



AP Environmental Science Course Syllabus 2020-2021

Ms. Snell

Kristen.Snell@hcps.org

Twitter: @bahssnell

Course Description

Environmental Science is a collaborative study that investigates how humans interact with the natural world. AP Environmental Science is designed 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.

Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. The curriculum draws upon various scientific disciplines including:

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

The course will consist of lab activities, data collection and analysis, group and individual projects, topic discussions, lecture discussions, video presentations, student presentations, text reading assignments and field activities. Because this course is truly interdisciplinary, students will be faced with the task of thinking and problem solving on many levels.

The course prerequisite for APES is successful completion of one year of Biology.

Goals for Student Learning

Seven **Cross-cutting Concepts** will be stressed throughout the year:

- Patterns
- Cause and effect
- Scale, proportion, and quantity
- Systems and system models
- Energy and matter
- Structure and function
- Stability and change

These are interwoven with the **Science and Engineering Practices**:

- Asking questions and defining problems
- Developing and using models
- Planning and carrying out investigations
- Analyzing and Interpreting Data
- Using mathematics and computational thinking
- Constructing explanations and designing solutions
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

The four themes, which provide a foundation for the structure of the APES course, are:

BIG IDEA 1: ENERGY TRANSFER (ENG) 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 (ERT) 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 ENVIRONMENT (EIN) 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 (STB) 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 Outline

General Scope and Sequence for APES: Unit	Topic	Relevant Chapters
1	The Living World: Ecosystems	3, 4, 5, 6, 7
2	The Living World: Biodiversity	6, 7
3	Population: Human Population Dynamics	8, 9
4	Earth's Systems and Resources	4, C-K12
5	Land and Water Use	10, 11, 12, 13, 23
6	Energy Resources and Consumption	14, 15, 16
7	Atmospheric Pollution	19
8	Aquatic and Terrestrial Pollution	10, 20, 17, 21, 22
9	Global Change	18, 19

Textbook and Materials:

- Barrens AP Environmental Science Review book
- Environmental Science textbook
- Pen/pencil
- Highlighter

** All PowerPoints will be provided on itsLearning**

HCPS Grading Policy

Your grade will be based on assignments that fall into three weighted categories: Assignments in the Product category will make up 50% of your grade, Process assignments will account for 30%, and Practice Assignments will account for the final 20%. **Practice** assignments help you to **practice** skills and **reinforce** your learning. **Process** assignments will give a good indication of your **growth** toward an end goal, and the **Product** portion of your grade measures how well you have mastered the learning goals and standards.

Examples of Product, Process, and Practice		
PRODUCT (50%) <i>Culminating Demonstration of Knowledge</i>	PROCESS (30%) <i>Addressing Specific Short-Term Learning Outcomes</i>	PRACTICE (20%) <i>Building Attitudes, Habits, and Skills</i>
Summative Assessments	Formative Assessments	Building attitudes, habits, and skills through practice
<ul style="list-style-type: none"> Primarily completed in presence of teacher Rubric aligned to standards Accuracy graded 	<ul style="list-style-type: none"> Could be completed in presence of teacher Could be aligned to Rubric standards Accuracy graded 	<ul style="list-style-type: none"> Graded for completion and/or participation according to guidelines
<p style="text-align: center;"><u>Examples</u></p> <ul style="list-style-type: none"> Unit tests/exams/quizzes Investigations/Formal lab reports Lab Practical Exams Long-term projects Essays Presentations 	<p style="text-align: center;"><u>Examples</u></p> <ul style="list-style-type: none"> Quizzes CER writing – Claim, Evidence, Reasoning Socratic Seminar Short-term projects Problem Solving Data evaluation Internet animations 	<p style="text-align: center;"><u>Examples</u></p> <ul style="list-style-type: none"> Homework Exit questions/closure responses Collaborative work Graphic organizers, warm-ups Vocabulary building Peer- Reviews

*These are *just some examples* of assignments that could be placed in each category. Some assignments may fall into *more than one category* depending on the intent of the assignment. **The assignments are subject to change at the teacher's discretion as the year progresses.**

Absent Work Policy

All assignments should be submitted on time. Students will be given the number of class periods equal to the number of lawful class periods absent to turn in completed make up assignments without penalty. If a student is unlawfully absent, work will be accepted with a penalty of one letter grade off the assessed value.

Late Work Policy

All assignments should be submitted on time in order to earn full credit. Any assignment, (*product, process, or practice*) will be allowed to be turned in late for one letter grade deduction from the grade a student earns on the assignment. In order to earn credit for late assignments, students must submit assignments by the end of the day on Wednesday (except for the last week of the quarter) following **ANY** HAC update. Students are only able to submit assignments that have an established due date within the grading window before the HAC update. Assignments that are turned in for late credit will be identified by a footnote in HAC to include a statement about the deduction of a letter grade due to the lateness of the assignment.

