

**Mini-Unit Title:** –Supermarkets,” Sustenance, and Sustainability

**Grade Levels:** 10 – 12 (students who have already taken Living Environment/Biology)

**Content Area(s):** Science, English, Social Studies, Global Citizenship Seminar, Advisory

**Time Allotment:** 3 – 5 class periods (60 – 90 minute periods)

### **Academic Standards Addressed**

New York State Education Department English Language Arts Learning Standards 1, 3, 4

### **Abstract**

In order to help us, the Earthwatch volunteers, gain an understanding of life in the Amazon and let go of some of our ethnocentric ways of thinking, Dr. Bodmer made the analogy that the jungle is the supermarket for the people living in the Amazon. Not only is it an ever-changing, sometimes unreliable, difficult place to acquire basic needs, it is a valuable resource that must be preserved in order to provide for future generations of people. The basic problem is how people can meet their immediate needs and still insure that resources will be available for months, years, centuries to come. In order to tackle this problem, one must first begin to understand the people who live here, the environment they are living in, and the plants and animals that they rely on to survive that could disappear if used in an unsustainable way.

### **Goals**

Students will be able to:

- identify the necessity for and challenges of conservation
- gain a basic understanding of cultural relativism
- gain a basic understanding of daily life in the western equatorial Amazon
- compare and contrast their own daily needs, activities, and challenges to those of people living in the western equatorial Amazon

### **Performance Indicators**

- Verbal participation and written work during class (daily participation grade)
- Collaborative team work (graded with a rubric)
- Group project (graded with a rubric)
- Presentation (graded with a rubric)
- Comparison and contrast essay (graded with a rubric)

### **Background Information**

- Completion of Living Environment/Biology
- 8<sup>th</sup> to 9<sup>th</sup> grade reading level (materials can be adapted for struggling readers and writers)

### **Materials**

- Chart paper
- Markers/Colored Pencils
- Paper
- Pens/pencils

- Handouts about: flooded forests in the western equatorial Amazon (terrain, causes/effects of changes in water level, etc.); peccaries in the flooded forests of this area (dietary needs, how affected by changes in habitat/water level, etc.); arboreal mammals in the flooded forests of this area (dietary needs, how affected by changes in habitat/water level, etc.); fish in the flooded forests of this area dietary needs, how affected by changes in habitat/water level, etc.; agriculture/plants in the flooded forests of this area (species, productivity, soil, types of crops that can grow, fruit, etc.); Cocama people (adaptability, –seasonal” hunting and fishing practices, basic cultural beliefs and practices, habitat type, dietary needs/wants, etc.).

### Technology

- Computers with Internet access (optional)
- Projector (optional)

### Instructional Procedure

1. Motivation: Students write a *detailed* account of an average trip to the supermarket beginning with leaving the apartment/house and ending with returning and preparing a meal for the family.
2. Students share out.
  - Discuss: How easy or difficult is it for you to acquire food? Why?
  - What influences what you choose to buy and eat?
  - How easy or difficult for you/your family members is it to prepare and serve a meal to all the members in your household? Why?
3. Brainstorm: What do you know, and think you know, about the Amazon?
4. Provide a brief description of the western equatorial Amazon so that students are able to participate in step 5 (don't give too much information—let them be creative!).
5. If you lived in the Amazon how do you think you would acquire what you and your family members need in order to survive?
6. Show students photographs/slides of western equatorial Amazon (flooded forest floor, trees and plants, animals, people's homes, etc.).
7. Small group work (6 expert groups: flooded forests, peccaries, arboreal mammals, fish, agriculture/plants, and the Cocama people): Read and annotate the handouts and write a brief summary of the information you learn. If Internet is available, students can search for additional information.
8. Small group work: one member from each expert group joins with others to form a new group (each group should have 6 members, 1 from each expert group).
9. Small group work: Community Plan for Sustenance and Sustainability. Each group is given a scenario in which a Cocama family is in need of resources. The scenario must outline the time of year, the number of family members and their ages/disabilities, etc., the number of others in the village/community/area, the family's existing resources (boat? skills? etc.). Working collaboratively, the group must determine how the family will acquire necessary resources based on what resources are available, what the family's needs and challenges are, etc. In addition, they must not exhaust any resources (they must still be there for the next few generations of villagers). They can use chart paper to outline their Plan and create visual images and must write down a detailed account of their Plan.

10. Presentations: show visuals, explain the Community Plan for Sustenance and Sustainability, and explain why certain choices were made. Answer questions.
11. Teacher delivers mini-lecture on current/proposed community-based conservation plans in western equatorial Peruvian Amazon.
12. Students write an essay in which they compare and contrast their own group's Community Plan to currently planned/implemented community-based management conservation plans and identify the strengths and weaknesses of either (or both).
13. Reflection:
  - In what ways are your (students') needs similar to those of the Cocama? In what ways are they different?
  - In what ways are your challenges in acquiring and preparing food and meeting your nutritional needs similar to those of the Cocama? Different?
  - What did you find interesting and/or surprising?
  - In what ways can you practice conservation in your own community?
  - What might you do differently from now on based on what you have learned?

**Assessment:** Class participation points and rubrics (see "Performance Indicators").

**Extensions/Connection to Other Content Areas**

Bring in articles, short stories, novels, poems, et al. reading materials on the Amazon; study the history of explorers, colonizers, missionaries, and rubber barons in the Amazon and their affect on the environment and the indigenous people; show clips from *Aguirre*, *Wrath of God*, *Fitzcarraldo*, and/or *The Mission*; study the benefits and dangers of the timber industry on the environment and the people.

Lesson Submitted by: Erin Bauer