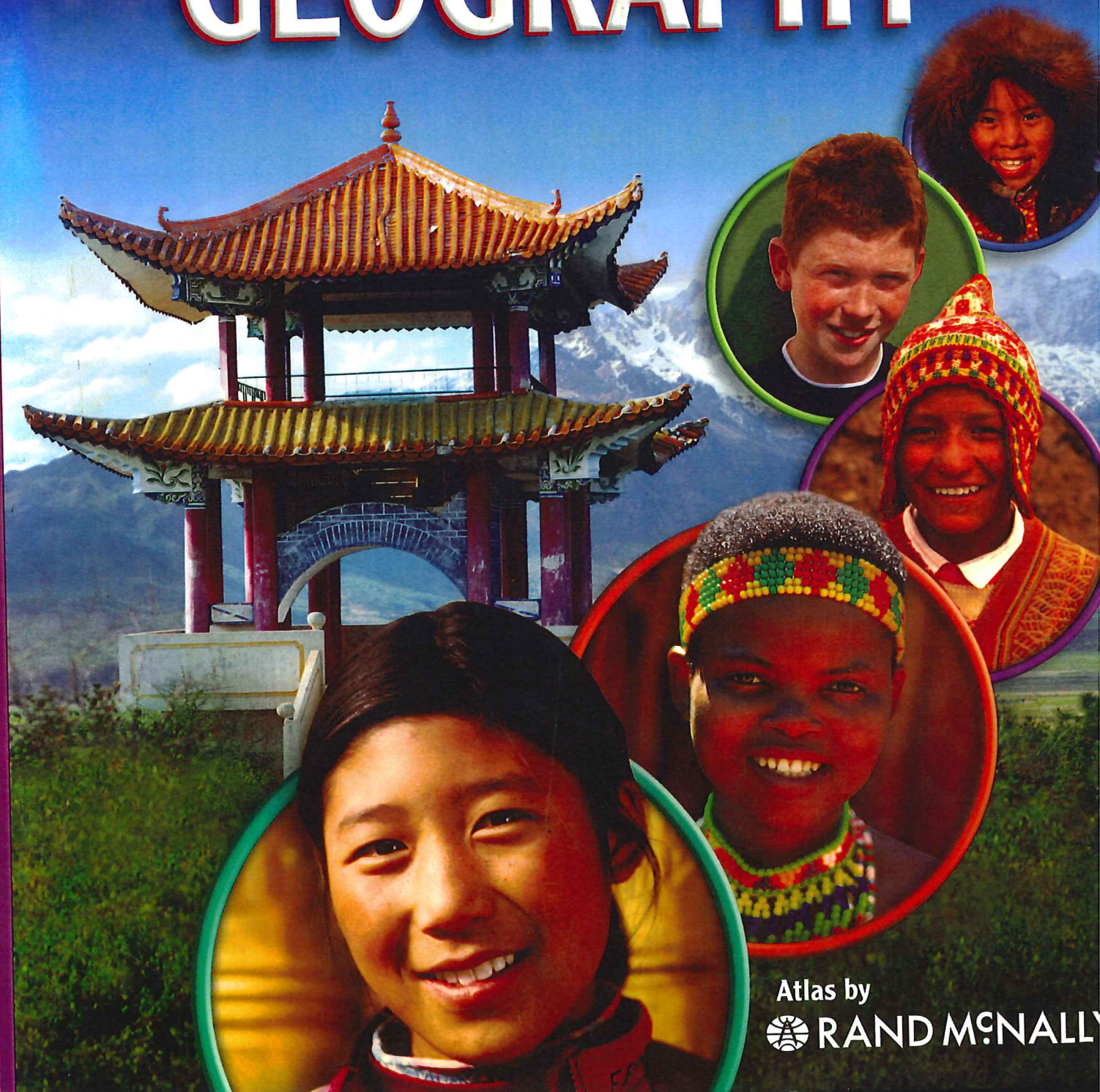


McDougal Littell

World Cultures *and* GEOGRAPHY



Atlas by
 RAND McNALLY

SECTION
3

Reading for Understanding

▶ Key Ideas

BEFORE, YOU LEARNED

Geographers use technology to help them do their jobs of finding information about selected areas.

