Build a Molecule Student Guide Name: _____

Start: 1. Google: PhET Build a molecule

2. Click on the first link

3. Click on the Run Now! button

4. Explore the simulation. Be sure to click on everything.

5. Your Molecules Collection 1 Build all of the molecules in the collection.

6. Choose one of the molecules from your collection and draw it in the box.

Name of molecule: _____

-it is made up of _____ atom(s) and _____atom(s)

7. Click on the Collect Multiple tab at the top of the screen.

- ✓ Build all the molecules in Collection 1.
- ✓ Be on the lookout for the , it means you have the collection completed.

8. Answer the following questions for $2CO_2$.

a. What is the **name of the molecule** when 2- oxygen atoms bond with 1- carbon atom? _____

b. $2CO_2$ molecules, how **many molecules** are present? _____

c. If you have $2CO_2$ molecules, how many **different types of atoms** are present? _____

d. Draw a picture of $2CO_2$.

Fill in the chart to organize the type of atom(s) and the number present in $2CO_2$.

9.

Name of atom in molecule	Number of atoms present

Summary: A **coefficient** is a large number in front of the molecular formula.

2 H_2O –It means there is more than one molecule and multiples of atoms

In this case: _____ **water molecules** with _____ **hydrogen atoms** and _____ **oxygen atoms**.

10. In Larger Molecules section, Use Kit #4 to build a **SiH_4** molecule.

What is the name of this molecule? _____

----------**You are Finished!**

Extension!!!

Build a few molecules in the Larger Molecules .

Use the kits and put atoms together to build actual molecules. The name of the molecule will appear when you have built a known molecule. In the box to your left, draw a molecule that you built and write its name. (You can draw more below if you want to!)

Name of molecule: _____

Write one observation you noticed about building molecules?

_____

_____