Name: Partners: _		
Hour:	Date:	

Chemistry: Molecular Models Activity

A molecule can be represented on paper in several ways. The chemical formula shows the number and kind of each atom in a molecule.

Example: NH₃

The Lewis structure shows the arrangement of the atoms of a molecule in two dimensions. In a Lewis structure, the atoms, bonds, and unshared electron pairs are shown.

Example: H — N — H

A structural formula is simply the Lewis structure without the unshared electron pairs. The main purpose of the structural formula is to show which atoms are bonded to which.

Example:	H — N — H
·	
	Н

In this activity, you will be constructing three-dimensional models of several molecules. You will find the chemical formula, the Lewis structure, the structural formula, and then you will construct a model of each molecule. You will show the model to the teacher and have the appropriate box initialed.

Use the model kits according to the following key:



You may work in groups of up to three. It is sufficient to have one member of your group have the "Official Initial" paper. The teacher will initial only this paper, as long as the names of all of the group members are on this paper.

Compound Name	Chemical Formula	Lewis structure	Structural Formula	Teacher's Initials
carbon tetrachloride	CCI₄			
methane				
water				
ethane	C₂H ₆			
ethyne	C ₂ H ₂			
hydrogen monosulfide				
carbon dioxide				

Compound Name	Chemical Formula	Lewis structure	Structural Formula	Teacher's Initials
ammonia				
hydrogen monochloride				
trichloro- methane	CHCI ₃			
urea	CO(NH ₂) ₂			
propane	C ₃ H ₈			
butane	C ₄ H ₁₀			
nitrogen triiodide				



Name:		
	Partners:	

Hour: ____ Date: _____

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Use the model kits according to the following key:

carbon = black tetrahedron chlorine = green tetrahedron nitrogen = red tetrahedron oxygen = blue tetrahedron sulfur = yellow tetrahedron hydrogen = white with one bond



You may work in groups of up to three. It is sufficient to have one member of your group have the "Official Initial" paper. The teacher will initial only this paper, as long as the names of all of the group members are on this paper.