The root of the word geography is an ancient Greek word meaning “earth description.” Geographers study the location and relationships of Earth’s physical and living features. They look for links between places and people and identify patterns in order to learn why those patterns exist or occur.

A Geographic Perspective

What is the spatial perspective?

Geographers focus on understanding the world and answering questions about it. An important part of the geographical perspective is the spatial perspective. A spatial perspective focuses on how individual places, people, or objects are related to one another across the surface of the Earth. Using a spatial perspective, geographers examine why things are located where they are. Geographers also use the spatial perspective to examine what makes regions distinct based on changes and movements of people over time and changes in the physical environment. This spatial perspective can also be viewed from a local perspective, such as where to select a new home, or the global perspective, such as the economic activities of countries in the form of trade.

Other aspects of the geographic perspective include the ecological perspective and the perspective of experience. The ecological perspective focuses on understanding Earth as a complex set of interacting living and nonliving components. It involves thinking about the connections and interactions that operate among ecosystems and human societies. The perspective of experience considers how people make meaning from the world in which we live. As people live in locations on Earth, they have experiences and build memories that give places on Earth unique characteristics. Awareness and sensitivity to these uniquenesses are an important part of the perspective of experience.

Not all people who study or incorporate geography into their profession are labeled geographers. Geography skills can be applied to a variety of fields, including government, business, and education.

One broad cluster of career opportunities in geography is teaching and education. Teaching opportunities exist at all levels, from elementary to high school to university levels of education. Teachers with a background or training in geography topics are in demand in the United States for elementary and high schools. Students with formal geographic training from a university can find work in many diverse businesses, industries, and professional fields.

Because geography itself has many specialized fields, there are many ways that people use geography in their work. Those with a knowledge of physical geography can work as meteorologists who study the atmosphere and weather patterns; as emergency management officials dealing with natural hazards, such as earthquakes or hurricanes; as ecologists who study the interrelationships of organisms and their environment; as soil scientists; and as environmental managers. Work in the environmental field includes assessing the environmental impact of proposed development projects regarding air and water quality and wildlife.

Those with knowledge of human geography find work in many areas such as health care, transportation, population studies, economic development, public policy, and international economics. Human geographers with a background in urban planning are hired by local and state government agencies to focus on projects such as housing and community development and parks and recreation planning. An economic geographer examines human economic activities. He or she may work at such tasks as market analysis and site selection for stores, factories, and restaurants. A regional geographer studies the features of a particular region and may assist government and businesses in making decisions about land use. Geographers can also find employment as writers and editors for publishers of textbooks, maps, atlases, news and travel magazines, and Web sites.

One of the most important tools of a geographic perspective is the ability to think geographically about the world. Geographers use five basic skills that are key to geographic understanding: asking, acquiring, organizing, analyzing, and answering geographic questions. Asking geographic questions provides information that can be used to better understand one’s surroundings. As knowledge is acquired, it can be applied to recognize patterns and relationships that will help in real-life situations.

Listing List at least three fields outside of geography that use geography skills.

The Elements of Geography
What are the elements of geography?

Geography uses the geographic perspective to study the peoples, places, environments, histories, and cultures of the world’s regions. Geographers study the interactions between peoples, places, and environments to explain why and how patterns of interaction occur. There are six overall elements geographers consider in their work: the world in spatial terms, places and regions, physical systems, human systems, environment and society, and the uses of geography.

The World in Spatial Terms

Spatial relationships link people and places based on their locations and relationships to each other. Location is a reference point for geographers in the same way that dates serve as reference points for historians.

One way of locating a place is by describing its absolute location—the exact spot at which the place is found on the Earth. To determine absolute location, geographers use the system of latitude and longitude. On a day-to-day basis, humans tend to identify a place based on relative location—a place’s location in relation to another place. For example, New Orleans is located near the mouth of the Mississippi River. Knowing the relative location of a place helps you to think spatially. By creating a mental map based on relative location, you can orient yourself in space and develop an awareness of the world around you.

The broad or specific definition of a geographic location based on relative or absolute location also takes into account a place’s site and situation. Site is the specific location of a place, including its physical setting. For example, the site of San Francisco is its location at the end of a peninsula in northern California. Situation refers to a more general location, defined by a place’s geographic position in relation to other places and its connections to other regions. San Francisco’s situation is a port city on the Pacific coast, close to California’s agricultural lands.

Places and Regions

A place has physical and human significance. It has distinguishing characteristics defined by its features and surroundings. Geographers study and assess the similarities and differences between places to express what features are unique to each place. To interpret the Earth’s complexity, geographers group places with similar characteristics into regions. A region can be defined by physical traits such as climate, landforms, river systems, soils, vegetation, animal life, and natural resources. A region can also have human significance, as defined by characteristics such as language, religion, political units, trade networks, and population distribution. Geographers identify three types of regions: formal, functional, and perceptual.

