



## **Giraffe Riff-Raff**

### **LESSON OVERVIEW**

**GRADE LEVEL:** 5-8

**TOPIC/SUBJECT MATTER:** Science

**TIME ALLOTMENT:** 1-2 class periods

### **OVERVIEW**

This lesson uses video segments from the NATURE film "Tall Blondes" to illustrate the effects of wildlife conservation and relocation, using giraffes as an example. Students will explore the different types of human-animal relationships, and then view video segments which look at human-giraffe relations and the effect to preserve the giraffe population in parts of Africa. This will be followed by a discussion of human behavior and impact on wildlife populations. As a culminating activity, students will examine different careers in wildlife conservation.

### **MEDIA RESOURCES:**

#### **VIDEO**

Clip 1: "In the Wild"

Introduction to translocation of giraffes.

Clip 2: "On the Move"

Example of processes of translocation.

Clip 3: "New Digs"

Giraffes arrive at the game farm and get used to their new environment.

Clip 4: "Giraffe Manor"

Giraffe Behavior and Human Interaction



## WEB SITES

### [NATURE: Tall Blondes: Giraffe Translocation](#)

<http://www.pbs.org/wnet/nature/episodes/tall-blondes/giraffe-translocation/2258/>

Background on translocation and an interview with the director of a wildlife relocation firm.

### [The Game Capture School](#)

<http://www.gamecapture.info/>

Web site for a school located in South Africa dedicated to wildlife conservation and education.

### [GCC: African Fund for Endangered Wildlife](#)

<http://www.gcci.org/afew/afew.html>

Organization which concentrates on education school children about conservation efforts.

### [The Giraffe Manor](#)

Official Web site for the Giraffe Manor hotel & giraffe preserve, as seen in "Tall Blondes."

### [Wildlife Translocation Association](#)

<http://wta.org.za/>

Association of companies engaged in the wildlife conservation industry in South Africa

### [Wildlife Conservation Society](#)

<http://wcs.org/>

Home of the conservation organization led by the Bronx Zoo.



## **STANDARDS:**

### **National Science Education Standards, Grades 5-8**

[http://www.nap.edu/openbook.php?record\\_id=4962](http://www.nap.edu/openbook.php?record_id=4962)

#### **Content Standard E**

### **UNDERSTANDINGS ABOUT SCIENCE AND TECHNOLOGY**

- Scientific inquiry and technological design have similarities and differences. Scientists propose explanations for questions about the natural world, and engineers propose solutions relating to human problems, needs, and aspirations. Technological solutions are temporary; technologies exist within nature and so they cannot contravene physical or biological principles; technological solutions have side effects; and technologies cost, carry risks, and provide benefits.
- Many different people in different cultures have made and continue to make contributions to science and technology.
- Science and technology are reciprocal. Science helps drive technology, as it addresses questions that demand more sophisticated instruments and provides principles for better instrumentation and technique. Technology is essential to science, because it provides instruments and techniques that enable observations of objects and phenomena that are otherwise unobservable due to factors such as quantity, distance, location, size, and speed. Technology also provides tools for investigations, inquiry, and analysis.
- Perfectly designed solutions do not exist. All technological solutions have trade-offs, such as safety, cost, efficiency, and appearance. Engineers often build in back-up systems to provide safety. Risk is part of living in a highly technological world. Reducing risk often results in new technology.
- Technological designs have constraints. Some constraints are unavoidable, for example, properties of materials, or effects of weather and friction; other constraints limit choices in the design, for example, environmental protection, human safety, and aesthetics.
- Technological solutions have intended benefits and unintended consequences. Some consequences can be predicted, others cannot.

#### **Content Standard F**

### **POPULATIONS, RESOURCES, AND ENVIRONMENTS**

- When an area becomes overpopulated, the environment will become degraded due to the increased use of resources.



Learn more at [www.pbs.org/nature](http://www.pbs.org/nature).



- Causes of environmental degradation and resource depletion vary from region to region and from country to country.

## **NATURAL HAZARDS**

- Human activities also can induce hazards through resource acquisition, urban growth, land-use decisions, and waste disposal. Such activities can accelerate many natural changes.

## **SCIENCE AND TECHNOLOGY IN SOCIETY**

Science and technology have advanced through contributions of many different people, in different cultures, at different times in history.

