

**Montclair High School
Biology Replacement**

Department: Science
Course: Biology Replacement
Level:9
Credits: 5

Course Description:

This course is a contemporary study of life on earth. Current topics are incorporated into the text and laboratory investigations. The major theme is the variety and continuity of life. Primary emphasis in this course will be on developing an understanding of concepts rather than on memorizing terms and technical details. Cell's structure, chemistry and physiology as well as genetics are taught in the first semester. Second semester encompasses diversity and physiology of organisms as well as ecology. Evolutionary relationships are taught in both semesters.

Next Generation Science Standards:

NGSS HS-LS1, HS-LS2, HS-LS3, HS-LS4

Anchor Text(s):

Title: Modern Biology	Publisher: Holt	Year/Edition: 2009	ISBN: 9780030367694	Students will not be required to sign out a textbook.
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Supplementary Materials: The following materials play a heavy role in RC Biology:

- Rand Park/Montclair High School Campus
- Science videos on Netflix/Youtube (Neanderthal, Walking with Cavemen, Before the Dinosaurs, The Incredible Human Machine, and Planet Earth to name a few)
- Projecr RIA Youtube Channel
- Google Docs and Google Classroom (see "computer use" section below)
- Various living and nonliving specimens (see "specimen treatment" section below)
- And many more...!

Units of Study:

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

Proficiencies: By the end of this course, students will:

- Distinguish between living and non-living things.
- Explain the importance of chemistry to the study of biology.

- Define homeostasis.
- Compare and contrast photosynthesis and cell respiration.
- Explain the basic principles of Mendelian genetics and their application.
- Summarize the ecological role of various organisms.
- Explain the interrelationships between organisms and their environment.
- Demonstrate safety when working in the laboratory setting, including handling of materials and solutions, microscopes, dissection tools and glassware, and proper disposal of wastes.

Evaluation & Assessment:

- Test 30%
- Labs/Projects 20%
- Homework 20%
- Class Work 15%
- Quizzes 15%

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.