

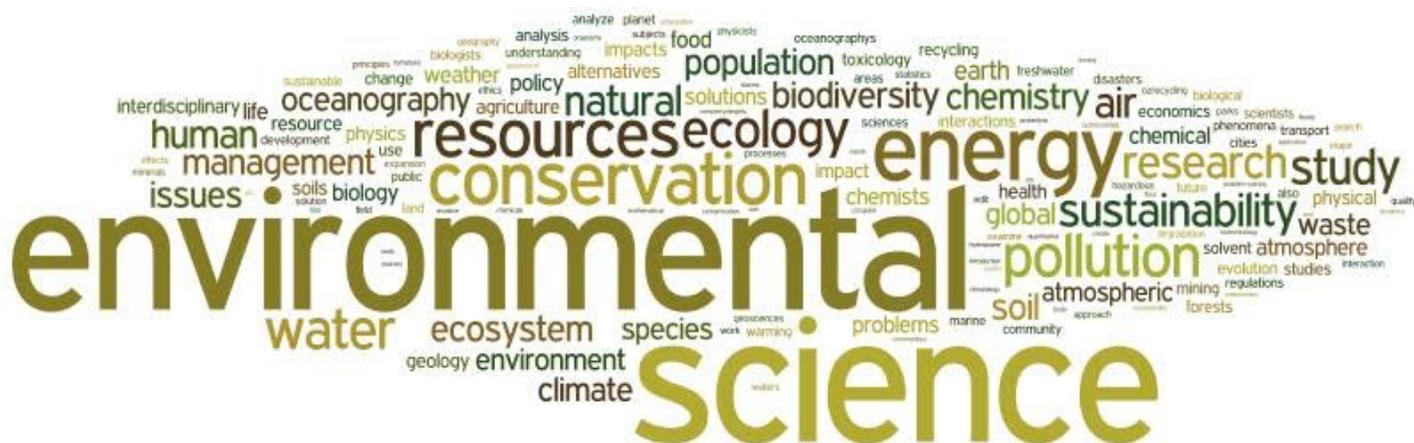
# 2018-2019 AP Environmental Science Summer Assignment

Welcome future APES students! This is an advanced science course that combines the disciplines of biology, chemistry, geology, physics, government and economics to investigate global environmental issues. We will discover how the Earth's systems function together and how humans have affected our planet. We will also examine our personal consumption habits and learn ways to be responsible global citizens in the face of serious environmental issues.

Because this is a college level course, you will be responsible for learning a large amount of material on your own. I will help you as we go, but it will be your responsibility to take notes, study and learn your vocabulary! We also work on the assumption that you have a general science background that includes biology, chemistry and algebra. The purpose of this project is to help you prepare for the APES content by reviewing some background information, and getting familiar with some of the basic concepts of environmental science.

**General Guidelines:** You will be expected to bring this to my classroom during the **first week** of school in September.

- **There are 3 parts to the summer assignment. DO NOT PROCRASTINATE!**
- **Read the directions for each section carefully!**
- **All work is to be completed on your own. You may not work with other students to complete this assignment.**



**Part 1 – Current Events in Environmental Science:** Identify *five* environmentally themed articles of interest to you. The articles must not predate January 1, 2018. You must aim high in selecting the articles. For example, *The New York Times* and *The Wall Street Journal* are generally written at a more appropriate level of depth and detail than some other sources, such as tabloid newspapers and many websites. Also, magazines such as *Discover*, *National Geographic*, *Natural History*, *Science*, or *Nature* can provide excellent articles about current environmental issues.

The articles should be long enough for you to write a substantial summary and a well thought out reflection to the questions listed below:

The following must be turned in for each article:

- Hardcopy of the article
- A two paragraph summary of each article
- A reflection answering the following questions:
  - Does the article teach you something new?*
  - What is your opinion of the issue?*
  - Does the article support or refute other information you've heard or read?*
  - How does this issue impact you?*
  - How is the article relevant to an AP Environmental Science course?*

Listed below is a partial list of appropriate current event topics:

*Ocean pollution* – plastic, waste dumping, coral bleaching

*River issues* – damming, pollution, protection

*Coastal concerns* – beach erosion, pollution, urbanization

*Toxins* – pesticide use, PCBs, any toxic substance released into the soil or water

*Pharmaceuticals* – in our water supply

*Noise pollution* – impact of noise pollution

*Biodiversity* – value of forests, wildlife, ecosystems

*Water pollution* – fecal coliform bacteria, water-borne diseases, eutrophication

*Alternative energy sources* – wind energy, solar, geothermal

*Global climate change*



**Part 2 – Home by Yann Arthus-Bertrand:** *Home* is a film almost entirely composed of aerial shots of various places on Earth. It shows the diversity of life on Earth and how humanity is threatening the ecological balance of the planet.

