

IB Environmental Systems
2010-2011
Syllabus

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Course Description:

This course is equivalent to a semester-long college-level course that investigates the complex systems of nature and humans' impact on the earth. The goal of the IB-ES course is to provide students with the scientific principles, concepts and methodologies required to understand the systems 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; the course includes a wide variety of topics from different areas of study. At the college level, environmental science is offered from an array of departments, including geology, biology, environmental studies, environmental science, chemistry and geography.

Enduring Understandings:

1. Science is a process
2. Energy Conversion underlies all ecological processes.
3. The Earth is one interconnected system.
4. Humans alter natural systems
5. Environmental problems have a cultural and social context
6. Human survival depends on developing practices that will achieve sustainable systems.

Class Policy

You are responsible for following the *student ethics code issued for Montgomery County Students*, *the rules of Bethesda-Chevy Chase High School* and *the science laboratory safety rules*. Our classroom will be an environment in which all students will be comfortable, safe and able to learn. Participate, ask questions, contribute to discussions and group exercises.

I expect you to contribute to the "learning community" by doing the following :

1. cooperating with your teacher and classmates
2. respecting the rights and property of others
3. carrying out your student responsibilities.

Materials

- three-ring binder
- paper, pencil, blue/black pen (no other colors!)
- scientific calculator
- textbook (to be assigned)
- Lab notebook

Grading Policy

The grades will be weighted. The make up of the grade will be as follows:

Summative Assessments: 50%

Exams , Projects, Formal lab reports, Summative quizzes

Formative Assessments: 45%

Formative quizzes, Informal lab reports, Current Events

Homework/Practice: 5%

These assignments must be turned in on time to receive credit

I will keep a record of your grades on the computer. You will be responsible for keeping track of your graded assignments throughout the term. If you would like to discuss the grade of any assignment, missing assignment or makeup assignment, you are welcome to make an appointment with me. ***I will not discuss your grade during our class time.***

Assignments are turned in on the **due date**.

- The due date is the date that the assignment is due, but also the time at which I collect the assignment during that class.
- If you do not turn in that assignment when I collect it in class, it will be classified as **"turned in by the deadline"**.
- The deadline date for an assignment is the end of the day following the due date. When an assignment is not turned in at the time which it is due but prior to the deadline, the assignment will receive a **10% lower mark**.
- An assignment not turned in by the deadline will receive a zero.
- Before reassessment of quiz or lab, you must meet with me for re-teaching of concepts.

Test and Quiz Policy:

If you miss a test/quiz you **MUST** be here the next morning at **6:45 am (not lunch or after school....)**

If not there are 2 things that will happen:

1. You will not get the curve
2. You will get a different version of the test

There is only one quiz re-assessment per quarter. It is your job to study and be prepared for quizzes.

Attendance:

You are expected to attend ALL classes.

If you have an excused absence, please see me to establish a schedule for making up assignments/lab. It is your responsibility to follow up on what you have missed.

If you miss a laboratory period, the lab must be made-up the next day.

Unauthorized collaboration, cheating and plagiarism

I have **ZERO** tolerance for cheating, copying, or unapproved collaboration of any kind. Science is a collaborative world – discussion of subjects, labs, results and interpretations is acceptable. However, written description of results and

discussions for labs should never be identical. No assignment should ever be identical to another person's work. Evidence of this will result in zeroes for all parties involved with immediate notification of parent/guardian and administration.

Text: Living in the Environment: Principles, Connection and Solutions
G. Tyler Miller, Jr., Thirteenth Edition

- Test dates for this semester have already been established. This is so you can **put them onto your schedule NOW** and build your study schedule appropriately. Dates are subject to change based on the pace of the class, however you will be given plenty of notice if a date changes.
- There will a **weekly quiz on Friday**, except when an exam is scheduled. Some quizzes will be multiple-choice and others will be essay.
- Labs and projects will be a major portion of class and assigned throughout the year with due dates established well in advance.
- You will be required to complete a weekly environmental current event to allow you to apply course concepts to local environmental issues important to you. These will be due every Friday at the beginning of class. The reflection must be typed and at least a page long. The article must be submitted as well.

Semester ONE:

| | Chapters | Test Date |
|----------------|---|--------------------------------------|
| Unit 1: | <i>Systems and Ecosystems 1,3,4</i> | September 23 |
| Unit 2: | <i>Geology, Mineral and Soil resources 15,10</i> | October 12 |
| Unit 3: | <i>Evolution, Climate and Biodiversity 5,6,7</i> | November 7 |
| Unit 4: | <i>Community and Population Biology 8,9,12</i> | December 1 |
| Unit 5: | <i>Water Resources and Us 14,19,24</i> | January 5th |
| | CUMULATIVE FINAL: | January Finals Week Jan 13-20 |

OFFICE HOURS:

I can always be found in B318. You may e-mail me at any time.

Quiz Retake Times: You only have one week to retake a quiz. For example, if a quiz is given on Friday you can retake the quiz the following Thursday. Once that Thursday passes, so does the opportunity for that Chapter quiz. Remember that you can only retake one quiz per quarter.

Thursday's ONLY:

Before school: B31 8

Lunch: B316

After school: B318

Unit 6: Food, Pesticides and Toxicology

11
13
20

Unit 7: Air Pollution and Climate Change

17
18

Unit 8: Solid waste, Renewable and Nonrenewable Energy

15
16
21

Unit 9: Sustaining Biodiversity and Creating Sustainable Societies

22
23
25
28

In-class MOCK AP or IB EXAM: APRIL 28 and 29

AP EXAM: Tuesday, May 13

**IB EXAM: Paper 1 and 2, Wed. May 14
Paper 3, Thurs. May 15**

Final EXAMS: according to B-CC Exam Schedule