QUIZZES HANDED BACK TODAY
BIG TEST THIS FRIDAY

PURPOSE: HOW DO WE DRAW THE SHAPE OF A MOLECULE?

WARMUP

How MANY TOTAL VALENCE e^- ARE IN H_2O ?

$1+1+6=8e^-$

DRAW THE STRUCTURE OF H_2O

How MANY VALENCE e^- : eight

The shape at the oxygen is based on 2 lone pairs
2 bond pairs

The shape is "BENT"

Draw the shape of SiS_2

The total valence e^- is $4+6+6=16e$

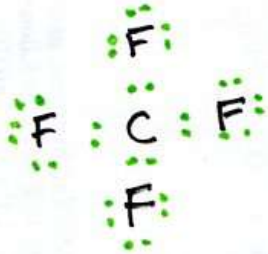
The shape is based on Silicon has $\emptyset$ Lone pairs
two bonds

The shape is Linear

Draw CF_4

How many valence e^-?

$7+7+7+7+4=32e^-$



Based on the carbon, there are 4 Bond pairs and zero lone pairs

The shape of CF_4 is tetrahedral

Making Lewis Dot Molecule Structures

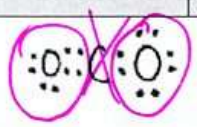
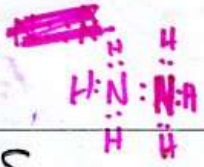
CλeMis+ry: http://genest.weebly.com

Stop in for help every day at lunch and Tues,&Thurs after school!

Name ANS

Period WERS

1. Fill in the table

Circle atoms that are stable, cross out atoms that are unstable	Either write 'stable' or redraw the same letters in the same arrangement but with any number of e- that will make the atoms stable	Circle atoms that are stable, cross out atoms that are unstable	Either write 'stable' or redraw the same letters in the same arrangement but with any number of e- that will make the atoms stable
	 (stable)		

2. *Complete each step with the correct word or words.* CLASS NOTES

In class we learned that the steps for drawing a Lewis Structure of a molecule are:

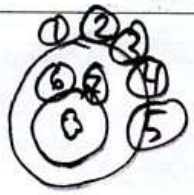
a. First, you total up the number of valence electrons on all of the atoms of the formula.
b. Then, when totaling up the e-, assume that each atom is (charged / neutral)
c. Next, ~~place~~ the element symbols on your drawing first, putting in the middle, any element that there are (few of / lots of)
d. Now add electron dots (one at a time / two at a time) to bond the atoms together
e. Add any leftover (protons / electrons) as **lone pairs**
f. Check that each atom is stable and follows the (trio / quartet / octet) rule.
g. If you ran out of e-, you should erase some lone pairs and turn them into (single / double) bonds.

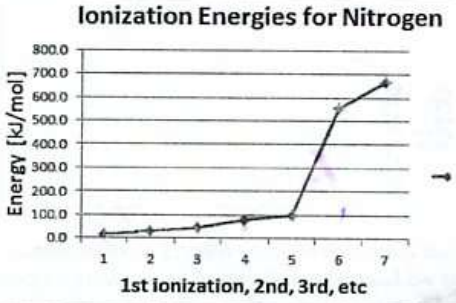
3. Draw a stable Lewis Dot structure for each molecule:

I_2 	OF_2 
CO_2 	NI_3 

4. Rewrite the following Noble Gas Abbreviations in the longer version of electron configuration ($1s^2\ 2s^2$ etcetera)
   a. $[Ne]3s^2 3p^5$ $1s^2 2s^2 2p^6 3s^2 3p^5$
   b. $[He]2s^1$ $1s^2 2s^1$
   c. Write the Lewis Dot symbol for each of the two atoms above: •Li :Cl:

5. In the white box at right sketch Bohr Orbit diagram in a cartoon style similar to the one shown at left but make it different in two ways:
   - Make it a sketch for the nitrogen atom with the ionization energy graph shown here
   - where each electron should be, write a number that matches each of the numbered ionizations from the graph below





6. What is the largest element in Period 3?
   SODIUM

7. What element is the smallest nobel gas?
   helium

8. Which halogen has the **second** highest electronegativity?
   CHLORINE

9. Draw a stable Lewis Dot structure for each molecule:

H_2S 	N_2 
HCl 	F_2 

ANSWERS