

## AP Environmental Science 2018-19

### Summer Preparatory Work

Welcome to AP Environmental Science class at Yorktown High School, also known as APES! I have looked over our class roster for next fall, and we have a dynamic group of students who have registered for this AP college course. In this letter you will find two pieces of information: 1) a course overview and 2) three summer assignments to complete heading into next school year. First, and foremost, enjoy your summer break but do make time to stay mentally sharp in completing your summer AP work as you strive to be a “life-long learner.”

#### Course Overview

AP ES, much like other *Advanced Placement* courses, is based on three primary building blocks. First, acquiring content knowledge will be important. Second, there will be a fair amount of writing that will take place in this course as prescribed by College Board and lastly, there will be a moderate amount of mathematical work that you will cover in preparation for the AP ES exam in May of 2018.

Textbook:                    *Environmental Science: A Global Concern (Cunningham/Cunningham)*

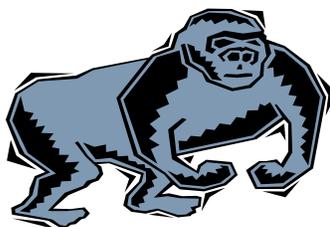
Class Platform:            Canvas

#### Major Topics in AP ES:

- Key Themes, Critical Thinking and Earth as a Living Planet
- Human Populations and Their Affect on our Planet
- Ecology: Biological Diversity, Food Webs and Biogeography
- Water, Soil and Air Pollution
- Energy Consumption
- Environmental Health
- Environmental Policy

#### Mr. McCormick’s contact information:

- School e-mail: [tmccormick@yorktown.k12.in.us](mailto:tmccormick@yorktown.k12.in.us)
- Yahoo e-mail: [trentmccormick86@yahoo.com](mailto:trentmccormick86@yahoo.com) (use for submitting summer assignments)
- Cell phone: 765-282-9136 (you may call or text me at appropriate times of the day regarding environmental science questions)



## Three APES Summer Assignments

The following assignments will count toward your Quarter 1 grades next school year. If you have any questions regarding these assignments, feel free to contact me.

### ASSIGNMENT #1 – PERSONAL INTRODUCTION (10 points)

- Due date: **Friday, July 27, 2018**
- Submission Format: **PowerPoint (5-10 slides)** (sentence/paragraph format where necessary and PICTURES!)
- Submission Method: Please e-mail this to my YAHOO e-mail address as listed above.
  - ***Be sure to thoroughly label your attached document with your name, grade and date.***
    1. Brief introduction of yourself (name, parents' names, activities you are involved in, interests, hobbies, favorite kind of music and any other items that you care to share that define you as a person)
    2. Explain briefly why you are taking AP Environmental Science (APES)
    3. Brief description of your personal learning style (i.e. – hands on, visual, listening, reading, etc.)
    4. Please include at least one picture of yourself in your PowerPoint where appropriate (i.e. – picture of a favorite vacation spot, picture of you doing your hobby, etc.) You may include additional pictures and/or clip art where appropriate to 'dress up' your personal introduction PowerPoint. Mr. McCormick is always good for some light humor in an assignment of this nature. ☺

### ASSIGNMENT #2 – MATH PROBLEMS (8 points) (Math Conversion Problems Attached – Page 4)

- Due date: **Friday, July 27, 2018**
- Submission Format: **Hand written math calculations**
- Submission Method: Scan your hand-written work into a file and e-mail it to my YAHOO e-mail address.
  - ***Be sure to thoroughly label your attached document with your name, grade and date.***
- Math problems
  1. Read the attached recycling scenario and answer the 8 mathematical conversion problems.
  2. Show all of your work (hand written) for each math problem.
  3. Although I want to see your work, you may enlist the help of your parents if you need some help.

### ASSIGNMENT #3 – SUMMER READING (10 points) (Reading Options Attached – Pages 5 & 6)

- Due date: **Friday, July 27, 2018**
- Submission Format: **Outline format in Word document**
- Submission Method: E-mail your book summary to my YAHOO e-mail address as an attachment
  - ***Be sure to thoroughly label your attached document with your name, grade and date.***
- You must read **ONE** of the 'book choices' offered on the provided list. To complete this assignment you must create an **outline summary** including the following components:
  1. Two interesting/important facts, issues or concepts from each chapter
  2. Include at the end of your outline a final section which summarizes the book by identifying two environmental issues/topics that the book addresses or refers to
  3. At the very end of your book review outline, provide a summary of how this book may influence your opinion on the environment (as it relates to the book's theme or message).
    - The list of books that you may select from can be found below on pages 5 and 6 of this document.
    - Be sure to include the book's title at the top of your outline.
    - Some of these books are available as e-books.

**Final Notes**

1. I hope you have a great summer. Everywhere you go is an environmental “moment.” Be sure to be aware of your surroundings and have safe travels.
2. Summer Work Deadlines:

<b>Assignment</b>	<b>Due Date</b>
Assignment #1 -- Personal Intro PowerPoint	Friday, July 27, 2018
Assignment #2 -- Math Unit Conversions	Friday, July 27, 2018
Assignment #3 -- Summer Book Review	Friday, July 27, 2018

3. The purpose of the summer assignments is to give me some early information about you including your timeliness, your academic skill sets, and your personal background.

