BASICS OF GEOGRAPHY

A UNIT OF STUDY

Includes Two Videos...

1. WATER AND LANDFORMS 2. CLIMATE AND NATURAL RESOURCES

Teacher's Guide

Video Produced by VIDEO DIALOG, INC.

Teacher's Guide and Blackline Master Activities by Beverley L. Tyndall

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These videos are closed captioned

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This self-contained Unit of Study is designed to provide students in grades 6-9 with resources to complement their study of geography and social studies. Live-action videos and printed student activities have been prepared to help students better understand the physical geography of the world in which they live and apply this knowledge toward a better understanding of human, or cultural, geography.

There are two video lessons in this Unit of Study. Each lesson examines several aspects of physical geography and looks at how physical geography impacts the lifestyles of people living in different regions of the world.

Basics of Geography is designed to be used in two ways—as a complete self-contained Unit of Study or as stand-alone video lessons. The Unit of Study consists of two videos, two sets of blackline master activities, and this accompanying Teacher's Guide containing Suggested Instructional Procedures for each of the two lessons, answer keys, and scripts.

Each stand-alone lesson consists of one video, one set of blackline master activities, and this Teacher's Guide. Using the table of contents, locate the video lesson you choose to use and follow the Suggested Instructional Procedures. An envelope containing the blackline master activities for the lesson you are using is enclosed. Included with the blackline masters for Basics of Geography: Climate and Natural Resources is a Unit Test designed to assess comprehension of the Student Objectives for the entire Unit of Study.

UNIT GOALS

After viewing the videos and participating in the lesson activities, the students should be able to:

- Use and interpret maps and globes as they relate to geography skills.
- Demonstrate an understanding of the relative location, size, and shape of the earth's major continents and oceans.
- Define terms for various landforms, bodies of water, and other geographic features, such as mountains, plateaus, islands, deserts and oceans.
- Explain how aspects of physical geography, such as climate and natural resources, affect population distribution and describe ways in which people in various regions of the world adjust their lifestyles to suit their natural environments.
MATERIALS IN THE UNIT

Videos

This Unit of Study contains two video lessons. The video titles and themes are as follows:

Lesson 1. WATER AND LANDFORMS examines the earth's oceans and fresh water sources, the major continents, basic types of landforms and changes to the earth's surface, and how these aspects of physical geography affect the patterns of living of people in different regions of the world. This video also contains an introduction to map and globe skills.

Lesson 2. CLIMATE AND NATURAL RESOURCES looks at various climates of the world and the factors that influence climate, the different types of natural resources found on the earth and the ways in which they are used, and how climate and natural resources affect population distribution and the lifestyles of people in various regions of the world.

Through vivid footage, graphics, and maps, Basics of Geography opens students' eyes to the world around them, exposing them to a variety of landscapes and cultures and helping them to gain a better understanding of their world and of the diversity of the people living in it.

Teacher's Guide

This teacher's guide has been prepared to aid you in utilizing material contained within the Unit of Study. In addition to this introductory material, the guide contains the following:

• Suggested Instructional Procedures for each lesson.
• Follow-up Activities, Projects, and a Quiz for each lesson.
• Answer Keys for the Blackline Master Activities.
• Script for each video lesson.
• Unit test and answer key.

Blackline Master Activities

Included in this Unit of Study are 23 blackline masters for xerographic duplication. They consist of a variety of activities, including in-class worksheets, take-home activities, maps, information sheets, and quizzes for each lesson, as well as a Unit Test intended to assess student comprehension of the complete Unit of Study. The answer key for the Unit Test is on page 26.
These blackline masters, hereafter referred to as activity sheets, are provided as the follow-up activities for each video lesson. They will help you determine focal points for class discussions based on the objectives for the lesson. The activity sheets have a three-fold purpose:

• To reinforce information presented in the videos.

• To provide an opportunity for students to apply what they have learned from the videos.

• To be used as diagnostic tools for assessing areas in which students need assistance.

Answer keys for the blackline master activities and Unit Test can be found on pages 10 and 24 of this teacher's guide.

INSTRUCTIONAL NOTES

It is suggested that you preview each video and read the related Suggested Instructional Procedures before involving your students in the lesson activities. In this way, you will become familiar with the materials and be better prepared to adapt the program to the needs of your class.

You will probably find it useful to follow the videos and lesson activities in the order in which they are presented in this teacher's guide.

It is also suggested that the video presentations take place before the entire class and under your direction. The lesson activities grow out of the content of the videos; therefore, the presentations should be a common experience for all students.

As you review the instructional program outlined in this teacher's guide, you may find it necessary to make some changes, deletions or additions to fit the specific needs of your students. We encourage you to do so, for only by tailoring the programs to your own students will they obtain the instructional benefits afforded by the materials.
BASICS OF GEOGRAPHY:
Lesson 1: Water and Landforms
Viewing Time: 23 minutes

SUGGESTED INSTRUCTIONAL PROCEDURES

TEACHER PREPARATION
Preview Video Lesson 1, WATER AND LANDFORMS. Read the introductory pages of this guide and the Suggested Instructional Procedures for this lesson. Duplicate the Activity Sheets you intend to use.

VIDEO SUMMARY
The study of geography is comprised of two parts: physical geography and human, or cultural, geography. Physical geography is the study of the earth's surface. Human geography is the study of how people interact with the earth. Geographers have developed maps and globes to better study the earth. Maps and globes each have their particular advantages and uses.

Geographers have created a series of imaginary lines, called lines of latitude and lines of longitude, to help locate points on a map or globe. One imaginary line, the equator, divides the earth into the Northern and Southern Hemispheres. Another line, called the prime meridian, divides the earth into the Eastern and Western Hemispheres. Understanding latitude and longitude, direction, scale, and symbols found in map legends or keys is essential for using maps and globes in the study of geography.

Seventy percent of the earth's surface is covered with water, most of it found in the earth's four main oceans. Only three percent of the earth's water is fresh water, found in bodies of water such as rivers and lakes. There is a finite amount of water on the earth—no new water can be created. Water goes through a continuous cycle of movement called the water cycle. Because water is essential for survival, people have historically settled near water sources. The amount of water in a region has a tremendous impact on people's lifestyles—what they eat, what they do for a living, and how they travel.

One-third of the earth's surface is covered by land. The different surface features of the earth are called landforms. The largest areas of land are the seven continents. Over millions of years, the earth's continents have slowly moved. This movement, called continental drift, is a result of movements of the earth's crust. Movements of the earth's crust also cause earthquakes and volcanoes. Changes to the earth's surface are also caused by wind and water. The different types of landforms found on the earth affect population distribution. Landforms also affect how people make a living, as well as how they have fun.
STUDENT PREPARATION

Each student should have paper and pencil or pen for completing the activity sheets and for taking notes.

Distribute Activity Sheet 1, Viewer's Guide, for Basics of Geography: Water and Landforms. This is designed to help students focus on key words and concepts contained in the video. Ask the students to review the Viewer's Guide before watching the video. Explain that they will be asked to answer the questions listed on this sheet at the end of the video, and then go over their answers with the class. Answers are found on page 7.

STUDENT OBJECTIVES

After viewing the video and participating in the lesson activities, the students should be able to:

• Locate the equator and prime meridian and use latitude and longitude to find places on a globe.

• Name and locate on a map or globe the earth's four main oceans and seven major continents.

• Explain the different stages of the water cycle.

• Discuss how the amount of water in a region affects the lifestyle of the people living there.

• Describe the various types of landforms found on the earth.

• Explain how the earth's surface has changed and continues to change due to forces on the earth as well as inside the earth.

