

Advanced Placement Environmental Science Syllabus 2023-2024, Mr. Goodwin

Description of Course

Welcome to AP Environmental Science! In this class, you will learn all about the various scientific concepts, principles, and methodologies of environmental science, the study of the natural world. This is a year-long class that will fulfill one-semester of an introductory college level environmental science or laboratory science course. An AP exam will be given at the end of the second semester. All students are expected to take the exam. We will be investigating a variety of topics from water pollution, air toxicity, soil and agriculture, global climate change, and energy resources. And, we will perform many laboratory experiments to help master these topics and develop scientific practices.

Course Objectives

1. To provide you with scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world
2. To identify and analyze environmental problems both natural and man-made
3. To evaluate risks associated with these problems
4. And, to examine alternative solutions for resolving and/or preventing them.

Textbook and Review Books

- Environmental Science: A Study of Interrelationships

AP Environmental Science Practices

The AP Environmental Science practices describe what a student should be able to do while exploring course concepts.

- 1) Concept Explanation: Explain environmental concepts, processes, and models presented in written format.
- 2) Visual Representation: Analyze visual representations of environmental concepts and processes.
- 3) Text Analysis: Analyze sources of information about environmental issues.
- 4) Scientific Experiments: Analyze research studies that test environmental principles.
- 5) Data Analysis: Analyze and interpret quantitative data represented in tables, charts, and graphs.
- 6) Mathematical Routines: Apply quantitative methods to address environmental concepts.
- 7) Environmental Solutions: Propose and justify solutions to environmental problems.

AP Environmental Science Big Ideas

The big ideas serve as the foundation of the AP Environmental Science course and allow students to create meaningful connections among concepts.

- **Big Idea 1: Energy Transfer:** 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.
- **Big Idea 2: Interactions between Earth Systems:** The Earth is one interconnected system. Natural systems change over time and space. Biogeochemical systems vary in ability to recover from disturbances.
- **Big Idea 3: Interactions Between Different Species and the Environments:** Humans alter natural systems and 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.
- **Big Idea 4: Sustainability:** Human survival depends on developing practices that will achieve sustainable systems. A suitable combination of conservation and development is required. The management of resources is essential. Understanding the role of cultural, social, and economic factors is vital to the development of solutions

Course Prerequisites

AP Environmental Science is open to students who have taken 1 year of biology, 1 year of earth science, 1 year of chemistry, and currently enrolled or passed Algebra II.

Grade Assessment

Tests: 40% Quizzes: 15% Classwork/Homework: 20% Labs: 25%

Grade Ranges

90-100 % = A 80-89 % = B 70-79 % = C 65-69 % = D 64% or below = F

Classroom Policies

- You will need a notebook for this class. You will take notes in the notebook as well as receive handouts. All items need to be in class everyday.
- Please remain in your seats. Movement causes lab accidents.
- Please keep all food and drinks, except for water, outside the classroom.
- You are expected to go to the bathroom before or after class.
- Attendance matters. Attendance and participation = success.
- Practice academic honesty. Any cheating in the class will be reported to the AP as well as receiving a zero on the assignment. Parent conferences will also be held and letters of recommendation withheld. This holds for multiple parties involved.
- **LATE WORK** is not accepted in this AP Environmental Science course.
- CCSD's Code of Conduct contains a cell phone policy of "off and away". How teachers choose to accomplish this in their classrooms is up to the individual classroom teacher, these procedures will be shared with students in every class on the first day of school. As the policy emphasizes, students' cell phones need to be off and away so that we are offering an optimal educational atmosphere for learning. Students should not be retrieving their cell phones to take to the bathroom with them or to wander the halls. Students who do not adhere to this policy may be subject to discipline. For this class, cell phones will be placed in the assigned cell phone pocket for the duration of class.
- Academic work is expected to be of your original design.
- Come to class prepared. All printing or submission of assignments should be done BEFORE class.

Absences and Make-up Work

- If you miss a class, the assignment that was due on the day you were absent is due the following day you return for an excused illness only.
- I encourage you to be responsible. Complete missing work from days not attended (from an excused illness only). The number of days of the absence determines how many days you have to make up the work. (Ex: 1 day absent = 1 day to complete work).
- Turn the absent work into me with **ABSENT** written on the top. You can always find out what you missed by asking a friend in the class, asking me before or after class, or checking the Google Classroom. Please, try to refrain from asking me during class.
- If you are absent for an assessment, you are required to take it the very next day you return to school. Communication with Mr. Goodwin is required.

Quizlet

Here is A link Quizlet study resources: <https://quizlet.com/join/3F4uFyN3e>

AP Exam

A mock exam will be given in April. The AP Exam will be on Thursday, May 9, 2024. The AP Exam will be composed of 80 multiple choice questions (90 minutes, 60% of score) and 3 Free Response Questions (70 minutes, 40% of score).