Congratulations on completing the 2017-18 school year and have a great summer!

**Mr. McCormick**

Environmental Science and AP Environmental Science Teacher

## **Math Problems**

**NAME:** \_\_\_\_\_

### ***Background Information:***

Recycling centers store the used cans they buy from can collectors in trailers. A full trailer holds 15,000 pounds of loose cans. There are about 24 aluminum cans in a pound. When the trailer is full, it is hauled to a processing plant where the loose cans are pressed into huge 800-pound bales. Bales are then loaded into rail boxcars for a trip to an aluminum company remelting plant. Remelted cans are rolled into new aluminum for new cans. In this scenario, aluminum scrap is worth \$0.60/pound.

1. Suppose you own a recycling center in this scenario. If you want to fill your trailer full of used aluminum beverage cans, how many cans will you need?
2. How much cash can you collect for the cans in a full trailer in this scenario?
3. If each can collector brings in 30 pounds of aluminum cans, how many can collectors must visit the recycling center before a trailer is full?
4. When the trailer is hauled to a processing plant (where loose cans are baled), how many complete bales can be made from 1 trailer load?
5. How many aluminum cans are in 1 bale?
6. The bales are loaded in railroad boxcars. A boxcar holds 100 bales. How many pounds of cans are in a full boxcar?
7. How many aluminum cans are in a full box car?
8. How much money were can collectors paid - for the aluminum cans in 1 boxcar?

## **BOOK CHOICES FOR APES SUMMER ASSIGNMENT #3**

### **The World without Us (by Alan Weisman -- 2007)**

The book is a description of what would happen to Earth if humans just disappeared. This includes the deterioration of man-made objects. The author looks at what would happen to species that rely on human's existence, their buildings, and monuments.

### **Cadillac Desert: The American West and Its Disappearing Water (by Marc Reisner – 1993)**

This timely history of the struggle to discover and control water in the American West is a tale of rivers diverted and dammed, political corruption and intrigue, billion-dollar battles over water rights, and economic and ecological disaster.

### **Omnivore's Dilemma (by Michael Pollan – 2006)**

The author follows each of the food chains that sustain us – industrial food, organic or alternative food, and food we forage ourselves – from the source to a final meal, and in the process develops a definitive account of the American way of eating. His absorbing narrative takes us from Iowa cornfields to food-science laboratories, from feedlots and fast-food restaurants to organic farms and hunting grounds, always emphasizing our dynamic coevolutionary relationship with the handful of plant and animal species we depend on.

### **Field Notes from a Catastrophe: Man, Nature, and Climate Change (by Elizabeth Kolbert – 2006)**

This is a book that outlines what is expected to happen during global warming. Some of the things in the book are based on real events and others are expected outcomes if the climate continues to warm.

### **Wolves of Isle Royale: A Broken Balance (by Rolf Peterson – 2007)**

This book looks at the comprehensive study of the predator-prey relation between the wolf and the moose on the Isle Royale National Park. For nearly 50 years this relationship has been studied, making it one of the longest such studies in the world.

### **Tracking the Vanishing Frogs (by Kathryn Phillips – 1994)**

In 1990 scientists noted an alarming fact: from California, Colorado and Wyoming to Brazil, Switzerland and Japan, frogs are disappearing. Recognizing that frogs are a 'living barometer' of the Earth's environmental health, a number of biologists set out to discover why. *Tracking the Vanishing Frogs* chronicles these efforts.

## **BOOK CHOICES FOR APES SUMMER ASSIGNMENT #3**

### **(Continued)**

#### **Tinkering with Eden (by Kim Todd – 2002)**

*Tinkering with Eden* is a lyrical, brilliantly written history of the introduction of exotic species into the United States, and how the well-meaning endeavors of scientists, explorers, and biologists have resulted in ecological catastrophe. Todd's assured voice will haunt her readers, and the stories she tells – such as the druggist who brought starlings to America because he wanted the landscape to feature every bird mentioned by Shakespeare – will forever change how we see our increasingly afflicted landscape and its unanticipated inhabitants.

#### **Cod: A Biography of the Fish that Changed the World (by Mark Kurlansky – 1998)**

This book describes how a single species of fish has had a huge influence of the Europeans. Vikings caught cod off the shores of Greenland. Cod was a staple of the medieval diet; was sold salted by the Basques; and was the reason Europeans set sail across the Atlantic. But what has happened to the cod? What are the human and environmental issues of the depleted cod fisheries? The author looks in great detail of cod fishing industry and its impact.

#### **Hot, Flat, and Crowded (by Thomas Friedman – 2008)**

The author tries to show the urgency in America for a national renewal and explains that a green revolution can bring about a more sustainable environment and a sustainable America. The author explains how many of the world's issues (global warming, population growth and globalization) have produced an unstable Earth. The challenge of sustainability presents the United States, and the world, an opportunity to rebuild its economy, develop cleaner energy, and provide jobs.

#### **Other**

If you find an appropriate environmentally based book that is not on this list (that you would like to read), give me a call on my cell phone to get it approved. My contact information can be found earlier in this document.