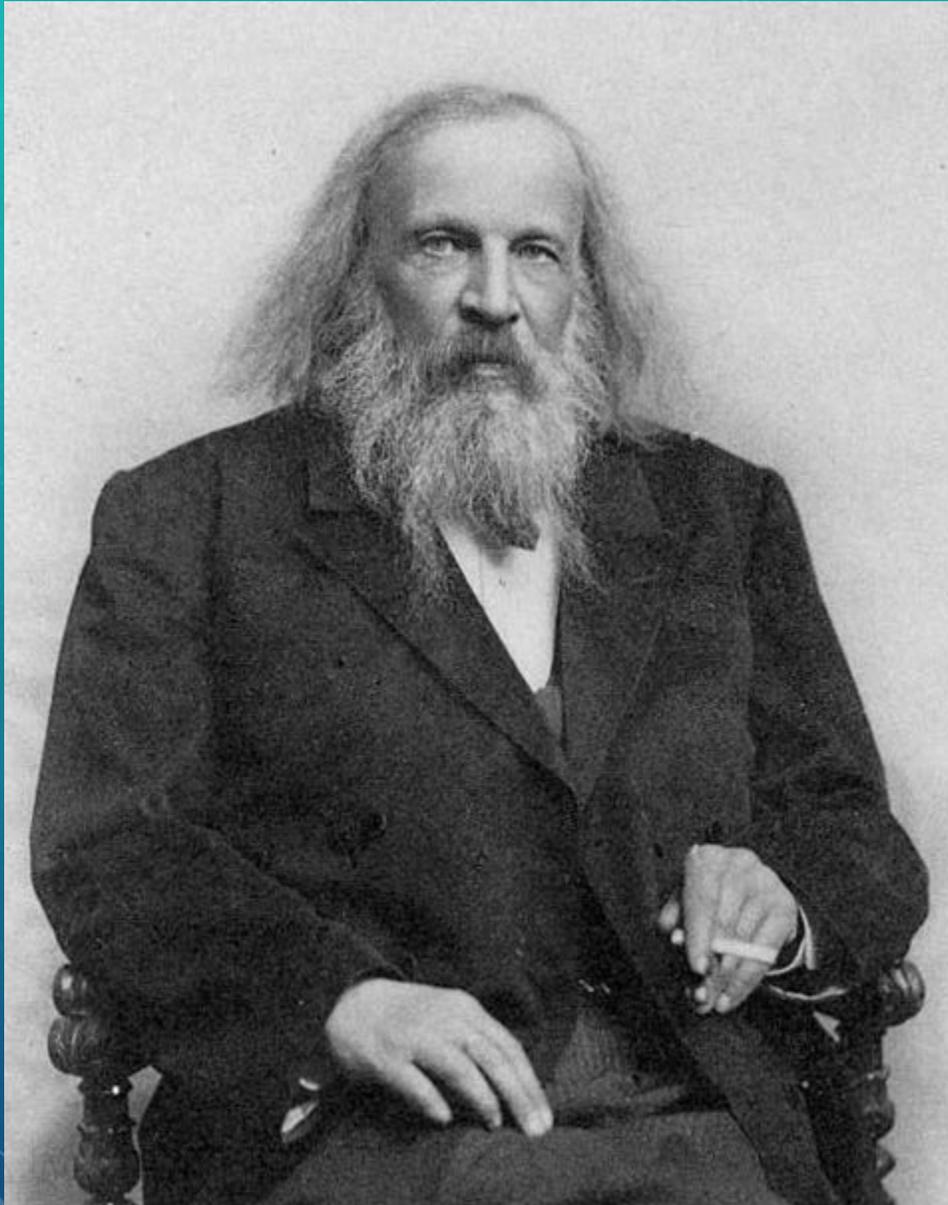
2. beryllium

3. boron

4. carbon

5. Do you notice any trends in regards to the number of electron orbitals?

6. Do you notice any trends in regards to the number of electrons in the outermost orbital?

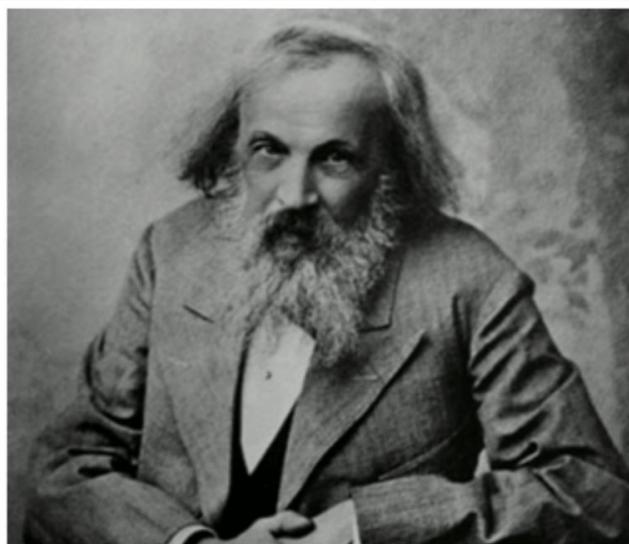


Dmitri Mendeleev

- 1834-1907
- Russian chemist/inventor
- Youngest of 17 siblings
- Professor
- Died from influenza
- Crater on Moon (Mendeleev) and element #101 (mendelevium) named after him

Mendeleev noticed patterns of elements when organized by atomic mass. He was even able to predict properties of elements that haven't been discovered yet!

Your challenge is to find periodic patterns to design your own periodic table.



Dmitri Mendeleev

Dmitri's first periodic table.

.....1			Ti50	Zr...
	Be.... 9.4	Mg ...24	V.....51	Nb..
	B.....11	Al.....27.4	Cr52	Mo .
	C.....12	Si.....28	Mn.....55	Rh..
	N.....14	P.....31	Fe56	Ru .
	O.....16	S.....32	Ni, Co..59	Pd..
	F.....19	Cl....35.5	Cu.....63.4	Ag..
	Na....23	K.....39	Zn.....65.2	Cd..
		Ca....40	?68	Ur..
		?45	?70	Sn ..
		? Er ..56	As..... 75	Sb..
		? Y .. 60	Se79.4	Te...
		? In...75.6	Br.....80	I....
