ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE

Course Description
Pre-requisites: Biology and/or Chemistry (a strong background in both will be needed)
Instructor: Mr. Ryan Walsh
Location: 120 C
Text: Living in the Environment: Principles, Connections, and Solutions, 17th Edition
Summer Reading: N/A

This course is designed to be the equivalent of a college-level semester course in Environmental Science. Environmental Science is an interdisciplinary field of study, and the goal in this class is to integrate what you know about Biology, Chemistry, Math, History, Sociology, Law etc. to come to an understanding of the natural world and the forces that affect it. It will follow the curriculum recommended by the College Board, and students are expected (not required) to take the AP exam offered by the College Board in May.

Independent work is an expectation of this course, and you will be required to master much content material on your own so that we have more time for laboratory and fieldwork. In addition, you will be required to do long-term observations outside of class time. Another important part of the course is data analysis, measurement, statistics, dimensional analysis and other operations that require mathematical skills.

There are several major unifying themes for this course that cut across the many topics included in the study of Environmental Science (from the College Board Course Description - go to http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/2128.html for a more complete description.

Human survival depends on developing practices that will achieve sustainable systems.

OUTLINE OF TOPICS

Go http:/www.collegeboard.com/ap/students/envsci/cours002.htmlfor an outline of major topics. The order of topics in the outline is not necessarily the order in which the topics will be addressed, and many of the topics will be interwoven repeatedly throughout the course.
My sites:
School Wires: http://cbsd.org//Domain/1908 (go to CB South's page for teacher pages) (daily lessons)
Quia: www.quia.com (assessment site)
Textbook website: Go to the school wires page (it's a long link)

LAB SAFETY

During lab activities, you may be learning the use of new equipment and substances and working with different energy sources. It is important that you approach your work seriously, following all the guidelines and safety rules.

ATTENDANCE
Regular attendance is very important, as we will be completing laboratory activities on a regular basis. The student is responsible for any material or assignments missed while absent for any reason (athletics, appointment, illness, vacation, etc.). A few required guidelines:

-If you think you will be sick I strongly suggest to email me by 3:30 of absence that you will be out the following day (rjwalsh@cbsd.org), this way I can give you guidance on the following day's lesson.
-Make sure the absence is excused with school (you have 3 school days, then a cut is issued).
-Late assignments (due to an excused absence) should be submitted the following day, each day late means that the assignment will lose daily points
-Make up all work and tests before/after school/study halls—see me to arrange times. The number one reason for academic failure is not making up work!!

DEADLINES
Also essential to making the most of the course is submission of all assignments on time. If an assignment is not in on the due date, your grade will be reduced according to the importance of the assignment and the number of days late. In general, the grade will be reduced by 10%of the point value of the assignment for each day late.

If you are absent, it is your responsibility to get the assignment and any missed notes from a classmate. You must see me within two days after your return so that I can give you an appropriate date for the missed material.

If you miss a quiz or test, it is your responsibility to make sure that you make up that quiz or test, not your teacher's. You will receive a zero if the work is not made up in a reasonable amount of time.

CONFERENCES AND HELP

Even the most bright and eager students have questions and confusion. Please don't hesitate to come in for help. If you need help, stop after class and arrange a time for us to meet. I can't emphasize enough how coming to see your teacher when you have a question can clear things up and make the class easier and more enjoyable. It may be for 5 minutes or for 70 minutes, but taking that initiative will serve you well in the long run.

You may also contact us by e-mail (see above)
GRADING AND EVALUATION

You will be graded according to the following guidelines:

-Tests – approximately 40-70 points.

-Quizzes- usually 10-25 points based on a reading, vocabulary or shorter unit.

-Labs – You will from time to time be asked to write lab reports, and I will give you detailed instructions as to the format and point value of each assignment. If you miss a lab, you must see me as soon as possible to arrange a make-up or alternative assignment. Even if you miss a lab, you are responsible for knowing the procedure, results, and conclusions of the experiment.

-Homework – If the assignment is answering a reading guide, it is very important that you read carefully, as you may be quizzed on your reading, and we will base our class activities on the assumption that you have read the assignment. When written homework is assigned, it may be checked and graded.

Class work will be graded from time to time, and points awarded will depend on the difficulty of the task.