Teacher Contact Information

Bgoodwin@cornwallschools.com

Outline of Course

Units	Exam Weighting
Unit 1: The Living World: Ecosystems	6–8%
Unit 2: The Living World: Biodiversity	6–8%
Unit 3: Populations	10–15%
Unit 4: Earth Systems and Resources	10–15%
Unit 5: Land and Water Use	10–15%
Unit 6: Energy Resources and Consumption	10–15%
Unit 7: Atmospheric Pollution	7–10%
Unit 8: Aquatic and Terrestrial Pollution	7–10%
Unit 9: Global Change	15–20%

APES Units Concept	Class Period Length
Introductions, Scientific Method, Lab Standards, CER, Lab Safety	3
Unit 1: The Living World: Ecosystems	14-15
Unit 2: The Living World: Biodiversity	11-12
Unit 3: Populations	12-13
Unit 4: Earth Systems and Resources	11-12
Unit 5: Land and Water Use	18-19
Unit 6: Energy Resources and Consumption	16-17
Unit 7: Atmospheric Pollution	11-12
Unit 8: Aquatic and Terrestrial Pollution	19-20
Unit 9: Global Change	19-20
AP Test in Early May- Review	6

****Note**** This is a rough overview of the course. The concepts we are covering will not vary. However, the week number may differ if I feel we need to spend more or less time on a subject. Also, a week is given at the end of the semester for intense review and the final.

Grading Update to Midterms, Finals/Regents

The following updates have been made to our 2023-2024 grading policy. In classes where midterms are required this assessment will be 6% of a student's overall grade. Classes that end in finals/regents exams, these assessments will count as 10% of a student's overall grade. Each quarter will be worth 21%.

Dress For Success

The mission of CCHS is to prepare students for college and career readiness. As part of that mission we would like students to focus on appropriate dress for the venue they are attending. For example what one would wear to the beach or the gym is not appropriate for school and or typically places of employment. Students should not be wearing clothing that advertises drugs, alcohol, explicit adult websites or entertainment, tobacco, weapons, foul language or abbreviated foul language etc. Students that do not adhere to the Dress Code may be subject to discipline

Attendance

Student attendance is imperative for student success. In order to properly learn and retain information students need to be in class and participating in a lesson. Staying home and submitting assignments via Google Classroom is not a substitute for instruction from a teacher. NYS has a seat time requirement for students to earn credit. Students who have poor attendance will be required to meet with school social workers about school avoidance and families will be required to work with high school staff to chart a course of action to correct a student's attendance. If attendance issues are not resolved school staff may need to contact additional outside resources to intervene.

Lateness

In addition to attendance it is imperative that students are on time for school. Students that come into class late disrupt the learning that is taking place and are missing seat time. Students that develop habits of lateness will be required to meet with school support staff and their parents/guardians to create a plan of action to arrive at school on time. Students that are late will be subject to discipline.

Homework Rubric
2 points total per homework assignment

2 points	1 point	0 points
Homework is 100% complete. Every question contains a relevant answer. Questions are answered thoughtfully. No section of the question is ignored. Effort was placed into completing the assignment. Homework was completed on time.	Homework is incomplete (problems, vocab words, or answers are missing). Some answers are missing. Questions are answered, but may be missing parts (like explain or why/why not?). Some effort was exerted to complete most of the assignment.	Homework was not completed by the due date. Homework was not attempted. Most or all questions are not answered.

Classwork Rubric

	5 (Exemplary)	4 (Competent)	3 (Satisfactory)	2 (Inadequate)	1 (Poor)
Assignment Completeness	All items attempted and are complete	90-95 % of items are attempted and complete.	76-89% of items are attempted and complete.	At least ½ to ¾ of the items attempted and complete	Less than ½ of all items attempted and complete.
Accuracy	All items are correct	90-95% items are correct	76-89% of the items are correct	Between ½ and ¾ of items are correct	Less than ½ of items are correct
Demonstrated Knowledge	Shows a complete understanding of the questions, mathematical ideas, and processes.	Shows substantial understanding of the problem, ideas, and processes.	Shows understanding of the problem, ideas, and processes. Some gaps do exist with understanding.	Response shows some understanding of the problem, but significant gaps exist in understanding.	Response shows a complete lack of understanding of the problem
Requirements	Goes beyond the requirements of the problem. Shows step by step process, and details analysis	Meets the requirements of the problem. Shows most steps of process and detailed analysis.	Meets the requirements of the problem. Steps and detailed analysis are lacking or wrong.	Does not meet the requirements of the problem. Most steps are incorrect and detailed analysis is lacking/wrong.	Does not meet the requirements of the problem because steps and analysis are not present.

Disclaimer to Grading and the Gradebook Process:

We will complete many assignments in this class to master our course objectives. Not all assignments completed are placed in the gradebook. Some assignments will be used as formative assessment tools (check ins), so I can shape my curriculum to fit current student academic needs.

Dear Parents or Guardians,

My name is Brian Goodwin and I am your student's AP Environmental Science teacher.

This is a rigorous year-long class that will fulfill one-semester of an introductory college level environmental science or laboratory science course. An AP exam will be given at the end of the second semester (May). We will be investigating a variety of topics from water pollution to air toxicity. And, we will perform many laboratory experiments to help master the topics. Your student will be performing much work on their way to accomplishing these tasks.

The grade breakdown for the class is as follows: 90-100 % = A, 80-89 % = B, 70-79 % = C, 65-69 % = D, and 64% and lower = F. Students will be graded on tests, quizzes, labs, homework, and class work. Homework will be given almost every night. They are also expected to review course materials when done with homework.

As an aid for parents and students, all grades will be posted on School Tool.

If you have any questions or comments about the class, please email me at bgoodwin@cornwallschools.com.

Sincerely,

Brian Goodwin

____ I have read Mr. Goodwin's class information letter and understand that there is a website with which I can monitor my child's progress in class. I am aware that AP Environmental Science is a rigorous course and my student will be challenged.

Signature of Parent

Date

Name of Student

Name of Parent

Phone #

Email of Parent

Cell Phone of Parent