

# The Field Museum Education Department Presents

## *African Biodiversity Grades 3-5* **Educator Guide**

The Field Museum Education Department develops on-line Educator Guides to provide detailed information on field trip planning, alignment with Illinois State Goals and Learning Standards, as well as hands-on classroom activities to do before or after your visit to the Museum.



## Illinois State Standards

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Science State Learning Standards: 12, 13  
Language Arts State Learning Standards: 5  
Social Science State Learning Standards: 17

## African Biodiversity

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The African continent is home to a rich diversity of habitats that support an amazing variety of plant and animal life (“biodiversity”), as well as human cultures. Use this guide to explore the biodiversity and cultural diversity of Africa in our *Africa Exhibition*.

### Pre-visit Activities:

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1. Discuss and define vocabulary terms, along with historical events, that students will encounter throughout the exhibit.
  - Environment
  - Culture
  - Species
  - Biomes (*savanna, desert, and rain forest, etc.*)
  - Conservation
  - Natural resources
  - Habitat
2. Compare and contrast the environment of the United States with that of Africa using a concept web, comparison chart, or Venn diagram.
  - What biomes are found in the United States and Africa? (i.e. desert Sahara and Mohave)
  - What natural resources are associated with each biome, in Africa and the United States?
  - How do we/they use the natural resources found in our/their biome in our/their daily life? (i.e. oil for fuel and heat, leather for shoes, corn for food)
3. An interactive and exciting portion of the exhibit focuses on the steps of the scientific method. You may want to introduce or review the steps before visiting the museum.
4. In the Harris Educational Loan Center you can check out experience boxes that will enhance your students learning here at the museum and in your classroom. These materials include hands-on activities that correlate with the Africa Exhibit. All of the resources are available for up to 3 weeks at a time.

**Note:** To register call 312-665-7555 or email [harrisloan@fieldmuseum.org](mailto:harrisloan@fieldmuseum.org) for more information.

## Field Trip Activities:

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### 1. Mapping Skills

Students will visit many countries of Africa during their journey through the exhibition. Using a simple map of the continent (additional resources can be found at [www.nationalgeographic.com/maps](http://www.nationalgeographic.com/maps)) the students can color the countries that they visit during their tour of the Africa exhibit. They can also shade in the biomes of the continent to emphasize the diversity of the environment.

2. Student Activity sheet - Provide each student with a copy of “African Biodiversity” Student Activity Sheet. Using the questions as a guide, ask students to record information from the exhibition.

3. Hands-on activity stations are found throughout the halls of the museum. At these stations, facilitators guide the students through an investigation with touchable objects related to the surrounding exhibit. The Africa Mega Map, The 70 Days of Mummification, Large Senet Game, and Story Time are offered several days a week in Stanley Field Hall.

**Note: These and other activities are subject to change without notice and should be confirmed at the museum information desk upon arrival.**

## Post-visit Activities:

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1. Ask students to create a classroom memory book of Africa. Each student recalls a few favorite items from the exhibit to illustrate. Have the students explain in writing what parts of the exhibit they enjoyed and why they chose the item. Collect all memories and bind them into a classroom memory book.
2. Your students saw many different species of plants and animals during your visit to the museum. You may want to take this opportunity to explore the method of classification that scientists use. Begin a discussion explaining that each student has several names. (Example: John Michael Smith). Each of the names define who they are and what family they belong to. The same is true with animals. For example, a lion is *Panthera leo*. The first word is always capitalized, the second is not, and both should be italicized. Humans, of course, are *Homo sapiens*. The full classification for a lion would be: Kingdom, Animalia (animals); Phylum, Chordata (vertebrate animals); Class, Mammalia (mammals); Order, Carnivora (meat eaters); Family, Felidae (all cats); Genus, Panthera (great cats); Species, leo (lions).
3. Compare the animals found in particular region of Africa to those found in the United States. Have students research the scientific name of each species in order make the comparison.
4. Have students compare and contrast the deserts, rainforests, and savannas of Africa with similar biomes in the United States.
5. How are deserts in Africa similar or different to those in the United States?
6. How are rainforests in Africa similar or different to those in the United States?
7. How are savannas in Africa similar or different to those in the United States?

### Credits:

*Support for Year of Biodiversity and Conservation programming provided by the City of Chicago, Richard M. Daley, Mayor; Department of Environment, N. Marcia Jiménez, Commissioner.*

*Science in Action for Conservation, made possible by a grant from NASA's Earth Science Education Program is a video available FREE to all schools and organizations. For more information visit us at [www.fieldmuseum.org/scienceinaction](http://www.fieldmuseum.org/scienceinaction)*

## Student Activity Sheet: Biodiversity

Africa is home to diverse species of animals. Each type of animal is adapted to the environment in which it lives, meaning that it has specific behaviors or characteristics that allow it to survive in that environment. Humans also have adapted to the different environments in which we live. In Africa, differences in our clothing, our tools, behavior and beliefs (our cultures) reflect the diversity of the environments in which we live.

In each box, write down the name of an animal or human society or culture and list 3-5 ways in which that animal or society has adapted to its environment.

### Savanna

| Savanna | Human  | Animal   |
|---------|--|--|
|         | Name a society/culture:  | Name an animal:  |
|         | What cultural adaptations has this society made to survive in the savanna?<br><br>1.<br><br>2.<br><br>3.<br><br>4.<br><br>5. | How has this animal adapted to survive in the savanna?<br><br>1.<br><br>2.<br><br>3.<br><br>4.<br><br>5. |

### Rain Forest

| Rainforest | Human  | Animal   |
|------------|--|--|
|            | Name a society/culture:  | Name an animal:  |
|            | What cultural adaptations has this society made to survive in the savanna?<br><br>1.<br><br>2.<br><br>3.<br><br>4.<br><br>5. | How has this animal adapted to survive in the savanna?<br><br>1.<br><br>2.<br><br>3.<br><br>4.<br><br>5. |

## Pre-visit Activities:

### Dessert

| Desert | Human  | Animal   |
|--------|--|--|
|        | Name a society/culture:  | Name an animal:  |
|        | What cultural adaptations has this society made to survive in the savanna? | How has this animal adapted to survive in the savanna? |
|        | 1.   | 1.   |
|        | 2.   | 2.   |
|        | 3.   | 3.   |
|        | 4.   | 4.   |
|        | 5.   | 5.   |

## African Biodiversity (October)

Located in the Africa Exhibition Hall. Insert images from the website and insert questions or quotes below near exhibit areas:

### Savanna Animals:

Learn more about Africa's vast Savanna region, a **grassy plain** that covers about third of the continent. Discover how endangered Savanna animals, such as the giraffe, black rhino, and hippopotamus, survive as *megaherbivores*, eating large quantities of vegetation between them and thereby sustaining the Savanna itself.

### The Rift:

Explore the ecosystems of the Great Rift, you begin your journey at the Geology Field Station and move through the region's biomes, going from volcanic lakes to **lush mountain rainforests** to the barren afro-alpine, to the grassy savanna plains and finally to the parching desert to discover adaptations made by indigenous creatures.

### Caravans:

Visit Mauritania, Mali, Niger, Chad, Sudan, and Nigeria. An ecological and cultural story is told through the Tuareg people, camels, salt and caravans. Explore the **complexity of a desert ecosystem** and end your journey in the metropolitan trading city in the Sahel—Kano, Nigeria.

*"The elephant has an important presence in African culture and is often represented in folklore and art," says Chap Kusimba, Ph. D., Anthropology Department, Field Museum. "But its most important impact on African people has been in the way it has shaped much of the natural landscape making some areas more suitable for human habitation."*