



New Mexico and the World

Curriculum Resources for New Mexico Teachers



The Price of Protein

Historically, the Pantanal has been an area of intense cattle production. Students will research and learn about this area, focussing on the social fabric of the community.

These lessons contain (thanks to Jane Goodall's program, Roots and Shoots) three main aspects:

- Care and concern for people*
- Care and concern for animals*
- Care and concern for the environment*

Additionally, the lesson includes research of the global issue or subject, application at the local level, and an element of community service. Each lesson plan provides a menu of possible areas of interest for the students to investigate. Likewise, the suggestions for activities should allow choice to the learners. Documentation of the student's research could be in the form of a drawing, a report, a debate, or a three-dimensional diorama. Implicit in the design of my lessons is the need for each student to do their own research, and present their learning to the class.

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Grade Level: 5-8

Area: Language Arts; Science

Strand(s):

NM Benchmark(s): LANGUAGE ARTS:

Strand: Reading and Listening for Comprehension Content

Standard I: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.

Strand: Writing and Speaking for Expression Content Standard II: Students will communicate effectively through speaking and writing.

SCIENCE:

Strand III: Science and Society

Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.

Length:

of Students:

- Learning Objectives:** To consider some of the pros and cons of ranching
To investigate current issues surrounding the health of safety of eating "high on the food chain"
To research possible benefits of seeking alternative sources of proteins
To explore vegetarian life-style as alternative to meat consumption

Introduction: In the Pantanal, and perhaps even at a national level, the boi (cow) and the vaqueiro (cowboy) are integral parts of the society and the culture. Similar to the cowboys of the western United States, the figure of the vaqueiro is an important icon. Likewise, the issues surrounding cattle-raising and the detriment to the environment are common concerns for both countries.

Sharman Apt Russell, a resident of the Gila River area in New Mexico writes of the effect of cattle grazing on the environment, "What sustained heavy grazing has done, here in this country and all over the world, is contribute to the insidious drying of our planet." (Kill the Cowboy, 6) Despite the title, the author is not calling for an end to either the cow-person, not the grazing of cattle. In her book, Apt Russell makes some powerful conclusions: there need to not eat as much meat, to pay a better price for what we do eat, to not import beef from other countries, to not support the destruction of an ecosystem anywhere and to allow for the reintroduction in the southwest of the native Mexican wolf.

Although Russell is specifically speaking of areas protected and administered by the United States federal government and administered by the BLM, her words are also applicable to the Pantanal. She concludes with these remarks, I believe in wilderness and large expanses of wildlife habitat because wilderness and wildlife have an intrinsic right to exist. Moreover, we need them. Wilderness proponents ask for so little: a small percentage of the contiguous United States, the barest fraction of this planet, tiny slivers of land. This is an important compromise between humanity and the rest of the earth. I believe that cattle should be slowly and honorable phased out of most wilderness areas, wildlife refuges and national monuments. (Cowboy, 196) I believe that we need the cowboy. We need every root and roothair. I believe in a biodiversity of myth. Remembrance is an acknowledgment of the past, of all that was good and all that was bad. Repentance is a transformation lured by the vision of what the future could be.

Russell reminds us that we must think globally, and act locally. Her book also helps to explain the fascination for ranching and the glamorization of the Brazilian vaqueiro and the cattle-raising industry. Worldwide, the land degradation from cattle-raising is leading to erosion and to the creation of wastelands. The burning of the Amazonian rainforest and the clearing of matto in the Pantanal has implications for the wetlands and the water cycle. (Eco-

Economy, 57)

The churrasquerias (restaurants featuring huge amounts of meat) give a very false impression of the ability of the average person to be able to eat well, hiding the fact that some 30 million people are suffering from hunger and food insecurity in Brazil. The present currency, the real, is the currency that replaced the cruzeiro in 1994. The value had been artificially propped up by the government until 1999, with one real being equal to one dollar. Because of the need for Brazil to service their foreign debt and control inflation, the current economic situation is very difficult for the average person. With the current three to one ratio of real to dollar, the American tourist is not only seen as being much advantaged, but is in actuality much wealthier than Brazilian workers.

Materials:

Procedures:

PEOPLE:

1. Investigate the lifestyle of the Brazilian vaqueros and fazendeiros. What are the relationships between the workers and the owners of the cattle ranch?
2. What is a typical day in the life of a person of this region?
3. Research and create a typical dish from the Pantanal (other than jacaré stew)

ANIMALS:

1. What are some of the typical animals (mammals, reptiles, amphibians, insects etc.) of the Pantanal? Compare and contrast them with the local animals in your area.
2. What type of cattle is best suited for this area, and how are they feed?
3. What is the role of cattle ranching as viewed by people in this area?

ENVIRONMENT:

1. What changes (to the environment) have taken place with the presence of cattle ranching, in Brazil?
2. What is the price per pound of meat, and what is the additional cost (including the grazing, herding, healthcare, transportation etc.)?
3. What are some alternative sources of protein available to people? Perhaps a grub at the gourmet café?

Background Info:

**References-
Resources:**

Student Activities:

Assessment:

**Technology
Integration:**

Accommodations:

Review Questions:

Related Careers:

Career Education:

Hints and Tips:

Lesson Evaluation: