

Montclair High School

Course Syllabus

Department: Science

Course: AP Environmental Science

Level: Advanced Placement

Credits: 6

Course Description:

The goal of AP Environmental Science (AP ES) is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and man-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and preventing them.

AP classes are college courses taught at high schools with the intent that students will foster an interest in a discipline that they can continue to pursue at the college level. In addition, successful course completion can result in students acquiring credit before college or elevated placement once accepted to a college or university.

AP ES is designed for the student who is attracted to the more analytical aspects of science, and who is motivated by an inquiry-based approach to learning.

NJSLS-S Standards:

ESS2-2/4/5/6, ESS3-1/2/3/4/5/6, LS4-2/3/4/5/6, LS2-1/2/6/7

Anchor Text(s):

Text Title	Publisher/Author	Year/Edition	ISBN	Text Distribution
Environmental Science for AP	BFW Freeman/ Andrew Friedland	2012 (1 st edition)	9780716738497	Hard copy, PDF copy , & online text available

Supplementary Materials:

Laboratory manuals, educational videos, Internet activities, articles from journals, magazines and/or newspapers, etc.

Proficiencies:

By the end of this course, students will:

1. Acquire a rich and active understanding of how the Earth with its living and nonliving parts interact to yield ecosystems
2. Identify and know the significant complexities inherent in the science of the environment, pollution studies, and public policies.
3. Employ analytic techniques as a way of solving problems that have developed because of environmental stress or damage.
4. Learn that some problems are unsolvable.
5. Learn and employ the techniques of scientific research and investigation in discovering new and old information about the Earth and its ecosystems.

Units of Study:

- Global Environmental Picture
- Components of Ecosystems
- Principles of Ecosystem Function
- Population, Succession, and Ecosystems
- Evolutionary change and Ecosystems
- Demographics
- Development Issues
- Soil and the Ecosystem
- Hydrologic Cycle
- Food Production and Distribution
- Biodiversity and Protection
- Conservation and Preservation
- Fossil Fuels
- Nuclear Power
- Renewable Energy
- Environmental Hazards and Human Health
- Integrated Pest Management
- Water Pollution
- Disposal and Recovery of Solid Waste
- Hazardous Chemicals and Toxic Waste
- Atmosphere
- Atmospheric Pollution
- Economics, Public Policy, and the Environment

In addition, students are expected to:

1. Maintain a high level of participation and preparation.
2. Complete all assignments on time.
3. Demonstrate a cooperative attitude and contribute to the learning process of the class.
4. Prepare for and take the AP test!

Evaluation & Assessment:

- There will be a test on each book chapter. Some chapters may be combined into a single exam.
- The Midterm exam will consist of all of the material covered in marking periods 1 and 2, and will be structured like a mock AP exam.
- As per regulations for the AP Exam, no calculators may be used on classroom Tests or Quizzes.
- Lab work will be completed in groups. However, each student will submit 1 individual lab report to TurnItIn.com.
- All written student work must be individual and in the student's own voice. It is unacceptable to copy and/or plagiarize work from any source, including another student. Please refer to the student handbook for policies regarding cheating and plagiarism.
- At the AP level it is unacceptable to hand in work that is late. Any assignment that is handed in beyond the due date will earn a zero.
- Any makeup test or quiz missed must be scheduled within 2 days after returning to class – it is your responsibility to schedule a makeup time and adhere to it. When you know in advance you will be missing class for a field trip or college visit, you are expected to arrange to take tests/quizzes in advance of your absence.
- Grading Breakdown:
 - Tests/Quizzes 60%
 - Labs/Classwork/Homework 30%
 - Projects 10%
- The Final Grade will consist of each marking period (22.5% each), the midterm exam (5%) and the final exam (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.