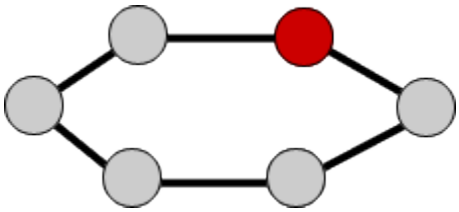
How to Build 3D Glucose Molecule

Materials:

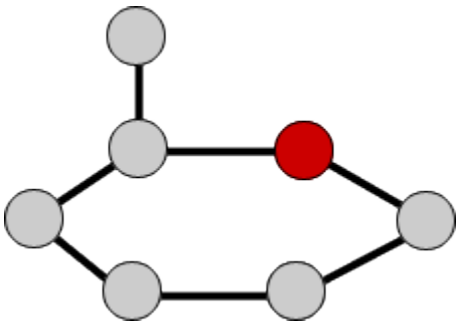
12 large Styrofoam Balls
1 package of wooden skewers (or pipe cleaners)
2 Ziploc bags (large)
newspaper
12 small Styrofoam Balls
wire cutter or heavy duty scissors
water-based craft paints (2 light colors)
Sharpie® Marker (black)

Instructions:

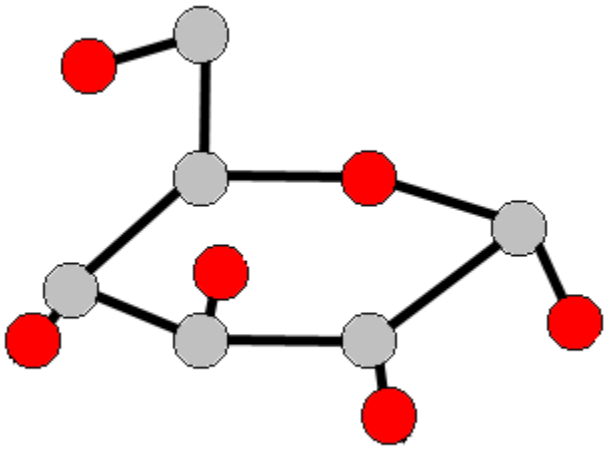
1. To protect whatever surface you will be working on cover it with multiple layers of old newspaper.
2. Pour one color of water-based craft paint into a large Ziploc bag. Place six of the large Styrofoam balls into the bag and seal the bag. Be sure that each ball is coated with the paint. Set the Styrofoam balls on some old newspaper to dry (about 1 hour).
3. Using the same process described in step 2 color the remaining six large Styrofoam balls with the second color of water-based craft paint (be sure to use a new large Ziploc bag). Again, be sure that each ball is coated with the paint. Set the Styrofoam balls on some old newspaper to dry (about 1 hour).
4. Once the large Styrofoam balls have dried use the black Sharpie® to write a large C on one set of six large Styrofoam balls (first color). These represent Carbon atoms. On the remaining six large Styrofoam balls (second color) use the black Sharpie® to write a large O. These represent Oxygen atoms.
5. On the 12 small, uncolored Styrofoam balls use the black Sharpie® to write a large H. These represent Hydrogen atoms.
6. Remove 12 of the wooden skewers from the package. Use wire cutters or heavy duty scissors to cut of the sharp tips of the skewers. Next, cut the 12 skewers in half. Color the skewers with the Sharpie®. Set aside.
7. Retrieve the 12 large Styrofoam balls. Take five of the balls marked "C" and one ball marked "O" and form a hexagonal shape, using six of the colored skewers.
   In the diagrams below the Carbon atoms are gray, the Oxygen atoms are red, and the Hydrogen atoms are black…your colors WILL NOT be the same!!!



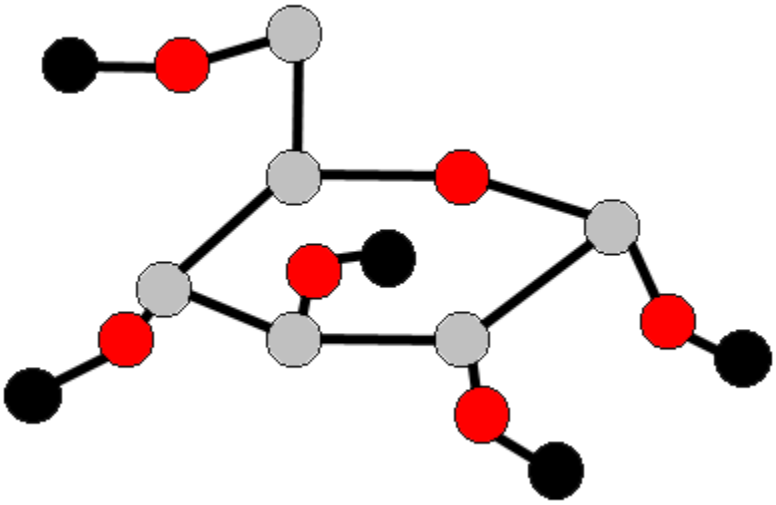
8. Attach the remaining "C" ball to the "C" ball to the left of the Oxygen atom.



9. Attach the remaining five "O" balls to five of the balls marked "C."



10. Lastly, attach the 12 "H" balls to the 12 larger balls, one "H" to each molecule.



CONGRATULATIONS….YOU HAVE SUCCESSFULLY BUILT A GLUCOSE (SUGAR) MOLECULE!!!