• Explain what impact different landforms have on people's patterns of living.

VIDEO PRESENTATION

Present the video. The viewing time is 23 minutes. The script of the recorded narration is provided on page 13 of this teacher's guide.
CLASS DISCUSSION

It is recommended that you involve students in a brief discussion after viewing the video and before involving them in the Follow-Up Activities. You may wish to begin your discussion with the questions that appear at the end of the video and on Activity Sheet 1, Viewer's Guide. The questions listed on the Viewer's Guide can be found below along with the answers printed in italics.

1. What do we call the two sets of lines that geographers have created to help locate places on a map or globe?
   Answer: The lines that run east and west are called lines of latitude. The lines running north and south are called lines of longitude.

2. What are the two lines that divide the earth into the Northern and Southern Hemispheres and the Eastern and Western Hemispheres?
   Answer: The equator divides the earth into the Northern and Southern Hemispheres. The prime meridian is the dividing line between the Eastern and Western Hemispheres.

3. What percentage of the earth's surface is covered by water?
   Answer: Water covers 70 percent of the surface of the earth.

4. Name all four oceans.
   Answer: The four oceans are the Atlantic, Pacific, Indian, and Arctic.

5. What percentage of the water found on earth is fresh water?
   Answer: Only 3 percent of the earth's water is fresh water.

6. What are the three stages of the water cycle?
   Answer: Water goes through a continuous cycle of evaporation, condensation, and precipitation.

7. Name all seven continents.
   Answer: The seven continents are North America, South America, Europe, Asia, Africa, Australia, and Antarctica.

8. What are the four basic types of landforms found on the earth?
   Answer: The four basic types of landforms are mountains, hills, plains, and plateaus.

9. What name have geographers given to the movement of the continents over millions of years?
   Answer: Geographers call the gradual movement of the continents "continental drift."
10. Where would you be more likely to find a large population center: on top of a high mountain or on a coastal plain?

*Answer: Most likely you would find a large population center on a coastal plain because it is easier to build cities and grow crops on flat land. Plus the proximity to the ocean would make travel and trade easier.*

**FOLLOW-UP ACTIVITIES**

There are eight Blackline Master Activity Sheets provided for this video lesson. Activity Sheet 1, *Viewers Guide*, is to be distributed before presenting the video. The other activity sheets may be used immediately following the video presentation, during other class time, or as homework assignments. Answers can be found beginning on page 10 of this teacher's guide.

- Distribute Activity Sheet 1, *Viewers Guide*, if you haven't already done so. Give the students an opportunity to answer the questions, then go over the answers with them, expanding on their responses as you feel necessary.

- Distribute Activity Sheet 2, *Vocabulary Exercise: Word Scramble*, to each student. This exercise is intended to increase the students' familiarity with important geography terms. Using the definitions at the bottom of the page as clues, have the students unscramble the sets of letters to form ten common geography terms.

- Distribute Activity Sheets 3 and 3a, *Map Exercise: Using Maps and Globes*, to each student. The purpose of this exercise is to allow students to apply the information in the program towards developing their map skills. Using the latitude and longitude coordinates provided, have the students mark the locations of places on the accompanying map, and then answer the questions that follow.

- Distribute Activity Sheet 4, *Locating Oceans and Continents*, to each student. This exercise is intended to help insure your students' understanding of the relative shapes, sizes, and locations of the earth's major geographic features. Have the students identify the four main oceans and the seven major continents outlined on the map, and then answer the questions that follow.

- Distribute Activity Sheet 5, *Identifying Landforms & Bodies of Water*, to each student. This activity is designed to introduce your students to terms not covered in the video. Have the students study the different landform types and bodies of water illustrated, and then answer the questions that follow.

- Distribute Activity Sheet 6, *Water, Landforms, and You*, to each student. This exercise allows the students to apply the information they learned from the program to their own lives. Ask each student to describe some ways in which the land and the water where they live affect their lifestyle.
• Distribute Activity Sheet 7, **Quiz**, to each student. Use the quiz to evaluate student progress of this lesson's objectives. The quiz is given below for your teaching convenience. Answers can be found on page 12.

1. Physical geography includes the study of:
   a) landforms     b) bodies of water     c) climate     d) natural resources     e) all of the above

2. Historically, people settled near water for the following reasons:
   a) ease of transporting goods    b) energy source for mills    c) water source for crops    d) source of drinking water    e) all of the above

3. True or False. The ocean floor is mostly flat. _____

4. True or False. Many mountains were formed by the movement of glaciers.

5. Lines of latitude and lines of longitude are measured in degrees. Degrees are further divided into __________ and __________.

6. Northwest is one example of an ______________ direction.

7. People can access one source of fresh water called _______ _______ by digging wells.

8. Africa and Asia are connected by a narrow strip of land called the

9. The study of the forces within the earth that cause the earth's crust to move is called __________ ______________.

10. The stages of the water cycle are ______________, __________ and ______________.

**PROJECTS**

• Written Reports. Assign students or groups of students to prepare written reports on the following topics:

**A. Changes to the Earth’s Surface:** Have students write reports on natural phenomena that cause changes to the surface of the earth. Suggested topics include volcanoes, earthquakes, floods, dust storms, and glaciers. Student reports should address the following questions:
   • What are the causes of this natural phenomenon?
   • Where and when does it occur most frequently?
   • What are some effects it has on the people living nearby?
   • How might it be controlled or predicted?
B. *Water and Landforms Around the World:* Have students choose a country and write a report about that country's water sources and landforms. Encourage them to choose countries from a wide variety of regions. Student reports should address the following:

• What are the primary landforms and bodies of water in this country?

• How do the landforms and bodies of water affect the lifestyles of the people living there, i.e., what kinds of food do the people eat, what types of jobs do they have, how do they travel, what do they do to have fun?

C. *The Water Cycle:* Ask students to examine the water cycle. Since the world contains only 3% fresh water and no new water is created, what are the implications of population growth, pollution, and global warming?

2. Have students make a detailed physical relief map of the area in which they live. Include latitude, longitude, regional landforms and bodies of water, and major landmarks. A detailed key or legend should also be included.

**EXTENDED LEARNING ACTIVITIES**

Investigate water and landforms at the following websites:

American Geophysical Union  
http://earth.agu.org/kosmos7homepage.html  
202-462-6900

United States Geological Survey  

Association of American Geographers  
http://www.aag.org  
202-234-1450

**ANSWER KEY**

Activity Sheet 1, **Viewer's Guide**  
See Page 7.

Activity Sheet 2, **Vocabulary Exercise: Word Scramble**

1. map scale  
2. hemisphere  
3. longitude  
4. degree  
5. equator  
6. evaporation  
7. isthmus  
8. volcano  
9. glacier  
10. erosion
1. (D) Buenos Aires, (I) Nairobi
2. (A) Anchorage, (D) Buenos Aires, (E) Los Angeles, (F) Madrid
3. (F) Madrid
4. (I) Nairobi
5. (C) Sydney
6. (I) Nairobi
7. Southeast
8. Northwest
Activity Sheet 4, Locating Oceans and Continents

1. Arctic Ocean
2. Indian Ocean
3. Pacific Ocean
4. Antarctica, Australia
5. Asia, Australia
6. North America, South America, Africa, Europe, Antarctica
7. South America, Africa
8. Europe, Africa
9. Australia
10. Since this is a Mercator projection map, it distorts the size of the continents, especially nearest the poles.

Activity Sheet 5, Identifying Landforms and Bodies of Water
1. canyon
2. archipelago
3. mountain range
4. bay
5. mouth of river
6. cape
7. strait
8. delta
9. tributary
10. gulf

Activity Sheet 6, Water, Landforms, and You
Answers will vary.

Activity Sheet 7, Quiz
1. e) all of the above
2. e) all of the above
3. F
4. T
5. minutes and seconds
6. intermediate
7. ground water
8. Isthmus of Suez
9. plate tectonics
10. evaporation, condensation, and precipitation
What exactly is geography? The study of the earth? Yes. But it's much more than that, too. Geography also includes the study of everything living on the earth, especially people. Because it is such a vast topic, the study of geography is usually divided into two parts: physical geography, and human, or cultural, geography.

Physical geography is the study of the earth's surface—the different landforms and bodies of water that cover the earth. Physical geography also includes the study of weather and climate, as well as the earth's natural resources, such as plant life and minerals.

Human geography is the study of people and how they interact with the earth. It looks at how various cultures living in different regions of the world use the earth and its resources and what effect this has on the earth itself.

The following program will examine both the physical aspect of geography and its human aspect—how we people living on earth are affected by our physical surroundings and, in turn, what impact our presence has on this planet we call home.

Over time, we have developed tools to help us better understand the earth. For thousands of years, people looked at the world and tried to record what they saw. Motivated by the desire to find shorter trade routes as much as by the desire for knowledge, early explorers traveled the world and drew maps of the places they had been. The maps they drew ranged from early, whimsical attempts to later ones that were surprisingly accurate.

The exploration of our world continues to this day, but explorers have the advantage of being able to study the earth from space. Photographs taken from orbiting satellites have given us a more exact picture and a better understanding of the earth.

The primary tools that geographers and explorers have developed to study the earth are maps and globes. A globe is a model, or small copy, of the earth. Looking at a globe is like looking at the satellite pictures taken from space. Because a globe is round, like the earth, relative shapes, sizes and distances are shown quite accurately. Globes, however, have their disadvantages. They are hard to carry around, and they can only show you one side of the earth at a time.

Maps are flat drawings of the earth. Unlike globes, they can let you see the whole earth at once. Or they can show you just a small part of the earth, such as your town, in great detail. However, because the earth is round and maps are flat, they do not show relative shapes, sizes, and distances as accurately as globes do.
Geographers have found ways to solve the problem of drawing a round world on flat paper—they call these drawings **projection maps**. There are a number of different types of projection maps, and each has its particular advantages and uses. The Mercator projection provides an accurate picture of shape and direction and is often used for ship navigation. The Robinson projection shows relative sizes more accurately, so is useful when making comparisons between places on the earth.

When discussing the earth, geographers often divide it into two **hemispheres**. The word hemisphere means "half a sphere," or half of the earth. One division is made along an imaginary line halfway between the North and South poles. This line is called the **equator**. The equator divides the earth into the Northern Hemisphere and the Southern Hemisphere. Another imaginary line divides the earth into the Eastern and Western Hemispheres. This line is called the **prime meridian**.

In order to identify locations on a map or globe, geographers have created a system of imaginary lines called **lines of latitude and lines of longitude**. Latitude lines run east and west. Longitude lines run north and south.

These lines are measured in **degrees**. Degrees are further broken down into **minutes** and **seconds**. The equator is the starting point for measuring lines of latitude. The equator is zero degrees latitude. Latitude lines are measured by the number of degrees they lie north or south of the equator.

The prime meridian is zero degrees longitude. Lines of longitude, then, are measured in the number of degrees they are east or west of the prime meridian. Together, these lines create a **grid**, or series of criss-crossed lines, to help you locate a point on a map or globe.

When describing a location, we often speak of it in terms of direction. You already know north, south, east, and west. These four directions are called the **cardinal directions**. In between, there are four **intermediate directions**. Northwest, one intermediate direction, is halfway between north and west. The other three intermediate directions are northeast, southeast, and southwest.

When using maps and globes, it helps to know what their **scale** is. The scale tells you their size in relation to the earth. For instance, if the scale of a globe is one to 42 million, it means the earth is 42 million times larger than the globe.

You may often need to use a scale on a map in order to determine distances. A map scale may tell you, for example, that one inch on the map is equal to 100 miles on the earth. The map scale is usually found in the **map legend** or **map key**. The map key contains other important information, such as **symbols**. The map key tells you what different symbols represent, such as that a star is the symbol for a country's capital city.
People use maps for many purposes, so there are many kinds of maps containing various information. One familiar map is a political map. It shows countries and cities. Another type of map is a physical relief map. It shows the natural features of the earth, such as mountains, deserts, and lakes. Yet another type of map is a distribution map. This sort of map contains information such as population distribution or the amount of rainfall in different regions of the world.

If you looked at the earth from space, you would see that much of the earth's surface is covered with water. In fact, water makes up 70 percent of the earth's surface. Most of the water on the earth is salt water, found in the world's ocean system. Even though the world's oceans are really all connected, they are generally considered to be four distinct oceans: the Atlantic, the Pacific, the Indian, and the Arctic.

The earth's surface at the bottom of the ocean, called the ocean floor, contains valleys and mountains just like the rest of the earth's surface. Some of these mountains rise above the surface of the oceans to form islands.

Until recently, the earth's ocean floor was not even as well mapped as the surface of Mars because geographers were unable to see it. But recent satellite technology has allowed them to map the ocean floor in much greater detail, revealing plains, ridges, and even volcanoes.

Compared to the amount of salt water on the earth, there is very little fresh water. In fact, only three percent of the earth's water is fresh. Fresh water is found in lakes, rivers, streams, and wetlands. Fresh water can also be found underground. People can access this water, called ground water, by digging wells.

There is a finite amount of water on the earth. That means no new water can be created. The water that exists today is the same water that existed thousands of years ago. Water just keeps going through a continuous cycle of movement called the water cycle.

All water, from puddles to oceans, experiences a process called evaporation. The warmth from the sun changes the water into water vapor and it rises into the air. Once in the air, the water vapor cools and condenses, or changes back into water droplets, forming clouds. Eventually, the water falls back to earth as rain, snow, or another form of precipitation, only to begin the water cycle all over again.

The earth's fresh water is the source of drinking water for all the people of the world and provides the water needed for all the animals and plants on the earth to live and grow. Because water is essential for survival, and because new water cannot be created, people have historically settled near sources of water. For example, some of the great early civilizations grew up along the Nile River Valley in Egypt, as the Nile provided plenty of water to drink and made the surrounding land fertile for growing crops.
People settled near water for other reasons too. Great port cities were established near natural harbors and rivers because of the ease of transporting goods by water. Water also provided the energy needed for mills to grind grain into flour, resulting in the establishment of mill towns along rivers.

The amount of water in a region of the world has a tremendous impact on the lifestyle of the people living there. Water affects what they eat, what kind of jobs they hold, as well as how they travel. People living in Japan, for example, tend to eat a great deal of fish and seaweed because their country is surrounded by the ocean. Many Japanese make their living as fishermen, and when people travel in Japan, they often find it easiest to go by boat since their country is made up of thousands of islands.

If water makes up 70 percent of the earth's surface, then the remainder, or about one third, of the earth's surface is covered by land. The largest areas of land on the earth are the seven continents. These continents are North America, South America, Europe, Asia, Africa, Australia, and Antarctica.

Some of these continents are connected to one another. Europe and Asia are sometimes referred to jointly as Eurasia. The Ural Mountains are usually considered the dividing line between the two. North and South America are connected by Central America, and Africa and Asia are connected by a narrow strip of land called the Isthmus of Suez.

