3. Li	List, by number, both the period and group of each of these elements.							
	<u>Name</u>	Symbol	<u>Period</u>	Grou	<u>p</u>			
	beryllium							
		Fe						
	lead							
4. W	Which of the following pairs of elements belong to the same period? (choose one)							
	a. Na and Cl	b. Na a	and Li	c. Na an	d Cu d. Na and M			
5. W	Which of the following pairs of elements belong to the same group? (choose one)							
	a. H and He b. Li and Be c. C and Pb d. Ga and							
6. W	/ould you expect str	ontium to be,	chemically, m	ore similar to	Ca or Rb and WHY?			
7. G	ive the name of the	following grou	ips:					
a.	. Group 1			c. G	roup 17			
b	. Group 2			d. G	roup 18			
8. W	/hich of these eleme	nts has the hig	ghest first ion	ization energ	y: Sn, As, or S?			
9. Li	ist some properties o	of metals.						
	ist some properties of states the following ator		increasing ele	ectronegativit	у: О, Al, Ca			
11. Li 12. W	ist the following ator Vhy does fluorine hav	ns in order of ve a higher ion	ization energ	y than iodine	?			
11. Li 12. W	ist the following ator Vhy does fluorine hav ircle the element wit	ns in order of i ve a higher ion th the lowest i	ization energ	y than iodine ergy in each se	? et:			
11. Li 12. W	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg	ns in order of ve a higher ion th the lowest i	ization energ	rgy than iodine rgy in each so c.	et: Se, S, Te, O			
11. Li 12. W 13. C	ist the following ator Vhy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N	ns in order of i ve a higher ion th the lowest i g	ization energ	y than iodine ergy in each se c. d	? et:			
11. Li 12. W 13. C	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit	ns in order of i ve a higher ion th the lowest i g Mg th the largest a	ization energ	y than iodine ergy in each se c. d in each set:	et: Se, S, Te, O . As, K, Br, Ca, Kr			
11. Li 12. W 13. C	ist the following ator Vhy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl	ns in order of i ve a higher ion th the lowest i g Mg th the largest a	ization energ	y than iodine ergy in each se c. d in each set: c.	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne			
11. Li 12. W 13. C 14. C	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B	ns in order of i ve a higher ion th the lowest i g Mg th the largest a b	ization energ onization ene atomic radius	rgy in each se c. d in each set: c. d	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg			
11. Li 12. W 13. C 14. C	ist the following ator Vhy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit	ns in order of i ve a higher ion th the lowest i Vg th the largest a b th the lowest r	ization energ onization ene atomic radius	y than iodine ergy in each se c. d in each set: c. d cter in each s	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg set:			
11. Li 12. W 13. C 14. C	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit a. Be, Ca, Sr, Mg	ms in order of i ve a higher ion th the lowest i g Mg th the largest a b th the lowest r	ization energ onization ene atomic radius	rgy in each se c. d in each set: c. d cter in each s c.	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg set: Se, S, Te, O			
11. Li 12. W 13. C 14. C 15. C	ist the following ator Vhy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N	ns in order of i ve a higher ion th the lowest i Vg th the largest a b th the lowest r yg	ization energ onization ene atomic radius netallic chara	y than iodine ergy in each se c. d in each set: c. d cter in each s c. d	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg set: Se, S, Te, O As, K, Br, Ca, Kr			
11. Li 12. W 13. C 14. C 15. C	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit a. Be, Ca, Sr, Mg	ns in order of i ve a higher ion th the lowest i g Mg th the largest a b th the lowest r g Mg lowing propert	ization energe onization energe atomic radius metallic chara	y than iodine ergy in each se c. d in each set: c. d cter in each s c. d	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg set: Se, S, Te, O As, K, Br, Ca, Kr			
11. Li 12. W 13. C 14. C 15. C	ist the following ator Vhy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N	ns in order of i ve a higher ion th the lowest i Vg th the largest a b th the lowest r yg	ization energe onization energe atomic radius metallic chara	y than iodine ergy in each se c. d in each set: c. d cter in each s c. d propriate typ	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg set: Se, S, Te, O As, K, Br, Ca, Kr e of element:			
11. Li 12. W 13. C 14. C 15. C	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N flatch each of the fol	ns in order of i ve a higher ion th the lowest i g Mg th the largest a b th the lowest r g Mg lowing propert	ization energe onization energe atomic radius metallic chara	y than iodine ergy in each se c. d in each set: c. d cter in each s c. d	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg set: Se, S, Te, O As, K, Br, Ca, Kr e of element:			
11. Li 12. W 13. C 14. C 15. C	ist the following ator Vhy does fluorine hav ircle the element with a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element with a. Li, K, Na, H, RI b. Be, N, Li, F, B ircle the element with a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N flatch each of the foll a. Metal	ns in order of i ve a higher ion th the lowest i g Mg th the largest a b th the lowest r g Mg lowing propert b. Noni	ization energe onization energe atomic radius metallic chara	y than iodine ergy in each se c. d in each set: c. d cter in each s c. d propriate typ	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg set: Se, S, Te, O As, K, Br, Ca, Kr e of element:			
11. Li 12. W 13. C 14. C 15. C	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N 1atch each of the foll a. Metal shiny	ns in order of i ve a higher ion th the lowest i g Mg th the largest a b th the lowest r g Mg lowing propert b. Noni	ization energe onization energe atomic radius metallic chara	y than iodine ergy in each se c. d in each set: c. d cter in each s c. d propriate typ du poor condu	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg set: Se, S, Te, O As, K, Br, Ca, Kr e of element:			
11. Li 12. W 13. C 14. C 15. C	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N 1atch each of the foll a. Metal shiny good conde malleable	ns in order of i ve a higher ion th the lowest i g Mg th the largest a b th the lowest r g Mg lowing propert b. Noni	ization energe onization energe atomic radius metallic chara	y than iodine ergy in each se c. d in each set: c. d cter in each s c. d propriate typ du poor condu	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg Set: Se, S, Te, O As, K, Br, Ca, Kr e of element: ctile			
11. Li 12. W 13. C 14. C 15. C 16. N	ist the following ator /hy does fluorine hav ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N ircle the element wit a. Li, K, Na, H, Rl b. Be, N, Li, F, B ircle the element wit a. Be, Ca, Sr, Mg b. Ar, Cl, Na, P, N 1atch each of the foll a. Metal shiny good conde malleable	ns in order of i ve a higher ion th the lowest i Vg th the largest a b th the lowest r J Ng lowing propert b. Non uctors of heat	ization energe onization energe atomic radius netallic chara ties to the app metal	y than iodine ergy in each se c. d in each set: c. d cter in each s c. d propriate typ du poor condu	et: Se, S, Te, O As, K, Br, Ca, Kr Kr, Ar, Xe, He, Ne Ar, Cl, Na, P, Mg Set: Se, S, Te, O As, K, Br, Ca, Kr e of element: ctile			

