

Montclair High School

Course Syllabus

Department: Science

Course: AP Biology

Level: Advanced Placement

Credits: 6

Course Description:

The AP Biology course is a year-long course designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year of college. Non-science majors often use this course to fulfill a basic requirement for a laboratory-science course. Primary emphasis in this course will be on developing a deep understanding of concepts rather than on memorizing terms and technical details. Inquiry and experimentation are integral to the course and students will learn how to use evidence and reasoning to make a claim and draw conclusions. Cell structure, biochemistry and genetics are taught in the first semester. The second semester encompasses evolution/diversity and physiology of organisms as well as ecology. Evolution is a unifying concept in biology and its concepts are taught in both semesters.

Standards:

HS-LS-1, HS-LS-2, HS-LS-3, HS-LS-4

Anchor Text(s):

Text Title	Publisher/Author	Year/Edition	ISBN	Text Distribution
Biology	Pearson/Campbell	2007 and 2008/8 th and 9 th edition	0321543254 & 0321558235	Hard copy to each student and access to e-text

Supplementary Materials:

Laboratory manuals, educational videos, Internet activities, articles from journals, other textbooks, magazines and newspapers.

Units of Study:

- Science as Process
- Evolution
- Energy Transfer
- Interdependence in nature
- Relationship of structure to function
- Regulation
- Science, Technology and Society
- Continuity and Change

Proficiencies:

By the end of this course, students will:

- Grasp science as a process rather than as an accumulation of facts.
- Recognize unifying themes that integrate the major topics of biology.
- Design experiments, analyze data using statistics and draw conclusions.

- Present experimental findings through lab reports and mini-posters.
- Apply biological knowledge and critical thinking to social concerns.

Evaluation & Assessment:

- Test 60%
- Lab work, projects 20%
- Quizzes 15%
- Homework, classwork 5%

Prior to beginning any lab activities, all students must have submitted a Safety Contract which has been duly signed by both the student and their parent/guardian. This contract will be kept on file by the teacher for the duration of the course.