

## 2010 Syllabus for Environmental Science July 26-30, 2010

### **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 help develop the skills and techniques necessary to help you aid your students to do well on the AP Environmental Science Exam. 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 20 years. I am an AP Environmental Science teacher at the Indiana Academy for Science, Mathematics and Humanities in Muncie, Indiana. I am a Midwest area AP Environmental Science consultant For the College Board and have been teaching AP summer institutes for 11 years. I have been an AP Exam reader since 2000, including three years as a Table Leader. Lately, I’ve been involved with local sustainability initiatives. I hope to bring these experiences to our sessions to share as we work to demystify the Advanced Placement experience.



### **Institute Preparation**

I am planning on being able to provide you with copies of many of my 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. I encourage you to bring along one or two activities/labs that you would like to share.

## **Institute Schedule**

### Monday Morning

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

### Monday Afternoon

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

### Tuesday Morning

Soil Texture and Nutrient Analysis  
Plate Tectonics  
Mining Activity

### Tuesday Afternoon

Textbooks and other resources  
Multiple Choice Exam  
Free Response Exam and Rubrics

### Wednesday Morning

Population Biology  
Mark-Recapture  
U.S. Census I.D.B.  
Natural Selection/Predator Prey Simulation

### Wednesday Afternoon

Group Project definition and work time  
Air Quality Testing and Data  
Indoor Air Quality-Radon

### Thursday Morning

Water Quality Testing  
Cemetery Demography  
Sharing Lab/Activities

### Thursday Afternoon

Computer Resources to support your course  
Work time for projects  
More Free Response Questions/Rubrics

### Friday Morning

Multiple Choice Exam Analysis  
Project Presentations/ Sharing  
Finishing lab data analysis  
Review and Wrap Up

### **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 and the successful completion of an academic assignment.

### **Additional Information**

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