



Gray Whales

9-12 Classroom Activity

Lagoon Debate

OBJECTIVE

Given a common environmental situation, students will research available literature or other resources for more information, and logically argue a viewpoint. They will be able to demonstrate a real-life decision-making process and evaluate its outcome.

ACTION

1. Familiarize yourself with the environmental situation by reading all three player cards and the background information.
2. Divide your class into three groups. Each student group represents a different fraction of the issue.
Group 1: the developers: Mitsubishi and the Mexican government
Group 2: a coalition of environmentalists
Group 3: local population of fishermen and tourist business people
3. Distribute player cards to student groups.
4. Give students a chance to familiarize themselves with the situation. Depending on your students and the time given to the assignment, this may be a few minutes to a week or more of research.
5. Stage a "town meeting" at Laguna San Ignacio, Baja California, to discuss the issue. At the end of the meeting, vote on a plan that will be acceptable to all fractions.
6. After the meeting, discuss how environmental issues are complex problems of society that affect people as well as animals. Ask the following questions to prompt students to discuss the decision-making process. Were all groups satisfied with the outcome of the meeting and the new policy?
 - Is it always easy or possible to come up with a solution acceptable to all concerned?
 - Would it ever be beneficial to compromise your point of view? When and why?
 - What role does science play in policy-making?
 - What role does public education play in awareness and action?

BACKGROUND INFORMATION

On March 2, 2000, Mitsubishi and the Mexican government abandoned plans to build a salt plant near Laguna San Ignacio in southern Baja California, a favorite nursery grounds for gray whales. Since announcing the salt plant plans more than five years ago, Mitsubishi Corporation of Japan and the Mexican Federal Government met opposition from an international coalition of environmentalists, fishermen, scientists, and consumers.

The 116 square miles (300 square kilometers) to be developed for the salt plant fell in the heart of the six million acre (2.4 million hectare) Vizcaino Biosphere Reserve which protects endangered species and critical habitats. Sustainable human activities are encouraged within a reserve buffer zone, but the core areas (like Laguna San Ignacio) are closely regulated to allow only activities consistent with the Reserve's conservation objectives.

MATERIALS

- Lagoon Debate player cards
- access to library, Internet or other sources of information
keywords for Internet searches on Yahoo, Google, or Lycos include "Vizcaino Biosphere Reserve" "Gray Whales" "Laguna San Ignacio"

Player Cards

DEVELOPERS

Mitsubishi Corporation of Japan and the Mexican Federal Government
You are determined to provide industry to the area. You see the lagoon site as an excellent area to produce salt. Studies have shown the saltworks will contribute \$80 million a year with \$8 million a year going into the local income. There will be between 100-250 jobs created. You view this as a way for the local people to better their lives, to build or buy better houses, and have more money to spend.

COALITION OF ENVIRONMENTALISTS

The Natural Resource Defense Council, International Fund for Animal Welfare, and the World Wildlife Fund
You are committed to saving the environment and endangered species. You know this development will totally destroy the California gray whale's last undisturbed nursery lagoon. Besides gray whales, you fear the saltworks will harm other animals as well, such as sea turtles, eagles and falcons, seabirds like pelicans, and land animals such as the endangered peninsular pronghorn antelope. To help fight the war against Mitsubishi, you are recruiting others that feel the same as you. You have asked consumers to boycott Mitsubishi products, and to write or e-mail letters of protest.

LOCAL FISHERMEN AND TOURIST BUSINESS PEOPLE.

You understand the people in the towns around the lagoon need more jobs and a better living, but are unsure whether it should be from fishing and tourists or from big business like Mitsubishi and the saltworks. You know that a study conducted in 1996 showed a fish catch of 14.5 kilograms with a harvested value of \$60 million. The fisheries provide 450 jobs a year with high local value because the fish is processed locally. You also know ecotourism contributes about \$500,000 a year with \$400,000 going into the local economy. At least 100 jobs come from ecotourism. Fisheries and ecotourism depend on maintaining a healthy environment and keeping areas safe from industrialization.