

AP Environmental Science

Mrs. Stark

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syllabus provided <http://www.delandhs.org>

Course Overview

The goal of this class as described in the *Course Description for AP Environmental Science* 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.” With this in mind, we will treat this course as a study of balanced versus unbalanced systems, at all times focusing on the interacting cycles that create the global ecosystem we depend upon. At all times students should treat this as a college level course and attend to it with the required effort and commitment necessary for their own success.

Course Prerequisites

For successful completion of this course it is strongly recommended by the College Board that students have successfully completed honors biology and chemistry and be largely competent in math including the use of statistics and completion of Algebra. Also desired though not required is the completion of an Earth Science course. It is for these reasons that AP Environmental Science should be taken in the Junior or Senior year of high school.

Textbooks

Cunningham Environment

Course Schedule

Refer to specific learning goals in the syllabus outline you have received separately. This should simply serve to guide your reading and pace yourself through the class. Tests will happen approximately every two weeks on the assigned test day. Dates and pages are approximate and subject to change. All chapters are from Cunningham Environmental Science text.

<u>Topic</u>	<u>Reading</u>
Boot Camp	Ch. 3
Review	
Data Collection and analysis, statistics	
Intro to Environmental Science	Ch. 1, 2
I. The interconnected earth	
Systems and models	Ch. 1, 2
The flow of energy	Ch. 3, 4
Cycling of matter	Ch. 4
The solid earth	Ch. 10
The atmosphere	Ch. 17
The biosphere	Ch. 5-9
Review and wrap up	
II. Humans and their place in the environment	
History and Global distribution	Ch. 1,2,12
Carrying capacity	Ch. 9, 12
Cultural and Economic influences	Ch. 1,26-28
Review and wrap up	

III. Renewable and nonrenewable resources	
Water	Ch. 14
Review and wrap up	
Minerals	Ch. 15
Soils	Ch. 10, 15
Land	Ch. 25
Biological	Ch. 22-24
IV. Energy	
Fossil Fuels	Ch. 15-16
Nuclear	Ch. 15-16
Alternative forms	Ch. 16
Review and wrap up	
V. Environmental Quality	
Air/Water/soil	Ch. 17-19
Pollutants, effects, solutions	
Solid waste	Ch. 21
Impacts on human health	Ch. 11, 20
VI. Global Change and its consequences	
First order effects – changes	Ch. 17-19
Second order effects – consequences	Ch. 17-19
Review and catch up	
<i>Spring Break</i>	
VII. Environment and Society	
Economic forces	Ch. 26
Cultural and Aesthetic considerations	Ch. 27, 28
Environmental Ethics	Ch. 28
Environmental Laws and regulations	Ch. 2
Issues and options	

VIII. Review for AP exam- we will schedule review as the year progresses- visit the AP Environmental Science student page for exam information and exam practice.

AP Environmental Science Exam Thursday May 10, 2018 at noon, 3 hours.

Closing Activities

Reading is required of all students and eligible for inclusion on exams. All exams will be taken in class without notes. Exam format will include multiple choice, fill-ins, short answer and extended answer essay questions. Students are expected to take daily notes and be prepared at all times for test on current and past material. Class notebooks may be collected for a grade at random.

Weekly Schedule (subject to change)

Approximately 2-3 days will consist largely of lecture format classes focusing on in depth coverage of material. Students are expected to take notes daily in class and on selected reading assignments, ½-1 day will be devoted to discussion of current topics, field work and data analysis and 1-1/2 days will be devoted to setup

and completion of labs. More lecture time may be necessary during some weeks. Tests reviews will take place before school or at lunch.

State Standards

After successfully completing this class students will be able to:

1. Demonstrate understanding of the interrelationships of the natural world.
2. Identify and analyze environmental problems, both natural and human-generated.
3. Evaluate the relative risks associated with natural and human-generated environmental problems.
4. Analyze alternative solutions for resolving and/or preventing environmental problems.
5. Use the scientific method to solve problems, employ metric measurements, and demonstrate safe and effective use of laboratory instruments.
6. Identify the effects of technology on air, water, and land quality and identify possible solutions for negative impacts.
7. Develop an understanding of how human population growth and human development affect local human, vegetative, and wildlife communities, and impact other natural resources.
8. Describe methods which individuals and industry can employ to conserve natural resources and energy.
9. Compare the effects of different methods of conservation in various parts of the world.
10. Identify examples of environmental planning and waste management that have been used in the local community and explain their impact.
11. Analyze the present and future effects of various preservation or conservation strategies on the local community.

Rules and Consequences

Class Rules

1. Treat everyone in the class with respect.
2. Come to class every day, on time and prepared to learn.
3. Leave your bad day at the door.
4. Always clean up after yourself.
5. Always give your best effort and let your actions be a reflection of yourself.

Consequences

1. Warning after class teacher will record incident.
2. Second student conference, parent contact.
3. Further problems = Referral.
4. Repeated offences or problems will be dealt with accordingly including removal from this class.

Grading

This is an approximate outline of grading for each quarter. Numbers are approximate to give students an idea of roughly what to expect, but relative frequencies are subject to change. Grades are based on a point total system. Student grades are calculated as their points divided by the total possible points. Students are responsible for keeping track of their grades. Daily attendance does contribute to effort and participation grades, timely active attendance is required. **There are no retakes on assignments but test corrections are suggested and for D's and F's required**

Task	Points	Number	Total
Summatives Labs Tests	various	various	60%
Formatives, Quizzes, Homework	various	various	40%

A = 90 – 100% B = 80 - 89% C = 70 – 79% D = 60 – 69% F = less than

Exams

All tests in the class are cumulative as this will help fully prepare students for the AP exam in the spring. Students are strongly encouraged to prepare for and complete the AP Environmental Science exam, though it is not required for completion of the course. This will serve in place of a final exam for those students who choose to take it. All others will have a comprehensive exam in class covering all the year's materials

Lab

Lab work is a required portion of the class and will include experiments from lab manuals, fieldwork, data analysis, and student designed experiments. Students will work in lab groups but are each responsible for completing individual lab reports each week. Labs will be due on assigned dates after completion of the activity often on the weekly test day. All labs will be completed according to the specified format and be graded according to the rubric distributed by the instructor. Any missed labs must be made up.

Recommendation

It is strongly suggested, though not required, that students purchase study guides for the AP environmental Science exam and use them throughout the class. Students may also choose to purchase Peterson field guides for insects, trees and shrubs, and freshwater fish for use in familiarizing themselves with the local environment.

Projects will be assigned throughout the year.

Materials

Composition notebook
Notecards
black pen
colored pencil
glue sticks
box of tissues
home computer or access to a public computer

Due to budget constraints we are often short on supplies in the science department. The following is a list of items we commonly use in class that are in short supply. If you are able to donate any of these items to the class it would be greatly appreciated. Thank you for your help and generosity. **"Any donation is completely VOLUNTARY; all students will be provided with the same level of supplies used in the class, at no charge regardless of whether they made any donation or of the amount given."**

Colored pencils	Rulers	Scissors
Glue	Tape	Graph paper
Construction paper	Computer paper	

Course Syllabus Agreement/ 9-12 Student Laboratory Contract

Mrs. Stark, Science Instructor

I have been instructed in the necessary safety procedures required in this course. I agree to abide by the following guidelines. Failure to follow these guidelines may result in reduction in grade, disciplinary action and/or exclusion from laboratory activities.

- Safety apparel will be worn when specified by the instructor.
- Long or loose hair will be tied back. Excessively loose clothing or jewelry will not be worn.
- All safety rules and regulations will be followed.
- There will be no drinking or eating in the laboratory.
- Experiments will be done in the specified order with the prescribed quantities of chemicals.
- Only the chemicals specified by the teacher will be used. No unauthorized experimentation will be done.
- The proper use of safety equipment and correct evacuation procedures will be followed.
- Wash hands thoroughly before beginning and after completing an experiment.
- Contact lenses will not be worn during specified experiments.
- Horseplay or other inappropriate behavior will not be tolerated during laboratory experiments.
- Never taste chemicals or smell them directly.
- Never pick up broken glass with bare hands.
- Report all accidents, no matter how minor, to the teacher.
- Never work without teacher supervision in the lab.
- Do not remove any chemicals or equipment from the lab without the teacher's permission.

As a *parent/guardian*, I have read the above syllabus/lab contract and understand what will be going on in my student's class and what is expected of my student.

Parent/Guardian signature: _____ **Parent printed name:** _____

Home and/or Cell #: _____ **Date:** _____

Email Contact: _____

***Best time and method to reach you:** _____

As a *student*, I have read the above syllabus/lab contract and understand what will be expected of me in class and what I should expect to see from taking this course.

Student signature: _____ **Student printed name:** _____

Period: _____ **Date:** _____

