

Title: Discovering Costa Rica: New Places, New Ideas, New Experiences

Grade Level: 6-8; 9-12 Curriculum Focus: Social Studies, Science

**Video Segments:**

[The Mangrove Swamp](#) (06:04)

[Tracking the Fer-de-Lance](#) (2:53)

[Capuchin Monkey Survival](#) (4:07)

[Tracking Elephants](#) (6:33)

**Program Description:** These video chapters take you into the ecosystems of Costa Rica where you encounter indigenous animals as well as a natural ecosystem. Adaptation and the importance of ecosystems are the foci of these video chapters.

**Learning Objectives:**

After viewing this video students will be able to:

- Compare and analyze societal patterns for preserving and transmitting culture while adapting to environmental or social change
- Explain how language, art, music, belief systems, and other cultural elements can facilitate global understanding or cause misunderstanding
- Understand how an organism's behavior evolves through adaptation to its environment
- Understand that populations of organisms can be categorized by the function they serve in an ecosystem

**Classroom Connections:**

**A:** One idea that permeates all of the video chapters on Costa Rica is *adaptation*. The Capuchin monkey, the Fer-de-Lance, and elephants have all adapted to their environment and ecosystem for maximum survival. The Capuchin monkey, for example, chews the leaves of piper plants to harness the leaves' chemical properties, creating a bug repellent they rub into their fur. The Fer-de-Lance, a bothrops asper, one of the most feared snakes in South America, relies on the rain forest for its camouflage. And as we learn from Jeff Corwin, the mother elephants will sacrifice their lives in order to save their babies; in fact, Corwin and the Masai guide call these animals, "extraordinary mothers," comparing their reactions and responses to human mothers.

In light of what you have learned here, explore the ways you and your classmates adapt to your environment(s). Explore any similarities of adapting to an environment you see between the animals in the video chapters and yourselves.

**B:** The Mangrove Swamp is awash with life. Corwin describes this area as "the most pristine and unique ecosystem in the world, hosting a number of types of life."

Using the Internet and your library, determine where the closest ecosystems are in your area. Research what makes them good ecosystems. Search for what kinds of life exist

there, like the Pygmy Anteater Corwin discovers. Be sure to record the traits and habitats of the different life forms. For example, Corwin tells us that the Pygmy Anteater is arboreal and is a didactylus. Report your findings to your class. You may use images or video segments in your presentations.

### **Target Vocabulary:**

**Ecosystem:** the complex of a community of organisms and its environment functioning as an ecological unit

**Abductor Muscle:** to draw or spread away (as a limb or the fingers) from a position near or parallel to the median axis of the body or from the axis of a limb

**Masai:** a member of a pastoral and hunting people of Kenya and Tanzania

**Pachyderm:** any of various nonruminant mammals (as an elephant, a rhinoceros, or a hippopotamus) of a former group (Pachydermata) that have hooves or nails resembling hooves and usually thick skin; *especially*: ELEPHANT

**Didactylus:**\*\* a small, fast-moving sloth with two claws

**Arboreal:** inhabiting or frequenting trees <*arboreal* monkeys>

**Bothrops asper:** the venomous pit viper found in South America

\*All definitions from *Merriam Webster Dictionary Online* (link to <http://www.merriam-webster.com/>)

\*\* Definitions are from video

### **Academic Standards:**

National Council for the Social Studies (NCSS) has developed national standards to provide guidance for teaching social studies. To view the standards online, go to <http://www.socialstudies.org>

- Understand the significance of studying culture and cultural diversity
- Understand global connections and interdependence

National Science Teachers Association (NSTA) has adopted The National Academies Press national standards to provide guidance for teaching science. To view the standards online, go to <http://books.nap.edu/openbook.php?isbn=0309053269>

- Understand population and ecosystems
- Understand diversity and adaptations of organisms