



Melissa Schwartz	Tree Conservation Unit
M.T. Bedwell Elementary School	
Bernardsville, New Jersey	Science, Math, Language Arts, Geography, Social Studies
2004	Grade 4
Puerto Rico's Rainforest	One to two weeks; to be continued throughout the year

Abstract: After completing our “fact bookmarks” based on my PowerPoint presentation and explanation of my expedition, we will begin our unit on trees and conservation, which will coincide with Fall. I plan on reading, *The Lorax*, by Dr. Seuss to get my students motivated about the importance of trees. My students will have to make a correlation between this children’s book and real-life conservation. Next, I plan on doing a tree study similar to what I did in the field. I will be taking the students outside where we will measure the dbh, canopy width, and slope of several trees and we will be checking for growth throughout the year. We will discuss what conditions are needed for healthy tree growth and compare the similarities and differences between the trees I studied in Puerto Rico and the trees in Bernardsville, New Jersey. I will also include other outdoor activities such as outdoor Fall poetry writing and leaf collecting as a part of this unit. In addition, to differentiate for more advanced students, I will provide the opportunity to do a tree research report.

Goal: My students will understand the importance of scientific research and conservation projects through hands-on activities, reading, and writing projects.

Performance Indicators:

1. Students will be able to demonstrate an understanding of the importance of conservation and the effects of forest destruction. (Group and individual writing tasks)
2. Students will understand the correlation between *The Lorax* and real-life deforestation and will demonstrate understanding through a writing prompt.
3. Students will develop their scientific research skills by using various measurement tools to measure trees.
4. Students will be able to demonstrate critical thinking skills by comparing local trees to Puerto Rican trees.

Background Information: As previously stated, students have already acquired information about the rainforest from third grade thematic unit. These concepts will be reviewed with specific emphasis on the importance of

trees in the rainforest. In addition, students must be present for my PowerPoint presentation that outlines my Earthwatch expedition and how to take tree measurements.

- Materials:**
1. Puerto Rico's Rainforest PowerPoint Presentation- using computer and screen projection.
 2. Coqui Bookmarks
 3. Dr. Seuss's *The Lorax*
 4. Measuring Tape
 5. DBH tape
 6. Tree, Rainforest, and Conservation books for classroom library
 7. Paper
 8. Internet (Computer)
 9. *Discovering Trees* by Douglas Florian
 10. *The First Forest* by John Gile

Technology: Throughout the unit I may use some of the following:

1. Microsoft PowerPoint
2. Internet
 - a. www.eyeontherainforest.org (Las Casas website)
 - b. www.cnnnet.clu.edu/procoqui (Coqui website)
 - c. www.PCRF.org (Planetary Coral Reef Foundation)
 - d. www.space.com
 - e. www.bio2.com/index/html.

Instructional Procedure: (To be done over the course of about a week)

Introduction:

Review: Previous knowledge of rainforest and summer bridge activities.

-PowerPoint Presentation of my expedition in which students will see pictures, leaf samples, wood, and receive a lot of information to be recorded on bookmarks. (PowerPoint presentation to be given days before tree unit begins)

Motivation: Ask students to brainstorm what might happen if we keep on destroying rainforests. Show students "The Lorax" puppet who can help show us the effects of rainforest destruction.

Activities:

1. I will read aloud *The Lorax* by Dr. Seuss and think aloud making connections to the real world and asking the children to do the same.
2. We will outline cause and effect in the story on chart paper through group discussion and then students will independently answer a writing prompt relating the story to real-life deforestation.
3. I will review with my students the reason why scientists measure trees and I will review the different forms of tree measurement.
 - a. Students will learn key vocabulary: canopy, slope, and diameter.

4. I will take the students outside to demonstrate use of the measuring tape, dbh tape, and compass to measure a tree's canopy width, diameter, and slope.
5. Once the children feel comfortable doing this, they will work in groups to measure several trees on the school property and record data.
6. Once data is collected we will discuss what might make certain trees grow faster or appear healthier than others. We will also compare the tree measurements of the trees that I measured in Puerto Rico to those in Bernardsville, New Jersey.
7. I will read aloud *The First Forest* by John Gile. We will discuss the genre of the book and as I read I will think aloud noticing figurative language, poetic form of story.
 - a. Students will do a creative writing prompt based on this story.
8. We will read portions of Douglas Florian's *Discovering Trees* so students become familiar with various types of trees.
 - a. We will review the components of non-fiction text and compare this book to *The First Forest*.
9. To differentiate instruction for those advanced students, I will provide an optional tree research project for them to work on.

Closure: Once the whole unit is completed we will present the information that we have found to another class in the school. In addition, we will discuss and write journal entries on the importance of scientific research and conservation projects, the goal of this unit.

Assessment:

Students' understanding of the content of this unit will be assessed through their data collection sheets, journal entries, and writing prompts. Students should show knowledge of key vocabulary words and understanding of conservation and scientific research.

Students' understanding of hands-on activities and group work will be assessed through anecdotal notes that I will take as I walk around observing.

Connection to Other Content Areas:

This unit makes connections to Science, Math, Language Arts, Geography, and Social Studies. In addition, we will be doing art projects with leaves and learning some conservation songs for music connections.

Core Curriculum Standards: 3.1, 3.2, 3.3, 3.4, 3.5, 4.9, 4.10, 5.2, 5.4, 5.5, 5.7, 5.12

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