Name _____

AP Biology
Chapter 4 - Carbon and the Molecular Diversity of Life
Guided Reading Assignment Campbell's 10th Edition

Essential Knowledge:
1.D.1 There are several hypotheses about the natural origin of life on Earth, each with supporting evidence
2.A.3 Organisms must exchange matter with the environment to grow, reproduce, and maintain organization

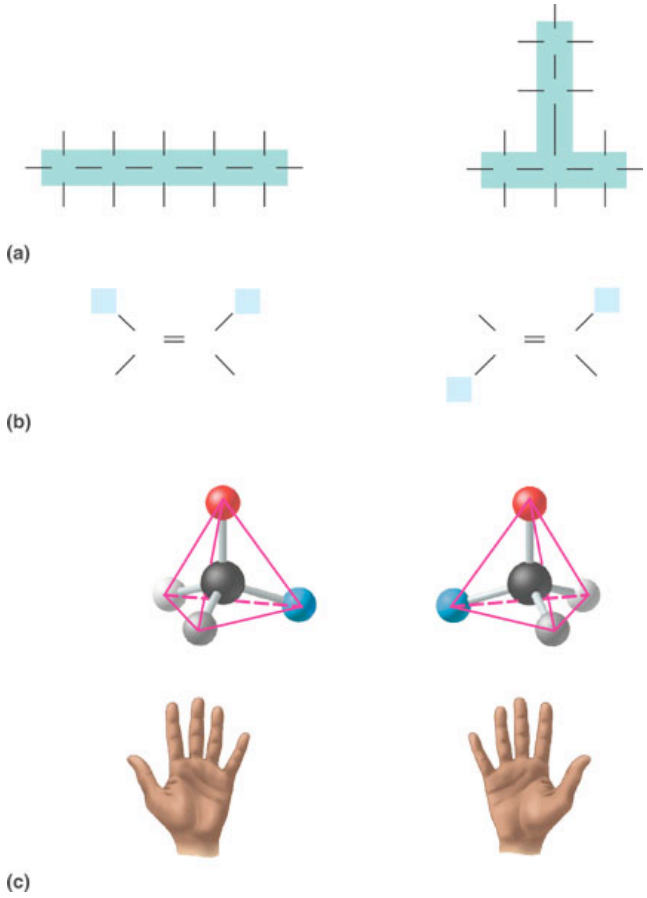
Again, this chapter is a review of previously covered material. We will be moving through the material very quickly, please see me for extra assistance if needed.

1. Why is organic chemistry so important in the study of biology?

2. Why was the Urey-Miller experiment so important?

3. What is special about carbon that makes it the central atom in the chemistry of life?

4. Use the diagram to label and contrast the three types of isomers.



5. Explain the significance of functional groups and then complete the table below

Chemical Group	Draw structure	Name compound	Functional properties	Example
Hydroxyl				
Carbonyl aldehyde				
Carbonyl ketone				
Carboxyl				
Amino				
Sulfhydryl				
Phosphate				

6 How does the structure of ATP allow it to carry out its primary function as an energy storage molecule