# AP Environmental Science

**Description of Average Weekly Outside Requirements**

### Main Topics
**(What main ideas/concepts are covered):**

- Topic 1. The Living World: Ecosystems
- Topic 2. The Living World: Biodiversity
- Topic 3. Populations
- Topic 4. Earth Systems and Resources
- Topic 5. Land and Water Use
- Topic 6. Energy Resources and Consumption
- Topic 7: Atmospheric Pollution
- Topic 8: Aquatic and Terrestrial Pollution
- Topic 9: Global Change

### Rationale
**(Why a student should take this course):**

AP Environmental Science is a multidisciplinary course, where the ideas and information from subjects such as biology, chemistry, earth science, political sciences and economy are combined and applied. AP Environmental Science follows the course content as outlined by the College Board and it has been designed to be the equivalent of a one-semester, introductory college course in environmental science.

This course framework provides a clear and detailed description of the course requirements necessary for student success. The framework specifies what students must know, be able to do, and understand, with a focus on big ideas that encompass core principles and theories of the discipline. The framework also encourages instruction that prepares students for advanced environmental science coursework. A complete course description and exam detail can be found on the College Board website for AP students.

### Reading
**(Text, document, etc.):**

- Students will read from the textbook, approximately 15-20 pages at a time, between 3 and 4 times a week.
- Students are responsible for short readings, 1 to 3 pages, throughout the semester to supplement the text.

### Written
**(Terms, questions, outlines, free response, etc.):**

- Students will write short answer and essay questions that require students to analyze a situation and develop actions to correct the situation.

### Grade Composition
**(How are grades determined):**

- Tests
- Quizzes
- Lab Reports
- Homework and Classwork

### Required Skills
**(Skills necessary to be successful in this course):**

- Reading/Comprehension
- Work Ethic
- Organization
- Open Mind- New Concepts
- Basic Writing - Analytical

### Skill Development
**(Skills developed in this course and how):**

This course has been developed to be a rigorous science course that emphasizes scientific principles and analysis, and that includes a laboratory component.

Students cultivate their understanding of the interrelationships of the natural world as they explore concepts like the four Big Ideas; energy transfer, interactions between earth systems, interactions between different species and the environment, and sustainability.

### Sample Textbook Excerpt:

*"Energy comes from a variety of sources and has a variety of uses. When a single fuel source serves more than one purpose, such as a hotel using a natural gas generator to produce electricity and hot water, this is known as **cogeneration**. Producing electricity and heat from the same source of coal is a type of cogeneration, but there are many others. The key to cogeneration is that there is one primary source for energy, but the energy can be used in at least two ways."*

*"**Fossil fuels** can be made into specific fuel types and for a specific purpose. The most widely used sources of energy globally are fossil fuels. Fossil fuels are formed from plant and animal remains that were buried millions of years ago. Coal, crude oil, and natural gas are all fossil fuels and the most widely used sources of energy. The reserves for oil, coal, and natural gas are spread throughout the globe."*