			Rb.....85.4	Cs..
			Sr.....87.6	Ba..
			Ce92	
			La94	
			Di.....95	
			Th.....118	

THE UPDATED
PERIODIC
TaBLE
SONG

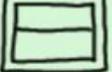
September 17, 2018

Mastery Objective: The students will describe the atomic composition of simple molecules by assessing their knowledge from an atom practice quiz.

Drill Warm-Up:

1. Atom 'Xyz' is in period 5 and group 15. How many electron orbitals will be drawn for a Bohr model? How many electrons will be in its outermost orbital?
2. As you move from left to right in each period in the periodic table, what happens to the number of electrons and atomic mass?

the periodic table of procrastination

tv 				texting 	snacking 
internet 	napping 			video games 	stare out window 
phone call 	fill in later				

pleated-jeans

September 18, 2018

Mastery Objective: The students will describe the atomic composition of simple molecules by earning a proficient score on the Atom Quiz.

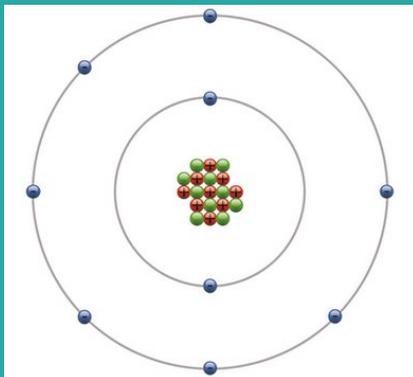


The atomic symbol for confusion

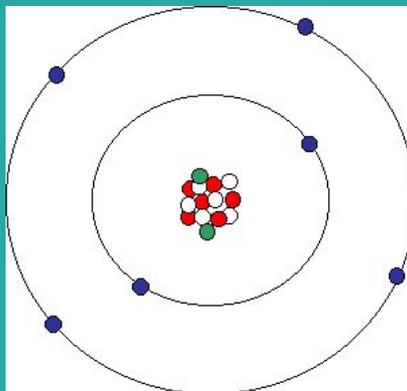
Drill Warm-Up:

Identify the following atoms:

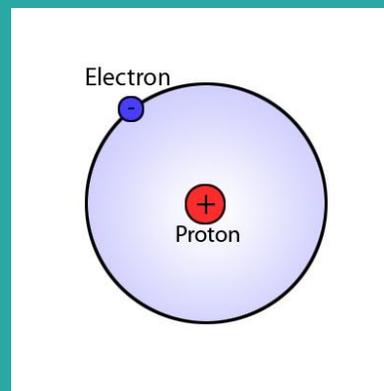
1.



