

Course Goals:

The goal of the AP Environmental Science course 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 human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.

Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. Yet there are several major unifying constructs, or themes, that cut across the many topics included in the study of environmental science. The following themes provide a foundation for the structure of the AP Environmental Science course.

1. Science is a process.
 - Science is a method of learning more about the world.
 - Science constantly changes the way we understand the world.
2. Energy conversions underlie all ecological processes.
 - Energy cannot be created; it must come from somewhere.
 - As energy flows through systems, at each step more of it becomes unusable.
3. The Earth itself is one interconnected system.
 - Natural systems change over time and space.
 - Biogeochemical systems vary in ability to recover from disturbances.
4. Humans alter natural systems.
 - Humans have had an impact on the environment for millions of years.
 - Technology and population growth have enabled humans to increase both the rate and scale of their impact on the environment.
5. Environmental problems have a cultural and social context.
 - Understanding the role of cultural, social and economic factors is vital to the development of solutions.
6. Human survival depends on developing practices that will achieve sustainable systems.
 - A suitable combination of conservation and development is required.
 - Management of common resources is essential.

Course Outline by Topic: (Times and Sequence are Subject to Change.)

Unit 1: Intro to Env. Science/Matter&Energy/ (2-3 wks)

Chapter 1: Studying the State of our Earth

Chapter 2: Environmental Systems

Unit 2: The Living World (5-6 wks)

Chapter 3: Ecosystem Ecology

Chapter 4: Global Climates and Biomes

Chapter 5: Evolution and Biodiversity

Unit 3: Biological and Human Populations (3-4 wks)

Chapter 6: Population and Community Ecology

Chapter 7: The Human Population

Unit 4: Earth Systems and Resources (3-4 wks)

Chapter 8: Earth Systems

Chapter 9: Water Resources

Unit 5: Land Use (3-4 wks)

Chapter 10: Land, Public and Private

Chapter 11: Feeding the World

Unit 6: Energy Resources and Consumption (3-4 wks)

Chapter 12: Nonrenewable Energy Sources

Chapter 13: Achieving Energy Sustainability

Unit 7: Pollution (7-8 wks)

Chapter 14: Water Pollution

Chapter 15: Air Pollution and Stratospheric Ozone Depletion

Chapter 16: Waste Generation and Waste Disposal

Chapter 17: Human Health and Environmental Risks

Unit 8: Global Change and a Sustainable Future (1-2 wks)

Chapter 18: Conservation of Biodiversity

Chapter 19: Global Change

Chapter 20: Sustainability, Economics, and Equity

Grading: This course will have a grade administered at the end of each of the four quarters. Calculation of quarterly grades will be as follows:

Tests and Quizzes:	60%
Laboratory and Written Assignments:	20%
Homework and Class Participation:	20%

Tests and Quizzes: Tests will be given periodically sometimes after a chapter is complete and other times after a particular topic is complete. Approximately 3 to 4 tests will be given per quarter.

Most tests will be **two** periods in length. The first period will contain approximately 30-50 AP multiple choice questions. The second period will usually contain 2 essay questions. It will be important to budget your time wisely as you take both sections of your exams.

Quizzes will be given in between chapters and topics usually on a weekly basis. Quizzes could be all multiple choice **or** essay format. The format of the quiz will be discussed days prior to the quiz. Tests will be on Wednesdays and make-up tests will be given no later than the Tuesday after the missed test date.

Labs: Labs must be completed, as they are a required component of this course. Most labs will require formal write-ups. Labs will be scored out of ten points. If a lab is handed in late, 3 points will be deducted for a maximum allowable score of 7/10. Labs may not be made up for a higher score.

Laboratory work varies in length. Most labs will require formal lab write-ups whereas other labs are brief in nature. For example, short graphing activities can be handed in for a grade, but will may be graded out of 5 points rather than 10.

Homework and Journals:

Homework and journal summaries will be assigned on a weekly basis.

At the beginning of each week a journal article and chapter readings will be assigned. Journal articles will need to be summarized and chapter questions will need to be completed by the end of the week.

Journal summaries will be handed in every week for a grade. Homework will be visually checked **or** handed in for a grade each week.

Field Trips: This course will include field trips. Details to follow.