The surface of the earth has many distinctive features. Some areas are flat, while others are steep. These different surface features are called landforms. There are four basic types of landforms. The ones you are probably most familiar with are hills and mountains. What distinguishes them is that hills simply are not as high as mountains. The other two basic types of landforms are plains and plateaus. Both terms describe areas that are flatter than hills or mountains. A plain is a large area of flat, or nearly flat, land. An area of flat land that rises higher than the land surrounding it is called a plateau, which means "plate."

In addition to these four basic types of landforms, there are many, many more. Some of the more familiar ones are islands, which are bodies of land completely surrounded by water, or peninsulas, which are pieces of land nearly surrounded by water. A type of landform you may be less familiar with is an isthmus, such as the Isthmus of Suez mentioned earlier, which is a narrow strip of land connecting two larger areas of land. Or a mesa, which is a high, flat-topped hill shaped like a table. In fact, mesa is the Spanish word for table.

The earth's landscape is constantly changing due to forces on its surface, as well as forces under its surface. Many of these changes happen so gradually they are difficult to see, except over a long period of time, such as the carving out of a valley by a river. Other changes are sudden and dramatic, such as an earthquake.
Over millions of years, even the shapes of the continents have changed. Geographers believe that 200 million years ago, some of the continents may have been joined together. If you look at a map, you can see how some of the continents look as if they would fit together, like a jigsaw puzzle. But, very slowly, over millions of years, the continents moved apart until they ended up where they are today. Their movement has not stopped, however. Geographers predict that millions of years from now, the world could look very different than it does today. This movement of the continents is called continental drift.

In order to understand continental drift, it is helpful to know what lies underneath the earth's surface. Immediately under the land and water you see is a layer of rock called the earth's crust. In some places the crust is as thick as 20 miles. That may sound like a lot, but when you consider that the distance between the North and South poles is 8,000 miles, you realize that the crust is really quite a thin layer.

Below the crust are layers of rock and metal that are so hot, some of it is melted, or molten. The crust floats on top of these layers, and because it is floating, it can move. The earth's crust does not move all in one piece, however, but in large segments called plates. Geographers think that Africa and South America are two plates that very slowly moved apart to form the two separate continents we know today.

Many of the earth's major geographic features are found along the edges of plates. As plates move and push against each other, their edges crumple up and eventually may form mountains or ocean ridges. The study of the forces within the earth that cause these plate movements is called plate tectonics.

In some cases, the movement of the earth's crust produces sudden changes. As plates' edges push together or move apart, the ground above is sometimes unable to stretch anymore, and it may break and suddenly move. This is what happens in the case of earthquakes.

Another effect of the movement of the earth's crust are volcanoes. Sometimes the hot, molten rock and metal underneath the crust is pushed up through cracks in the ground. The molten rock that flows out of the ground is called lava. Lava can build up over time to form volcanic mountains.

Changes to the earth's surface may also be caused by conditions on the earth, not just inside the earth. These kinds of changes, too, can happen suddenly or over millions of years.

Water can have a dramatic effect on the surface of the land. Oceans gradually wear away at the seashores. Heavy rains may cause rivers to flood. Flowing rivers, over time, can cut deep valleys through the land. In very cold areas, there are large, moving sheets of ice called glaciers. As these glaciers move, they scrape away the ground beneath them, digging valleys. Thousands of years ago, glaciers covered much of Europe and North America. Many of these regions' mountains and valleys were formed by the movement of these glaciers.
Wind, too, can cause changes to the surface of the land. As the wind blows, it carries away soil, eventually wearing down the land in a process called erosion. The wind also causes changes to the land through weathering. Small particles carried by the wind can act as an abrasive, gradually smoothing away the rough edges of rocks.

Just as the availability of water can affect where people choose to live, landforms are also a major factor in determining population distribution. Extremely mountainous areas are generally thinly settled because it is difficult to build anything on the side of a mountain and because the soil is usually too poor for farming. Most large population centers are located in flatter areas, since it is much easier to build cities and grow crops on level ground.

Landforms also have an impact on what kind of work people do as well as what kind of recreational activities they enjoy. Many people living in coastal or lowland plain regions, which are flatlands found near oceans or rivers, earn their living as farmers. These areas have the advantages of level land, making it is easier to operate farm machinery, and ample water supplies for crops.

People who live in mountainous areas may spend their leisure time downhill skiing or mountain climbing. In flat areas, cross-country skiing and cycling would be more likely pastimes. Those people lucky enough to live on an island might enjoy sailing or windsurfing on the water that completely surrounds them.

Water and land—these two things alone cover all of the surface of the earth. Water may be salty, as in oceans, or fresh, as in rivers. The land may be steep like a mountain or flat, like a plain. But in all their various forms, land and water help determine not only where people live on the earth, but how they live as well.

ADDITIONAL RESOURCES AVAILABLE FROM UNITED LEARNING, INC.

Regions of the United States Series - Cat. No. 10084V
Our Wondrous Oceans Series - Cat. No. 10399V
Erosion and Weathering - Cat. No. 1093V
Formation of Continents and Mountains - Cat. No. 1083V
All About Rocks and Minerals: Their Formation and Importance - Cat. No. 1103V
Glaciers: Nature's Conveyor Belt - Cat. No. 10310V
Using Maps, Globes, Graphs, Tables, Charts and Diagrams - Cat. No. 1013V
The Water Cycle - Cat. No. 10039V

United Learning, Inc., 800-424-0362, 24-Hour Fax: 847-647-0918
website: http://www.unitedlearning.com E-Mail: bistern@interaccess.com
BASICS OF GEOGRAPHY:
Lesson 2: Climate and Natural Resources

Viewing Time: 25 minutes

SUGGESTED INSTRUCTIONAL PROCEDURES

TEACHER PREPARATION

Preview Video Lesson 2, CLIMATE AND NATURAL RESOURCES. Read the introductory pages of this guide and the Suggested Instructional Procedures for this lesson. Duplicate the Activity Sheets you intend to use. Included with the Activity Sheets is a Unit Test intended to assess student comprehension of the entire Unit of Study.

VIDEO SUMMARY

Climate is an important feature geographers consider when studying a place on the earth. One factor that influences climate is the sun. Because of the way in which the earth moves around the sun, different parts of the earth face the sun at different times of the year. The more sunlight a place gets, the warmer its climate. Latitude also affects climate. Places located near the equator receive more direct sunlight and, therefore, are warmer than places located near the poles.

Other factors that influence climate are elevation, precipitation, wind, and water currents. Geographers divide the world into six climatic regions. Climate has a great impact on people's everyday lives. Climate helps determine what people wear and what kind of houses they live in. Climate also affects population distribution since many people choose to live in places with pleasant climates.

Another feature geographers consider when studying a place is natural resources. Water, land and air are earth's three basic resources. Land is important for the growth of another natural resource, vegetation. There are five types of natural vegetation regions found on the earth. People sometimes change the natural vegetation of a region to suit their needs. Vegetation is an example of a renewable resource.

Minerals are another natural resource that comes from the land. Minerals are divided into two categories, metals and nonmetals. Nonmetal minerals also include fossil fuels. Minerals are a nonrenewable resource, so it is important that we conserve our mineral resources. Air and water are important resources too, for they are essential to human life. They are also nonrenewable resources and must be protected against pollution.

Natural resources affect how people live in different regions of the world, such as what types of houses they live in and what they do for a living. Because natural resources are not distributed evenly across the earth, the world's population is not
distributed evenly either. People choose to live where they can find the resources they need. Trade is another result of the unequal distribution of resources. As people from different regions come into contact with one another, they trade ideas as well as goods. This has resulted in what geographers call "global interdependence."

