

## MOLECULE NAME: CARBON DIOXIDE

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Directions: Follow these step by step directions to create the molecule.

Step #	Description
1	Begin with a carbon atom
2	Add an oxygen atom to the carbon atom
3	Add another oxygen atom to the other side of the carbon atom

## QUESTIONS

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1. Describe the geometric structure of the molecule.
2. What is the chemical formula?
3. What types of bonds are present and how many of each one?



## MOLECULE NAME: XENON TETRACHLORIDE

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Directions: Follow these step by step directions to create the molecule.

Step #	Description
1	Begin with a xenon atom
2	Add an chlorine atom to the xenon atom
3	Add another chlorine atom to the other side of the xenon atom
4	Add a third chlorine atom to the other side of the xenon atom
5	Add a fourth chlorine atom to the other side of the xenon atom

## QUESTIONS

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1. Describe the geometric structure of the molecule.
2. What is the chemical formula?
3. What types of bonds are present and how many of each one?



## MOLECULE NAME: BENZENE

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Directions: Follow these step by step directions to create the molecule.

Step #	Description
1	Begin with a carbon atom
2	Add an carbon atom to the first carbon atom
3	Add another 4 carbon atoms to the first two carbon atoms. This will give you a total of 6 carbon atoms. They should form a ring.
4	Add a hydrogen atom to each of the carbon atoms. You will use a total of 6 hydrogen atoms.
5	Make sure your bonds are all correct.

## QUESTIONS

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1. Describe the geometric structure of the molecule.
2. What is the chemical formula?
3. What types of bonds are present and how many of each one?



## MOLECULE NAME: GLUCOSE

Directions: Follow these step by step directions to create the molecule.

Step #	Description
1	Begin with a carbon atom.
2	Add a hydrogen atom to the carbon atom.
3	Add an oxygen atom to the carbon atom.
4	Add a hydrogen atom to the oxygen atom.
5	Add a carbon atom to the original carbon atom.
6	Repeat steps 2, 3, and 4 to the new carbon atom added in step 5.
7	Add a carbon atom to the second carbon atom added in step 5.
8	Repeat steps 2, 3, and 4 to the new carbon atom added in step 7.
9	Add a carbon atom to the third carbon atom added in step 7.
10	Repeat steps 2, 3, and 4 to the new carbon atom added in step 9.
11	Add an oxygen atom to the fourth carbon atom added in step 9.
12	Add a carbon atom to the oxygen atom added in step 11.
13	Add a hydrogen atom to the carbon atom added in step 12.
14	Add the following structure to the carbon atom added in step 12: CH <sub>2</sub> OH.
15	Make sure all bonds are correct.

## QUESTIONS

1. Describe the geometric structure of the molecule.
2. What is the chemical formula?
3. What types of bonds are present and how many of each one?

