**Advanced Placement Environmental Science**  
**Summer Assignment 2018-2019**  
**Buford High School**  
**Mrs. Valerie Head**  
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Dear AP Environmental Science Student,  
  
 Welcome to the 2018-2019 class of AP Environmental Science (APES)! I am very excited to meet and work with each of you. Students who enroll in APES should be ready and willing to devote sufficient time, focus, and energy to class assignments including text readings, taking extensive notes in and outside of class, preparing for frequent exams and quizzes, and participating in class activities, labs, and discussions.   
  
 APES is an immense field of study. Not only is it a science in the traditional sense, it is complicated by societies, opinions, governments, beliefs, economics, laws and ethics. If you want to succeed in APES, you’ll need to constantly embrace this interdisciplinary perspective and be open to understanding opinions different than your own. This will be one of the most current and relevant classes that you will take because it deals with issues that we are exposed to daily, whether you realize it or not! To prepare, it is required that you complete the summer assignment prior to the start of the school year.

The major topics of the class we will be covering this year are as follows:

(You can go ahead and make these your tabs in your notebook if you’d like.)

*The Living World* - Ecosystems and Biogeochemical Cycles

*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

*Pollution*- Types of Pollution and their Impacts, Waste Disposal

*Global Change* - Global Warming, Loss of Biodiversity

**Summer Assignment To-Do List:**

1. **Join Remind by joining the class @bufapes18 on the Remind app or Text @bufapes18 to 81010.**
2. **Join the APES Google Classroom by entering the code: ajiuqg**
3. **Bookmark the APES class webpage and familiarize yourself with the layout:** [**www.bhshead.weebly.com**](http://www.bhshead.weebly.com)
4. **Bookmark the** [**APES College Board Website**](https://apstudent.collegeboard.org/apcourse/ap-environmental-science/course-details) **and familiarize yourself with the APES Course & Exam**
5. **Complete the Current Events Assignment (See pg 2 for instructions)**
6. **Complete the Intro to APES Unit Assignments (See pg 2 for instructions)**

**\*\*All Summer Assignment work is due to Google Classroom by the first day of school.\*\***

Current Events Assignment Instructions:

One of the most exciting (and overwhelming!) elements of this class is keeping up with current events and how it relates to what we are learning. You will begin this task over the summer to gain some knowledge about current issues in environmental science.

* Find 1 current article about the environment (from 2016-2018) from the following six topics: Land Use, Energy, Pollution, Climate Change, Population Growth, and Environmental Legislation.
* You may use a physical or online newspaper or journal, as well as “.gov, .edu, or .org” sites. The website you choose your article from must be legit.
* You will need to cite your sources properly (MLA or APA), so make sure you’re collecting that information too.
* Remember, maintain your integrity and academic honesty by writing your original thoughts.
* Summarize the article by using the questions below as a guide (will probably need to be 2 paragraphs in order to fully explain yourself)
  + What is the problem? When did it begin? Has it been resolved?
  + Who are the responsible parties, if they are known?
  + How severe is the environmental impact? Who will be affected the most?
  + Is there a solution? Why? Why not?
  + What are your thoughts on the issue?
* Upload this document to Google Classroom. You will see the assignment titled “Summer Assignment- Current Events,” and you will upload it directly to that post.

Intro to APES Unit Instructions:

APES is an extremely broad course and we will often have to go through material very quickly. To help us not have to rush through the course, we can take care of a few basic things before the year begins. You are expected to have a solid understanding of biology, chemistry, and even physics to do well in this course. You are also expected to have a strong grasp on basic math skills and strategies, as well as the use of dimensional analysis. Completion of this portion of the summer assignment will ensure that you are ready to jump into APES in August!

* Go to Google Classroom and download the Ch 1 and 2 Study Guide. I highly recommend that you print this so that you can take notes and add it to your APES notebook. You will use this to fill in answers as you make your way through the Ch 1 and 2 Prezi links that are also posted on Google Classroom. Make sure you also watch the video clips that are embedded within the Prezis.
* Complete the Ch 1 and 2 Quiz. The link to this 25 question online quiz is posted on Google Classroom.
* Finally, let’s look at one of the most difficult aspects of this class… Dimensional Analysis! There is a math component to this class, and it is required that you use dimensional analysis to solve a lot of the problems. Also, understanding how to use scientific notation is essential.
  + First, watch this video clip showing you how to do these types of problems. <https://www.youtube.com/watch?v=AGxOWIuaBP8>
  + Next, complete the practice problems below on notebook paper. Remember you MUST show your work using dimensional analysis. Don’t panic if this causes you trouble. We will work on this all year.

1. Convert 100 km to m

hr sec

2. Use the following conversions to help solve the question below:

1 square mile = 640 acres

1 hectare (Ha) = 2.47 acres

A 340 million square mile forest is how many hectares?

3. Fifty eight thousand kg of solid waste is equal to how many metric tons? 1 metric ton is equal

to 1000 kg.

4. Calculate how many gallons of water are wasted in 1 month by a toilet tank that leaks 2 drops

of water per second.

1 L = 3,500 drops and 1 L = 0.265 gallons

5. Each house in a community of 3000 homes uses on average 8000 kilowatt hours per year.

How many kwh of energy does the community use in one year?