STUDENT PREPARATION

Each student should have paper and pencil or pen for completing the activity sheets and for taking notes.

Distribute Activity Sheet 1, Viewer's Guide, for Basics of Geography: Climate and Natural Resources. This is designed to help students focus on key words and concepts contained in the video. Ask the students to review the Viewer's Guide before watching the video. Explain that they will be asked to answer the questions listed on this sheet at the end of the video, and then go over their answers with the class. Answers can be found on page 21.

STUDENT OBJECTIVES

After viewing the video and participating in the lesson activities, the students should be able to:

• Discuss the various factors that influence a region's climate.

• Name and locate on a map the six main climatic regions.

• Explain how different climates affect people's patterns of living.

• List the earth's basic natural resources.

• Identify and locate on a map the five types of natural vegetation regions.

• Discuss how natural resources in a region affect the lifestyles of the people living there.

• Define the term "population density" and discuss the geographic factors that influence it.

• Explain what is meant by the term "region."

VIDEO PRESENTATION

Present the video. The viewing time is 25 minutes. The script of the recorded narration is provided on page 27 of this teacher's guide.
CLASS DISCUSSION

It is recommended that you involve students in a brief discussion after viewing the video and before involving them in the Follow-Up Activities. You may wish to begin your discussion with the questions that appear at the end of the video and on Activity Sheet 1, Viewer's Guide. The questions listed on the Viewer's Guide are as follows. The answers appear in italics.

1. The Earth is constantly in motion. What are these two different motions called? Answer: The earth rotates, or spins, on its axis as it revolves, or travels, around the sun.

2. Name the six climatic regions of the world. Answer: The six climatic regions of the world are tropical, subtropical, temperate, subpolar, polar, and highlands.

3. What two main factors do geographers use to determine a region's climate? Answer: Climate is determined by temperature and precipitation.

4. Where would you find the warmest climates, in the low, middle or high latitudes? Answer: The warmest climates occur in the low latitudes.

5. What are the five natural vegetation regions found on the earth? Answer: The five types of natural vegetation found on the earth are forest, savanna, grassland, tundra, and desert.

6. Name two ways people might change the natural vegetation of an area to fit their needs. Answer: People might change the natural vegetation of an area by clearing trees to create farmland or by irrigating dry land to make it suitable for growing planted vegetation.

7. Which of these resources is a renewable resource: air, water, vegetation, minerals? Answer: Vegetation is the only renewable resource. Air, water and minerals are all non-renewable resources.

8. Minerals are divided into two different categories. Name them. Answer: The two categories of minerals are metals and nonmetals. Nonmetal minerals also include fossil fuels.

9. What are some results of the unequal distribution of natural resources across the earth? Answer: The unequal distribution of natural resources has resulted in unequal population distribution since people tend to settle near the resources they need. It has also resulted in trade, as few places have every resource its people might want.
10. How do geographers define region?
Answer: A region is an area with several things in common that set it apart from other areas of the world. A region can be defined by many different factors, such as by landforms, or by common cultural practices.

FOLLOW-UP ACTIVITIES

There are ten Blackline Master Activity Sheets provided for this video lesson. Activity Sheet 1, Viewer's Guide, is to be reviewed before presenting the video. The other activity sheets may be used immediately following the video presentation, during other class time, or as homework assignments. A copy of a world map is included with these activity sheets should you choose to assign to your students Project No. 2 on page 24 of this teacher's guide. Answers to the Activity Sheets begin on page 24 of this teachers' guide.

• Distribute Activity Sheet 1, Viewer's Guide, if you haven't already done so. Give the students an opportunity to answer the questions, then go over the answers with them, expanding on their responses as you feel necessary.

• Distribute Activity Sheet 2, Vocabulary Exercise: Crossword Puzzle, to each student. This exercise is intended to increase the students' familiarity with important geography terms. Using the clues provided, have the students complete the crossword puzzle with ten common geography terms.

• Distribute Activity Sheets 3 and 3a, Climates of the World, to each student. The purpose of this exercise is to increase your students' understanding of the climatic regions of the world and the factors that influence climate. Have the students study the map of climatic regions and then answer the questions that follow.

• Distribute Activity Sheets 4 and 4a, Natural Vegetation Regions, to each student. This exercise requires the students to use the information learned about natural resources to draw conclusions about how resources affect patterns of living. Have the students study the map of natural resources and answer the questions that follow.

• Distribute Activity Sheets 5 and 5a, Population Density, to each student. This activity asks the students to make deductions about how aspects of physical geography might affect population distribution. Have the students compare the accompanying population density map with the elevation, climate, and natural vegetation maps and then answer the questions that follow.

• Distribute Activity Sheet 6, Climate, Resources, and You, to each student. This exercise allows the students to apply the information they learned from the program to their own lives. Ask each student to describe some ways in which the climate and the natural resources where they live affect their lifestyle.
1. Which of the following can affect a region's climate?
a) precipitation b) elevation c) water currents d) wind e) all of the above

2. Which of the following natural vegetation regions would most likely have trees growing?
a) savanna b) grassland c) tundra d) desert e) none of the above

3. True or False. If the Southern Hemisphere is tilted toward the sun, it is summer in the Northern Hemisphere. _____

4. True or False. Norway is located near the Arctic Circle, so it has a polar climate.

5. The amount of time it takes for the earth to make one revolution around the sun is called a ________.

6. The low latitudes, or the tropics, are located between the Tropic of ___________ and the Tropic of ___________.

7. Coal, petroleum oil, and natural gas are all examples of a type of nonmetal mineral called ___________ ___________.

8. The atmosphere is an important resource because people need ____________ to breathe and plants need ____________ ____________ in order to grow.

9. Geographers use the term ___________ ____________ to describe the number of people living in an area.

10. The term ___________ ____________ refers to people from different regions of the world depending on each other for goods and ideas.

Projects

1. Climates and Resources Around the World: Have students choose a country and write a report about that country's climate and natural resources. Encourage them to choose countries from a wide variety of regions. Student reports should address the following:

   • What is the climate of this country and what are its primary natural resources?
• How do the climate and the natural resources affect the lifestyles of the people living there, i.e., what kinds of food do the people eat, what types of jobs do they hold, what kind of clothes do they wear, what kind of houses do they live in, etc.

2. Dividing the World into Regions: Geographers can use many different criteria when dividing the world into regions. They might divide it according to landforms, according to climates, or according to common cultures. Give the students a copy of the world map provided, and ask them to do some research, using their textbooks and books from the library as resources, comparing the many different ways the world might be divided into regions. Then have them color in their maps showing one way to divide the world into regions. Have them explain to the class what criteria was used to divide the world into these particular regions.

3. Conserving Earth's Natural Resources: Contact your local recycling center to arrange for a field trip to teach the students about the recycling process, or contact your local parks service to arrange for the students to help clean up litter and learn about local efforts to prevent land, air and water pollution.

4. Have students create vegetation maps of your area. Include map keys or legends.

EXTENDED LEARNING ACTIVITIES

Investigate climates and natural resources through the following websites:

Earth Science & Resources Institute
http://www.esri.utah.edu

Centre for Climate & Global Change Research
http://www.meteo.mcgill.ca

EcoNet
http://www.igc.apc.org/econet

ANSWER KEY

Activity Sheet 1, Viewer's Guide
See page 21.

