

Name \_\_\_\_\_

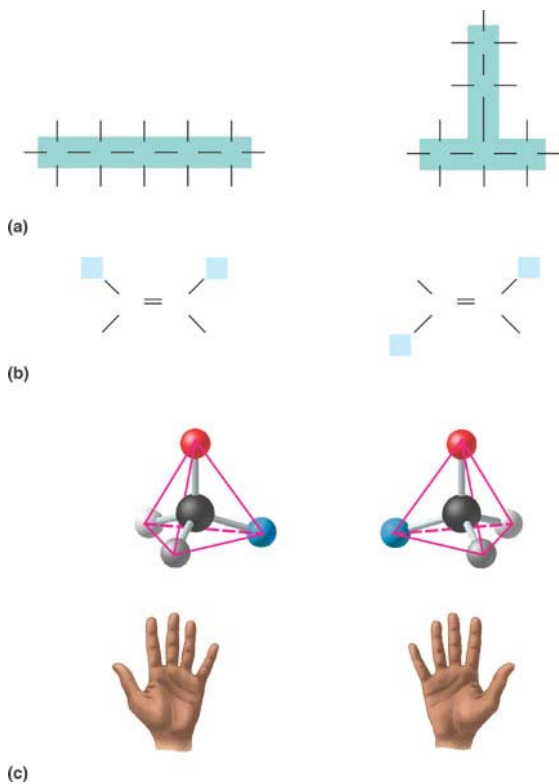
**AP Biology**

**TEXT: *Biology*, Campbell and Reece**

**7<sup>th</sup> Edition**

**Chapter 4 – Carbon and the Molecular Diversity of Life**  
**Guided Reading**

1. Why is organic chemistry so important in the study of biology?
2. Explain the importance of the Urey-Miller experiment and its impact in the scientific community?
3. What unique properties of carbon make it the central atom in the *chemistry of life*?
4. Use the diagram below to label then compare and contrast the three types of isomers.



5. Create a table below. After each functional group draw the structure, name the compound, write an example and note the functional properties. *Now, doesn't this look like great quiz material?*

Functional Group	Drawing of the structure	Compound Name	Example	Functional Properties
Hydroxyl				
Carbonyl				

Carboxyl				
Amino				
Sulfhydryl				
Phosphate				

### AP Biology Exam Checkpoint

6. An organic compound that is composed of carbon, hydrogen, and oxygen in a 1:2:1 ratio is known as a
- a. lipid
  - b. carbohydrate
  - c. salt
  - d. nucleic acid
  - e. protein