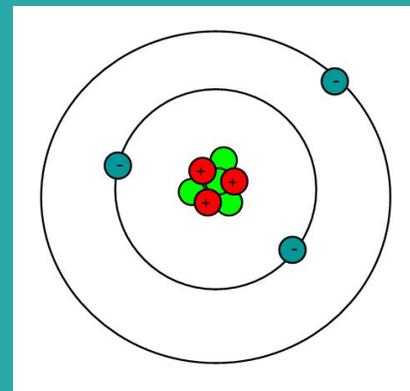
2.



3.



4.

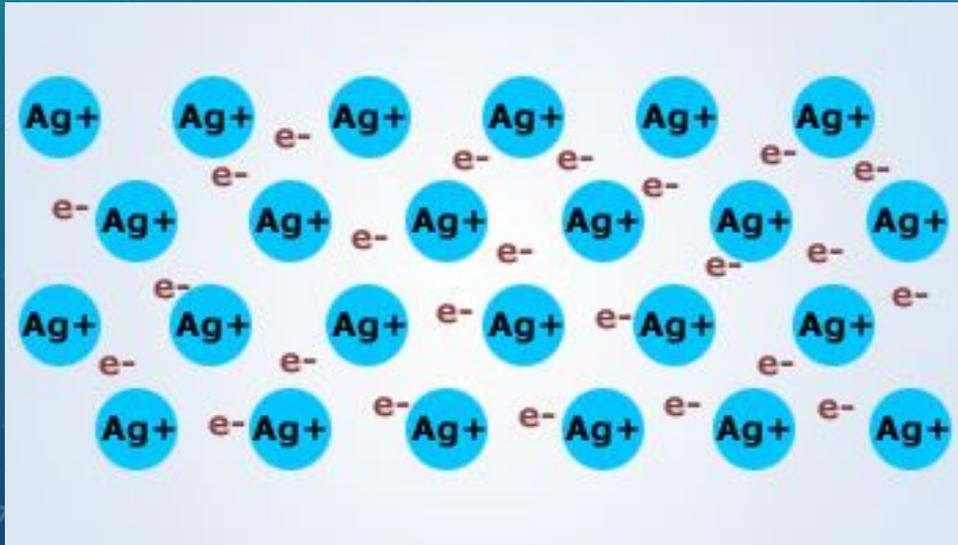




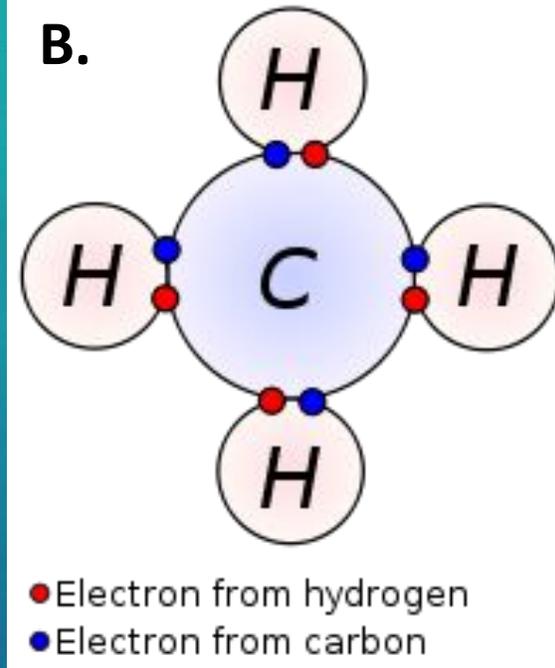
2. There are three types of bonds:

- ionic: between metals and nonmetals
- covalent: two or more nonmetals
- metallic: one or more metals

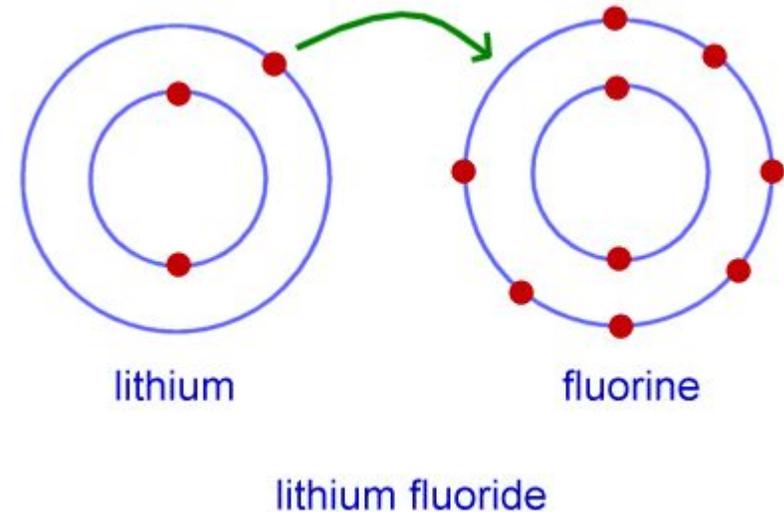
A.



B.



C.



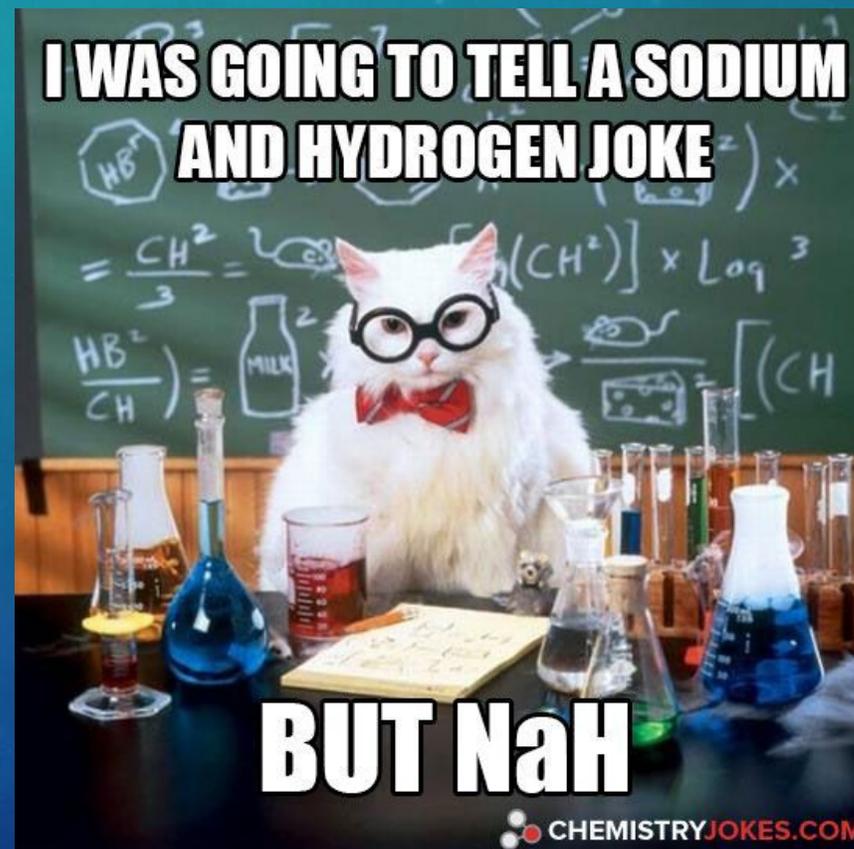
September 19, 2018

Mastery Objective: The students will describe the atomic composition of simple molecules by gathering research about properties of different groups found in the Periodic Table.