Activity Sheet 2,
Vocabulary Exercise: Crossword Puzzle
Activity Sheet 3, **Climates of the World**
1. Jakarta
2. tropical
3. Fairbanks
4. subpolar
5. Both cities are located near the Arctic Circle, but Oslo's climate is made temperate by the warm currents from the Gulf Stream. Because St. Petersburg is farther inland, its climate is not affected by the Gulf Stream.
6. Addis Ababa is located in a highland region, meaning in an area of high elevation. The city's high elevation makes its climate colder than that of other cities near the equator.
7. Bombay
8. Brasilia

Activity Sheet 4, **Natural Vegetation Regions**
1. Billings
2. Bangkok
3. Central Australia is covered by a desert, while its coasts are mostly forest and savanna regions. People probably settled in the coastal areas because it would be difficult for them to grow food in the central desert region.
4. Bogota. Mecca is located in a desert region, meaning it receives little rainfall. Bogota is located in a forest region, meaning it receives frequent precipitation.
5. Bonn
6. Reykjavik
7. Ottawa
8. Kate

Activity Sheet 5, **Population Density**
1. Subpolar
2. 0-2
3. Subtropical
4. 25-125
5. Fewer people choose to live in subpolar climates because the weather is too cold. Instead, people choose to live in warmer, subtropical climates. 6.0-2
7. Desert
8. 25-125
9. Savanna
10. Few people live in the desert because there is not enough water to drink and it is difficult to grow crops. More people live in the savanna region because this area receives some precipitation so vegetation can grow.
11. 0-2
12.0
13. Few people live in extremely mountainous regions because it is difficult to build cities or grow crops there. More cities are located in low-elevation coastal plain regions because it is easier to build cities and grow crops on flat land.
Activity Sheet 6, Climate, Resources, and Lifestyles
Answers will vary.

Activity Sheet 7, Quiz.
1. e) all of the above
2. a) savanna
3. F
4. F
5. year
6. Cancer, Capricorn
7. fossil fuels
8. oxygen, carbon dioxide
9. population density
10. global interdependence

Activity Sheet 8, Unit Test
Part 1
1. T 10. F 18. F
5. T 14. F 22. F
6. F 15. F 23. F
8. T 17. T 25. T
9. F

Part II
1. c 11. b
2. b 12. c
3. a 13. c
4. b 14. a
5. c 15. c
6. b 16. b
7. a 17. c
8. c 18. a
9. c 19. a
10. a 20. b

Part III
Answers will vary.
When you think about geography, perhaps the first thing that comes to mind is land. You might think of the continents or of the many different landforms found on the earth. Water, too, might come to mind, such as oceans and rivers and lakes. You might also think of the people living on the earth and how their lives are affected by the land and water around them.

Certainly the study of geography would have to include land and water, for these two things cover all of the surface of the earth. But, in addition to land and water, there is another feature geographers consider when studying the earth. This feature is climate. Climate is, simply put, the weather pattern of a region of the world over a long period of time.

Many factors influence a region's climate. Perhaps the most important of these is the sun. The sun is the source of all light and warmth for every place on earth. However, not all places receive the same amount of sunlight. This is because of the way in which the earth moves around the sun.

The earth's axis is not straight up and down, but tilted. Because of this, as the earth revolves around the sun, different parts of the earth are tilted towards the sun at various times of the year. For example, in July the Northern Hemisphere is facing toward the sun, but half a year later in January, it is tilted away from the sun. This movement of the earth results in the different seasons of the year.

When a hemisphere is tilted toward the sun, it receives more direct sunlight. The more sunlight a place gets, the warmer it becomes. Of course, if one side of the earth is facing toward the sun, the other side must be facing away from the sun. When a place gets less sunlight, the weather becomes colder. So, for example, when it is winter in the Northern Hemisphere, it is summer in the Southern Hemisphere.

There are other factors besides the sun that determine climate. In some places the weather stays warm year-round, while in other parts of the world, it is cold all the time. One reason for this is latitude.
Latitude is the distance a place lies north or south of the equator, measured by imaginary lines called lines of latitude. There are five latitude lines geographers use in discussing climate. The first one is the equator. Places located near the equator receive large amount of sunlight all year-round and are warmer than other places on earth.

Twenty-three-and-a-half degrees north of the equator is a line of latitude called the Tropic of Cancer. When the Northern Hemisphere is tilted toward the sun, sunlight falls directly along this line. When the Southern Hemisphere is facing the sun, sunlight falls upon another line located twenty-three-and-a-half degrees south of the equator, called the Tropic of Capricorn. Areas of the world located between these two lines are called the low latitudes or the tropics.

South of the Tropic of Capricorn, at sixty-six-and-a-half degrees south latitude, is a line of latitude called the Antarctic Circle. Another line, called the Arctic Circle, is located north of the Tropic of Cancer at sixty-six-and-a-half degrees north latitude. The areas between the tropics and these two lines are called the middle latitudes. The sun never shines directly on these areas, so places located here are cooler than in the tropics. The middle latitudes are also known as the temperate regions.

North of the Arctic Circle and south of the Antarctic Circle are the high latitudes, or polar regions. These areas receive the least amount of sunlight, so places here are very cold. In fact, for half the year, these areas get no sunlight at all.

Another factor that determines a region's climate is elevation. Elevation is the height of an area above sea level. Generally, the higher an area's elevation, the colder its climate. Because of this factor, snow can be found year-round on top of high mountains, even when the weather is warm down below.

Another important aspect of a region's climate is the amount of precipitation that falls. In some places, it rains or snows nearly every day. Other places may be completely dry for most of the year, with rain coming only in certain months, like during the monsoon season in India.

Wind, too, can have an effect on an area's climate. Depending on from which direction winds blow, they can be either warm or cool. Winds blowing from the tropics carry with them warm air. Similarly, winds blowing from polar regions bring cold air.

Water currents can act the same as wind currents by carrying warmth or coolness from one part of the world to another. One example of this is the Gulf Stream. The Gulf Stream refers to ocean currents that carry warm water from the Gulf of Mexico to places as far north as Norway. Due to the effect of these water currents, even though Norway is located near the Arctic Circle, its climate is warmer than that of most places in the polar regions.
Geographers divide the world into six main climatic regions: tropical, subtropical, temperate, subpolar, polar, and highlands. Each of these climatic regions are defined by both temperature and precipitation. For instance, places with a subtropical climate would be described as having hot, dry summers, and cool, rainy winters.

Climate has a great impact on people's everyday lives. Among other things, it affects what they wear and what kind of houses they live in. People who live in hot climates, for instance, wear very light clothing. But people who live in polar climates, such as Inuits, wear fur or other warm clothing to protect themselves from the cold.

Inuits also live in houses that are well-insulated to protect against the arctic air. But people who live in hot climates don't need to worry about insulation. Instead, they might build their houses so that cool breezes can get in.

Climate not only affects how people live but, in large part, determines where they live. People may choose to live in a particular place because it has a pleasant climate. Many older people in the United States, for example, choose to retire to Florida or Arizona because it is warm there year-round. Very few people live in places that are too cold, such as Antarctica, or too hot and dry, like the Sahara Desert.

Another feature geographers consider when studying a place is natural resources. Natural resources are the materials found in nature that people utilize in their lives. Water, land, and air are earth's three basic resources. Other natural resources come from these three, such as plants that grow on land, or fish that live in water.

The top layer of the land, the soil, is essential for the growth of another natural resource, vegetation. Trees, flowers, and grasses are all different forms of vegetation. There are five main types of natural vegetation regions found on the earth: forest, savanna, grassland, tundra, and desert.

A forest is a place where trees are the main form of vegetation. Trees require a lot of water, so forests are generally found in climatic regions with frequent precipitation.

Savannas are grassy areas with some trees growing. Savannas are found in regions that receive less precipitation than forest areas.

