

## **AP: Biology**

AP\* Biology builds students' understanding of biology on both the micro and macro scales. After studying cell biology, students move on to understand how evolution drives the diversity and unity of life. Students will examine how living systems store, retrieve, transmit, and respond to information and how organisms utilize free energy. The equivalent of an introductory college-level biology course, AP Biology prepares students for the AP exam and for further study in science, health sciences, or engineering.

The AP Biology course provides a learning experience focused on allowing students to develop their critical thinking skills and cognitive strategies. Frequent no- and low-stakes assessments allow students to measure their comprehension and improve their performance as they progress through each activity. Students regularly engage with primary sources, allowing them to practice the critical reading and analysis skills that they will need in order to pass the AP exam and succeed in a college biology course. Students perform hands-on labs that give them insight into the nature of science and help them understand biological concepts, as well as how evidence can be obtained to support those concepts. Students also complete several virtual lab studies in which they form hypotheses; collect, analyze, and manipulate data; and report their findings and conclusions. During both virtual and traditional lab investigations and research opportunities, students summarize their findings and analyze others' findings in summaries, using statistical and mathematical calculations when appropriate. Summative tests are offered at the end of each unit as well as at the end of each semester, and contain objective and constructed response items. Robust scaffolding, rigorous instruction, relevant material and regular active learning opportunities ensure that students can achieve mastery of the skills necessary to excel on the AP exam.

This course has been authorized by the College Board to use the AP designation.

\*AP is a registered trademark of the College Board.

### Course Materials

#### Semesters 1 and 2:

Required AP Biology requires a college-level biology textbook. Students may use any college-level biology textbook to successfully complete the course. Resources are provided in the course to support students using either of the following texts:

Campbell Biology, 9th ed. Neil A. Campbell and Jane B. Reece et al. (Benjamin Cummings, 2011). ISBN-10: 0321558235 / ISBN-13: 9780321558237.

Principles of Life, 1st ed. David M. Hillis et al. (W. H. Freeman, 2011). ISBN-10: 1429276487 / ISBN-13: 9781429276481

AP Biology requires the completion of hands-on lab activities and has been approved by the College Board as meeting all requirements for a laboratory science course. For more information on the materials required for this course, refer to the Course Materials List at <http://support.apexlearning.com>. In the upper-right corner, under Quick Links, select Course Materials.

### **International Virtual Learning Academy**

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