

Name: _____ Section: _____

Building Molecular Models

Directions: Below you will find molecules/compounds that are composed of atoms. Your objective is to **first build** the molecules/compounds using the provided molecular model kits and then you must analyze the model to complete the table.

Molecule/Compound	# of atom types	Names of atoms	# of each type of atom	Total # of atoms
$O = O$ <i>Oxygen Gas</i>				
$H - O - H$ <i>Water</i>				
$O = C = O$ <i>Carbon Dioxide</i>				
<pre> H H-C-H H </pre> <i>Methane</i>				
<pre> H H H H-C-C-C-H H H H </pre> <i>Propane</i>				
<pre> O H-C-OH H OH H H H </pre> <i>Glucose</i>				

Questions:

1. The molecular model kit consists of different colored spheres and springs/sticks. Describe what each of the following represent:
 - Spheres -
 - Sphere color -
 - Springs/Sticks -
2. The oxygen gas you modeled is considered a molecule, but **NOT** a compound. However, the water, carbon dioxide, methane, propane, and glucose you modeled are all considered molecules **AND** compounds - molecular compounds. Consider this information to define the terms molecule and compound. *Hint: it may be helpful to consider the information compiled in the data table.*
3. When viewing the structural diagram, the molecules/compounds appeared to be connected in straight lines. Was this the case when you actually built the molecules/compounds? What do you think accounts for this?
4. What did you notice about the number of holes in each atom? How would you explain this?
5. If the atoms in this activity represent the letters in the alphabet of matter, what do you think the molecules/compounds represent?