A formal region features a unifying characteristic, such as a product produced in that region. For example, the Corn Belt is a band of farmland stretching from Ohio to Nebraska in the United States. It is a formal region because corn is its primary crop. A functional region incorporates a central node and a surrounding area that is connected to the node by some defined function. For example, a cell tower provides the central node for a surrounding area in which cell phone users can obtain phone reception. A perceptual region uses a looser standard for characterization, defined more by commonly accepted tradition or value than by objective data. For example, the term “heartland” refers to a central area in the United States in which traditional values of family and hospitality are believed to predominate. A perceptual region could also be labeled a vernacular region. This refers to patterns native to a particular region in spite of boundary lines. The Creole dialect that is spoken in southern Louisiana is an example of a vernacular region. It is defined more by the culture and speech of the region than by a designation of state and city boundaries.

Physical Systems and Human Systems
Because geography can cover a broad range of themes, geographers divide their focus into major branches: physical geography and human geography. Physical geography—climate, land, water, plants, and animal life—looks at these processes and their significance to humans. Human geography, or cultural geography, analyzes human activities and their relationship to the cultural and physical environments. Political, economic, social, and cultural factors can include themes such as urban development, economic production and consumption, and population change. Because physical and human geography are still very broad in their focus, they can be further divided into subject areas. For example, climatology is the study of climate and long-term atmospheric conditions and their impact on ecology and society. Historical geography is the study of places and human activities over time based on the geographic factors that have shaped them.

Geographers study how physical features and processes of land, water, and climate interact with plants and animals to create, support, or change ecosystems. An ecosystem is a community of plants and animals that depend upon one another and their surroundings for survival. Geographers also study the processes by which people operate across Earth’s surface—how they settle the Earth, form societies, and create permanent features. A recurring theme in geography is the ongoing movement of people, goods, and ideas. Human migration and settlement, as well as the exchange of ideas and practices among cultures, can over time transform societies, traditions, and the landscape in which humans live. In studying human systems, geographers look at how people compete or cooperate to change or control aspects of the Earth to meet their needs.

**Environment and Society**

The relationship between people and their physical environment is a theme embodied by human-environment interaction. Ways in which people use their surroundings, ways in which they change it voluntarily and involuntarily, and the consequences that result from such human-environment interaction are very important themes for geographers. Pollution, construction, human population growth, conservation of parks, and reintroduction of species into the wild are just a few of the ways humans change the physical environment. Yet the physical environment can also have an effect on humans. For example, physical barriers such as rivers, mountains, and deserts limit human movement and growth. Natural phenomena such as hurricanes, earthquakes, and heavy storms or droughts force humans to adapt their activities and lifestyles to the changing environment. By understanding how the Earth’s physical features and processes shape and are shaped by human activity, geographers help societies make informed decisions about their relationship with their surrounding physical environment.

**The Uses of Geography**

Geography provides insight into how physical features and living things developed in the past. It also takes into account current trends regarding the physical and human environment in order to plan for future needs. Planning and policy making must account for interactions between humans and the natural environment. Data regarding physical features and processes can highlight suitable sites for resource extraction or for human habitation. Urban planners analyze trends in human growth within a specified region to determine where and what systems, such as schools, roads, public services, and businesses, are necessary for supporting a growing population. Geographers analyze past data in order to determine effective future actions to sustain and support both the natural environment and human development. Although people trained in geography are in great demand in the workforce, many of them do not have geographer as a job title. Geography skills are useful in so many different situations that geographers have more than a hundred different job titles.
Geographers work in a variety of jobs in government, business, and education. They often combine the study of geography with other areas of study. For example, an ecologist must know the geographic characteristics of a place or region in which he or she studies living organisms. Similarly, a travel agent must have knowledge of the physical and human geography of a place in order to plan trips for clients.

Identifying What are the three types of regions?

Research Methods

What methods do geographers use to conduct their work?

To do their work, geographers use several research methods. Direct observation and measurement, mapping, interviewing, production and use of statistics, and the use of technology are all specialized research methods used by geographers.

Direct observation and measurement involves analysis of patterns of human activity that take place on the Earth’s surface. Geographers using this method will visit a place to gather information about it from what they observe of the place and its geographic features. Geographers also employ remote sensing from satellite images and aerial photographs to locate specific information without having to visit the site in person. For example, aerial photographs or satellite images can be used to locate mineral deposits, to determine the size of freshwater sources, or to see the extent of urban sprawl.

