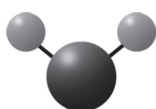


Your steadfast love, O Lord, extends to the heavens, your faithfulness to the clouds. Psalm 36:5

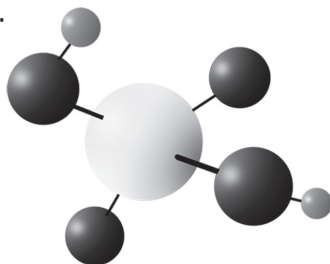
- True or False?** Almost all the familiar types of matter—air, plants, animals, food, water, automobiles, furniture, etc.—are made from small “pieces” of matter called molecules.
 - True or False?** There are really only a few different types of molecule.
 - In the ball-and-stick diagrams, what do the “balls” represent?
-

- Match the molecule below to its correct name.

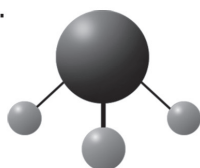
a.



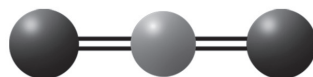
b.



c.



d.

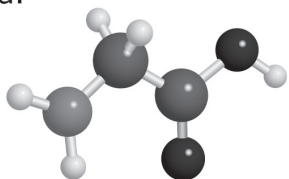


- sulfuric acid
- water
- carbon dioxide
- ammonia

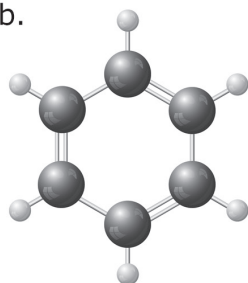
- How many atoms are the molecules in 4a, 4b, 4c and 4d made of? _____

- How many atoms are the molecules below made from?

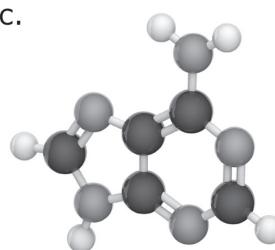
a.



b.



c.

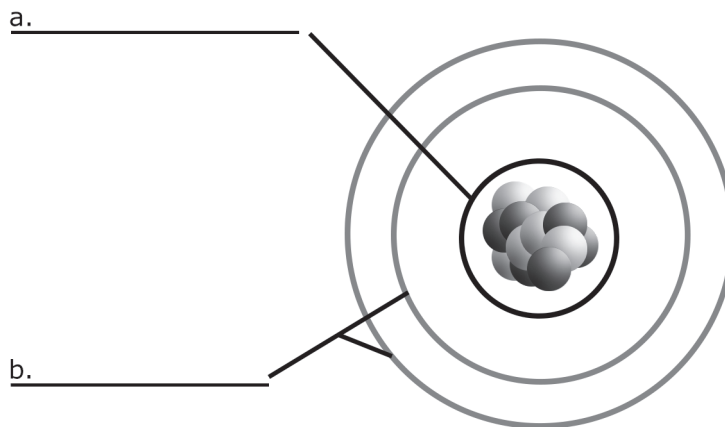


- The abbreviation symbol for a type of atom is listed below. Provide its name.

a. N stands for _____

b. O stands for _____

8. What is the symbol for sulfur? _____
9. How many different kinds of atoms are there?
- a. 68
 - b. 81
 - c. 181
 - d. 118
 - e. 128
10. **True or False?** Because an atom is so small, it is not made from anything smaller.
11. **True or False?** The fact that we can see an individual atom with a very powerful microscope clearly shows that even though something is very, very small, it is still matter because it can be seen and takes up space.
12. Choose the correct statements.
- a. Large types of matter—like trees, people, animals and mountains—are not made from tiny types of matter called molecules.
 - b. Even though they are tiny, all atoms are made from even smaller pieces of matter.
 - c. It is how an atom is built that makes one type of atom different from another type.
 - d. By counting the “balls” in a ball and stick model, you can tell how many atoms a molecule contains.
13. Label the parts of an atom.



