



Grand Haven High School

AP Environmental Science

Course Number:

Grade Level: 11-12

Credits : 1

Prerequisite Courses : AP® Environmental Science is open to students who have taken biology, chemistry or physics (may be taken concurrently), and earth science. Although it is strongly suggested to have Biology and Chemistry completed prior. Students must be prepared to work outdoors and indoors for labs and complete up to one hour of reading or flipped notes per night. This is a college level course and students are expected to complete online readings and assignments daily.

Course Description

This elective course is primarily a senior level course (open to juniors and underclassmen if they feel confident to take an AP science course) and is designed for students anticipating a career/program in environmental science or other related biology / environmental careers. It is also designed to allow the student to gain a deeper knowledge in the interdisciplinary study that environmental science is. Students in this course will study a variety of topics including, ecology, biology, pollution, populations, energy, land and water use, pollution, climate change, and much more. This class provides a world view of the state of the global and local environment and covers a variety of modern environmental issues. Learning will occur through in class and flipped notes, class discussion, lectures, as well as hands on activities, discussions, projects, and other classroom activities. Students will also utilize the online AP Classroom through the College Board.

Flipped Classroom

Due to the amount of information needed to be covered before the AP Exam in May students are responsible for flipped classroom assignments. These usually take 10-30 minutes to complete. Students will watch video notes and record them in their note packet. Students also may be assigned a reading to supplement the notes or an assignment. These are critical to complete because it is important class information they will need to be successful on assessments.

AP Classroom Assignments

Students are often assigned question sets in the AP classroom to review the content. These sets range from 2-30 questions usually. These are worth credit or no credit. If the students start to show low effort on these point values will be assigned based on the % right. For example if a student gets a 75% or better on a set they will receive full credit of 10 points but if a student gets 50-74% they will receive 7 points, and if a student gets a 50% or lower they will receive 5 points. These are written like AP exam questions so it is important to become familiar with the test question style all year.

FRQ Student Grading

There are 3 Free Response Questions on the AP exam in May and they are weighted at 40% of the exam grade. During the school year students will be assigned to peer evaluate each other's Free Response Questions in an unbiased professional manner. This provides the students with great insight as to what is expected on the free response questions because they are particular in how they expect the students to answer.

Late Work

Students will be expected to have their assignments completed by the start of the next class if it is assigned as HW. Students that do not have this completed will lose 50% of the credit when they do bring it in and show the teacher. If it is over 2 days late the students will receive **no** credit. The at home assignments are an expectation so getting them done in a timely manner is important. The assignments usually do not take copious amounts of time so should be able to be completed with ease (likely 10-30 min). Students also usually get to have a head start on their homework at the end of the class period which assists in lowering the time spent at home on homework.

Assessments/Assignments

Students will engage in regular discussion of reading assignments and laboratory experiences along with written assignments including *inquiry* of current events, and interrelatedness of science concepts and political and economic considerations. Students will conduct investigations using appropriate laboratory equipment and prepare formal lab reports complete with charts, graphs, data tables and analysis. Students will be regularly assessed on assigned readings, notes, videos, and presentations.

Scope & Sequence

Course Outline

Unit 0 - Introduction to Environmental Science Concepts

Unit 1 - Ecosystems

Unit 2 - Ecology & Biodiversity

Unit 3 - Populations

Unit 4 - Earth Systems & Resources

Unit 5 - Land and Water Use

Unit 6 - Energy Use

Unit 7 - Atmospheric Pollution

Unit 8 - Aquatic & Terrestrial Pollution

Unit 9 - Global Climate Change

Environmental Science Practices

The course provides instruction in each of the following seven content areas outlined in the *AP Environmental Science Course & Exam Description*:

Science Practice 1: Concept Explanation

Science Practice 2: Visual Representation

Science Practice 3: Text Analysis

Science Practice 4: Scientific Experiments

Science Practice 5: Data Analysis

Science Practice 6: Mathematical Routines

Science Practice 7: Environmental Solutions

Field Trips

There will be opportunities for on campus and off campus environmental field trips. Last year students visited the Wastewater Treatment Plant and the DJ Angus. Students are expected to attend field trips as they give invaluable experiences that enforce key topics in the class.

Laboratory Experiences

Students will participate in a wide variety of lab experiments pertaining to environmental science. The biggest lab activity and formal lab report will be the Ecocolumn Lab that students will participate in the first semester.

Communication

Regular progress can be monitored using Synergy and Google Classroom. The teacher will be available via email.

Grading Policy

This course has 2 categories as follows:

- Assessments = 60% (quizzes, tests, some projects, lab report)
- Classwork = 40% (activities, labs, readings, notes, flipped notes)

Phone/Technology Policy

Phones are expected to be put in the phone caddy prior to the start of class, they are to be retrieved at the end of the hour when the teacher allows. If you are caught with your phone it will be confiscated and taken down to the office where you will go retrieve it at the end of the day. If caught more than once the rest of the schoolwide phone policy will apply. Absolutely 0 tolerance for phones or any other technology during tests or assessments. Chromebooks should only be used when directed. During notes they should be put away until they are needed for an assignment. Chromebooks should be shut at the beginning of the hour unless told otherwise by the teacher.

WHAT YOU PUT INTO THE CLASS IS WHAT YOU GET OUT!!!