Drill Warm-Up:

Identify the following elements:

1. Group 11, Period 5
2. Group 17, mass = 80 amu
3. Period 4, # of protons = 26
4. Period 3, metalloid



Name _____
Date _____
Science _____

Group Properties in the Periodic Table

Group ____: _____

Group contains: _____
Electrons in outer orbital: _____

Reactivity: _____

Shared Properties: _____

Color-Code:

Group 1: Red

Group 2: Brown

Groups 3-12: Yellow

Group 13: Blue

Group 14: Green

Group 15: Nitrogen Group

Group 16: Oxygen Group

Group 17: Light Blue

Group 18: Noble Gases

Click with the mouse or tablet to show with pen. I

Group

Period	I												III						IV	V	VI	VII	VIII
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18					
1	1 H																			2 He			
2	3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne					
3	11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar					
4	19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr					
5	37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe					
6	55 Cs	56 Ba	* La	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn					
7	87 Fr	88 Ra	** Ac	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112 Cn	113 Nh	114 Fl	115 Mc	116 Lv	117 Ts	118 Og					
8	119 Uue																						

* Lanthanides

57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Th	Dy	Ho	Er	Tm	Yb	Lu

** Actinides

89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Mt	No	Lr

Alkali metals	Alkali earth metals	Lanthanides	Actinides	Transition metals
Poor metals	Metals	Nonmetals	Halogens	Noble gases



September 18, 2017

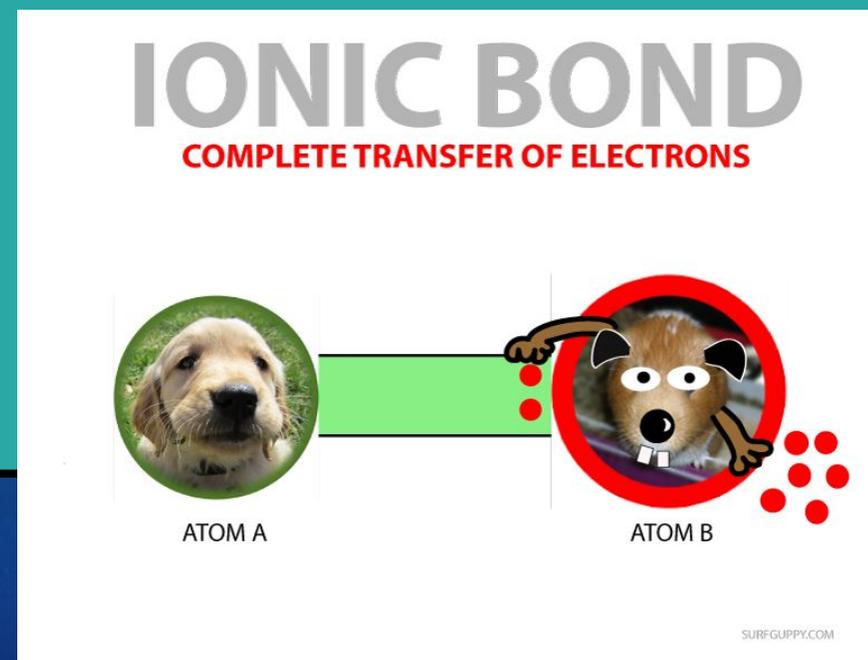
Mastery Objective: The students will describe the atomic composition of simple molecules by matching up atoms that could potentially form bonds with each other.

Drill Warm-Up:

Determine whether each of the following atoms would form ionic or covalent bonds.

Remember, metal + nonmetal = ionic and two nonmetals = covalent.

1. Hydrogen and Chlorine (HCl)
2. Potassium and Chlorine (PCl_3)
3. Carbon and Oxygen (CO_2)
4. Hydrogen and Oxygen (H_2O)
5. Sodium and Fluorine (NaF)



October 4, 2017

Mastery Objective: The students will describe the atomic composition of simple molecules by using researched information to complete a Periodic Table Puzzle.

Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99
Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99
Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99	Sodium 11 Na 22.99	Batmantium 27  19.39	

Drill Warm-Up:

Identify the following elements:

1. Where are the most reactive metals found in the periodic table?
2. What is the family name of elements in group 17?
3. In which groups of the periodic table are transition metals found?