Scientists and engineers work in many different settings, including colleges and universities, businesses and industries, specific research institutes, and government agencies.

Science cannot answer all questions and technology cannot solve all human problems or meet all human needs. Students should understand the difference between scientific and other questions. They should appreciate what science and technology can reasonably contribute to society and what they cannot do. For example, new technologies often will decrease some risks and increase others.

## **MATERIALS**

For each group of students:

- Large sheets of paper or posterboard for Introductory Activity

For each student:

- Conservation Strategies Organizer



## OBJECTIVES

Students will be able to:

- Provide examples of human interactions with animals;
- Understand ways in which human behavior affects wild animal populations;
- Detail processes of conservation and translocation;
- Explain the pros and cons of wildlife conservation efforts;
- Identify and describe careers in wildlife conservation.

## Before the Lesson/Prep for Teachers

Prior to teaching this lesson, you will need to:

Preview all of the video segments and Web sites used in the lesson.

Download the video clips used in the lesson to your classroom computer, or prepare to watch them using your classroom's Internet connection.

Bookmark the Web sites used in the lesson on each computer in your classroom. Using a social bookmarking tool such as [del.icio.us](http://del.icio.us) or [www.diigo.com](http://www.diigo.com) (or an online bookmarking utility such as [www.portaportal.com](http://www.portaportal.com)) will allow you to organize all the links in a central location.

## INTRODUCTORY ACTIVITY:

1. Begin by asking students to think about their day-to-day interactions with animals. What types of animals do they interact with? What do their interactions consist of? (*Answers will vary.*) Encourage students to be thorough and look at their interactions with many different types of animal - this could include feeding pets, swatting flies, eating a hamburger - any situation where animals become part of the students' lives.
2. Pick four or five animals that came up during the class discussion. These may vary according to students' answers or regional animals, but they should be different kinds of animals that inspire different kinds of interactions (i.e. Dog, Fish, Spider, Squirrel). Divide students into four groups and assign an animal to each group. Give each group a large sheet of paper or posterboard. Give students 5-10 minutes to think about any and all ways that they might interact with this sort of animal, and to write down all of their answers on the sheet of paper.



3. When time is up, post the sheets of paper at the front of the room. Have students read some of their answers aloud. Compare the interactions with the different animals. Ask students the following questions based on their answers:

- Why do we interact with these animals in these ways?
  - How does our behavior impact these animals?
  - How does the animal's behavior impact us?
  - How does this animal impact our habitat or environment?
  - Do our actions have an impact on the animal's habitat or environment?
4. Tell students that while these interactions impact animals and their habitats on a local level, all over the world animal populations and habitats are affected both positively and
5. negatively by humans and human behavior. Ask students to reflect on their observations about human-animal interaction in their lives, and think of some examples of ways that human behavior has an impact on wild animals. (*Answers will vary, but should include negative effects such as habitat destruction, hunting, etc.*) Ask students what they think humans could do about some of the negative effects they have on wild animals. (*Conservation, preservation.*)

#### **LEARNING ACTIVITY:**

1. Tell students they're going to see some examples of humans interacting with a specific wildlife population - giraffes in Africa. Explain that, like many of the animals they interact with on a regular basis, giraffes are not endangered or at risk. However, they are susceptible to pressure from the human population. Ask students to think of what some of these pressures might be. (*Answers should include hunting, habitat destruction such trees cut down for firewood and to make room for livestock, expanding human population, competition for food and water resources.*)

2. Ask students to consider why conservation efforts would be made to save the giraffe population if it is not currently at risk? (*Answers may vary but should amount to "preventing the population from becoming endangered.*) Explain to students that while the giraffe population in general is not at risk, some subspecies may be in danger of extinction. Remind students that giraffes, as well as many other species of wildlife, are vulnerable to habitat loss and habitat fragmentation due to human expansion, and by making efforts now it may prevent negative effects on the animal populations later. Tell students that this process of managing natural resources, namely animals and their habitats, is known as conservation.



3. Ask students to think of what humans can do to counteract the negative effects on the giraffe population and habitat, and to write their thoughts in the first column of the Conservation Strategies Organizer. Tell students that translocation is one of the main strategies used in conserving the giraffe population, and give students a working definition of translocation (*the capture, movement, and release of wildlife from one location to another.*) Tell students that they will be watching some video clips that explore some of these conservation efforts.
  