Link to the movie: <https://www.youtube.com/watch?v=jqxENMKaeCU>

*As you watch the movie, answer the following questions.  
Record your answers on the attached answer sheet.*

1. What was void in the Earth's early atmosphere?
2. What was different about the cyanobacteria compared to the archeobacteria?
3. Where is the carbon that poisoned the early Earth's atmosphere?
4. What is the strata?
5. How much of our oxygen comes from the algae that tints the surface of the oceans?
6. What is the humus?
7. Although humans are only 200,00 years old, what have they been able to do?
8. What was the only energy available to the people that lived 6,000 years ago?
9. How long ago did agriculture start?
10. What is the world's most widespread occupation?
11. In the past 50 years, a single lifetime, what has happened to Earth?
12. In the last 60 years, how much has the Earth's population increased?
13. Today, what percent of the world's 7 billion inhabitants live in cities?
14. How much energy does a liter of oil produce?
15. What has become the symbol of comfort and progress?
16. What percentage of fishing grounds are exhausted, depleted, or in danger of being so?
17. What is fossil water?
18. How much water per person, per day, do the inhabitants of Las Vegas consume?
19. What stores more carbon than the Earth's entire atmosphere?
20. In 40 years, how much has the Amazon rainforest been reduced by?
21. How many people in the world still depend on charcoal?
22. What happened to the Rapanui people?
23. Why are "all eyes on the poles"?
24. If Greenland melts, how much of a sea level increase is expected?
25. What percentage of coral reefs is disappearing?
26. How much of the world's population live on coastal plains?
27. How much of Australia's farmland is affected by global warming?
28. How much stronger is methane than carbon dioxide?
29. What percentage of the world's population consumes 80% of its resources?
30. How many human deaths are a result of dirty drinking-water?
31. How many climate refugees might there be by 2025?
32. Where does 80% of the energy we consume come from?
33. How much energy does the sun potentially provide for Earth in one hour?
34. At the end of the film, what hope does the video offer?

**Part 3 – Documentaries:** Choose two documentaries on different subjects to watch. 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 on a separate sheet of paper. (*Type the information using 12 point font*)

- Provide the name of the documentary and year in which it was released.
- Describe three questions you had as a result of your viewing.
- Describe your opinion of the documentary – positive/negative/neutral. Reference items in the documentary to support your thoughts. (Minimum eight sentences)
- 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 eight sentences)

Choose one of the documentaries you viewed and design a unique movie poster and slogan for it (8.5” x 11” in size). Your movie poster should be colorful, neat, and include a slogan that identifies the “take home message” of the film.

**Suggested Documentaries** - many can be found on NetFlix, Amazon Instant Video, or some even stream on the web.

National Geographic: Human Footprint  
Flow: For the Love of Water  
National Geographic: Six Degrees Could Change the World  
180° South  
Food, Inc.  
King Corn  
Who Killed the Electric Car/Revenge of the Electric Car  
Manufactures Landscapes  
Bag It  
Vanishing of the Bees  
Baraka  
Blue Gold: World Water Wars  
Trashed  
World in Balance: The Population Paradox  
Plastic Planet  
Planet in Peril  
An Inconvenient Truth  
Empty Oceans, Empty Nets (PBS)  
The Cove  
Harvest of Fear (Frontline)  
Hawaii: Message in the Waves  
Cane Toads: An Unnatural History

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**Summer Assignment Bonus:** For 10 Bonus Points, create a “Logo” for our AP Environmental Class on a separate 8.5” x 11” sheet of paper. The design must be creative and original to receive credit.

# *Home* Answer Sheet

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

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29. \_\_\_\_\_

30. \_\_\_\_\_

31. \_\_\_\_\_

32. \_\_\_\_\_

33. \_\_\_\_\_

34. \_\_\_\_\_

Name \_\_\_\_\_

## Score Sheet:

Your completed assignment should be placed in a pocket folder in *Part* order. Please attach this Score Sheet to the **front** of the folder before you turn it in.

**Part 1: – Current Events**      **Score** \_\_\_\_\_ / 30

**Part 2: – *Home* video**      **Score** \_\_\_\_\_ / 34

**Part 3: – Documentaries:**      **Score** \_\_\_\_\_ / 26

**Total Score** \_\_\_\_\_ / 90

**% Score** \_\_\_\_\_

**Optional Logo Design Bonus** \_\_\_\_\_ / 10

**FINAL SCORE** \_\_\_\_\_