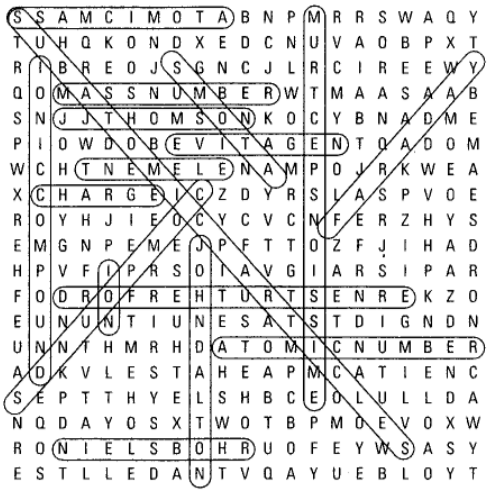
WS 7.0-1 Atomic Theory Word Search



Chapter 7 Quiz

Part A: Modified True/False

1. False, J.J. Thomson
2. False, electron
3. False, 8 electrons
4. True

Part B: Sentence Completion

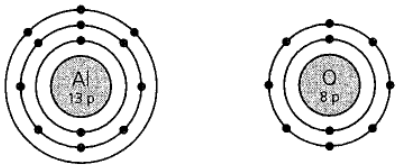
5. the number of protons, or the atomic number
6. becomes less negative/becomes smaller
7. ionic bonds/ionic compounds
8. 18th/last

Part C: Multiple Choice

9. (b); 10. (b); 11. (a); 12. (d); 13.(c); 14. (a); 15. (b)

Part D: Short Answer

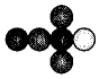
16. When a non-metal forms an ion, it must acquire extra electrons to fill the vacancies in its outer electron shell, up to the maximum allowed for that shell. The number of extra electrons acquired equals the amount of negative charge on the ion.
17. (a) The minimum number of electrons that must be transferred is 6.
    (b) There must be 3 magnesium ions for every 2 nitride ions.
18. Sodium has only 1 electron in its outer shell, whereas magnesium has 2 electrons in its outer shell. To react and form a compound, the metal atoms must shed the electrons from their outer shell. Less energy is required to remove sodium's 1 outer electron than to remove the 2 outer electrons from a magnesium atom.
19. (a) (b)



20. The Bohr theory holds that electrons will be found only in specific allowed orbits around the nucleus. When atoms absorb energy, electrons move up to higher orbits. When electrons fall back down, eventually, atoms emit light energy. Within an allowed orbit, the electrons do not emit light energy. There are a maximum number of electrons that can exist in any one orbit or shell.

WS 8.1-1 Writing and Visualizing Chemical Formulas

1.

$(NH_4)_2CO_3$	
Al_2O_3	
Mg_3P_2	
FeF_2	
$KHCO_3$	
Na_2SO_4	

2.

Ions combined		Formula
1 calcium	1 carbonate	$CaCO_3$
1 lead	2 nitrate	$Pb(NO_3)_2$
2 lithium	1 sulphate	Li_2SO_4
1 chromium	1 phosphate	$CrPO_4$
1 magnesium	1 carbonate	$MgCO_3$
3 chromium	2 phosphate	$Cr_3(PO_4)_2$
2 sodium	1 carbonate	Na_2CO_3
1 ammonium	1 hydroxide	NH_4OH
1 barium	1 oxide	BaO
1 barium	2 nitrate	$Ba(NO_3)_2$
1 aluminum	3 fluoride	AlF_3
1 lead	4 chloride	$PbCl_4$
3 lead	4 phosphate	$Pb_3(PO_4)_4$
3 sodium	1 phosphide	Na_3P
2 lithium	1 oxide	Li_2O