Grasslands may be covered with a variety of different types of grasses. Grassland regions receive less rainfall than savannas and have few, if any, trees.

A tundra is a type of plain found in polar regions. Here, the ground underneath the soil remains frozen all year long. The surface, however, is warm enough to allow small plants, such as grass and moss, to grow. Trees cannot grow on the tundra.

Deserts are dry areas where very few plants grow. Only plants that can live for long periods without water, such as cacti, can survive here.
If you looked at a map of the natural vegetation regions of the United States, you would see that nearly the entire eastern half of the country is covered by forests. But you know that, in reality, it is not. That is because people have adapted the natural vegetation of the area to fit their needs. In this case, they have cleared some of the forests to create farmland to grow crops. Food crops, such as grains, fruits, and vegetables, and industrial crops, such as cotton and rubber, are all examples of planted vegetation.

Another way in which people change the natural vegetation of an area is by supplying water to a dry region in order to make the land suitable for farming. This process is called irrigation. Much of the western half of the United States depends on irrigation in order to grow crops.

Vegetation is an example of a renewable resource. Crops can be grown, harvested, and replanted over and over again. When trees are cut down to make paper products, new trees can be planted in their place.

People depend on the land as a resource not only for what grows on the land, but also for what forms in the land. Natural resources found in the land are called minerals.

Minerals are usually divided into two categories, metals and nonmetals. Metals generally are solid, shiny, and can be molded and shaped. Some metals are rare and, therefore, quite valuable, such as gold and silver. Others, like aluminum and iron ore, are more plentiful and are used in great quantities for manufacturing.

Nonmetals include a wide variety of minerals used for many different purposes. Some, such as nitrates and sulfurs, are used as fertilizers. Others, such as sand and clay, are common building materials. The human body requires small quantities of minerals as nutrients to help it function properly.

Fossil fuels are another form of nonmetal minerals. Fossil fuels include coal, petroleum oil, and natural gas. They get their name because they are formed from the fossils of dead plants and animals. Fossil fuels have many important uses, such as heating buildings and running machinery, such as automobiles.

Unlike vegetation, people can not grow new minerals. They can only mine, or take out of the ground, what exists naturally. Minerals then are a nonrenewable resource. Some minerals, however, can be reused. Aluminum cans, for example, can be melted down and used to make new aluminum products. This method of using things over again is called recycling. Recycling and conservation will help make earth's mineral resources last longer.

Air and water, earth's two other basic natural resources, are just as valuable as land. In fact, life on earth could not exist without air and water. When geographers and scientists talk about air, they usually refer to it as the earth's atmosphere. The term
atmosphere includes the entire layer of air surrounding the earth. The earth's atmosphere is made up of a number of different gases, including oxygen, which is essential to human and animal life, and carbon dioxide, which plants need in order to grow.

Water, too, is essential to human life. Humans cannot live without fresh water to drink. Most of the water found on the earth is salt water and, therefore, not suitable for drinking; but the oceans, with their abundance of fish and other seafood, are an important food source for many people.

Water and air, like minerals, are nonrenewable resources. No more can be created. For this reason, it is extremely important for us to take care of these valuable resources. For years, people have been using air and water with little concern for conservation. Rivers and lakes have become polluted, and many industries have been releasing harmful smoke and gases into the air.

Fortunately, people have begun to realize the importance of conserving air, water, and other natural resources. Laws have been passed to regulate pollution, and people are making an effort to limit their use of nonrenewable resources. We all must do our part to insure that earth's natural resources remain long after we are gone.

Just as water, landforms, and climate influence people's lives, natural resources, too, affect how people live in different regions of the world. For example, the natural resources available in a particular region can determine the type of houses people live in. In forest regions, most houses are built of wood, while in desert regions, where there are no trees, people build their houses with bricks made from clay. These are called adobe houses.

Natural resources can also determine what people do for a living. In areas with coal and iron ore deposits, many people work as miners. These mineral resources also provide jobs for those who process the iron ore into steel at steel mills.

The earth is a vast place containing many different bodies of water, landforms, and climates, and there are people living in nearly every region of the earth. However, people are not scattered evenly across the earth. Some areas are quite heavily populated, while others are more thinly settled. When geographers discuss the number of people living in an area, they use the term population density.

Population density is affected by a number of geographic factors. Few people live in areas that are too dry, like the desert, or too cold, like Antarctica. They don't live in areas that are too hard to reach, such as extremely mountainous regions, and they don't live in areas where the soil is too sandy or too rocky for farming.

Instead, most people live in areas where they can find the natural resources to meet their needs, and since resources are not distributed evenly across the earth, neither
are people. Historically, people have settled in areas with good soil, a fresh water supply, and ample sunlight. With these things, they were able to grow the food they needed in order to survive.

Other natural resources, such as minerals and fossil fuels, attracted people too. Oil deposits discovered in the Middle East transformed a barren desert region into a land of modern cities and wealthy oil companies.

Few places have every resource its people need. As a result, people have had to engage in trade with other parts of the world in order to obtain the resources they want. When people from different areas come into contact with one another, often more than goods are exchanged. They also trade ideas and customs. This interaction among different regions of the world leads us to our final discussion.

When studying geography, you often hear the word region. But what exactly do we mean by "region?" Geographers define a region as an area with several things in common that sets it apart from other areas of the world. Geographers divide the world into regions in order to study it more easily.

Often a region is defined by its landforms, such as the Rocky Mountain Region of the United States, or by its climate, such as the Tropics. But most often, a region is defined by its culture, meaning the people living in the region share common cultural practices, such as language, religion, and art, and have common ideas about government and economics.

More and more these days, people from different regions of the world are coming into contact with one another. Advances in technology have made transportation and communication easier and faster. And more and more, people from different regions of the world are beginning to depend on each other for goods and ideas. This has resulted in what geographers call "global interdependence."

As our world becomes more and more interdependent, the need to learn about other places grows increasingly important. As our world continues to interact, people from different regions will hopefully grow to have a better understanding of one another, and eventually, perhaps we'll see that the things we have in common are more important than our differences.

ADDITIONAL RESOURCES AVAILABLE FROM UNITED LEARNING, INC.

Using Maps, Globes, Graphs, Tables, Charts, and Diagrams - Cat. No. 1013V
Drops of Water, Grains of Sand - Cat. No. 10443V
Culture: What Is It? - Cat. No. 10091V
Culture: Similarities and Differences - Cat. No. 10450V

United Learning, Inc., 800-424-0362, 24-Hour Fax: 847-647-0918, website: http://www.unitedlearning.com E-Mail: bistern@interaccess.com
Unit Test

Part I: True or False
Directions: Write a "T" in front of the true statements and an "F" in front of the false statements.

__ 1. Physical geography is the study of the earth's surface, weather, and climate. __ 2. Globes are flat representations of the earth.

__ 3. The equator divides the earth into the Northern and Southern Hemispheres.

__ 4. The prime meridian divides the earth into the Northern and Southern Hemispheres.

__ 5. Lines of latitude run east and west; lines of longitude run north and south. __ 6. "Northwest" is a cardinal direction.

__ 7. A map key, or legend, may contain the map's scale and other helpful information.

__ 8. The world's four oceans are the Atlantic, the Pacific, the Indian, and the Arctic.

__ 9. The three stages of the water cycle are boiling, freezing, and melting. __ 10. Islands are narrow strips of land connecting two larger areas of land.

