Chemistry Unit 3 - Molecular Models Activity

CLASS SET

Write the answers on your own sheet of paper.

1) Write the symbols along with the electron dot structure and color for each of the following elements in your set:

a) carbon

b) hydrogen

c) oxygen

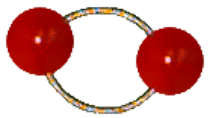
d) chlorine

e) nitrogen

2) How many connections (bonds) can each of the atoms in #1 make? Add this information to your list in question 1. (Hint: Count the number of single dots in the dot structure)

3) Connect the atoms as indicated in each case. You need to use all the holes (bonds) in each atom to connect them. Then, draw the model that you made and write the formula of each substance represented in the models:

Example: 2 atoms of oxygen ..... O_2



a) 1 atom of carbon and 4 atoms of hydrogen

b) 2 atoms of hydrogen and 1 atom of oxygen

c) 1 atom of nitrogen and 3 atoms of hydrogen

d) 1 atom of hydrogen and 1 atom of chlorine

4) Use the following formulas to assemble the corresponding models and draw them:

a) C_2H_6 (ethane)

b) HClO (hypochlorous acid)

c) H_2O_2 (hydrogen peroxide)