

June 2020

Dear AP Environmental Science Student-

In order to remain enrolled in AP Environmental Science during the 2020-2021 school year, the summer assignment that you are receiving **must** be completed **prior** to the start of classes in September.

During the summer months, you can contact me at [lcherchia@mtpicsd.org](mailto:lcherchia@mtpicsd.org). I will return your e-mail within 48 hours.

Enjoy your summer. I am looking forward to an exciting year in AP Environmental Science!

Sincerely,

Mrs. Cherchia

**Policies, Requirements, and Expectations for**  
**AP Environmental Science**

Mrs. Cherchia

E-mail: lcherchia@mtplcsd.org

**Objectives of AP Environmental Science:**

1. To expose the student to a college level course while still in high school.
2. To create the opportunity to earn college credit while still in high school.
3. To enhance the organizational, analytical, and problem-solving skills of the student.
4. This course will culminate with the AP exam in Environmental Science in May. Taking the exam is a requirement for course credit.

**Expectations:**

1. Students are expected to arrive to class on time and maintain good attendance. If legally absent from class, a student is expected to look on the class page for the homework assignment and the day's notes. Assignments must be made up according to the following guideline- for each day absent you have one day to make up the work.
2. If you are absent from a lab, you must stay after school to make up the lab as soon as you return to school. Students are responsible for performing all lab work. Labs must be typed and handed in on time. Ten percent of the grade will be deducted each day a lab is late.
3. Homework will be checked and some assignments will be collected. It is important to keep up with the reading and the homework assignments.
4. There will be either an announced quiz or a test every week. The questions will be AP level questions in order to prepare for the AP exam in May.

**Supplies:**

1. Either a 3-ring binder or a spiral notebook with folder dedicated to AP Environmental Science.
2. Bring pens and pencils and a scientific calculator to class every day.
3. You do not need to bring your textbook to class. Leave it at home!!
4. We will order the review book together as a class, please do not buy one on your own!

**Grading Policy:**

**Quarterly grades** will be calculated as follows:

Exams/Quizzes: 60%

Labs: 15%

Classwork/Homework/Class Participation: 25%

**Final Grade** will be calculated as follows:

Each quarter grade will count as 28% of the final grade and the midterm exam will count as 16% of the final grade. (Remember, you will only have quarter grades for three quarters, 4<sup>th</sup> quarter is the senior internship!) The AP exam in May **does not** count as part of your course grade.

**Lab Requirements:**

A satisfactory written lab report must be submitted for all lab work. Ten percent a day will be deducted for each day a lab is late.

**Extra Help is available every day after school! (With a rare exception!)**

## AP Environmental Science

**Note to parents:** In order to help your child succeed in this course, it is beneficial to maintain communication between student, teacher, and parent/guardian. I, therefore, ask that you review the preceding course requirements and grading policy with your child. Please fill out the information below and have your child return this form to me in September.

Student Name: \_\_\_\_\_

Home Telephone Number: \_\_\_\_\_

Parent Cell Phone Number: \_\_\_\_\_

Which Number is Preferable? Home                      Cell

(Please circle one)

When is the best time to call? \_\_\_\_\_

Parent e-mail: \_\_\_\_\_

We have read the course requirements and the grading policy for AP Environmental Science at Westlake High School.

Student Name (Print): \_\_\_\_\_

Student Signature: \_\_\_\_\_

Parent Name (Print): \_\_\_\_\_

Parent Signature: \_\_\_\_\_

Date Signed: \_\_\_\_\_

### APES Summer Work 2020

You will be watching several videos and answering questions on those videos. The videos are a combination of a review of some important topics in science and an introduction to AP Environmental Science. There is a lot of information in this course. Therefore you need to keep up with the work and be prepared in September.

A. Video #1: [Environmental Systems](#)

Watch the above video and answer the following questions:

1. Discuss the differences between an open and a closed system, and how this relates to matter and energy.
2. Discuss the 1st and 2nd Laws of Thermodynamics. Why are these important in the study of environmental science?
3. Explain the three energy units discussed in the video.
4. What is systems analysis?
5. Explain the concept of negative and positive feedback loops. (List an example of each presented in the video.)

B. Video #2: [Water- A Polar Molecule](#)

Watch the above video and answer the following questions:

1. Explain the concept of electronegativity and the electronegativity trends on the periodic table.
2. What makes water a polar molecule?
3. Explain hydrogen bonding.
4. Explain the properties of water presented in the video:
  - a. Cohesion
  - b. Capillary action
  - c. High specific heat
  - d. Ice floating
  - e. Good solvent

C. Video #3: [Acids, Bases, and pH](#)

Watch the above video and answer the following questions:

1. Explain how hydronium and hydroxide ions are formed. What is the chemical formula and charge of each ion?
2. How is pH calculated?
3. How is the pH of a substance related to the hydrogen ion concentration? (This is an important concept to be careful with!)
4. Why is understanding pH important in the study of the environment?

D. Video #4: [The Origin of Species: The Making of a Theory](#)

Watch the video attached above and follow the directions on the attached worksheet.

[Darwin and Wallace Worksheet](#)

We will be reading case studies and analyzing scientific data throughout the year. One of the FRQ's (Free Response Questions) on the APES exam will ask you to propose a solution to an environmental problem and justify your claim.