Mapping is essential to geographers. Many findings from geography research can be shown visually and spatially on maps better than they can be explained through statistical methods or written documents. Complex information can be collected and shown in more easily understood terms through using maps that highlight features, patterns, and relationships of people, places, and things. Maps also are useful for making comparisons. For example, a geographer might compare population density maps or transportation networks maps of two counties in order to determine where to build new schools.

Interviewing requires a geographer to ask questions rather than just collect data, images, and on-site observations. Specifically, for human geographic studies, geographers may want to find out how people think or feel about certain places. They may also want to examine the ways in which people’s beliefs and attitudes have affected the physical environment. To obtain such information, geographers interview their subjects. They can do this by selecting a particular group of people for study. Rather than contacting every individual in the group, however, geographers use a carefully selected sample of people whose answers represent the larger group.

Geographers also analyze statistics. Numerical data, such as temperature and snowfall, can provide insight into a region’s climate trends. Geographers use computers to organize and present this information in an understandable manner, as well as to look in detail at the data for patterns and trends. For example, studies that identify age, ethnicity, and gender of specified regions can emphasize possible trends within a human population. After identifying such patterns and trends, geographers use statistical tests to see whether their ideas are valid.

Defining What do geographers do?
**Geography and Other Subjects**

*How is geography related to other subjects?*

Geography has important relationships to other subjects. Geographers use geographic tools and methods to understand historical patterns, economies, politics and political patterns, and the impact of societies and cultures on the landscape.

To visualize what places could have looked like in the past, geographers take into account historical perspectives of the place. For example, to gather information about how a city has changed over time, geographers can collect information from historical sources regarding census data, economic output, birth and death rates, natural disasters, disease, and major fluctuations in population size. Such data can address questions concerning how human activities have changed the natural vegetation, or how waterways are different today than in the past. Such historical perspectives provide insight as to which institutions or development should be constructed to avoid repeating past complications between human growth and the physical environment.

Additionally, analysis of historical and current political patterns emphasizes changing boundary lines and government systems. Geographers are also interested in how the natural environment has influenced political decisions and how governments change natural environments. For example, in the 1960s the Egyptian government built the massive Aswān High Dam on the Nile River to help irrigate the land. The dam altered the Nile River valley and significantly impacted the region’s people.

Human geographers, also called cultural geographers, use the ideas of sociology and anthropology to study human tendencies and past cultures and their influence on current traditions and social norms. Because people come from diverse cultural backgrounds, their interpretations of information and experiences differ depending on their frame of reference. For example, residents of a particular neighborhood may define boundaries based on location of activities, such as stores they frequent and people with whom they have contact. However, the local governments create neighborhood boundaries to facilitate services and maintenance. Furthermore, other neighborhood boundaries may be created by police departments and school districts that have different needs to meet and different reasons for creating spatial divisions. Human geography can be used to study the relationships between people, places, and environments by mapping information about them into a spatial context using GIS and other geospatial technologies. Human geographers study the way people are rooted in particular places and how they have constructed various types of regions. Some geographers specialize in studying the feelings one has about a place, which is very closely connected with theories in the fields of psychology and behavioral science.

Geographers study economies to understand how the locations of resources affect the ways people make, transport, and use goods, and how and where services are provided. Geographers are interested in how locations are chosen for various economic activities. Where and what human groups choose to produce and consume depend on a variety of factors: location of natural resources for mining and extracting, fertile soil for farming, suitable climates for living and producing, and proximity to good transport routes and other cultures to establish trade relations.
Economic activity relies on not only a society’s production and use of goods, but also on the transport of goods between cultures in the form of trade. Such interdependence between global economies is part of what defines relationships and communication between various cultures. The growth of technological and communication systems in today’s world affects these trade patterns. In more developed and industrialized countries, the ability to call a client halfway across the world, reduce production time by mechanical production instead of human labor, use the Internet to communicate ideas instantly, and send goods overnight via air delivery are examples of how innovations in technology have increased the speed and efficiency of the movement of information and goods.

**Naming** What is another name used for human geographers?

**Skills Practice** When you hear a new academic vocabulary word, be sure to use it. For example, you can use it in sentences you write and in discussions with your classmates. Practice using the academic vocabulary words *obtain* and *fluctuation* by writing a sentence containing each of these words.

**Reviewing Vocabulary**

1. **Understanding Relationships** How are site and situation different?

2. **Listing** Using your graphic organizer, write a definition of *geography* in your own words.

3. **Identifying** What is the spatial perspective?

4. **Categorizing** What are the elements of geography?
5. **Organizing** What methods do geographers use to conduct their work?

6. **Evaluating** How is geography related to other subjects?

**Writing Activity**

**TEKS:** 1A

7. **Informative/Explanatory** Write a paragraph explaining how geography helps us interpret the past, understand the present, and plan for the future.