

Organic Molecule Modeling Activity

1. In the ball and stick model set, the black balls are carbon atoms, and the white are hydrogen atoms. Examine the balls and these elements in the periodic table, and explain why this is appropriate.
2. Now remove 4 carbon atoms and 10 hydrogen atoms from your kit. How many different ways can you put these atoms together to form a single molecule? You may use single bonds (one stick), or you may double bond atoms together using the springs. Draw all of the molecules you make below or in your notebook.
3. The different molecules you just made are called isomers. Define an isomer, and explain why they are important.
4. Read the section on structural and geometric isomers. Using your kit, make a model to show the difference between them. Draw your model below.
5. What is meant by a carbon skeleton, and how might it be important in the construction of organic molecules such as proteins, carbohydrates, lipids, and nucleic acids?

