

The Jeff Corwin Experience

Morocco: Mysterious Desert Ecosystem

Teacher's Guide

Grade Level: K-8

Curriculum Focus: Life Science

Lesson Duration: Three class periods

Program Description

Morocco holds its secrets closely. Jeff Corwin uncovers them, leading him to the not-so-friendly horned viper, the secretive “fish of the sand,” and the legendary predator that killed Cleopatra – the cobra.

Video Index

Segment 1: The Moroccan Coast (15 min.)

Description

Explore the coast of Morocco, where rare northern bald ibises live. Discover a Montpellier snake, then learn about the unique relationship among people, goats, and argon seeds.

Pre-viewing question

Q: Why do you think the northern bald ibises are on the verge of extinction?

A: Answers will vary, but some students may mention that the ibises have been overhunted, exposed to lethal pesticides, and pushed from their habitat.

Post-viewing question

Q: How do people make argon oil?

A: First they extract the seeds from the scat of goats, which eat argon fruit. Then they make a paste from the seeds and extract the oil from the paste.

Segment 2: The Sahara (14 min.)

Description

Travel to the Sahara desert to meet the Berbers, a nomadic tribe who survives in this harsh environment. Discover the fish of the sand.

Pre-viewing question

Q: What do you know about the Sahara?

A: Answers will vary, but some students may know that it is a large desert in North Africa.

Post-viewing question

Q: How does the desert horned viper stay cool in the Sahara?

A: It undulates its body so that it moves under the sand, where temperatures are lower.

Segment 3: Roman Ruins (12 min.)

Description

Journey to Volubilis, an ancient Roman ruin that is home to interesting creatures. Meet a cobra and check out the African hedgehog that resembles a porcupine.

Pre-viewing question

Q: What other habitats do you think Jeff will visit in Morocco?

A: Answers will vary, but some students may figure out that he is going to a forest after leaving the Sahara.

Post-viewing question

Q: The venom of cobras often contains a neurotoxin. What is a neurotoxin?

A: A neurotoxin is a substance that damages or destroys the cells of the central nervous system. When injected into prey, the neurotoxin usually causes paralysis and death.

Lesson Plan

Student Objectives

- Learn about Morocco's desert animals.
- Create an album about Morocco's reptiles and arachnids.
- Share the albums with other members of the class.

Materials

- *The Jeff Corwin Experience: Morocco: Mysterious Desert Ecosystem* video and VCR, DVD and DVD player
- Computer(s) with Internet access
- Paper and pencils
- Scissors and glue
- Markers, colored pencils, and crayons

Procedures

1. Begin the lesson by showing students *The Jeff Corwin Experience: Morocco: Mysterious Desert Ecosystem*. Ask students to pay close attention to the reptiles and arachnids featured.



2. After watching the video, discuss with students the animals they saw. Ask them to name the reptiles and arachnids, which should be the following:
 - Montpellier snake
 - black scorpion
 - desert horned viper
 - North African cobra
 - uromastyx lizard
3. So students can remember their virtual journey to Morocco, ask them to create an album of Morocco's reptiles and arachnids. Each page should include a drawing or photograph of the animal, its name, size and weight, coloring, habits (what it eats, when it eats, where it lives, when it mates), and if the animal is venomous. Students also should create a front and back cover for their albums.
4. Give students time in class to work on their albums. In addition to the information in the video, students can learn more about these animals at the following Web sites:

Montpellier snakes

- <http://thasos.users.btopenworld.com/herptiles.htm>
- <http://www.pubinfo.gov.nc.tr/b013.htm>

Scorpions

- <http://www.szgdocent.org/resource/ff/f-scorp.htm>

Desert horned vipers

- <http://www.whozoo.org/Intro2000/sabrinor/SDNdeserthornedviper.htm>
- <http://www.pbs.org/sahara/wildlife/horned.htm>
- http://www.bbc.co.uk/nature/reallywild/features/desert_viper.shtml

Black cobras (also called Egyptian cobras)

- http://www.kingsnake.com/elapids/egyptian_cobras.htm

Uromastyx

- <http://www.centralpets.com/pages/critterpages/reptiles/lizards/LZD2742.shtml>
- http://www.nafcon.dircon.co.uk/agamids_uromastyx.html

5. If students need additional time, have them complete the albums as homework. During the next class period, ask for volunteers to share their work.
6. Conclude the lesson by discussing these desert creatures with the class. Which animal did students think was especially interesting? What did students learn about reptiles?

Assessment

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

- 3 points: Students were highly engaged in class discussions; researched the topic thoroughly; and produced an attractive, accurate, and informative album.
- 2 points: Students participated in class discussions; researched the topic adequately; and produced a satisfactory album.
- 1 point: Students participated minimally in class discussions; did not complete their research; and produced an incomplete album.

Vocabulary

desert horned viper

Definition: A large venomous snake that has scaly horns above its eyes

Context: The desert horned viper is a dangerous snake that will strike if provoked.

Montpellier snake

Definition: A green and black snake that has raised scales and strong venom

Context: The Montpellier snake's venom can kill a lizard, but it is not particularly dangerous to humans.

Morocco

Definition: A country on the northwest coast of Africa, bordered by the Mediterranean Sea to the north and Atlantic Ocean to the west

Context: The Strait of Gibraltar separates Morocco from Spain, which is only eight miles away.

North African cobra

Definition: A highly venomous snake that can stretch its neck into a hood

Context: The North African cobra may grow longer than six feet and it can move very quickly.

scorpion

Definition: A venomous arthropod of the arachnid family, characterized by a segmented tail with a stinger on the end

Context: A black scorpion's sting can be lethal to humans.

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>.

Life Sciences: Understands the relationships among organisms and their physical environment

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>

