

Welcome to Timberlane AP Environmental Science! The following is your APES Summer work.

The APES curriculum is divided into the following topics which we will cover in several interconnected units as described in your syllabus.

The Living World – ecosystems and cycles
– biodiversity

Populations – demographics, dynamics and growth

Earth Systems and Resources – atmosphere, soil, groundwater, and geology

Land and Water Use – agriculture, forestry, mining, fishing and global economics

Energy Resources and Consumption – fossil fuels, nuclear energy, conservation and consumption

Atmospheric Pollution – types of pollution and its impact

Aquatic and Terrestrial Pollution – types of pollution and its impact, waste disposal

Global Change – ozone, global warming, loss of biodiversity

In order to prepare you for this adventure, this summer packet will get your mind wrapped around the type of work and thinking that will be expected in this course. There are 3 parts to this summer packet and it is expected that it is all completed by the specific due dates in AUGUST. I will check my e-mail throughout the summer, so if you have any questions, please do not hesitate to ask. As I will be away, my access to e-mail will be more limited, so be sure to ask questions a bit ahead of time so that I am sure to be able to answer them before the due dates.

Part 1 Environmental World View

Answer the following questions and submit them on google classroom by August 9th. Be sure to thoroughly answer each question.

1. Why you are taking AP Environmental Science?
2. Why you think you will be successful on the AP Exam?
3. Describe what you believe is the most important environmental issue facing our world and thus why studying the environment is important? For this portion, you must cite 3 reputable sources (scholarly or newspaper articles are both acceptable). Cite using whatever is your preferred format. You may not simply list the links at the bottom.

Part 2 Getting into Nature

Submit on the first day of class, Wednesday August 28 – you should not be able to submit this on google classroom, because you should not be using technology to complete this assignment.

Having an appreciation for the outdoors will help you understand the importance of this course. Each week, you need to set aside 15-20 minutes to just sit outside somewhere and quietly observe what is going on around you. Use all of your senses to really see, hear, smell and touch the world in which you live. (I don't recommend eating anything!). Pick a private, secluded spot each time. You can use the same spot each time if you like, or a different place each time. After quietly sitting, write about what you observed and how you felt. Remember, use all of your senses. You should have 8 entries since the summer is about 8 weeks long (that excludes the week right after school ends, so you can have an initial break!). Each entry must be at least 100 words in length. Don't be afraid to write more or to include sketches/drawings! It must be hand written since you should be writing it outside while free of technology! For one of the entries, I would like you to spend time camping, hiking, canoeing/kayaking, visiting a state or national park, volunteering for an environmental group or learning center. Write a lengthier entry that describes your visit, including any observations of wildlife, human impacts on that environment (pollution, etc.), and how you enjoyed the activity.

Part 3 Prerequisite Knowledge and Skills

* Content knowledge: Chapter 2 questions are due on August 16th and Chapter 3 questions are due on August 23th. On the first day of class, there will be a quiz on the content that is covered in both of the chapters.

AP Environmental Science is a college level course that combines content area from earth science, biology, chemistry, physics, math, and social studies. You are expected to enter the course with a good understanding of basic scientific and mathematical concepts and skills, as well as strong reading, writing, and speaking abilities. Although we will continue to develop these skills throughout the school year, your success in the class is also dependent upon what you bring to it at the onset. One goal of this summer assignment is to help you brush up on these skills and concepts. Over the summer, review the scientific concepts outlined below; we will be building upon and referencing them throughout the school year.

Many of you will feel comfortable with a lot of this information, as it reviews concepts from Biology and Chemistry. Therefore, focus your efforts on the concepts that you do not understand. Remember, I teach in the science department, so I know that some of this is more of a review than other material. Be prepared to ask questions on the first day of class prior to the quiz.

You should be prepared to take a quiz on these science concepts on the first day of class. If you do not receive at least an 80% on the quiz, you will need to stay after for tutoring until you are able to achieve an 80% on it.

You should be familiar with the following terms/concepts from Biology, Chemistry, and Earth Science, as outlined in chapters 2 and 3 in your book:

- Although you will only be graded on your responses to the questions at the end of the chapters, I would highly suggest that you take the time to read the chapters thoroughly in order to allow you to better understand the information.
- There is a lot of material in each question, as many of them have multiple parts. Make sure that you space out working on these so as to ensure that you get as much out of this review as possible!
- Studying the diagrams and case studies throughout the chapter hold important information and often present that information in a more easily digestible form!

Chapter 2: Beginning on p. 36

Review Questions: # 1, 2, 3, 4, 5, 6, 7, 8, 9

Critical Thinking: # 1, 3, 4, 5, 6, 7

Do not overly focus on the following topics; we will go over them in greater depth throughout the course: macromolecules, cell theory, the in-depth specifics of different types of energy.

Chapter 3: Beginning on p. 66

Review Questions: # 1, 2, 3, 4, 5, 6, 7, 8

Critical Thinking: # 1, 3, 4, 5, 6, 7

Do not overly focus on the following topics; we will go over them in greater depth throughout the course: GPP & NPP and nutrient cycles other than the water cycle.