



What You Will Learn...

Main Ideas

1. Physical geography is the study of landforms, water bodies, and other physical features.
2. Human geography focuses on people, their cultures, and the landscapes they create.
3. Other branches of geography examine specific aspects of the physical or human world.

The Big Idea

Geography is divided into two main branches—physical and human geography.

Key Terms

physical geography, p. 16
 human geography, p. 18
 cartography, p. 19
 meteorology, p. 20


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TAKING NOTES

Use the graphic organizer online to take notes on the branches of geography.

The Branches of Geography

If YOU lived there...

You are talking to two friends about the vacations their families will take this summer. One friend says that his family is going to the Grand Canyon. He is very excited about seeing the spectacular landscapes in and around the canyon. Your other friend's family is going to visit Nashville, Tennessee. She is looking forward to trying new foods at the city's restaurants and touring its museums.

Which vacation sounds more interesting? Why?

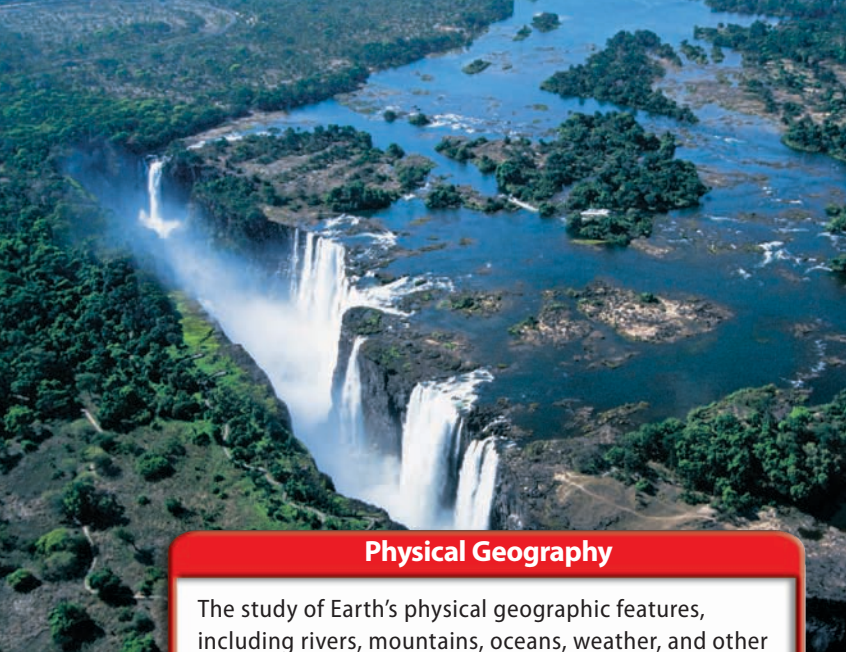
BUILDING BACKGROUND Geography is the study of the world and its features. Some features are physical, like the Grand Canyon. Others are human, like restaurants and museums. The main branches of geography focus on these types of features.

Physical Geography

Think about a jigsaw puzzle. Seen as a whole, the puzzle shows a pretty or interesting picture. To see that picture, though, you have to put all the puzzle pieces together. Before you assemble them, the pieces do not give you a clear idea of what the puzzle will look like when it is assembled. After all, each piece contains only a tiny portion of the overall image.

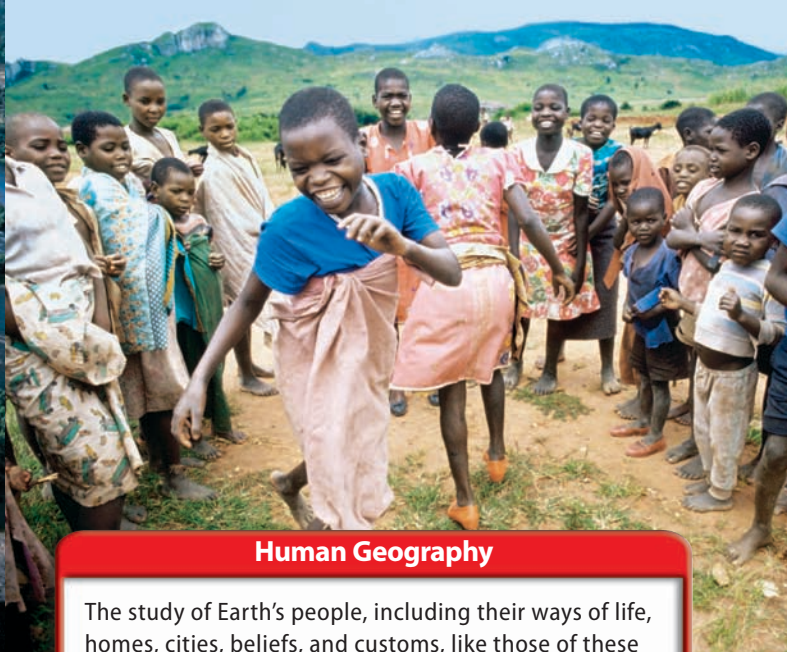
In many ways, geography is like a huge puzzle. It is made up of many branches, or divisions. Each of these branches focuses on a single part of the world. Viewed separately, none of these branches shows us the whole world. Together, however, the many branches of geography improve our understanding of our planet and its people.

Geography's two main branches are physical geography and human geography. Geographers identify and locate major physical and human geographic features of various places and regions in the world. The first branch, **physical geography**, is the study of the world's physical geographic features—its landforms, bodies of water, climates, soils, and plants.



Physical Geography

The study of Earth's physical geographic features, including rivers, mountains, oceans, weather, and other features, such as Victoria Falls in southern Africa



Human Geography

The study of Earth's people, including their ways of life, homes, cities, beliefs, and customs, like those of these children in Malawi, a country in central Africa

Geography

The study of Earth's physical and human geographic features

The Physical World

What does it mean to say that physical geography is the study of physical geographic features? Physical geographers want to know all about the different features found on our planet. They want to know where mountain ranges are, how rivers flow across the landscape, and why different amounts of rain fall from place to place.

More importantly, however, physical geographers want to know what causes the different shapes on Earth. They want to know why mountain ranges rise up where they do and what causes rivers to flow in certain directions. They also want to know why various parts of the world have very different weather and climate patterns.

To answer these questions, physical geographers take detailed measurements. They study the heights of mountains and the temperatures of places. To track any changes that occur over time, physical geographers keep careful records of all the information they collect.

Uses of Physical Geography

Earth is made up of hundreds of types of physical geographic features. Without a complete understanding of what these features are and the effect they have on the world's people and landscapes, we cannot fully understand our world. This is the major reason that geographers study the physical world—to learn how it works.

There are also other, more specific reasons for studying physical geography, though. Studying the changes that take place on our planet can help us prepare to live with those changes. For example, knowing what causes volcanoes to erupt can help us predict eruptions. Knowing what causes terrible storms can help us prepare for them. In this way, the work of physical geographers helps us adjust to the dangers and changes of our world.

READING CHECK Analyzing What are some features in your area that a physical geographer might study?



BIOGRAPHY

Eratosthenes

(c. 276–c. 194 BC)

Did you know that geography is over 2,000 years old? Actually, the study of the world is even older than that, but the first person ever to use the word *geography* lived then. His name was Eratosthenes (er-uh-TAHS-thuh-nee-z), and he was a Greek scientist and librarian. With no modern instruments of any kind, Eratosthenes figured out how large Earth is. He also drew a map that showed all of the lands that the Greeks knew about. Because of his many contributions to the field, Eratosthenes has been called the Father of Geography.

Generalizing Why is Eratosthenes called the Father of Geography?

Human Geography

The physical world is only one part of the puzzle of geography. People are also part of the world. **Human geography is the study of the world's human geographic features—people, communities, and landscapes.** It is the second major branch of geography.

The Human World

Put simply, human geographers study the world's people, past and present. They look at where people live and why. They ask why some parts of the world have more people than others, and why some places have almost no people at all.

Human geographers also study what people do. What jobs do people have? What crops do they grow? What makes them move from place to place? These are the types of questions that geographers ask about people around the world.

Because people's lives are so different around the world, no one can study every aspect of human geography. As a result, human geographers often specialize in a smaller area of study. Some may choose to study only the people and landscapes in a certain region. For example, a geographer may study only the lives of people who live in West Africa.

Other geographers choose not to limit their studies to one place. Instead, they may choose to examine only one aspect of people's lives. For example, a geographer could study only economics, politics, or city life. However, that geographer may compare economic patterns in various parts of the world to see how they differ.

Uses of Human Geography

Although every culture is different, people around the world have some common needs. All people need food and water. All people need shelter. All people need to deal with other people in order to survive.

Human geographers study how people in various places address their needs. They look at the foods people eat and the types of governments they form. The knowledge they gather can help us better understand people in other cultures. Sometimes this type of understanding can help people improve their landscapes and situations.

On a smaller scale, human geographers can help people design their cities and towns. By understanding where people go and what they need, geographers can help city planners place roads, shopping malls, and schools. Geographers also study the effect people have on the world. As a result, they often work with private groups and government agencies who want to protect the environment.

READING CHECK **Summarizing** What do human geographers study?

Other Fields of Geography

Physical geography and human geography are the two largest branches of the subject, but they are not the only ones. Many other fields of geography exist, each one devoted to studying one aspect of the world.

Most of these fields are smaller, more specialized areas of either physical or human geography. For example, economic geography—the study of how people make and spend money—is a branch of human geography. Another specialized branch of human geography is urban geography, the study of cities and how people live in them. Physical geography also includes many fields, such as the study of climates. Other fields of physical geography are the studies of soils and plants.

Cartography

One key field of geography is **cartography**, the science of making maps. You have already seen how important maps are to the study of geography. Without maps, geographers would not be able to study where things are in the world.

In the past, maps were always drawn by hand. Many were not very accurate. Today, though, most maps are made using computers and satellite images. Through advances in mapmaking, we can make accurate maps on almost any scale, from the whole world to a single neighborhood, and keep them up to date. These maps are not only used by geographers. For example, road maps are used by people who are planning long trips.

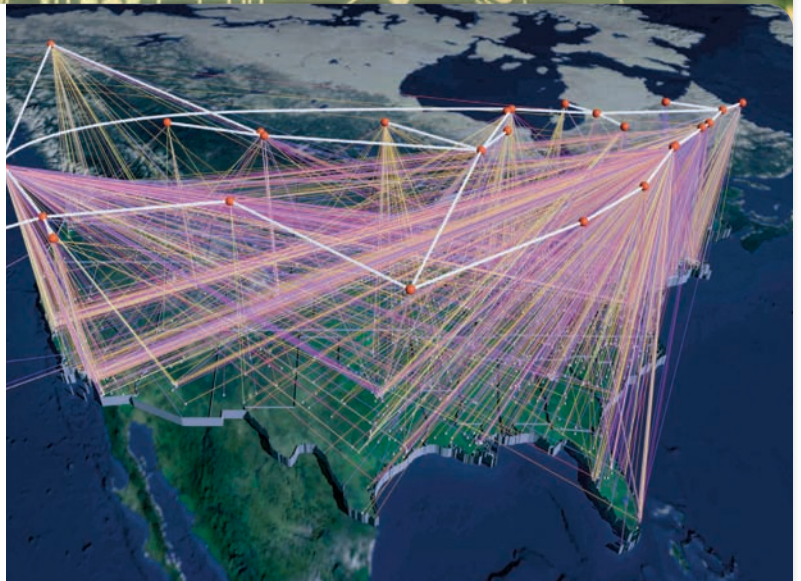
CONNECTING TO Technology

Computer Mapping

In the past, maps were drawn by hand. Making a map was a slow process. Even the simplest map took a long time to make. Today, however, cartographers have access to tools people in the past—even people who lived just 50 years ago—never imagined. The most important of these tools are computers.

Computers allow us to make maps quickly and easily. In addition, they let us make new types of maps that people could not make in the past.

The map shown here, for example, was drawn on a computer. It shows the number of computer users in the United States who were connected to the Internet on a particular day. Each of the lines that rises off of the map represents a city in which people were using the Internet. The color of the line indicates the number of computer users in that city. As you can see, this data resulted in a very complex map.



Making such a map required cartographers to sort through huge amounts of complex data. Such sorting would not have been possible without computers.

Contrasting How are today's maps different from those created in the past?



Meteorology is the study of weather. This meteorologist is using computers to follow and predict the movement of a powerful storm.

Meteorology

Have you ever seen the weather report on television? If so, you have seen the results of another branch of geography. This branch is called **meteorology**, the study of weather and what causes it.

Meteorologists study weather patterns in a particular area. Then they use the information to predict what the weather will be like in the coming days. Their work helps people plan what to wear and what to do on any given day. At the same time, their work can save lives by predicting the arrival of terrible storms. These predictions are among the most visible ways in which the work of geographers affects our lives every day.

READING CHECK **Finding Main Ideas** What are some major branches of geography?

SUMMARY AND PREVIEW In this section, you learned about two main branches of geography, physical and human. In the next chapter, you will learn more about the physical features that surround us and the processes that create them.

Hydrology

Another important branch of geography is hydrology, the study of water on Earth. Geographers in this field study the world's river systems and rainfall patterns. They study what causes droughts and floods and how people in cities can get safe drinking water. They also work to measure and protect the world's supply of water.

FOCUS ON READING

What do you already know about drinking water?

Section 3 Assessment



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ONLINE QUIZ

Reviewing Ideas, Terms, and Places

- a. Define** What is **physical geography**?

b. Explain Why do we study physical geography?
- a. Identify** What are some things that people study as part of **human geography**?

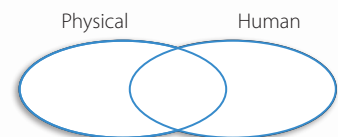
b. Summarize What are some ways in which the study of human geography can influence our lives?

c. Evaluate Which do you think would be more interesting to study, physical geography or human geography? Why?
- a. Identify** What are two specialized fields of geography?

b. Analyze How do cartographers contribute to the work of other geographers?

Critical Thinking

- Comparing and Contrasting** Draw a diagram like the one shown here. In the left circle, list three features of physical geography from your notes. In the right circle, list three features of human geography. Where the circles overlap, list one feature they share.



FOCUS ON WRITING

myWriteSmart

- Choosing a Branch** Your job description should point out to people that there are many branches of geography. How will you note that?