4. FRAME the first clip by telling students that they will watch a video clip featuring wildlife relocation workers in the field, interacting with giraffes. Give students a FOCUS by asking them to note characteristics of giraffes in the wild. PLAY the first clip, "In the Wild." FOLLOW UP with students by asking them to share their observations of characteristics of giraffes in the wild. (*Answers may include: little to no group structure, no leader, not much known about community life, camouflaging themselves in trees, dark markings, losing their habitat.*) Ask students how the relocation workers account for these characteristics in their work. (*Answers may include maintaining the fence, darting giraffes from helicopters in areas where there are no trees, approaching giraffes since they don't perceive humans as predators, covering giraffes' ears and eyes to reduce their stress.*)
  
5. FRAME the second video clip by telling students they'll see another example of how the relocation company operates to transport giraffes. Give students a FOCUS by asking them to note potential positive and negative aspects of the corralling process, for both the humans and the giraffes. PLAY the second clip, "On the Move." FOLLOW UP with students by reviewing their observations from watching the video clip. (*Answers may include: using a different method to capture giraffes in a wooded area, humans in danger of being kicked by giraffes, giraffes being scared, some giraffes calmly entering truck, possibility of giraffes charging, giraffes unhappy in small area, nerve-wracking for humans, sad or uncomfortable for humans to watch.*)
  
6. FRAME the next two clips by telling students they will see two examples of areas to which giraffes are relocated. Give students a FOCUS by asking them to note the benefits of the new habitats to the giraffes. PLAY the third clip, "New Digs." FOLLOW UP with students by asking what they noticed in the clip. (*Answers may include: private game farm, giraffes attended to by a vet, safe space to run, new open spaces, personal care.*) PLAY the last clip, "Giraffe Manor." FOLLOW UP with students by asking what they noticed in the clip. (*Answers may include: 20 minutes from Nairobi, sanctuary for one herd of giraffe, on front lawn of a hotel, dining room for animals, a LOT of human interaction, habitat created to save Rothschild giraffes.*) Ask students to compare and contrast the two habitats that they saw in the video clips.



7. Ask students to reflect on the video clips they have seen, and how humans behaved and interacted with the giraffes while capturing them and at the game farm and Giraffe Manor. Ask students to record the methods and practices of conservation and translocation shown in the video clips in the second column of the Conservation Strategies Organizer. Compare and contrast.

8. Project on a screen (or write on the board or a piece of chart paper) some of the more priority species for conservation. These include: tigers, jaguars, crocodiles, Asian elephants, gorillas, African wild dogs, bison, and sea turtles. Ask students to think about the habitats in which these animals live and how they interact with humans. Engage the class in a discussion of how the conservation strategies noted on their organizers might be applied to more at-risk or endangered wildlife populations.

### CULMINATING ACTIVITY

1. By now students have seen many different aspects of the conservation efforts in Africa, and the different people involved. Ask students to name some of the different jobs or careers in conservation that they noticed. As students call out their answers, make a list on the board or a piece of chart paper. (*Answers may include: company owner, pilot, corraller, darter, veterinarian, driver, animal handler, journalist, hotel worker, biologist, researcher, fundraiser, geographer, etc.*)

2. Tell students that, as they can see, there are many different ways to participate in the conservation industry. Ask students which career from the list they would choose, if they were to be involved in the conservation industry. Students should write a brief essay on why they chose that career, and what they would do in that position.

Students can visit the following Web sites for more information on the conservation industry and movements:

- Interview with Petronel Nieuwoudt at the NATURE: Tall Blondes Web site (<http://www.pbs.org/wnet/nature/episodes/tall-blondes/giraffe-translocation/2258/>)
- The Game Capture School (<http://www.gamecapture.info/>)
- GCC: African Fund for Endangered Wildlife (<http://www.gcci.org/afew/afew.html>)
- The Giraffe Manor (<http://giraffemanor.com/>)
- Wildlife Translocation Association (<http://www.wta.org.za/>)
- Wildlife Conservation Society (<http://wcs.org/>)



## Conservation Strategies Organizer

<u>Pre-Viewing</u> <b>Proposed Strategies for Wildlife Conservation</b>	<u>Post-Viewing</u> <b>Methods &amp; Strategies Used in Wildlife Conservation</b>