

**2023 AP Bio Summer Assignment - Stratton
(100 pts)**

The core theme of biology is evolution. **Explain** how natural selection is a mechanism of evolution and differentiate between the two. **Explain** the difference between microevolution and macroevolution. **Thoroughly explain** the following and how they fit this concept:

- I. Chemosynthetic organisms
 - A. What are chemosynthetic organisms
 - B. Hypothesize a situation/environment that would have led to this adaptation
 - C. Explain the role of natural selection and evolution in their adaptation

- II. Endosymbiotic Theory
 - A. What is the Endosymbiotic Theory
 - B. Hypothesize a situation/environment that would have led to this adaptation
 - C. Explain the role of natural selection and evolution in this theory

- III. Antibiotic Resistance
 - A. What is antibiotic resistance
 - B. Pick an antibiotic and hypothesize a situation/environment that would lead to this adaptation
 - C. Explain the role of natural selection and evolution in antibiotic resistance

- IV. Birds of Paradise, Galapagos tortoises, Galapagos finches, or Galapagos iguanas (pick one)
 - A. Explain the situation or the environment that led to their current adaptations
 - B. Explain the role of natural selection and evolution in these adaptations