

Overview

Summary

This book investigates four African regions: the Sahara, the savanna grasslands, the rain forest, and the Great Rift Valley. Readers will explore how these regions differ in their landforms, climate, wildlife, and vegetation, as well as how humans interact with each type of environment. A major factor in both the type of vegetation and population settlement in each region is the availability of water, which affects the lives of African farmers, fishermen, and desert dwellers. Large-scale projects such as the building of dams on the Nile and Congo Rivers have presented opportunities as well as challenges for people and regions. And in Africa's savannas and rain forests, people struggle to balance the competing needs of developing the economy and preserving the environment.

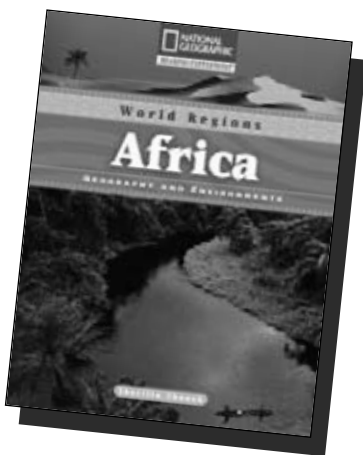
Exploration of Africa's lands of rich natural beauty and abundant resources will help students begin to understand the many forces of change affecting all world regions.

Background

Humans interact with their environments in countless ways, both changing the land and being changed by it. Building dams, clearing forests, burning grasslands, agriculture, fishing, and mining are just a few of the ways that humans make use of resources in different regions of Africa. While humans affect their environments, Earth's physical features and processes also influence human activities.

Africa: Geography and Environments

By Sherilin Chanek



Learning Objectives

Social Studies/Geography

- Examine the interactions of humans and their environments
- Interpret representations of Earth
- Locate and describe landforms and features such as mountains and plateaus
- Describe physical processes and identify geographic patterns associated with them
- Explore causes, consequences, and possible solutions to global issues such as pollution and endangered species

Process Skills

- Skill Focus**
- Create and compare climographs
- Supporting Skills**
- Interpret data
 - Infer
 - Generalize

Reading Skills

- Identify main ideas and details
- Draw conclusions
- Compare and contrast
- Use context clues
- Recognize cause-and-effect relationships
- Use graphics and graphic organizers

Focus on Content Area Reading

Before Reading

Activate Prior Knowledge

Show students the word “Africa.” What ideas come to mind? Students are likely to think of land types, such as the rain forests or deserts, or they may think of grasslands where great herds of wildlife roam.

Have students copy a K-W-L chart (see below) and fill it in as you complete a chart on the board. The first column includes information students already know about Africa’s regions. The second column includes information students want to know.

Have a student find Africa on a map or globe and describe its location in relation to their home region. How would they

travel to Africa? Discuss other geographic concepts, such as time zones and time differences, and how seasons differ in the Southern and Northern hemispheres.

Strategy Tip: Use visuals

Students can organize ideas about Africa’s regions by creating maps using the outline map on page 112. While previewing the book or reading, have students create maps for concepts addressed. Students can locate and label the four regions of Africa using the maps on the chapter opener pages. Then students can locate and label different environmental challenges faced in each chapter, using the locator maps with each section and their summarizing skills.



Meeting Individual Needs

For specific strategies on meeting individual needs, see pages 80–85.

Chapter 1: Sahara

Before Reading

Preview & Set Purpose

Give students time to preview the chapter, paying attention to headings, photographs, maps, graphics, and captions. Ask:

What topics are included in this chapter?

Why do you think the map on page 20 is called a locator map?

What type of information will you find in the “Key Ideas” feature?

Ask students whether this book reminds them of other books they have read. Help students set a purpose for reading. Ask:

What do you want to find out as you read? How might learning about the Sahara be valuable?

Africa’s Regions		
Know	Want To Know	Learned

Correlation to National Standards

Writing/Communication Skills

- Find facts about a topic
- Conduct research
- Use the writing process
- Give an oral presentation

Reading/Language Arts

- Read to become informed about the needs of society
- Apply a wide range of strategies to comprehend texts
- Use written and spoken language for learning
- Use the writing process
- Conduct research

Social Studies

- Time, Continuity, & Change
- People, Places, & Environments
- Production, Distribution, & Consumption
- Science, Technology, & Society
- Global Connections

Geography

- The World in Spatial Terms
- Places and Regions
- Physical Systems
- Human Systems
- Environment and Society
- The Uses of Geography

Focus on Content Area Reading (continued)

Vocabulary Strategy: **Use Context Clues**

Activity Master, Page 16

Have students turn to page 10 in their books. Point out the term *arid* and have a volunteer read the sentence with that word. Ask: *After reading that sentence, how would you define arid?*

Ask students to explain how they figured out the definition. Explain that using context clues is a good strategy for defining words. Have students complete the Activity Master while reading Chapter 1. Students can use the glossary to check their answers.

During Reading

Read Strategically: Take Notes

As students read, have them take notes to organize their ideas about the question: “How do people, plants, and animals adapt to life in this dry, harsh land?”

Students may also use the Cause-and-Effect diagram on page 107 to organize their ideas about water in the desert, answering: “What brings water to the Sahara? What effects does this water have?” One example could be—how the presence of the Nile River affects agriculture, industry, and the population of the Sahara.

After Reading

Respond

Initiate a class discussion to assess reading comprehension. Ask:

What is the weather like in the dry parts of the Sahara? (See pages 10–12.)

(summarize)

In the photo on page 12, why do you think the man has covered his head and face with cloth? **(make inferences)**

How do you think a Tuareg’s life might be different from that of someone who lives along the Nile River? (See pages 12–13.) **(compare and contrast)**

In what ways do people react to environmental conditions in different areas of the Sahara? In what ways are people trying to control environmental conditions? (See pages 12–19.) **(make inferences)**

Why do farmers use irrigation? How do dams affect farming? (See pages 18–19.) **(retell)**

How is the land changing in the Sahel? (See pages 20–21.) **(draw conclusions)**

Writing: Write a Letter

Have students reread the letter on page 17. Then ask them to imagine they are traveling across the Sahara and are taking time to write to someone far away about their experience. In the letter, students should describe the who, what, where, why, when, and how of their journey.

Chapter 2: Savanna

Before Reading

Preview & Set Purpose

Have students preview the chapter, noting headings, photographs, charts, graphs, and captions. Ask:

Looking at the photographs, how would you describe Africa’s savanna? What kinds of plants and animals are shown? Which photos include people, or evidence of people?

Use the Vocabulary Graphic Organizer on page 110 to help students preview the vocabulary for this chapter.

To help students set a purpose for reading, ask:

What do you want to find out as you read?

During Reading

Read Strategically: **Recognize Cause-and-Effect Relationships**

Activity Master, page 17

As students read independently, have them list as many causes and effects as they can find. Have students use the Activity Master to answer cause-and-effect questions about the Sahara.

Remind students that an effect is what happens and the cause is why it happens. Identifying causes and effects helps students see connections between events.

Focus on Content Area Reading (continued)

After Reading

Responding

Initiate a class discussion to assess reading comprehension. Ask:

How is the savanna different from the Sahara? Describe its location. (See pages 22–33.)

(compare and contrast)

How do both herbivores and carnivores depend on the savanna? (See page 24.)

(draw conclusions)

Why are so many countries joining their national parks together? (See page 29.)

(draw conclusions)

How are national parks sometimes a problem for people of the savanna? In what ways do they help people of the savanna? (See page 30.)

(make inferences)

How does sustainable development help people and animals in Kruger National Park in South Africa?

(See page 33.) (summarize)

Writing: Write an Advertisement

Students can work independently or in pairs to write an advertisement inviting visitors to a national park in the savanna. Tell students that an advertisement is a common form of persuasive writing used to influence people's behavior. Their advertisements should provide information that will make people want to visit the park.

Have students use an atlas to select a national park in the savanna. Then students can gather information about the places and wildlife people might see there. Now students should decide what to say. On another sheet of paper, have them write the advertisement. Consider having students create visuals for their advertisements.

Communicating: Speaking/Listening

Students can present their advertisements in small groups. Encourage students to practice their presentations in advance.

Students reading aloud should

- ✓ Speak clearly at an appropriate speed and volume.
- ✓ Make eye contact with listeners.
- ✓ Make their purpose clear and support it with reasons.

Listeners should

- ✓ Listen politely.
- ✓ Identify the main idea.
- ✓ Ask questions when the presentation is finished.

Chapter 3: Rain Forest

Before Reading

Preview & Set Purpose

Look at the chapter opener on pages 34–35. Have students use the Graphic Organizer on page 109 to create a K-W-L chart on African rain forests in their notebooks. Then combine

their ideas into a class K-W-L chart on the board.

