

AP Environmental Science

The goal of this course is to provide students with the scientific principles, concepts, and methodologies to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, and to evaluate the risks associated with these problems and examine alternative solutions for resolving and/or preventing them.

Text

ENVIRONMENTAL SCIENCE, Karen Arms, Holt 2008.

Additional Teacher Resources

Laboratory Investigations AP Environmental Science, William Molnar. People's Publishing Group 2005.

Environmental Science, 10th Ed., Richard Wright, Pearson 2008.

Methods

Instruction consists mostly of lectures, lab-work, discussions, demonstrations, and written assignments- including research projects, in-class assignments, and homework. Students regularly analyze current events, explore case studies, and examine environmental laws. One or more of these is accomplished weekly. An average of one block per week is devoted to hands-on laboratory experiences or fieldwork. All lab experiences and fieldwork require a written report, typically completed outside of class time. Time allowance listed for each lab does not include time needed for extensive research (in the case of some assignments) or writing the report. Some labs require just a few minutes each block over several days or weeks in order to monitor changes.

In the Unit descriptions below, multiple labs are listed for some topics and some labs overlap topics. **One or more** of these labs will be conducted depending on previous student knowledge, time constraints, and available resources during a specific school year.

Unit 1

Chapter 1

Topic: Environmental Issues, Their Causes, and Sustainability

General overview of the topics covered throughout the year.

- o Video: *The Lorax* ; introduces students to basic environmental concepts. Followed by book reading: *The Truax*. Students critically compare the two and identify competing points of view.
- o Case Study: Easter Island- ties into history of environmental science
- o Lab: Tragedy of the Commons

Students in one of several groups represent heads-of-households competing for a common community resource. Students first observe what happens when all have unlimited opportunity to use the resource and are restricted from communicating and/or collaborating to manage that resource. In a second set of trials, students are allowed to communicate and may privatize a portion of the resource and manage its use. Approximately 1 hour.

Chapter 2