

AP ENVIRONMENTAL SCIENCE SUMMER ASSIGNMENT DUE AT THE FIRST CLASS!

Read this FIRST!!

Greetings!

I am very excited about teaching AP Environmental Science! We shall embark on a cross-discipline journey to understand the Earth's environment in new and hopefully more complex ways. The trip should prove a fun challenge.

You do need to read this document in its entirety and take the assignments seriously. **This is an AP class and as such you will be treated like first year college students.** Student expectations differ from other classes in high school. For example, late assignments will not be accepted. Make sure you read the syllabus and understand the expectations for this course. Once the school year starts, dropping this class becomes **impossible**. If you feel you registered for this class by mistake, contact student services as soon as possible and before the first week of school.

See you in August!!

Dr. T

Supplies

All students will need the following supplies for AP Environmental Science.

1. Binder to hold handouts, quizzes and other loose paper.
2. Bound lab notebook with grid lines, like bound journals but with graph paper pages (spiral bound notebooks are **NOT** acceptable substitutes)
3. Expo board markers, minimum of two per student
4. Black ball point pen (or other black pen that will not bleed when the paper gets wet)

Google Classrooms

All students should join the Google Classroom APES. The group codes will appear on my RHS landing page one week before the first class. I recommend you use the notification feature on Google so you do not miss any assignments or posts.

Readings

Some of these are rather long. Do not wait to the last minute or you will not get finished. I will assess your understanding of content with papers, quizzes and tests during the first three days of class.

1. College Board (2021) AP Environmental Science: Course and Exam Description. (Retrieved January 29, 2021)

<https://apcentral.collegeboard.org/pdf/ap-environmental-science-course-and-exam-description.pdf?course=ap-environmental-science>

2. A Guide to Plastics in the Ocean: It's a problem but one we can do something about. Oceanservice.noaa.gov. (Retrieved January 29, 2021)

<https://oceanservice.noaa.gov/hazards/marinedebris/plastics-in-the-ocean.html>

3. Familiarize yourself with the College Board website. All testing will occur on this website.

4. Read the articles linked in this document.

<https://docs.google.com/document/d/1zV3bP1u7KrO10GmRzXrdDKu6lHYxR411YSLdNmsClu4/edit?usp=sharing>

Videos

You will watch several short videos for this class throughout the semester. The videos are used to deliver important content outside of class. Links to videos get posted on Google Classroom. Most of the videos will be on YouTube. I will assess your understanding of this video content with papers, quizzes and tests on the first two days of class.

1. The Scientific Method by Bozeman Science at

<https://www.youtube.com/watch?v=GKGtkzgKfkc>

2. Significant Digits by Bozeman Science at

<https://www.youtube.com/watch?v=6oj4y0d44nQ>

3. Environmental Science by Bozeman Science

<http://www.bozemanscience.com/ap-es-001-environmental-science>

4. Environmental Systems by Bozeman Science at

<http://www.bozemanscience.com/ap-es-002-environmental-systems>

Note: If you are not up to speed on the properties of water, pH & buffers, and organic molecules, watch the videos referenced by Paul Anderson. The links are on the page with the above video.

5. Earth Systems and Resources That Support Life

<https://www.youtube.com/watch?v=Gp7XoealpMk>

6. Soils, Watersheds, El Nino and La Nina

<https://www.youtube.com/watch?v=Gp7XoealpMk>

Vocabulary

Please make sure you know the meaning of all the words in this list. These terms relate to the scientific method and measurement. You will take a **recall** test on this vocabulary list on the first day of school. I will place the words on the board and you will write the word and definition on a blank sheet of paper. Do not underestimate the difficulty of this assignment.

1. **Scientific Inquiry** – ongoing process of discovery in science
2. **Metric System** – a system of measurement based on the number 10
3. **Operational Definition** – a statement that describes how to measure a variable
4. **Independent Variable** – factor that a scientist changes during an experiment
5. **Dependent Variable** – factor that changes because of changes in the independent variable
6. **Hypothesis** – possible explanation for a set of observations or possible answer to a scientific question
7. **Technology** - how people modify their world to satisfy needs or solve problems
8. **Scientific Theory** – a well-tested concept that explains a wide range of observations
9. **Procedure** – a sequence of actions
10. **Data** – facts, figures and other evidence gathered through observations
11. **Length** - the distance between two points.
12. **Meter** - the SI base unit for length
13. **Mass** - the amount of matter that makes up an object.
14. **Gram** – the SI unit for mass
15. **Second** - the SI unit used to measure time
16. **Celsius scale** – the SI unit for temperature
17. **Volume** - the amount of space contained in an object
18. **Liter** - the SI base unit for volume
19. **Density** - the amount of matter compared to the amount of space the object occupies
20. **Density formula** - $\text{Density} = \text{Mass}/\text{Volume}$

World Maps

On the first day of class you must demonstrate knowledge of geography. You will be asked to list the names of the seven continents and identify their location on a world map. In addition, you will identify the location on a world map of major political players in the world. These countries play a role in our Earth's changing environment. This website provides a starting point for your studies. <http://www.mapsofworld.com/> You will find a blank map on the 'About' page of the Google Classroom, use it to practice labeling the countries.

USA

Brazil

Saudi Arabia

Russia

Greenland

Germany

Japan

Canada

Argentina

Iran

China

Australia

France

Norway

Mexico

Egypt

India

North Korea

Pakistan

United Kingdom