Writing: Research a Topic

Activity Master, page 18

For this activity, students will need access to library resources or the Internet. Suggest possible resources, such as the Web links from the book or the articles listed on page 15. Students should locate reliable resources, then list facts found about a topic they choose. Students can use the Activity Master to help organize their search and evaluate the facts they find.

During Reading

Read Strategically: Identify Problems and Solutions

Have students discuss and identify the positive and negative aspects of solutions to a problem. For example, present the term “deforestation” and give its definition. Using information from the chapter and their own ideas, students can identify two solutions, then the positive and negative aspects of each.

After Reading

Respond

Initiate a class discussion to assess reading comprehension. Ask:

Describe characteristics of plant growth in the rain forest.

(See page 36.) (summarize)

Focus on Content Area Reading (continued)

Describe what you might see while walking in a rain forest.

How might your skin feel?

What might you hear?

(See pages 34–39.)

(draw conclusions)

Why are chimpanzees becoming endangered? (See page 40.)

(generalize)

How are the Baka people helping themselves and areas of the rain forest at the same time?

(See page 41.)

(cause and effect)

In what ways is the Congo River important to the many people who live near it?

(See pages 44–45.)

(make inferences)

Writing and Research:

Write an Analytical Essay

Have students choose an endangered animal in the African rain forest, such as the chimpanzee, gorilla, or elephant. Have them write a report of several paragraphs analyzing why the animal they have chosen is endangered, and what efforts, if any, are being made to help. Students should also add any further steps they feel would improve the situation.

Chapter 4: Great Rift Valley

Before Reading

Preview & Set Purpose

Give students time to preview the features and headings in the chapter. Ask:

What are some ways that Earth changes shape?

Help students set a purpose for reading. Ask:

Why do you think it is important to different groups of people to understand the movement of Earth's surface?

Geography Strategy: Create Maps

Outline Map, page 112

Using the text and maps in the chapter and the Outline Map of Africa, create a map of the Great Rift Valley's main features. Include a title, a compass rose, and a key.

During Reading

Read Strategically:

Compare and Contrast

Graphic Organizer, page 108

Use the Venn Diagram to compare and contrast the Great Rift Valley with another region in the book. Have students label each circle with the name of the region, then identify what the two regions have in common in the overlapping area of the circles, and how the regions are different in the outer part of the circles. Students can use encyclopedias and other sources to add information.

After Reading

Respond

Initiate a class discussion to assess reading comprehension.

Ask:

How is the Great Rift Valley different from other regions in Africa? (See pages 46–59.)

(compare and contrast)

Name some of the ways tectonic activity is changing the land in this region. (See pages 50–51.)

(summarize)

How does temperature change as elevation changes? How do people and plants survive colder climates on mountains such as Mount Kilimanjaro?

(See pages 54–55.) **(retell)**

What are some examples of wildlife found in Africa's great lakes? (See pages 57–58.)

(summarize)

What environmental problem has occurred in Lake Victoria? How did one fisherman adapt? (See page 58.)

(problem and solution)

Writing and Research:

Write a Skit

What might a group traveling in the Great Rift Valley experience? Ask students to include descriptions of who is traveling, where they are traveling, what mode of transportation they are using, and how the travelers are prepared. Have the group encounter one problem, then find a solution to it. Students should perform the skit for the class.

Extend and Assess

Focus on Geography

Think Geographically: Create and Compare Climographs

Activity Master, page 19

Have students use the Activity Master to practice skills in creating and analyzing climographs. Have students work with a partner, discussing together the climate changes for the regions they plot.

Assessment Options

Questions

Use the following questions during individual conferences, or ask students to write the answers in their notebooks:

- 1 What are four major regions of Africa?
- 2 Name three ways that people have adapted to life in the Sahara.
- 3 What kinds of changes, from people and from nature, affect the savanna?
- 4 Name one way people are changing the rain forest. Name one way people are trying to protect the rain forest.
- 5 Which region would you most like to visit? Why?

Assessment Activity

Have students write a book review of *Africa: Geography and Environments*. Remind students that they should support their opinion with examples from the book.

Students should include

- ✓ Two favorite parts of the book.
- ✓ Part of the book they least liked.

- ✓ Three facts learned.
- ✓ A helpful illustration.
- ✓ A recommendation for or against the book.