Projects will be assigned and will vary in scope. The point value of each project will be set according to the difficulty of the task and the time involved.

Class Participation – I expect each of you to participate fully in class. There is no such thing as a stupid question, and you won't be downgraded for giving the wrong answer, so take the risk! Thoughtfulness, curiosity, and intellectual energy are all appreciated, and will contribute to your grade. If you don't feel comfortable speaking in class, talk to me outside of class. We also enjoy sharing any current events or special material to which you have access. Many of you have parents, relatives, or friends who may have something to offer the class. Please let me know if this is the case. Good class participation is characterized by the following behavior:

-Asks questions when doesn't understand, either in class or outside of class
-Asks questions and makes comments that show insight into the material
-Asks questions and makes comments that indicate careful preparation for class
-Asks questions and makes comments that indicate mastery of the material
-Behaves in a manner that promotes learning for all in the class
-Respects the right of others to speak and ask or answer questions
-Works in a cooperative manner in groups

-Helps members of the group to learn
-Show intellectual curiosity
-Takes responsibility for tasks
-Takes responsibility for self-learning
-Completes assignments carefully and accurately

AP EXAM INFORMATION

The AP Environmental Science Exam is three hours long and divided into two sections: multiple-choice (100) and free-response (4 questions). All students in the course are encouraged to take the exam.

I will be assigning practice questions (both multiple-choice and free-response) throughout the year within the context of homework, tests, class activities, etc. If you take a conscientious approach to this class, you will be prepared to take the AP exam. I do not, however, consider the primary goal of this course to be exam preparation. Much of what we will be doing is designed to give you an appreciation for the practice of Environmental Science.

ACADEMIC INTEGRITY POLICY

Students are expected to meet academic challenges with the highest degree of integrity and honesty. When questions arise about research or learning activities, students should demonstrate the discipline necessary to seek guidance from their teacher, rather than resorting to inappropriate behaviors that may undermine their own academic integrity and the learning process.

All students should read and understand the **CBS Academic Integrity Policy**, and ask questions or seek clarification if they are unsure of how that policy relates to academic work in general or to specific assignments for this course. Consequences will result when this policy is violated.

1st/3rd Marking Period

Unit 1: Humans and Sustainability (1 week)
- Humans and Sustainability: An Overview (Chapter 1)

Unit 2: Natural Systems and Ecosystems Introduction
- Science, Matter, Energy, and Systems (Chapter 2)
- Ecosystems: What Are They and How Do They Work? (Chapter 3)

Unit 3: Biodiversity and Population
- Biodiversity and Evolution (Chapter 4)
- Biodiversity, Species Interactions, and Population Control (Chapter 5)
- The Human Population and its Impact (Chapter 6)

Unit 4: Biomes and Biodiversity
- Climate and Biodiversity (Chapter 7)
- Aquatic Biodiversity (Chapter 8)

Unit 5: Sustaining Biodiversity
- Sustaining Biodiversity: The Species Approach (Chapter 9)
- Sustaining Terrestrial Biodiversity: The Ecosystem Approach (Chapter 10)
- Sustaining Aquatic Biodiversity (Chapter 11)

Unit 6: Sustaining Natural Resources
- Food, Soil and Pest Management (Chapter 12)
- Water Resources (Chapter 13)
- Water Pollution (Chapter 20) (Field Trip- Wastewater Treatment Plant)

Unit 7: Resources- Non-Renewable and Renewable
- Geology and Nonrenewable Mineral Resources (Chapter 14)
- Nonrenewable Energy (Chapter 15)
- Energy Efficiency and Renewable Energy (Chapter 16) (Field Trip- Green Building)

Unit 8: Atmosphere and Climate
- Environmental Hazards and Human Health (Chapter 17)
- Air Pollution (Chapter 18)
- Climate Disruption and Ozone Depletion (Chapter 19)

Unit 9: Pollution
- Solid and Hazardous Waste (Chapter 21) (Field Trip- Landfill)
- Cities and Sustainability (Chapter 22)

Unit 10: Sustaining Human Societies
- Economics, Environment and Sustainability (Chapter 23)
- Politics, Environment and Sustainability (Chapter 24)
- Environmental Worldviews, Ethics and Sustainability (Chapter 25)

FINAL EXAM – Date to be announced

FIELD TRIPS- TBA