Name: _____   5____

Build a Molecule Computer Sim

Learning Goals:
1. Describe the difference between a molecule name and chemical formula.
2. Distinguish between the coefficient and subscript in a chemical formula.
3. Use pictorial representations of molecules to generate chemical formulas.

First Tab
1. Make a molecule:
    a. How do you know you made a molecule? _____
    b. Write the **name** of some molecules you made (ex. Water).

    _____   _____
    _____   _____
    _____   _____

2. Molecule Names and Chemical Formulas:
    a. Compare the name and chemical formula for some molecules:

Molecule Name	Drawing	Chemical Formula

Second Tab
3. Make Many
   a. Fill all the collection boxes and then complete the questions for each Goal.

Goal: $4H_2$	
Draw it!	
What does the big '4' in $4H_2$ mean?	
What does the little '2' in $4H_2$ mean?	

Goal: $2CO_2$	
Draw it!	
What does the big '2' in $2CO_2$ mean?	
What does the little '2' in $2CO_2$ mean?	

Goal: $2O_2$	
Draw it!	
What does the big '2' in $2O_2$ mean?	
What does the little '2' in $2O_2$ mean?	

Goal: $2NH_3$	
Draw it!	
What does the big '2' in $2NH_3$ mean?	
What does the little '3' in $2NH_3$ mean?	

Third Tab Challenge
4. What's the biggest molecule you can make?
   a. Molecule Name: _____
   b. Chemical formula: _____

5. Can you make a molecule that can be broken into smaller molecules?
   a. Big molecule **name**: _____
   b. Big molecule **chemical formula**: _____
   c. Smaller molecule **names**: _____
   d. Smaller molecule **chemical formulas**: _____