

AP BIOLOGY TOPIC OUTLINE

Topic

I. Molecules and Cells

- A. Chemistry of Life
 - Organic Molecules in Organisms
 - Free Energy Changes
 - Enzymes
- B. Cells
 - Prokaryotic and Eukaryotic Cells
 - Membranes
 - Subcellular Organization
 - Cell Cycle and its Regulation
- C. Cellular Energetics
 - Coupled Reactions
 - Fermentation and Cellular Respiration
 - Photosynthesis

II. Heredity and Evolution

- A. Heredity
 - Meiosis and Gametogenesis
 - Eukaryotic Chromosomes
 - Inheritance Patterns
- B. Molecular Genetics
 - RNA and DNA Structure and Function
 - Gene Regulation
 - Mutation
 - Viral Structure and Replication
 - Nucleic Acid Technology and Applications
- C. Evolution Biology
 - Early Evolution of Life
 - Evidence for Evolution
 - Mechanisms of Evolution

III. Organisms and Populations

- A. Diversity of Organisms
 - Evolutionary Patterns
 - Survey of the Diversity of Life
 - Phylogenetic Classification
 - Evolutionary Relationships
- B. Structure and Function of Plants and Animals
 - Reproduction, Growth and Development
 - Structural, Physiological, and Behavioral Adaptations
 - Response to the Environment
- C. Ecology
 - Population Dynamics
 - Communities and Ecosystems
 - Global Issues