Book reviews should

- ✓ Include the required information.
- ✓ Present information clearly.
- ✓ Be accurate.
- ✓ Support opinions with facts.

Multiple-Choice Test

Use the multiple-choice test on page 96.

Cross-Curricular Connection

Science

Let students research more about predator-prey relationships in different environments in Africa. Have them choose a region, then use books, the Internet, and other resources to find out more about wildlife's feeding habits. They may find that the "food chain" is in many ways a "food web," with many animals and plants depending on each other for survival. Have students create diagrams for their findings.

Home-School Connection

Students can use newspapers and the Internet to find out when museum exhibits, films, or other special events about Africa are offered nearby, then plan a trip with family members.

Resources

Web Links

Students can expand knowledge of connections between environments, wildlife, and people with these clickable maps and text pop-ups. Have students click on Africa, then select and explore different regions, on www.nationalgeographic.com/wildworld

Articles from *National Geographic*

"End of the Line: Megatransect III": August 2001

"The Green Abyss: Megatransect Part 2": March 2001

"Imperiled Nile Delta": January 1997

"Journey to the Heart of the Sahara": March 1999

"Megatransect": October 2000

"Orphan Gorillas: Fighting to Survive in the Wild": February 2000

"Without Borders: Uniting Africa's Wildlife Reserves": September 2001

Vocabulary: Use Context Clues

The words below are from Chapter 1 of *Africa: Geography and Environments*. Find each word in the student book and read the paragraph that contains the word. Then write a definition of each word based on the way it is used in the paragraph (its context). Use the glossary to check your answers.

Word	Definition from Context	Definition from Glossary
arid		
scarcity		
nomad		
irrigation		
drought		
desertification		
oases		
harmattan		

Name _____

Read Strategically: Recognize Cause-and-Effect Relationships

Many plant and animal species live in the African savanna, while a growing number of human communities also call this giant grassland home. Increasing population pressure can have many effects on a savanna ecosystem. Answer the following questions about causes and effects in the African savanna.

1. What are effects of growing human populations on the savanna's resources?

2. What benefits result for people and animals when countries join national parks?

3. What are some effects of creating national parks that people do not like?

4. What is causing some African countries to encourage the growth of their tourism industries?

Look for two other causes and effects in *Africa: Geography and Environments*. Write two questions for your classmates to answer.

Writing: Research a Topic

You can use an organized process to learn more about a topic from *Africa: Geography and Environments* that interests you. After selecting a topic, use the Internet and books to find information. Use the steps below to organize your research and to evaluate the information you find. Then write your list of facts on a separate sheet of paper.

My Topic: _____

Step 1: Find sources. List the addresses and sources you will use from the Internet. The source on the Internet is the person or group that has written the Web page. Also list books and other resources.

Step 2: Separate facts from opinion. Take notes about your topic from sources listed above. Identify some facts and opinions. Write two facts here.

Step 3: Find out if the information is up to date. Find dates on the sources you've listed in Step 1. Write the dates you've found here. Circle the dates for the two sources that you will use.

Step 4: Check if the information is accurate. Write a draft of your list of facts on another sheet of paper. For each of the facts you've listed, try to find at least one other source that matches. Write the other sources you use here.

Name _____

Think Geographically: Create and Compare Climographs

The table below shows climate data for the city of Kisangani in the Democratic Republic of the Congo. Examine the average temperature and precipitation measurements for each month in Kisangani and then create a climograph for this African city.

Kisangani Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temperature (°F) (°C)	76.6 (24.8)	77.2 (25.1)	77.4 (25.2)	76.8 (24.9)	76.8 (24.9)	75.7 (23.7)	74.7 (23.6)	74.5 (24.1)	75.4 (24.5)	76.1 (24.4)	75.9 (24.5)	76.1 (24.5)
Precipitation (in) (mm)	3.8 (96.7)	4.2 (107.2)	6.8 (172.2)	7.5 (190.4)	6.4 (161.8)	5.0 (127.9)	4.5 (114.0)	7.0 (178.2)	6.5 (164.2)	9.2 (233.0)	8.1 (206.6)	4.1 (105.2)



- Describe the pattern of rainfall shown through the year on the climograph. _____

- Describe the pattern of temperature shown through the year on the climograph. _____

- Do you think there are four seasons in Kisangani? Why or why not? _____

- Compare Kisangani's climograph to the climographs on pages 60–61 of *Africa: Geography and Environments*. Do you think that this city is located near the savannah or the rain forest? Why?
