

AP Environmental Science Summer Homework:

You are making a great choice in taking AP Environmental Science next year. Your thinking will be challenged about what you know about Everett and Washington State and then applying the concepts to a national and worldview. In order to prepare for the school year so we hit the ground running in September, you will need to complete some summer tasks. The **due date** for all summer assignments will be Sept. 15th. This way, if you have any questions about the necessary tasks, you have time to ask and reassess what you have already completed. I am excited about what the year will bring and helping everyone be successful when taking the AP exam next May.

Videos:

There are many quality videos available on Netflix and YouTube about the Environment. One of the videos you will need to watch is The Lorax; you can find it on YouTube. In addition, pick two of the following videos to watch and reflect about this summer.

Netflix-

Fed-Up: Documentary about obesity concern in the United States

Fracknation: Rebuttal documentary about utilizing fracking for accessing natural gas

Gasland: Documentary about utilizing fracking for accessing natural gas.

True Cost: Documentary about the fashion industry's impact on developing nations.

Plastic Paradise: Documentary regarding the use of plastic in society.

Sustainable: Documentary looks at agricultural practices in the United States.

YouTube-

China's Mega Dam (1hr 30minutes): Discovery Channel documentary describing the impact building the largest dam in the world had on the Earth.

Strange Days on Planet Earth: Documentary narrated by Ed Norton about invasive species

The Lorax: Required. Watch the older version that is about 30 minutes long.

PBS Global Warming, the Signs and the Science: Documentary addressing the impact of climate change on several communities.

FLOW, For Love of Water: Documentary looking in the industrialized world's use of water from developing nations and even in the United States.

Use the Decomposing Algae Film Review at the end of the Homework Packet to complete your reflections about the additional videos. We will do activities regarding the Lorax during the first weeks of school.

Experiments:

Design an experiment (procedure) around one of the following testable questions or come up with one of your own. The point of the exercise is to think critically about what it takes for writing a scientific procedure; this is only a writing assignment. You are not required to complete an actual experiment. Several websites are available that can assist in designing the experiment. Experimental designs will be discussed at the beginning of the school year. I will also have a document on my classroom website that will assist in the writing of the experiment. This will be available at the end of June.

Does regular Coke make a good fertilizer for a grass lawn?

How does algal growth in ponds influence aquatic life living below the surface?

How do different materials decompose?

Are "Green" detergents (laundry or dish soap) less toxic than conventional forms?

Does the bullfrog affect ecosystems in Washington State?


Photo Scavenger Hunt:

Below is a list of vocabulary words that you can experience in your life, and I bet you don't even know it! A great way of learning is connecting what will take place in class to our everyday life. This stimulates thinking in never before seen ways.

Your job is to build a picture-file library for vocabulary of Environmental Science words you encounter. You must take a picture of the image being represented. For the photo to count, you must be present in the picture showing me the phenomenon/term. Unlike the video reviews and experimental design, if you want credit for the scavenger hunt, all submissions are due Sept. 8th. Building your library is a contest. Winners will receive a prize at the end of the first unit. No late submissions.

Eutrophication	Keystone Species	Heterotroph
Autotroph	Ecosystem	Detritivore
Adaptation	Native Species	Invasive Species
Generalist Species	Specialist Species	Point Source Pollution
Non-point Source Pollution	Mutualism	Pioneer Species
Coevolution	Fishery	Industrialized Farming
Subsistence Farming	Oceans	Freshwater life zone
Saltwater life zone	Runoff	Surface water
Watershed	Hydropower	Solar Power
Carnivore	Herbivore	Reuse

Example: Hydropower



Hydropower:
Grand Coulee Dam

A dam is built for storing water. When electricity is needed, water is released and flows through a turbine (usually dams have several) causing the turbine to spin. The spinning motion activates a generator and produces electricity.

Your picture does not have to be in color. The dimensions of the card should be between a 3" x 5" card (the size of the example) or a 5" x 7" card.

Your cards do not need to be typed, but the ability to read (teacher's discretion) is a must.

Decomposing Algae: Documentary Film Review Assignment Sheet

Description: A film analysis is not a summary of the plot; it goes deeper into analysis and reaction.

IT MUST BE TYPED and double-spaced using a 12-point, easily readable font such as Times New Roman, Calibri, or Tahoma.

Introductory PARAGRAPH (not bullet points) – 3 points

Provide basic information about the movie, and a sense of what your review will be about. Include:

_____ Introduction to the movie (1-2 sentences).

_____ Title (underlined)

_____ Director

_____ Publication Information: year released, length of movie

_____ Who funded the documentary?

_____ Movie's thesis (main idea) / theme / purpose?

Body - 9 points

There are two main sections for this part. The first is an explanation of what the movie is about. The second is your opinions about the movie and how successful it is with examples used to support your opinion.

_____ **Explanation – 3 points**

Give a brief (3-4 sentences) summary of what happened in the video and support why you chose the main idea for the documentary. Don't give too much away, this is not a movie report:

- Summary
- Central conflict

_____ **Analysis and Evaluation – 6 points**

In this section, you analyze or critique the movie. Write about your own opinions; just be sure that you explain and support them with examples.

- _____ How did the director achieve his or her purpose?
- _____ Describe the effectiveness of the interviews/visual design/music/sound.
- _____ What are the strengths and weaknesses of the movie?

Conclusion – 3 points

_____ Briefly (3-4 sentences) conclude the review by pulling your thoughts together. You may want to say what impression the movie left you with, or emphasize what you want your reader to know about it. *Be sure to include a grade, A-F, in your review with a recap of why the documentary earned the grade.*