October 5, 2017

Mastery Objective: The students will describe the atomic composition of simple molecules by using researched information to organize an alien periodic table.



Drill Warm-Up:

Identify the following groups:

- 1. These elements are the most reactive nonmetals.**
- 2. Which group has four valence electrons?**
- 3. When combined with fluorine or chlorine, this group is explosive and gassy.**

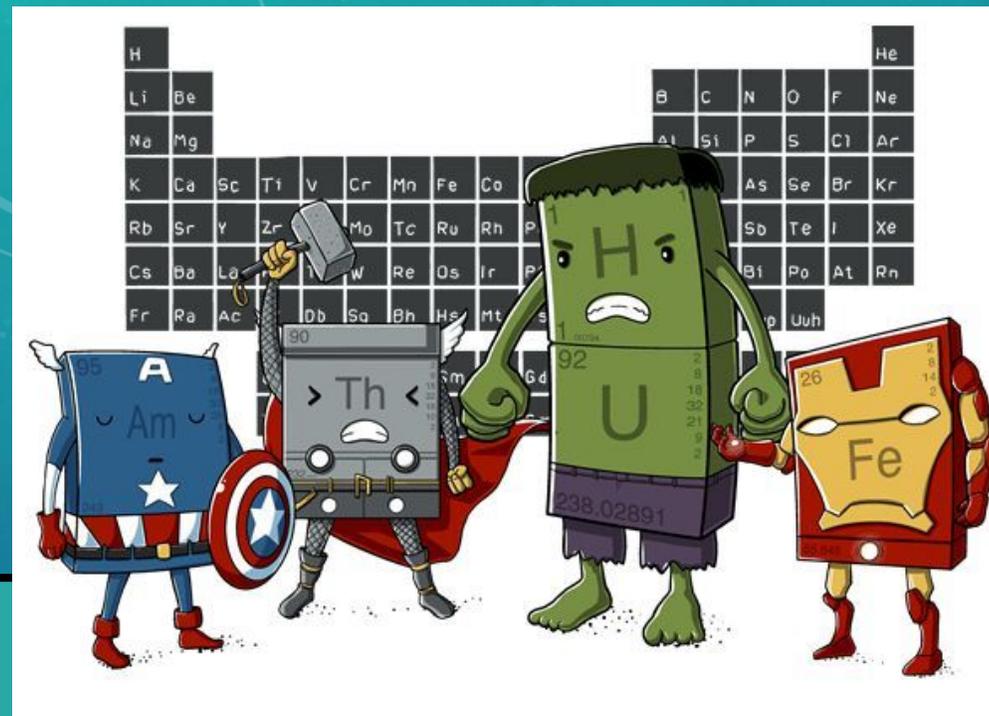
October 5, 2017

Mastery Objective: The students will describe the atomic composition of simple molecules by using researched information to solve a periodic table puzzle.

Drill Warm-Up:

Identify the following groups:

1. These elements are the most reactive nonmetals.
2. Which group has four valence electrons?
3. When combined with fluorine or chlorine, this group is explosive and gassy.



October 6, 2017

Mastery Objective: The students will describe the atomic composition of simple molecules by using researched information to write a haiku about a group in the periodic table.



Drill Warm-Up:

Identify the following groups:

- 1. This group includes the lanthanides and actinides.**
- 2. This group included aluminum and is reactive. The price of aluminum has dropped considerably since it can be cheaply produced.**
- 3. Which group contains three nonmetals, one metalloid, and one metal?**

October 6, 2017

Mastery Objective: The students will describe the atomic composition of simple molecules by using researched information to organize an alien periodic table.



Drill Warm-Up:

Identify the following groups:

- 1. This group includes the lanthanides and actinides.**
- 2. This group includes aluminum and is reactive. The price of aluminum has dropped considerably since it can be cheaply produced.**
- 3. Which group contains three nonmetals, one metalloid, and one metal?**

Alien Periodic Table

Step 1: Read clues and predict where the elements are placed.

Step 2: When finished, write element symbols on your worksheet.

Step 3: Color code metals, metalloids, and nonmetals. Include a key.

Step 4: Answer 'Analyze and Conclude' questions on clean looseleaf.