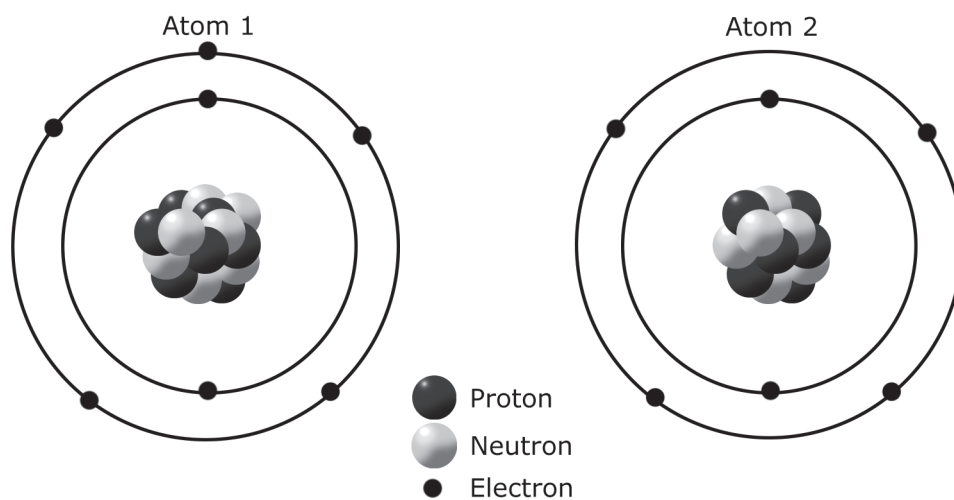
14. What are the three particles that atoms are built from?

15. Which particles make up the nucleus?

16. **True or False?** Electrons are in the nucleus.

17. **True or False?** The two atoms below are the same type of atom.

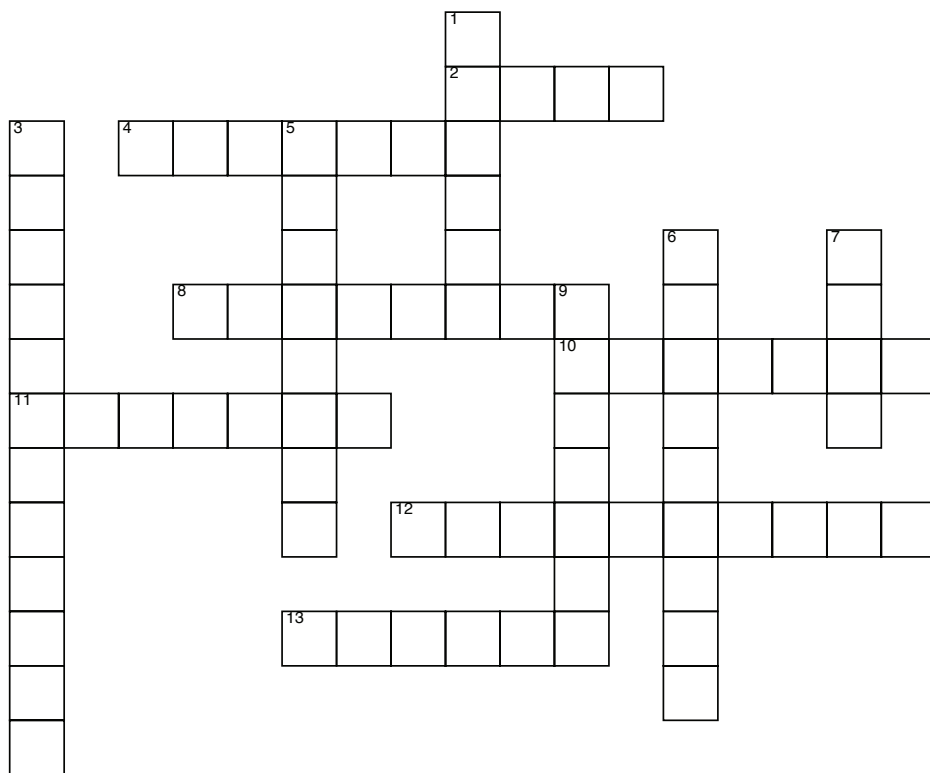
Why did you answer as you did?



CROSSWORD PUZZLE

Finish the crossword puzzle below using the words provided.

Atom
Ball and Stick
Bond
Chemist
Chemistry
Electron
Element
Matter
Microscope
Molecule
Neutron
Nucleus
Proton



ACROSS

2. The smallest whole unit of matter is a/an _____.
4. A scientist who studies how atoms and molecules interact.
8. The particle that whizzes around the outside of an atom's nucleus.
10. A kind of atom is called a/an _____.
11. Protons and neutrons "live" in the _____ of an atom.
12. An instrument that can be used to see pieces of matter that are too small to be seen with the naked eye.
13. One of the types of particles in an atom's nucleus.

DOWN

1. Anything that you can see or feel or that takes up space.
3. A _____ _____ _____ diagram is one way we can use to draw molecules.
5. Two or more atoms bond together to form a _____.
6. The scientific study of how atoms and molecules interact.
7. The thing in a molecule that holds two atoms together.
9. One of the types of particles in an atom's nucleus.