Monday – Morning Session (9am-noon)

I. Introductions & "I've Got Mine" Activity

II. The AP Course

Acorn Book

Examples of syllabi

III. Importance of Field Work & Labs

A. Integrating concepts into labs & inquiry-based learning

IV. The Exam

Multiple choice (60%)

Free response (40%)

Types of questions

Discussion on interpreting questions and writing good responses (handout)

Monday – Afternoon Session (1-4:00pm)

I. Biodiversity Measurements

A. Shannon Biodiversity Index Simulation

B. Benthic Bugs and Bioassessment

II. Inquiry and Water Quality Measurements (DLC)

III. Introduction to Study of Pond Ecosystems

IV. Introduction to BioBottles - Planning

V. Field Preparation for Tuesday

Homework: *1) Read through Lab 6 – Determining the Health of a Pond Ecosystem*
2) Do Activity – Ecological Experiments in the Field: River Food Chains
3) FRQ #2 – 2001 (Food Web/Ecological Interactions)
4) FRQ #4 – 2001 (Stream WQ)

Tuesday – Morning Session (8-noon)

I. Gather Equipment for Field Activity

II. Field Activity: Determining the Health of a Pond Ecosystem (Sunset Park)

III. BioBottle Design & Construction

IV. Human Population Changes – Survivorship Curves (The Cemetery Lab!)

V. Travel back to Del Sol High School

Lunch: ***The Lorax***

Tuesday – Afternoon Session (1-4:00pm)

I. Consolidate Cemetery Data & Construct Survivorship Curves

II. Review and Discuss Monday Homework

Ecological Experiments in the Field: River Food Chains

FRQ #2 – Food Webs, Ecological Interactions & Experimental Design

FRQ #4 – Stream Water Quality and Experimental Design

III. Stream Quality Monitoring Handout & Discussion on Lab Design

IV. Energy Calculations

V. Field Preparation for Waste Water Treatment Plant

Homework: 1) Construct Aquatic Food Web from Jacks Pond Park
2) FRQ #4 – 2005 (ANWR)
3) FRQ #1 – 2007 (Waste Water Treatment)

Wednesday – Morning Session (8-noon)

I. Evolution: Thought Exercises (Part I)
II. Field Trip to Las Vegas Water Pollution Control Facility (WPCF) - 6005 East Vegas Valley Drive (8:30-11:00)
Preliminary Design of WWT Plant Lesson
III. Evolution: Thought Exercises (Part 2)

Lunch: *"Wonderful World of DUNG!"* – video & question sheet (yes, I have a cruel sense of humor ;-)

Wednesday – Afternoon Session (1-4:00pm)

I. Debrief trip to WWT Plant & Discuss FRQ #1 – 2007
II. Nutrition and Food Resources
III. Toxins & Health Analysis
IV. Wicked Problems – Mock Trials
V. Syllabi Review and Construction – Part 1
VI. Discuss and Review Homework

Homework: 1) FRQ #1 – 2000 (Power Plant Calculation)
2) Onondaga Lake Case Study & Calculation Problems

Thursday – Morning Session (8-noon)

I. Review Homework Activities
A. Onondaga Lake Case Study and Problems
B. FRQ #1 – 2000 (Power Plant Calculation)
II. Explorations in Soil & Food Resources
A. Earth Apple
B. Productive Land vs Population Growth (website)

C. The Wealth Beneath Your Feet – Soil Lab (also discuss Lettuce Lab)
III. Human Population
A. Bacteria Bottles
B. Demographic Facts of Life

Lunch: "Cane Toads" – video and question sheet

Thursday – Afternoon Session (1-4:00pm)

I. Human Population (cont)
C. Human Population Growth
D. Power of the Pyramids

II. Discuss and Review Homework:
    A. Aquatic Food Web Activity (Heather) & "Oh, DEER" Activity
    B. FRQ #4 – 2005 (ANWR)
    C. Discuss Waste Water Treatment Lesson Design
III. Syllabi Review and Construction – Part 2
IV. Participant Activity Exchange
V. Review textbooks & lab resources
VI. Workshop Evaluation & Suggestions

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AP* Environmental Science