Grading Window	Designated HAC Update
September 8- September 24	September 24
September 27- October 13	October 13
October 14- October 29	October 29
November 8- November 19	November 19
November 22- December 10	December 10
December 13- January 13	January 13
January 24- February 11	February 11
February 14- February 25	February 25
February 28- March 11	March 11
March 14- March 25	March 25
April 1- April 22	April 22
April 25- May 6	May 6
May 11- May 20	May 20

ECO POINTS (EXTRA CREDIT OPPORTUNITY)-

Students will have the opportunity to earn ECO points during each quarter. These points can be earned by participating in environmental service activities including:

* **Paper Thursdays-** Every Thursday throughout the year, students can earn extra credit by bringing in one grocery bag (plastic or paper) of paper. Students will receive a half of a point per pound of paper. Students must bring in their own (no other student or parent other than the student receiving credit) paper on THURSDAYS ONLY and paper will be accepted until 7: 20. **PAPER WILL NOT BE ACCEPTED AFTER 7:20!!** The extra credit points received will be added to the student's practice grade at the end of the quarter.

***Aluminum/Can Tab Fridays-** Every Friday throughout the year, students can also earn extra credit by bringing in ALUMINUM cans and tabs from aluminum cans. Students will receive a point for every pound of cans they bring in. If the student also brings the aluminum tabs from the cans, they will receive an extra point of a point per pound of tabs. Students must bring in their own (no other student or parent other than the student receiving credit) tabs/aluminum on FRIDAYS ONLY and tabs/aluminum will be accepted until 7: 20. **TABS/ALUMINUM WILL NOT BE ACCEPTED AFTER 7:20!!** The extra credit points received will be added to the student's practice grade at the end of the quarter.

Academic Integrity

Academic integrity is taking responsibility for the quality and completion of one's own work. Academic dishonesty is taking someone else's work and claiming it as one's own. Students at Bel Air High School are responsible for knowing what is considered to be Academic Dishonesty and the subsequent consequences. More information can be found in the BAHS Student Planner.

Cell Phone Policy

- Students will place their cellphones in a teacher designated area as they enter each classroom. Teachers will review with students the specific location for each room. The phones will remain in the teacher designated area unless teachers explicitly tell students to take out the phones for instructional use.
- Cellphones will remain in the teacher designated area during bathroom visits, assemblies and trips to the nurse/counseling office/main office.
- Cellphones will be retrieved from the teacher designated area at the end of class at the direction of the teacher.
- School-appropriate cellphone use is permitted during class changes and lunch. Students are not permitted to make phone calls during school hours.

If the cell phone policy is violated, it is a referable offense

Who Gives a Tweet?

There are many organizations whose goal is saving keeping the world informed about environmental issues and how you can get involved. Every day, on Twitter, these organizations post important information about environmental issues (both positive and negative). Your job will be to HELP spread the word about these issues and what we can do to help.

If you do not have a Twitter account, please make one. Go to www.twitter.com and click on sign up. From there, it will ask you to create an account. You will create a Twitter name and be asked to either put in your phone number or email (depending on how you decide to sign up). You will be then asked to create a password. Click next and it will ask you to choose a picture, add interests, etc. You can add that information or skip it. You are now all signed up!!

NEXT:

1. You will search for me on Twitter. Type @bahssnell in the search bar. When you get to my page, click follow. You are now following me. You will then send me a tweet of a selfie so I know who you are. To send a tweet, click the feather/plus symbol in the lower right of your screen. In the message bar, you will add @bahssnell so that the tweet comes to me, download your picture, add a message including your name, and click tweet.

THE ASSIGNMENT:

Every week, you will either choose one of MY environmental posts/retweets or another environmental group's posts/retweet to retweet (e.g- CBF, Chesapeake Climate, UN Climate Change, Guardian Environment, National Geographic, HuffPost Green) To retweet, click the circular arrows under the post. When it asks, you want to click "retweet with comment". In the comment section, you will add @bahssnell so that the retweet comes to me.

Weekly tweets are due by FRIDAY.

In your notebook, you are going to create a page for every post you retweet. The format will be as follows:

Date of retweet:

Summary of Original Post:

I retweeted because:

All of your short summaries will be kept in your notebook for the entire year. Please put each summary on a separate page. Your twitter notebooks will be collected at the end of every quarter for a grade (50 points).

This is an AP class!! You should expect that work will be required from you outside of class. Come to class ready to work everyday!!

***** I will be available for any extra help that you may need in order for you to succeed during the course of the year. Please do not hesitate to ask.*****

Extra help hours: Monday-Wednesday 6:45am-7:20am

I have read and understood all of the information on the syllabus

Parent signature: _____ Date: _____

Student signature: _____ Date: _____