2013 AP Environmental Science Summer Institute Syllabus
July 22-25, 2013

Institute Overview

Greetings and welcome to the Advanced Placement Environmental Science summer institute. The Advanced Placement Environmental Science workshop is designed to aid in the development and teaching of a successful AP course within the guidelines of the College Board. I am envisioning an interesting and interactive week focusing on skills that will be helpful in teaching AP Environmental Science. We will be emphasizing lab activities, in particular, ways of doing labs that fit within different budgets. Generally, this means looking at both “high tech” and “low tech” ways of accomplishing the same objective. By collaborating we will cover lab activities that will support all the major study components on the AP Topics Outline. This is a participatory workshop and you should expect to be involved in the process of developing material and activities to share with others in the course. Additionally, the workshop will emphasize developing the skills and techniques necessary to help you aid your students to do well on the AP Environmental Science Exam , course pacing and resources. The workshop is intended to be a comprehensive collaborative effort committed to supporting participants in developing and teaching a successful Advanced Placement course.

Consultant Background

Michael R. Mayfield

I have a M.S. from the University of Michigan in Ecology and Evolutionary Biology and have been teaching environmental science for 22 years. I am an AP Environmental Science teacher at the Indiana Academy for Science, Mathematics and Humanities at Ball State University in Muncie, Indiana. I serve as a Midwest area AP Environmental Science consultant for the College Board and have been teaching AP summer institutes for 11 years. I have served as an AP Exam reader since 2000, including six years as a Table Leader. Lately, I’ve been involved with local sustainability initiatives and the Greening of the Campus. I hope to bring these experiences to our sessions to share as we work together to demystify the Advanced Placement experience.

Institute Preparation
I am planning on being able to provide you with copies of many lab activities and course materials that I have used to prepare my students for the AP Environmental Science Exam. We will examine both “low tech” and “high tech” ways of acquiring environmental data for the students to analyze and interpret in each of the major areas of the AP course outline. I encourage you to bring along one or two activities/labs that you would like to share and come prepared to work cooperatively to generate new materials at the institute.

Institute Schedule

Monday Morning
Introductions and goal setting for the week
Overview of Advance Placement Programs and the College Board
AP themes/coverage/audit and the future

Monday Afternoon
Quadrat/Plot Sampling
Microclimate Field Study
Data Analysis
The AP Exam and its structure

Tuesday Morning
Soil Texture and Nutrient Analysis
Agriculture/Food
Mining Activities

Tuesday Afternoon
Textbook analysis and other resources/Pacing
Free Response Exam and Rubrics
Wastewater Treatment/Projects

Wednesday Morning
Population Biology
Mark-Recapture
U.S. Census I.D.B.
Natural Selection/Predator Prey Simulation
Radon and Indoor Air Quality
Biodiversity Indices

Wednesday Afternoon
Group Project work time/Resources
Air Quality Testing set up
Cemetery Demography
More FRQ’s

Thursday Morning
Water Quality Testing/Benthic Macroinvertebrates/WQI
Air Quality data
Sharing Lab/Activities/Projects

Thursday Afternoon
Computer Resources to support your course
Energy Activities
Mathematics/calculations for Environmental Science
Multiple Choice analysis

Graduate Credit Option
Participants may also earn three graduate education hours for any of the AP Summer Institutes from Washburn University for a reduced tuition rate the successful completion of an academic assignment.

Additional Information
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