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**AP Environmental Science**

**COURSE DESCRIPTION**: This course is designed for students who have demonstrated a level of proficiency in mathematics and science. This course will introduce the student to the principles of environmental science which are relevant and informative and is designed to provide a sound foundation to understand the major challenges affecting earth’s systems. Additionally, this course is designed to provide training in studying methodology tools intended to help students learn content in both this course and beyond.

This course is designed for college-bound students. It not only fulfills 10 units of biological science needed for graduation, but also fulfills a lab science requirement for colleges and universities and it is expected that students will be prepared to take the AP exam on Monday, May 1st.

For more information see: <http://apcentral.collegeboard.com/apc/public/repository/ap07_envsci_coursedesc.pdf>

**UNITS OF STUDY**: These are the areas that we plan to cover this year:

|  |  |
| --- | --- |
| **Topic** | **Duration** |
| 1. Environmental Interrelationships | 1 week |
| 1. Environmental Ethics | 1 week |
| 1. Risk, Economics, and Environmental Concerns | 1 week |
| 1. Interrelated Scientific Principles: Matter, Energy and Environment | 1 ½ weeks |
| 1. Interactions: Environment and Organisms | 1 ½ weeks |
| 1. Kinds of Ecosystems and Communities | 1 ½ weeks |
| 1. Populations: Characteristics and Issues | 3 weeks |
| 1. Energy and Civilization: Patterns of Consumption | 1 ½ weeks |
| 1. Nonrenewable Energy Sources | 2 weeks |
| 1. Renewable Energy Sources | 1 ½ weeks |
| 1. Biodiversity Issues | 2 weeks |
| 1. Land-Use Planning | 1 ½ weeks |
| 1. Soil and its Uses | 1 ½ weeks |
| 1. Agricultural Methods and Pest Management | 1 ½ weeks |
| 1. Water Management | 1 ½ weeks |
| 1. Air Quality Issues | 2 weeks |
| 1. Climate Change: A Twenty-first Century Issue | 2 weeks |
| 1. Solid Waste Management and Disposal | 1 ½ weeks |
| 1. Environmental Regulations: Hazardous Substances and Wastes | 1 week |
| 1. Environmental Policy and Decision Making | 1 week |

**Laboratory/Field experiences:**

Students will acquire laboratory and analysis experience from lab manuals, analysis of published data sets like those from TIEE (Teaching Issues and Experiments in Ecology). Field experiences will be gained at natural reserve locations. It is intended that these field experiences can serve as inspiration for student projects described below. Lab and or analysis sessions will be carried out during at least one class period per week. In addition, guest speakers who are experts in their environmental fields will be utilized to supplement class information. Students are required to design and carry-out a research project that will be showcased at the end of the year. The project must be based on an issue in environmental science. Completion of the project will entail gathering and analysis of appropriate data, written interpretation of the projects outcome in the style of a research report as well as a verbal and visual presentation given to their fellow students at an end of the year symposium.

**REQUIRED TEXT***: Environmental Science: A study of interrelationships* by Enger, E.D and B. F. Smith (New York, NY: McGraw Hill Education,14th edition, 2016).

**OBJECTIVES**: The objectives of this course are: 1) to learn fundamental material in the above areas 2) to provide hands-on experience in order to formalize lecture concepts, and introduce students to techniques that they can use in the future 3) to confirm and expand upon the philosophical basis of science, 4) to review the fundamentals of scientific investigation, 5) to nurture interest in the subject area and enthusiasm for future work and stewardship.

**EVALUATION CRITERIA**:

Your new knowledge and skills will be measured in various ways. This will include: small group work, individual class work, labs, traditional testing, homework assignments, oral presentations, case studies, projects etc. Your grade will be based on total points accumulated throughout each semester. 1/4 of your grade will consist of class work and homework, 1/4 from labs and projects and 1/2 from assessments. Your first semester grade is independent from your second semester grade (they will not be averaged together).

The grading scale will be as follows:

## A+ 97% - 100%

## A 94% - 96% B- 80% - 83% D+ 67% - 69%

## 90% – 93% C+ 77% - 79% D 64% - 66%

## B+ 87% – 89% C 74% - 76% D- 60% - 63%

## B 84% - 86% C- 70% - 73% F 0 – 59% (No credit)

**10% will be deducted for each day an assignment is late.**

**MATERIALS:**

Bring the following items with you to class EVERY day for full credit and the potential to maximize learning:

1. 1 ½-2 inch 3-ring binder

2. Notebook paper

3. Pens or pencils

**ATTENDANCE:**

If you must miss a class (for whatever reason), it is your responsibility to find out what you missed and what you need to make up. See the daily assignment agenda in class or on my website if you have been absent.

**ELECTRONICS & MAKEUP:** No cell phone, stereo, iPod etc. use allowed in class unless it is part of a specific lesson. If I see them or hear them in class during inappropriate times, they will be confiscated. Please no grooming (makeup, hair brushing etc.) after class has begun. Grooming items will be confiscated if they are used during class time.

CHROMEBOOK & DEVICE RULES:

1. Stay on task and focused

2. Handle the borrowed device with care and correctly return it to the cart when asked.

**CLASSROOM RULES:**

Respect yourselves and others…..

• Be nice. Be polite to me as I teach and allow your fellow classmates to learn. Respect the room and everything/everyone in it.

This includes:

a. following directions;

b. being in your assigned seat at all times;

c. bringing no food or drinks (except water) in the room;

d. staying out of cabinets, drawers, my desk/area

e. following all school rules found in the student handbook including

Consequences:

1st offense: Verbal warning

2nd offense: lunch detention/call home

3rd offense: referral (to office)

\* For any severe disruptions, defiance, or any dangerous behavior, there will be an immediate referral to the discipline office/ISSS.

**WHAT YOU CAN EXPECT**:

1. I will be prepared to teach.

2. I am willing to help you at lunch and occasionally before or after school (just ask and we can figure out the best time on an individual basis).

3. I will keep a positive attitude and plan on learning from you as much as you learn from me.

**HELPFUL ITEMS**:

If you are able to donate, the following is a list of commonly used class items:

- Pencils, markers, colored pencils, Scotch tape, glue and note cards Thank you!

**DO NOT REMOVE**

I have read, understand, and agree to abide by the above APES class syllabus. I also understand that my parent(s) and or guardian(s) and I must sign this document below and return it to Mrs. Robles.

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Student Printed Name

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student signature Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent(s) or Guardian(s) Printed Name

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent(s) or Guardian(s) Signature Date

How can we best contact you? (Phone number at home or work, best times, and/or email address):