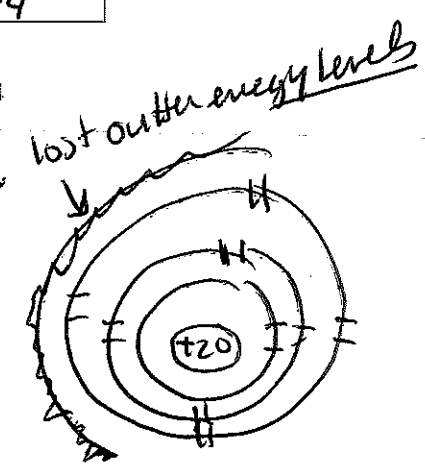
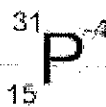


(#2-1) Sub atomic structure (topic)

1. Fill in the chart below.

symbol	Atomic number	Mass number	electrons	neutrons	charge
Li	3	6	2	3	+1
Ca	20	40	18	20	+2
P	15	31	19	16	-4

2. In the third row add in the appropriate values for the atom



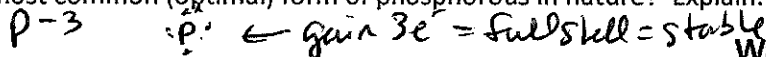
(#2-2) Modeling Atoms

3. Draw a Bohr diagram of the two rows provided in #1.

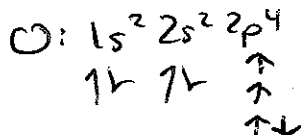
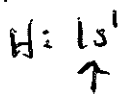
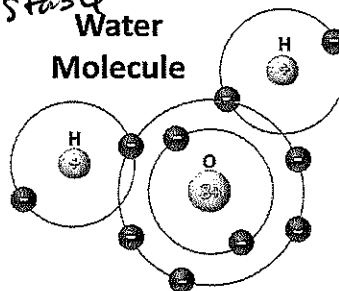


4. Write an electron configuration of #2.

5. Is #2 the most common (optimal) form of phosphorous in nature? Explain.



6. To the right is a Bohr model of a water molecule. Draw an orbital diagram of a hydrogen atom and an oxygen atom in the space below.



(#2-3) How do the properties of protons, electrons and the electron shells contribute to the periodic trends?

In the following question indicate if the substance is bigger (>) or smaller (<) in size. Justify each.

7. Ca < Sr → more energy levels

8. Ca >  $\text{Ca}^{2+}$  → more energy levels

9.  $\text{Ca}^{2+}$  <  $\text{Cl}^-$  → less proton, so  $\text{Cl}^-$  is bigger, less Coulombic attraction

10. Ne < F → less  $p^+$  so less Coulombic attraction

11. F <  $\text{F}^-$  → more  $e^-$  repulsion

Atomic Structure Remediation  
#2 Test Remediation

*If you don't know what your weakness is this is + pay can be used - see your teacher*

Results Analyses: X or O right or wrong answers.

1. #2-1	2. #2-1	3. #2-1	4. #2-1	5. #2-1	6. #2-1
7. #2-2	8. #2-1/#2-3	9. #2-3	10. #2-3	11. #2-3	12. #2-2
13. #2-2	14. #2-1	15. #2-3			
Version A written analysis: #2-1:			#2-2:	#2-3:	
Total Analysis: #2-1:		#2-2:	#2-3:		

- (#2-1) Sub atomic structure (topic)
- = How an atom acquires mass?  
(#2-1a) I can model how and why different atoms of the same element have different masses.
  - = How atoms acquire a charge?
- For the standard above how did you score:

Thoughts:

- (#2-2) Modeling Atoms
- (#2-2a) I can create and interpret a Lewis structure
  - (#2-2b) I can create and interpret a Bohr diagram
  - (#2-2c) I can model atoms with electron configurations.
  - (#2-2d) I can model atoms with orbital diagrams.
  - (#2-4e) I can model/manipulate atoms electronic structure via a PES diagram.
- For the standard above how did you score:

Thoughts:

- (#2-3) How do the properties of protons, electrons and the electron shells contribute to the periodic trends?

- = Atomic radius/ionization energy
- = Coulombs law

For the standard above how did you score:

Thoughts: