

To whom this may concern:

The purpose of this correspondence is to inform you of the desire to provide the students of my AP Environmental Science course an optional field experience in Smoky Mountain National Park. The trip would be centered on various pertinent topics which we cover in the course, and would take place specifically at the Tremont Institute in Townsend, Tennessee. The duration of the trip would be three days and would take place on Friday, February 23rd through Sunday, February 25th, 2018, and a great benefit of the trip is that it only removes the kids from one day of school, being that it is primarily over a weekend. The students would leave from the high school on Friday morning around 6:00AM and return to the high school on Sunday evening around 9:00PM. The transportation for the trip, which is roughly 8 hours one way, would be via a Great Day Tours charter bus, which is the same company the district uses for the DC trip.

All costs associated with this trip would be covered 100% by each student and should be around \$300.00/student including transportation, lodging, meals, & all courses at the Institute. The fact that the cost of said trip is around \$300.00, is the reason why this trip will be presented as an optional, yet extremely worthwhile experience for the students in my AP Environmental course. I estimate that roughly 50-60 students will participate in this experience, and will be taking three additional teachers/chaperones, (two male and two female), in addition to myself to assist with monitoring the students.

While at the Institute, the students will be working with staff who will detail the various features of the park, correlating to that of which we have covered throughout the duration of the class. The primary focus will be on environmental monitoring and qualitative analysis, stream quality, geologic formations, and impacts to biodiversity. Furthermore, students will have the ability to fish, hike, etc. as they explore the park during the three days we are there, while learning about mountain ecosystems not present in the surrounding areas of Ohio. This trip is intended to replace the AP Environmental trip to Stone Lab (AP Bio will still attend), and as stated, through utilization of two weekend days for travel and activities, students will actually miss less school than previously with the Stone Lab trip.

The following Website/Links will provide further information regarding the Institute:

<http://www.gsmit.org/>

<http://www.gsmit.org/teachers.html>

If you have any questions that I may directly address, feel free to contact me at:

reynoldsd@bbhcsd.org or 440-740-4881

Students who choose not to participate in the trip will still be expected to cover the topics that we experience while at the Institute in a classroom setting, and will be provided alternative materials with which to do so.

While at the Tremont Institute, we will focus on each of the following topics as designated by the College Board:

I. Earth Systems and Resources

A. Earth Science Concepts - Geologic time scale; seasons; solar intensity and latitude

C. Global Water Resources and Use - Freshwater - surface and groundwater issues; global problems; conservation

D. Soil and Soil Dynamics - Rock cycle; formation; composition; physical and chemical properties; main soil types; erosion and other soil problems; soil conservation

II. The Living World

A. Ecosystem Structure - Biological populations and communities; ecological niches; interactions among species; keystone species; species diversity and edge effects; major terrestrial and aquatic biomes

B. Energy Flow - Photosynthesis and cellular respiration; food webs and trophic levels; ecological pyramids

C. Ecosystem Diversity - Biodiversity; natural selection; evolution; ecosystem services

D. Natural Ecosystem Change - Climate shifts; species movement; ecological succession

E. Natural Biogeochemical Cycles - Carbon, nitrogen, phosphorus, sulfur, water, conservation of matter)

III. Population

A. Population Biology Concepts - Population ecology; carrying capacity; reproductive strategies; survivorship

3. Impacts of population growth - Hunger; disease; economic effects; resource use; habitat destruction

IV. Land and Water Use

B. Forestry - Tree plantations; old growth forests; forest fires; forest management; national forests

3. Public and federal lands - Management; wilderness areas; national parks; wildlife refuges; forests; wetlands

4. Land conservation options - Preservation; remediation; mitigation; restoration

5. Sustainable land-use strategies

F. Fishing - Fishing techniques; overfishing; aquaculture; relevant laws and treaties

VI. Pollution

A. Pollution Types

1. Air pollution - Sources—primary and secondary; major air pollutants; measurement units; smog; acid deposition—causes and effects; heat islands and temperature inversions; indoor air pollution; remediation and reduction strategies; Clean Air Act and other relevant laws

3. Water pollution - Types; sources, causes, and effects; cultural eutrophication; groundwater pollution; maintaining water quality; water purification; sewage treatment/septic systems; Clean Water Act and other relevant laws

2. Hazardous chemicals in the environment - Types of hazardous waste; treatment/disposal of hazardous waste; cleanup of contaminated sites; biomagnification; relevant laws

VII. Global Change

C. Loss of Biodiversity

1. Habitat loss; overuse; pollution; introduced species; endangered and extinct species

2. Maintenance through conservation

3. Relevant laws and treaties