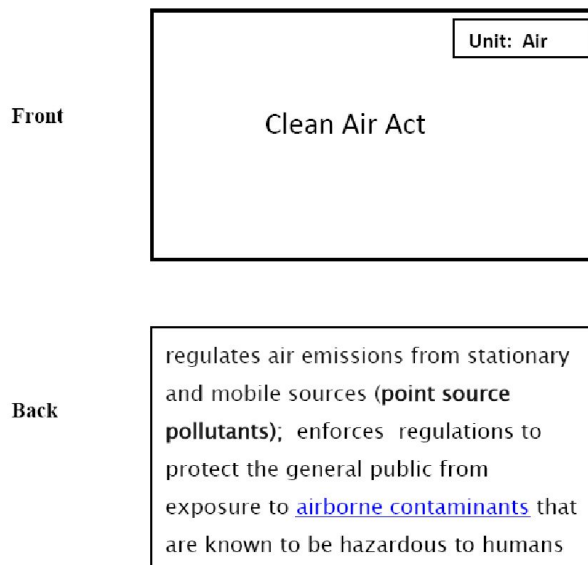


AP Environmental Science**Mrs. Mathis email: brandi.mathis@caswell.k12.nc.us**

Hello! I hope that you have an enjoyable, exciting, and educational summer! Here are some activities that you should do this summer to prepare for AP Environmental Science. The objective of this summer assignment is to give you a brief overview of the topics we will go over in APES and get you thinking environmentally. Please note that the assignment will be collected for a grade on the first day of class.

1.) For each of the following pieces of legislation make an index card with the name on the front of the card. Also, on the front of the card put the unit in the upper right corner (air, water, land, biosphere). On the back of the card put the function of the legislation. See the example on the next page. **There will be a quiz on these laws the second week of class. Index cards are due on the first day of class.**

Clean Air Act	Food, Drug, and Cosmetics Acts	Occupational Safety and Health Act
Comprehensive Environmental Response, Compensation Liability Act	Kyoto Protocol	Oil Pollution Act
Consumer Product Safety Act	Law of the Sea Convention	Oil Spill Prevention and Liability Act
Convention on International Trade in Endangered Species	Marine Mammal Protection Act	Pollution Prevention Act
Endangered Species Act	Migratory Bird Hunting Stamp Act	Safe Drinking Water Act
Energy Policy Act	Montreal Protocol	Soil and Water Conservation Act
Federal Food, Drug, and Cosmetic Act	National Energy Act	Solid Waste Disposal Act
Federal Insecticide, Fungicide and Rodenticide Act	National Environmental Policy Act	Surface Mining Control and Reclamation Act
Federal Water Pollution Control Act	National Park Act	Toxic Substances Control Act
Fish and Wildlife Conservation Act	National Wildlife Refuge System Act	Wild and Scenic Rivers Act
Food Quality Protection Act	Nuclear Waste Policy Act	Wilderness Act



2.) Fruits and Vegetables on the Move! At some point over the summer, look around your house and identify a piece of fruit or vegetable that has travelled to be a part of your diet. Usually there is a sticker on the item telling you its country of origin – or you could go to a food store and browse. (hint: do not use the tomato you picked out of the garden that morning) For the item you select:

- Record date, item, and its country of origin
- Use internet resources or other sources to estimate the distance from where the item was grown to your home. Do the best estimate you can – obviously it is difficult/impossible to tell where in Mexico that cantaloupe came from...
- List the most likely modes of transportation (hint: there are probably more than one of them) used to move that item from the field where it was growing to your kitchen.
- Respond to the following in a paragraph or two:
What are the environmental impacts of shipping fresh produce over long distances?
What are the health benefits/health costs of having a wide variety of fresh produce available at all times? Is it “worth it”?

3.) Read. At some point over the summer, identify an environmentally themed article that interests you. Please provide a citation for the source, and hard copy of the article. Please “aim high” in selecting this item. 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 most websites. Write at least 100 words giving your opinion of the article (Please do NOT summarize the article- tell me what YOUR opinion is).

4.) Prerequisite Skills and Knowledge. AP Environmental is a college level course that combines content area from earth science, biology, chemistry, physics, math, and social studies. You are expected to enter the course with a good understanding of basic scientific and mathematical concepts and skills, as well as strong reading writing, and speaking abilities. Although we will continue to develop these skills throughout the semester, your success in the class is also dependent upon what you bring to it at the onset. One goal of this summer assignment is to help you brush up on these skills and concepts, Over the summer, review the scientific concepts

below. You should be prepared to take a quiz on these skills and concepts during the first week of class.

Prerequisite Basic Scientific Concepts: You should be familiar with the following terms/concepts from Biology, Chemistry and Earth Science:

Organic vs. Inorganic
Natural vs. Synthetic
Kinetic vs. Potential Energy
Radioactive Decay
Half Life
Law of Conservation of Matter
1st Law of Thermodynamics
2nd Law of Thermodynamics
Entropy
Organism
Species
Population
Community
Ecosystem
Producers/Autotrophs
Consumers/Heterotrophs
Decomposers
Photosynthesis (reactants and products)
Cellular Respiration (reactants and products)

Aerobic vs. Anaerobic
Adaptation
Mutation
Gene
Trait
Chromosome
Gene Pool
Natural Selection
Biodiversity
Extinction
Plate Tectonics
Weathering
Climate Change
Rocks vs. Minerals
Climate vs. Weather
The full name of each of these chemical abbreviations: CO_2 , CO , $\text{C}_6\text{H}_{12}\text{O}_6$, CH_4 , H_2 , H_2O , N_2 , NO_x , NO^{-3} , NH_3 , O_2 , O_3 , P , PO_4^{-3} , S , SO_2 , Cl , K , NaCl , Pb , Hg , Rn , U