

Name _____

AP Biology

TEXT: *Biology*, Campbell and Reece

7th Edition

Chapter 4

**Organic Chemistry
Thematic Review Guide**

1. Define organic chemistry.

2. What are the major groups of organic compounds studied in biology?

3. Describe the various shapes of carbon skeletons.

4. Define the following:

a. Isotopes _____

b. Geometric isotopes _____

c. Enantiomers _____

5. Why are enantiomers of biological interest?

6. What is the significance of functional groups?

7. For each of the functional groups, complete the chart:

Group	Formula	Comments
Hydroxyl		
Carbonyl (aldehyde)		
Carbonyl (ketone)		
Carboxyl		
Amino		
Sulfhydryl		
Phosphate		

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AP Biology Exam Checkpoint

Free-Response Question

Phospholipids are a critical component of the cell wall. The cell wall is selectively permeable, allowing only certain substances in and out, and in certain amounts.

- (a) Describe why phospholipids are important components of cell membranes, based on their structure and properties.
- (b) Explain why proteins are an important component of the cell membrane, based on their structure and properties.