NOW YOU WILL LEARN

Geographers do many different kinds of jobs as they gather data and analyze and interpret it.

▶ Vocabulary

TERMS & NAMES

location analyst a person who studies an area to find the best location for a client

climatologist a geographer who studies climates



Visual Vocabulary Climatologist

urban planner a person who creates plans for developing and improving parts of a city

geomorphology (JEE•oh•mawr•FAHL•uh•jee) the study of how the shape of the Earth changes

REVIEW VOCABULARY

surveyor a person who maps and measures the land

Geographic Information Systems (GIS) a computer-based mapping technology

urban having to do with a city

▶ Reading Strategy

Re-create the web diagram shown at right. As you read and respond to the **KEY QUESTIONS**, use the web diagram to categorize details about careers in geography.



Skillbuilder Handbook, page R7

CATEGORIZE



GRAPHIC ORGANIZERS

Go to Interactive Review @ ClassZone.com



SECTION
3

CULTURE

Careers in Geography

Connecting to Your World

“What are you going to be when you grow up?” is a question that you may have been asked. You may not even know there are a variety of geography-related jobs. The Association of American Geographers lists nearly 150 different geography jobs. So, if you are interested in people, places, and environments, consider a job in geography. Your work will not be limited to maps—it might range from analyzing data to planning projects, or making decisions about the environment.



Modern Cartographer

A cartographer works at updating a street map.

Processing Geographic Data

KEY QUESTION What is a geographer's main activity?

A geographer's main activity is analyzing geographic information to answer geographic questions. Jobs processing geographic data begin, of course, with collecting the information. One on-the-ground job in data collection is that of a **surveyor**. Surveyors map and measure the land directly. They may mark boundaries, study the shape of the land, or even help find sewer and water systems beneath the Earth.

Surveyor A surveyor in Dhaka, Bangladesh, gathers data for a project.



High-tech information-gathering jobs include working with **Geographic Information Systems (GIS)** data. Some examples of these jobs include remote sensing specialists and GIS analysts. Take a look back at the GIS feature in Section 2 to get an idea of what a job using GIS would be like. Data analysis jobs require the ability to think critically, high-level computer skills, and a college education.

Once data have been processed, a geographer may study the information to use in planning projects such as a new urban area, a disaster evacuation plan, or the placement of a new highway. Planners can also help determine how to make a neighborhood a better place to live. These jobs, too, require good critical thinking, writing, and computer skills, as well as a college education. Planners are valuable to the success of a community.

FIND MAIN IDEAS Explain the main job of a geographer.

Advising Businesses and Government

KEY QUESTION How do geographers help businesses and government?

About half of jobs using geography are in business and government. All kinds of businesses use geographic information to help build and

expand their operations. A **location analyst** studies an area to find the best location for a client. The client might be a large retail store chain that wants to know which location would be best for opening a new store. The location analyst can study GIS reports on such elements as transportation networks or population in an area and give the business owners the positive and negative points about a location being considered.

In 1967, the Mexican government was looking for a location to create a new international tourist resort. They used location analysts to find an area that had good beaches and was easy to reach from the United States. The result was Cancún, today one of the world's most desirable vacation sites.

Businesses connected with natural resources such as forests also rely on geographers. Geographers help them understand the relationship between their business and the environment where their business is located.

Climatologists are geographers who study

CONNECT Geography & Culture

Cancún Then and Now

In 1967, Cancún was a small, swampy island on Mexico's Caribbean coast. It had white sand beaches, many birds and mangrove trees, but few people. After it was selected as a resort site, it was quickly transformed. Today, Cancún has more than 100 hotels and 500,000 permanent residents. Many work in the tourist industry that serves the millions of visitors who come each year from all over the world.



climates. They are used by businesses that need information about climate to conduct their operations. For example, coffee-growers in Brazil must have an idea if the weather during the next year will be helpful or harmful to their crop. To determine this, a climatologist might study the long-term climate data about the region to project future weather patterns.

City governments often use an **urban planner** to create plans for improving parts of the city. Planners may help locate and design residential or business areas, or parks and recreational spaces. They may find a location for an airport, mass transit routes, or sewer and water lines.

FIND MAIN IDEAS Explain how geographers help business and government.



Urban Planners Planners help city governments locate projects being built in a city. What questions might a planner ask to help a city find the right location for a project?

CONNECT to Your World

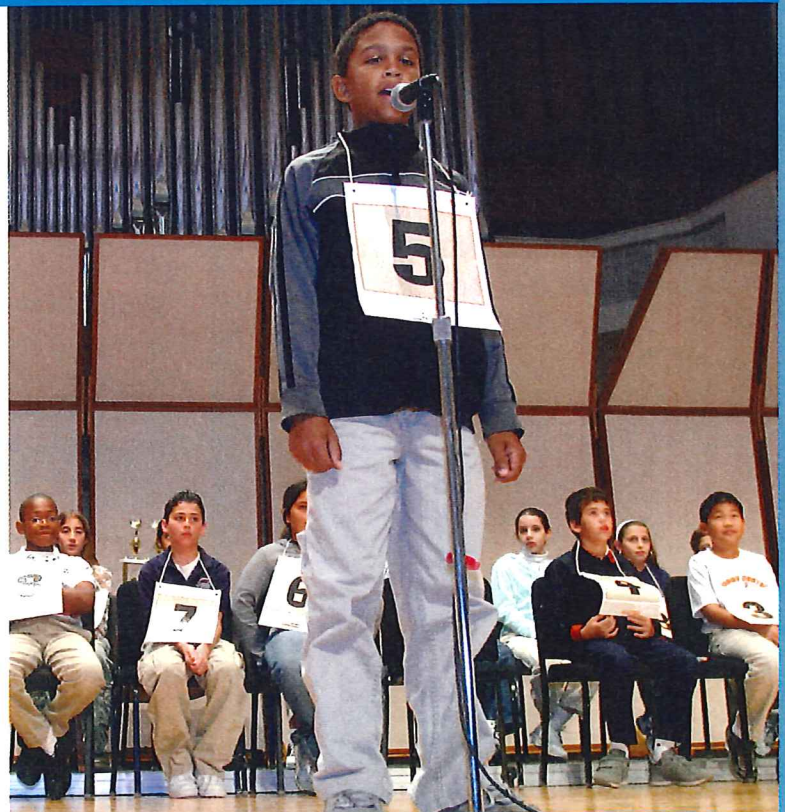
Geography Competitions

Across the United States and in foreign countries, students in grades four through eight compete in geography contests. Students are quizzed on all types of geography, including physical geography—such as locations of places and land and water features—and human geography.

Students compete in Washington, D.C., for the right to represent the United States in international competition for the world championship.

CRITICAL THINKING

Journal Entry Start a page in your journal with questions you could use in a geography contest at your school.





Surveying the Public

Human geographers ask residents about problems in the neighborhood. Why would geographers ask residents questions about their neighborhood?

Physical and Human Geography

KEY QUESTION What jobs are available related to physical and human geography?

Physical geographers are sometimes called earth scientists. Some study such topics as **geomorphology** (JEE•oh•mawr•FAHL•uh•jee), that is, the study of how the shape of the Earth changes. Others study weather and climate. Still others study water, the oceans, soils, or ecology. Jobs in these fields require special scientific training.

Some geographers study social, political, and economic issues as they relate to place or region. Human geographers are usually hired by government agencies to analyze a specific problem. These geographers work closely with political scientists, economists, and sociologists. Together, they provide possible solutions to problems from many different aspects of life in an area. And, of course, geographers teach the subject at all levels of education, from elementary schools to universities.

But no matter what geography jobs people might hold, they are always trying to answer the basic geographic questions: "Where are things located?" and "Why are they there?"

SUMMARIZE Name some physical and human geography jobs.

ONLINE QUIZ
For test practice, go to
Interactive Review
@ClassZone.com

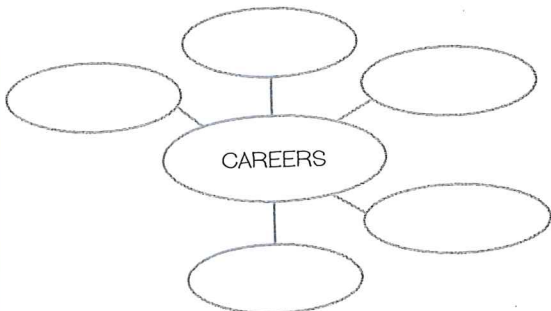
Section 3 Assessment

TERMS & NAMES

1. Explain the importance of
 - location analyst
 - climatologist
 - urban planner

USE YOUR READING NOTES

2. **Categorize** Use your completed web diagram to answer the following question:
In what ways could a business use the skills of a geographer?



KEY IDEAS

3. What are three requirements for most careers in geography?
4. Who are the two major employers of geographers?
5. What questions do all types of geographers ask?

CRITICAL THINKING

6. **Find Main Ideas** How important are geographers to businesses?
7. **Summarize** How do you train for a geographer's job in business and government?
8. **CONNECT to Today** How do planners help governments with public projects?
9. **WRITING Write a Job Description** Select a specific job in the field of geography and research it on the Internet. Then write a description of the job's skill requirements and its responsibilities. If possible find a person doing that job and do an interview or have that person speak to the class.

CHAPTER SUMMARY



Key Idea 1

Geographers have specialized ways to view and interpret information about the world.



Key Idea 2

Geographers use technical tools to help them understand both the Earth's physical processes and the activities of people on Earth.



Key Idea 3

Geographers do many different kinds of jobs as they gather data and analyze and interpret it.

 For Review and Study Notes, go to Interactive Review @ClassZone.com

NAME GAME

Use the Terms & Names list to complete each sentence on paper or online.

- I am a model of the Earth.
_____ **globe** _____
- I am in orbit 100 miles above the Earth.

- I am the study of people, places, and things. _____
- I create plans for improving parts of a city.

- I am an advanced technology tool used by geographers. _____
- I am a representation of a part of the Earth.

- I am a person who creates maps. _____
- I am a group of places that have something in common. _____
- I am a description of the physical and human characteristics of a location.

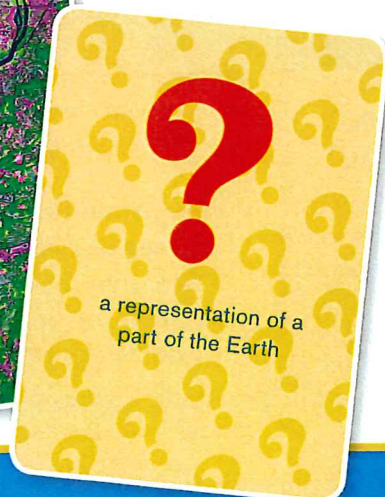
- I am a person who maps and measures the land. _____

cartographer
climatologist
environment
Geographic Information Systems
geography
globe
Global Positioning System
Landsat
location analyst
map
spatial
surveyor
place
region
urban planner

Activities

Flip Cards

Use the online flip cards to quiz yourself on terms and names introduced in this chapter.



Crossword Puzzle

Complete an online crossword puzzle to test your knowledge of basic geographic terms.

ACROSS

- a model of the Earth



VOCABULARY

Explain the significance of each of the following.

1. spatial
2. remote sensing
3. environment
4. database
5. geography



Explain how the terms and names in each group are related.

6. map, globe
7. map, cartographer
8. place, region
9. remote sensing, Landsat, Global Positioning System, Geographic Information System
10. cartographer, surveyor, climatologist, urban planner

KEY IDEAS

1 Themes and Elements of Geography

11. What are the three topics you study in geography?
12. Why is geography considered both science and social studies?
13. What is the difference between location and place?
14. What forces continually change Earth's surface?

2 Technology Tools for Geographers

15. What is remote sensing?
16. How do satellites aid in mapmaking?
17. What two basic geography questions does the Global Positioning System help you answer?
18. What is an example of a technologically advanced geographer's tool?

3 Careers in Geography

19. What is the main activity of a geographer's job?
20. What does a location analyst do?
21. What does an urban planner do?
22. What types of geography are included in physical geography?

CRITICAL THINKING

23. **Categorize** Create a table that lists the five themes of geography and shows two examples of geographic information that would be included in each theme's description.

FIVE THEMES	GEOGRAPHIC INFORMATION

24. **Find Main Ideas** How do people adapt to their physical world?
25. **Summarize** How does modern technology help geographers?
26. **Connect to Economics** What role do geographers play in business operations?
27. **Connect Geography & History** How does the study of geographic patterns help us to understand past events?
28. **Five Themes: Human-Environment Interaction** What can be learned about people by studying their interaction with the environment?

Answer the

ESSENTIAL QUESTION

In what ways does geography help us understand our world?

Written Response Write a two- or three-paragraph response to the Essential Question. Be sure to consider the key ideas of each section as well as specific ideas about how geographers answer geographic questions. Use the rubric below to guide your thinking.

Response Rubric

A strong response will:

- discuss the two basic geographic questions
- identify and describe the five themes and six essential elements of geography

- Online Test Practice @ ClassZone.com
- Test-Taking Strategies and Practice at the front of this book

POLITICAL MAP

Use the map to answer questions 1 and 2 on your paper.



1. Which of the cities shown on the map is located south of the Tropic of Capricorn?

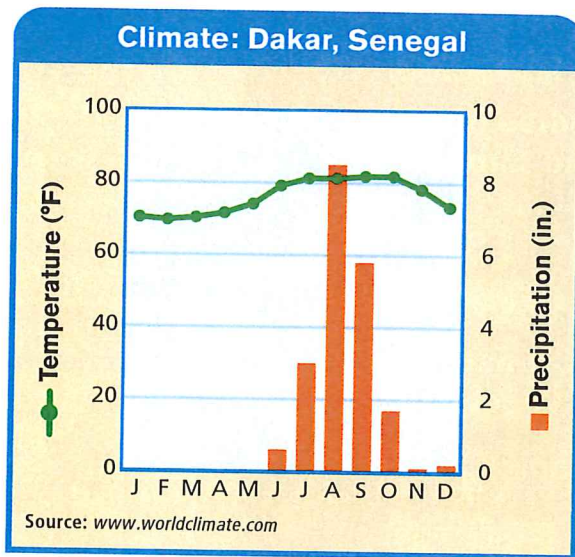
- A. Cairo
- B. Johannesburg
- C. Nairobi
- D. Lagos

2. Which of the cities shown on the map is located at approximately 30° N and 31° E?

- A. Cairo
- B. Johannesburg
- C. Nairobi
- D. Lagos

CLIMATE GRAPH

Examine the climate graph below. Use the information in the graph to answer question 3 on your paper.



3. In which months does Dakar get the most rainfall?

GeoActivity

1. INTERDISCIPLINARY ACTIVITY-TECHNOLOGY

With a small group, review new geographic technology. Choose one new tool to research further and create a museum-style display. Be sure your display shows the tool and how it works. Also, explain how the tool has changed the way geographic information is gathered.

2. WRITING FOR SOCIAL STUDIES

Imagine that you are an urban planner and have been asked to develop a plan for placement of a park in your city. Write one paragraph describing the location you chose and the reasons you selected it.

3. MENTAL MAPPING

Create an outline map of your neighborhood, city, or town and locate and label any of the following that are present in the area you map:

- physical features
- your home
- your school
- fire station
- hospital
- shopping area