



## **What is AP Biology?**

### **AP Biology Course Description**

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore topics like evolution, energetics, information storage and transfer, and system interactions. The AP Biology course is equivalent to a two-semester college introductory biology course for biology majors. The course content is organized into commonly taught units of study that provide a suggested sequence for the course. These units comprise the content and skills colleges and universities typically expect students to master to qualify for college credit and/or placement. This content is grounded in big ideas, which are crosscutting concepts that build conceptual understanding and spiral throughout the course.

### **Key Topics:**

Students will learn the following big ideas: biochemistry, cellular structure, cellular energetics, cellular communication, genetics, evolution, and ecology.

### **Course Goals:**

- Develop skills in problem-solving, critical thinking, and data analysis.
- Conduct laboratory experiments to explore biology concepts and apply the scientific method.
- The ability for students to clearly express their ideas and understandings.
- Prepare students for the AP Biology exam.

### **Expectations:**

- Active participation in class discussions and activities.
- Completion of homework assignments.
- Regular practice and review of concepts to reinforce learning.
- Collaboration with peers to carry out laboratory investigations.

### **Assessment:**

Your understanding of the material will be assessed through quizzes, tests, labs and homework assignments. Regular feedback will help you track your progress and identify areas for improvement.

### **Prerequisites:**

Students should have successfully completed high school courses in biology and chemistry

### **Labs:**

This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. Here is a list of some of the labs we perform: fish respiration, plant vs. animal respiration, microscopic investigation of cells, diffusion and osmosis rates, enzyme catalysis, rate of photosynthesis, Mendelian genetics, aseptic techniques and bacterial culturing, bacterial transformation, forensic DNA analysis, DNA extraction, plant transpiration.

**There is no summer course work for AP Biology.**