<u>Predicting Trends – Periodic Table WS</u>

Name		Date		Period				
18. Place the elements Rb, Na, K, Li a increasing atomic radius	Place the elements Rb, Na, K, Li and Cs in order of : increasing atomic radius							
decreasing electronegativity								
increasing ionic radius								
decreasing metallic character								
increasing ionic radius								
19. Place the elements Na, Si, Mg, S, Cl and Al in order of : decreasing atomic radius								
decreasing electronegativity								
decreasing ionic radius								
decreasing metallic character								
decreasing ionic radius								
20. Identify each element as a metal, metalloid, or nonmetal.								
a. fluorine	-	zinc		e. lithium				
b. germanium		phosphorous						
21. Give two examples of elements for each category.								
a. noble gases			-	alkali metals				
b. transition metals			e.	alkaline earth metals				
c. halogens								

- 22. Is it easier to form a positive ion with an element that has a high ionization energy or an element that has a low ionization energy? Explain.
- 23. Define the term Valence Electron(s).

24. Name the two groups of elements that are considered highly reactive.

- 25. Answer the following questions about the elements with the electron configurations shown here: $A = 1s^{2}2s^{2}2p^{6}3s^{2}3p^{6}4s^{2} \qquad B = 1s^{2}2s^{2}2p^{6}3s^{2}3p^{6}4s^{2}3d^{10}4p^{5}$
 - a. Is element A a metal, metalloid, or nonmetal?
 - b. Is element B a metal, metalloid, or nonmetal?
 - c. Which element is expected to have the larger ionization energy?
 - d. Which element is expected to have the smaller atomic radius?
- 26. The configuration of an element is $1s^22s^22p^63s^23p^64s^23d^3$
 - a. What is the identity of the element?
 - b. In what group and period in the Periodic Table is the element found?
 - c. Is the element a nonmetal, a main group element, a transition element, a lanthanide element, or an actinide element?