LESSON 32 ACTIVITY

Eight Is Enough
Octet Rule

Name _____

Date _____ Period _____

Purpose

To apply the octet rule to creating Lewis dot structures and structural formulas.

Instructions

1. Fill in the table with the correct structural formulas and Lewis dot structures. Check your drawings against the octet rule and the HONC 1234 rule. Include lone pairs in the structural formulas.

Molecular formula	Structural formula	Lewis dot structure
C_2H_6		
C_2H_4		
C_2H_2		

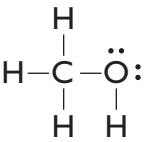
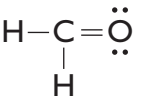
2. Explain how you can tell from the molecular formula when a compound has a double or a triple bond.

3. Fill in the table with the correct structural formula. Include lone pairs in the structural formulas.

Molecular formula	Structural formula	Molecular formula	Structural formula
H_2		I_2	
Cl_2		N_2	
O_2			

4. Molecules that are made up of two atoms are called **diatomic molecules.** Some elements—such as N_2, O_2, and all the halogens—are found as diatomic molecules in nature. Why do you think this is the case?

5. Fill in the table with the correct molecular formula or structural formula. Include lone pairs in the structural formulas.

Molecular formula	Structural formula	Molecular formula	Structural formula
		CH_5N	
		CH_3N	
CH_4O_2		HCN	
CH_2O_2		CO_2	

6. Making Sense Describe the process you use to determine the structure of molecules.

7. If You Finish Early From what you've learned so far, predict how the molecules in the table in Question 5 will smell. Explain your predictions.