

## AP Environmental Science Summer Assignment – 2018/2019 - Welcome to APES!!!

AP Environmental Science is a lab based course that is designed to examine ecological, biological, chemical, physical, and environmental concepts in action. A student in this course should be familiar with local, regional and global concerns within their environment. The objective of the summer assignment is to get you thinking environmentally and to refresh some math skills. Please note that all of the summer assignments will be collected on the first week of school. I hope that you have an enjoyable, exciting, and educational summer! I look forward to meeting you in August! – Mrs. Murchison

Below are the tasks you should complete this summer. All assignments should be typed. All assignments will be due on the first week of school in August. The expectations for an AP course are significantly higher than those for a regular course. All work is expected to be turned in on the due date.

### **1. Environmental Surveys / Ecological Awareness**

Directions: Complete the three footprint calculators below and create a Word document to compile your results. For each footprint create a short summary paragraph describing what you have learned about yourself.

- a. Go to: <http://www.h2oconserve.org/> or <http://www.gracelinks.org/824/water-program> and complete the water footprint calculator. Take a screen shot of your footprint results and add that to your Word document.
- b. Go to: <http://www.nature.org/greenliving/carboncalculator/index.htm> and find your individual carbon footprint. Take a screen shot of your footprint results and add that to your Word document.
- c. Go to: <http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/> and find your ecological footprint. Take a screen shot of your footprint results and add that to your Word document.

### **2. Tragedy of the Commons**

Directions: Read the essay “Tragedy of the Commons” by Garrett Hardin. The essay can be found at this link: [http://www.garretthardinsociety.org/articles/art\\_tragedy\\_of\\_the\\_commons.html](http://www.garretthardinsociety.org/articles/art_tragedy_of_the_commons.html). After reading, create a Word document and respond to the following questions in complete sentences.

- a. What is Garrett Hardin’s central idea in this essay?
- b. Do you personally agree with Hardin’s central idea?
- c. Is the “Tragedy of the Commons” unavoidable?
- d. Identify one “commons” in your own life (at school, home, work) and explain how it is (or is not) being managed wisely to avoid the situation described in the essay.

### **3. Brush Up Your Math Skills**

Directions: The math assignment does not need to be typed. Please complete the problems on the attached sheets and make sure to show all your work for full credit. Calculators are not allowed on the AP Environmental Science test.

### **4. Think Global! You may either –**

Choose **one book** from the list below to read over the summer. -OR- Choose **three environmental documentaries** to watch (some suggestions are below, but you may choose others).

**IF YOU CHOOSE A BOOK:** As you read, and after you finish... please complete the following:

- Write down any vocabulary and/or information that is related to environmental science and define (10 Term Minimum)
- Describe any questions you have as a result of your reading (5 Questions Minimum)
- Describe your opinion of the reading – positive/negative/neutral. Reference items in the book to support your thoughts. (Minimum 2 paragraphs)
- Relate what you have learned to your personal life – how does it affect/impact you? How does it fit into an APES course? (Minimum 1 paragraph)
- Condense the overall, take home message of the book into a Bumper Sticker slogan. Design & draw your bumper sticker. Then justify and defend your poster /slogan. (Minimum 1 paragraph)

**IF YOU CHOOSE TO WATCH DOCUMENTARIES:** Documentaries must be a minimum of 45 minutes in length.

Documentaries should look at Environmental ISSUES, not just nature. Please complete the following for EACH Documentary.

- Provide the name of the documentary and year in which it was released.
- Describe any questions you have as a result of your viewing (3 Questions Minimum)
- Describe your opinion of the documentary – positive/negative/neutral. Reference items in the documentary to support your thoughts. (Minimum 1 paragraph)

Relate what you have learned to your personal life – how does it affect/impact you? What information affected you the most? Will it impact how you live your life? (Minimum 1 paragraph)

Choose one documentary and design a unique movie poster and slogan for it. Your movie poster should be colorful, neat, and include a slogan that identifies the take home message of the film. Then justify and defend your poster /slogan. (Minimum 1 paragraph)

Book Options – most available from your local library or on electronic media

(Kindle/Nook/iPad)

Omnivore's Dilemma (Pollan, 2007)

Hot, Flat and Crowded (Friedman, 2009)

Ishmael (Quinn, D)

Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble (Brown, 2006)

Plan B 4.0: Mobilizing to Save Civilization (Sustainability Revised) (Brown, 2009)

The Origin of Feces (Waltner-Towes, D)

The Big Necessity (George, R)

A Civil Action (Harr, 1996)

The World Without Us (Weisman, A)

Coal River (Shnayerson, M)

Weather Makers (Flannery, T)

Cheap: The high cost of discount culture (Shell, 2009)

Cradle-to-Cradle: Remaking the Way we Make Things (McDonough & Braungart)

Wild Ones (Mooallem, 2013)

Silent Spring (Carson, 1962)

A Sand County Almanac (Leopold, 1949),

Water Wars: Drought, Flood, Folly and the Politics of Thirst (Ward, 2002)

Cadillac Desert: The American West and its Disappearing Water (Reisner, 1986)

Beyond Malthus (Brown, 1999)

Suggested Documentaries - many can be found on Netflix, Amazon Prime, and some stream on the web.

Home – [http://www.youtube.com/movie?v=jqxENMKaeCU&feature=mv\\_sr](http://www.youtube.com/movie?v=jqxENMKaeCU&feature=mv_sr)

National Geographic: Human Footprint

National Geographic: Six Degrees Could Change the World

180° South

Flow: For the Love of Water

Tapped

Trashed

Food, Inc.

King Corn

Dirt

Gasland

Who Killed the Electric Car / Revenge of the Electric Car

Manufactured Landscapes

Vanishing of the Bees

Fresh

Fuel

Bag It

Baraka

Plastic Planet

Planet in Peril

Empty Oceans, Empty Nets (PBS)

Harvest of Fear (Frontline)

The Cove

Hawaii: Message in the Waves

**\*\*\* Be prepared to discuss your experiences from this assignment as well as the book or documentaries\*\*\***