

The Jeff Corwin Experience

Costa Rica: Coastal Ecosystem

Teacher's Guide

Grade Level: K-8

Curriculum Focus: Life Science

Lesson Duration: Two class periods

Program Description

Jeff Corwin explores a secluded beach in Costa Rica, hoping to witness thousands of sea turtles that come ashore to lay their eggs. He encounters a troop of Capuchin monkeys, a venomous bushmaster serpent, a silky anteater, dolphins, whales, and frogs.

Video Index

Segment 1: Entering the Rain Forest (16 min.)

Description

Enter the rain forest of Costa Rica to see a range of animals, including the venomous fer-de-lance, the red-eyed tree frog, and playful monkeys.

Pre-viewing question

Why do you think the fer-de-lance is so dangerous?

Answer: Answers will vary, but some students may mention that it is large and has poisonous venom.

Post-viewing question

What does it mean to say that an animal is a generalist?

Answer: A generalist is an animal that eats just about anything. Such an animal has a greater chance of surviving than one with a more limited diet.

Segment 2: Moving West (17 min.)

Description

Travel into the Manuel Antonio area, home to the Central American bushmaster and many different poisonous – and playful – frogs.

Pre-viewing question

Where do you think poisonous frogs produce their poison?

Answer: Answers will vary, but some students may know that the frogs' poison is in their skin.

Post-viewing question

What are some characteristics of the pygmy anteater?

Answer: It is nocturnal, lives in the trees, and it has very soft, silky fur.

Segment 3: An Arribada (9 min.)

Description

Experience an *arribada*, the yearly mass nesting of turtles. Watch olive ridleys leave the water, lay their eggs on the beach, bury them, and then go back to the sea until next year.

Pre-viewing question

Why do you think the olive ridleys leave the water and go onto the beach?

Answer: Answers will vary, but students may know that they lay their eggs there.

Post-viewing question

What is an *arribada*?

Answer: It happens yearly when thousands of turtles come onto the beach to lay their eggs.

Lesson Plan

Student Objectives

- Learn about a unique event in Costa Rica known as the *arribada*.
- Write a journalistic article about the *arribada*.
- Compile the articles in a class notebook on the *arribada*.

Materials

- *The Jeff Corwin Experience: Costa Rica: Coastal Ecosystem* video and VCR, DVD and DVD player
- Computer(s) with Internet access
- Paper and pencils

Procedures

1. Begin the lesson by telling students that the *arribada* is the time when thousands of olive ridley sea turtles come onto the beach to mate and bury their eggs. Show segment 3 ("An Arribada") of *The Jeff Corwin Experience: Costa Rica: Coastal Ecosystem*.
2. After watching the segment, have students imagine that they are journalists covering the *arribada*. Their assignment is to write a compelling story about this event for readers who know nothing about sea turtles. The stories should follow the journalistic style of presenting the main points in the first paragraph. Students can check whether they have done that by making sure they answer



the following questions: who, what, where, when, why, and how. Suggest that students include photographs with their stories.

3. As students outline their stories, suggest that they also consider these questions:
 - What is the *arribada*?
 - Why does it occur?
 - How do the sea turtles know what to do?
 - Do you think this activity ensures the survival of sea turtles? If so, why?
4. Tell students that the following Web sites have useful information:
 - <http://www.costarica-nationalparks.com/ostionalwildliferefuge.html>
 - http://personal.riverusers.com/~teleman/national_parks_11-20.htm
 - http://www.ambios.co.uk/seaturtles/texts/Parlomas%20in%20the%20Pacific_CA.pdf
 - http://travel2.nytimes.com/fodors/top/features/travel/destinations/centralandsouthamerica/costarica/fdrs_feat_53_6.html?n=Top%2FFeatures%2FTravel%2FDestinations%2FCentral+and+South+America%2FCosta+Rica
5. During the next class period, ask volunteers to read their stories aloud. Then collect the stories and compile them into a class book. Students may add a cover, a table of contents, and a bibliography.

Assessment

Use the following three-point rubric to evaluate students' work during this lesson.

- **3 points:** Students watched the video segment carefully and attentively; gave the assignment a great deal of thought and considered all the questions asked; produced an accurate, compelling, and visually interesting story that followed the journalistic style.
- **2 points:** Students were attentive to the video; gave the assignment some thought and considered most of the questions asked; produced a mostly accurate, interesting, and somewhat visually interesting story that mostly followed the journalistic style.
- **1 point:** Students were not attentive to the video; gave the assignment little thought and did not consider the questions asked; produced an incomplete story with few images and that did not follow the journalistic style.

Vocabulary

arribada

Definition: A ritual during which the olive ridley sea turtles come onto the beach, lay their eggs, bury them, and then go back into the water

Context: Thousands of olive ridley sea turtles can be seen on the beach during the *arribada*.



Costa Rica

Definition: A country in Central America located between the Pacific Ocean and the Caribbean Sea and bordered by Nicaragua and Panama

Context: Costa Rica has one of the strongest economies in Central America.

olive ridley sea turtles

Definition: A small olive-colored sea turtle found in tropical Pacific and Indian and the southern Atlantic oceans

Context: Although olive ridley sea turtles are the smallest sea turtles, they are the least shy.

Ostional National Wildlife Refuge

Definition: A protected beach in Costa Rica where a large *arribada* takes place every year

Context: During an *arribada*, as many as one million sea turtle eggs may be buried on the beach in the Ostional National Wildlife Refuge.

Academic Standards

National Academy of Sciences

The National Academy of Sciences provides guidelines for teaching science in grades K-12 to promote scientific literacy. To view the standards, visit this Web site:

<http://books.nap.edu/html/nses/html/overview.html#content>.

Grades K-4

- Life Science: Organisms and environments

Grades 5-8

- Life Science: Populations and ecosystems
- Diversity and adaptations of organisms

Mid-continent Research for Education and Learning (McREL)

McREL's Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education addresses 14 content areas. To view the standards and benchmarks, visit

<http://www.mcrel.org/compendium/browse.asp>.

- Language Arts – Viewing: Uses viewing skills and strategies to understand and interpret visual media; Writing: Gathers and uses information for research purposes

Support Materials

Develop custom worksheets, educational puzzles, online quizzes, and more with the free teaching tools offered on the Discoveryschool.com Web site. Create and print support materials, or save them to a Custom Classroom account for future use. To learn more, visit

- <http://school.discovery.com/teachingtools/teachingtools.html>



