ONLINE LESSON PLAN

Inclusive Best Practices Project
Educating Students with Complex Support Needs
2008-2010

Respondent: **Eric Mitcheltree**
Muncy Junior-Senior High School
Muncy School District

Date of lesson to be observed/taped: **May 12, 2008**

1. Lesson Title:
Riparian Forest Analysis

2. Teacher(s) Name(s):
Eric Mitcheltree, Science Teacher, Muncy Junior-Senior High School

3. Grade Level(s): 11 and 12

4. Content Area: Environmental Science

5. Description/Abstract of Lesson:

Students will collect physical, chemical and biological data at a local riparian forest (Susquehanna River Fish Commission materials will be brought back to lab for chemical analysis and composition of soil and identification of specimens. The taping will be the last day of this six day lesson, culminating in students discussing results and diagraming a specimen from the field.

6. Primary Lesson Objectives:

At the end of this unit/lesson, students will be able to:
(1) Describe chemical, physical and biological parameters of a riparian forest
(2) Explain the differences between a riparian forest and a non-riparian forest
(3) Analyze and diagram specimens gathered during the Field Study.

7. Cognitive Level:
Knowledge
Comprehension
Application
Analysis
Synthesis

8. Standards and Anchors Addressed:

4.6.12. A
4.6.12. B
4.6.12. C

9. Guiding Questions for this Lesson:

1. How does seasonal flooding impact a forest community?
2. How are natural forest communities different from managed forests?

10. Assessment Tools:

Observation of Students in lab groups
Assessment of Field Notebook assignments
Student Self Reflection
Quiz/Test

11. Learning Connections:

Background: Students will collect physical, chemical and biological data at a local riparian forest (Susquehanna River Access). Materials will be brought back to lab for chemical analysis and composition of soil and identification of specimens. The taping will be the last day of this six day lesson, culminating in students discussing results and diagraming specimens from the field.

Prior learning: Students will have previously analyzed trees found on the school campus, performing similar tasks.

Curriculum connections: Math (measurements)

12. Instructional strategies used in this lesson:

Cooperative Learning
Demonstration
Inquiry-based Learning
Lecture
Note-taking
Project
Teacher Questions

13. Learning Activities or Tasks

Day 1: Students will be introduced to the site through classroom discussion. Students will also setup Field Notebooks to note data collected in the field and the lab.

Day 2: Students will travel by bus or van to the riparian forest site. Groups of two or three students will collaborate to complete in the field study assignments. The tasks include soil chemistry, pit trap construction (for insect collection) or line transects

Days 3 and 4: Students will perform chemical tests and identify organisms obtained in the field.

Day 5: Students will complete their field notebook data by constructing a transect map of the forest studied and will participate in directed discussion of the site.

Day 6: The teacher will finish the site discussion. Students will then construct a "Bestiary", with individual discussions with students of the taxonomy that may be used on the lab practical portion of the exam.

Day 7: Field Study assessment: part written exam, part lab “practical” exam.

14. Classroom Organization and Learning Environment:

The classroom is setup with fixed lab tables containing electrical outlets for microscopes, two sinks positioned at the front of the classroom and 15 computers at the back of the room. The tables have wide enough seats for wheel chair access. The back of the room is also modified for wheelchair access. Students will be at their seats for the first part of class discussion on of the field study site. Students will be working throughout the classroom during the second part of class to complete their bestiaries, and will be at their seats to complete their field notebooks.

15. Physical Environment/Classroom Layout:

Lab Tables

16. Materials and Resources:

Textbook, Manipulatives, Lab Equipment

Two paraprofessionals will assist students with disabilities during the lesson. One of twill work with students in lab groups to complete their specimen identification and analysis, and one will assist the student with complex support needs.

17. Lesson Evaluation/Teacher Reflection

This is the 15th year I've done this lesson. I expect the lesson to progress smoothly.