__ 11. The slow movement of land over the earth's surface is called continental drift.

__ 12. Glaciers are the earth's emission of hot, molten rock from within its core.

__ 13. Climate is the weather pattern of a region of the world over a long period of time.

__ 14. The two movements of the earth are called respiration and revelation.

__ 15. If it is winter in the Northern Hemisphere, it is winter in the Southern Hemisphere.

__ 16. The Tropic of Cancer and the Tropic of Capricorn are lines of latitude.

__ 17. Polar regions are at high altitudes, receive the least amounts of light, and are very cold.
18. Elevation, precipitation, wind, and water currents have no effect on a region's climate.

19. Six main climatic regions are tropical, subtropical, temperate, subpolar, polar, and highlands.

20. Earth's three basic natural resources are coal, iron, and petroleum.

21. The five main types of natural vegetation are forest, savanna, grassland, tundra, and desert.

22. The process of supplying water to a dry region is called irrigation.

23. Oil is a renewable resource.

24. The two types of minerals are metals and nonmetals.

25. A region is an area with several things in common that set it apart from other areas.

**Part II: Multiple Choice**

1. The primary tools that geographers and explorers have developed to study the earth are maps and
   a. atlases.
   b. projection maps.
   c. globes.

2. Lines of latitude and longitude are measured in degrees. Degrees are broken down into
   a. days and weeks.
   b. minutes and seconds.
   c. letters and numbers.

3. The prime meridian is __ degrees longitude, a.
   zero b. 23.5 c. 66.5

4. If the scale of a globe is one to ten million, that means a. the earth is ten times bigger than the globe, b. the earth is 10 million times bigger than the globe. c. the globe is one-tenth the size of earth.

5. A physical relief map shows a.
   population density. b. amount of rainfall.
   c. natural features, such as mountains, deserts, and lakes.
6. The bottom of the ocean floor
   a. is flat and shows no valleys and mountains.
   b. contains valleys and mountains just like the rest of earth's surface.
   c. has not been mapped in detail

7. New fresh water on earth a. cannot be created, 
   b. is constantly created by rainfall, c. can 
   only be created from salt water.

8. The following percent represents the amount of the earth's surface that is covered by water.
   a. 3%
   b. 50% c.
   70%

9. Some examples of landforms found on earth are 
   a. craters, mounds, strips, holes, bumps, and crevices. 
   b. bunkers, canals, valleys, cliffs, slopes, and inclines. 
   c. mountains, hills, plateaus, mesas, islands, and peninsulas.

10. The study of forces within the earth that cause sections of the crust to move is called 
    a. plate tectonics. 
    b. platter technology. 
    c. plateau teutonics.

11. Erosion of the earth is defined as a. the movement of glaciers, b. the 
    eventual wearing down of the land, c. the breaking and moving of 
    the land due to internal forces.

12. The earth constantly spins on its a. 
    axle, b. axiom, c. axis.

13. The amount of time it takes for the earth to make one revolution around the sun is 
    called a 
    a. day. 
    b. month. 
    c. year.
14. The area between the Tropic of Cancer and the Tropic of Capricorn is called the tropics or
   a. the low latitudes.
   b. the middle latitudes.
   c. the high latitudes.

15. The Gulf Stream is an example of a a.
    a. wind pattern, b. precipitation type.
    c. water current.

16. The following is an example of a nonrenewable resource: a.
    a. trees, b. minerals, c. wind.

17. Fossil fuels get their name because
    a. fossils are ground up to produce fossil fuels.
    b. dinosaurs used fossil fuels for cooking.
    c. they are formed from the fossils of dead plants and animals.

18. Earth's atmosphere is defined as
    a. the entire layer of air surrounding the earth.
    b. the oxygen we breathe.
    c. the weather forecast for the planet.

19. Population density is affected by
    a. an area's natural resources, water, climate, and landforms.
    b. an area's hotels, resorts, and tourism.
    c. an area's highways, roads and tunnels.

20. People from different areas of the world depending on each other for goods and ideas is called
    a. global warming.
    b. global interdependence.
    c. globetrotting
Part III: Essay Questions:

1. Explain why and how the various regions of the world depend upon each other. Give specific examples of things that might be exchanged between specific regions.

2. Do you think that recycling is a good idea? Why? What impact does recycling have on the earth's renewable and nonrenewable resources?

3. Do you believe that all the continents were once one land mass? Why? What do you think the earth's geography will be like in one million years?

4. How does the climate in your region impact the choices that you make? If you could move to another climate, which would you choose? Why?
DIRECTIONS: Review the following questions before watching the video, and be prepared to discuss the answers with the class after the video presentation. You may write your answers on this sheet.

1. What do we call the two sets of lines that geographers have created to help locate places on a map or globe?

2. What are the two lines that divide the earth into the Northern and Southern Hemispheres and the Eastern and Western Hemispheres?

3. What percentage of the earth's surface is covered by water?

4. Name all four oceans.

5. What percentage of the water found on the earth is fresh water?

6. What are the three stages of the water cycle?

7. Name all seven continents.

8. What are the four basic types of landforms found on the earth?

9. What name have geographers given to the movement of the continents over millions of years?

10. Where would you be more likely to find a large population center: on top of a high mountain, or on a coastal plain?
DIRECTIONS: Unscramble the sets of letters below to form ten familiar geography terms. The definitions at the bottom of the page might help you to unscramble the letters. The definitions are not necessarily in the correct order.

1. APM LCAES
2. PERHSIEMEH
3. GTOLUDENI
4. ERGEDE
5. OEQAUTR
6. RVAPANOETIO
7. HUSIMTS
8. LNAOVC0
9. CARIGEL
10. SERONOI

Definitions:
A unit of measurement for latitude and longitude.
A narrow strip of land connecting two larger areas of land.
The line dividing the earth into the Northern and Southern Hemispheres.
A stage of the water cycle.
The wearing away of the land.
An imaginary line that runs north and south.
One of the four basic landforms.
It tells you the relative size of a map or globe.
One effect of the movement of the earth's crust.
A large, moving sheet of ice.
BASICS OF GEOGRAPHY: Water and Landforms
Map Exercise: Using Maps and Globes

DIRECTIONS: Using the latitude and longitude coordinates provided, plot the approximate locations of the following cities on the accompanying map. Then answer the questions that follow.

<table>
<thead>
<tr>
<th>City</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANCHORAGE</td>
<td>61° 30'</td>
<td>149° 50' 39&quot; W</td>
</tr>
<tr>
<td>CAIRO</td>
<td>30° 2' 23&quot; N</td>
<td>31° 15' 0&quot; E</td>
</tr>
<tr>
<td>SYDNEY</td>
<td>33° 52' 46&quot; S</td>
<td>151° 12' 8&quot; E</td>
</tr>
<tr>
<td>BUENOS AIRES</td>
<td>34° 35' 59&quot; S</td>
<td>58° 20' 27&quot; W</td>
</tr>
<tr>
<td>LOS ANGELES</td>
<td>34° 3' 40&quot; N</td>
<td>118° 17 38&quot; W</td>
</tr>
<tr>
<td>MADRID</td>
<td>40° 24' 14&quot; N</td>
<td>3° 41' 51&quot; W</td>
</tr>
<tr>
<td>NEW DELHI</td>
<td>28° 38' 5&quot; N</td>
<td>77° 12' 33&quot; E</td>
</tr>
<tr>
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<td>55° 45' 27&quot; N</td>
<td>37° 39' 12&quot; E</td>
</tr>
<tr>
<td>NAIROBI</td>
<td>1° 15'41&quot; S</td>
<td>36° 49' 54&quot; E</td>
</tr>
<tr>
<td>TOKYO</td>
<td>35° 40' 18&quot; N</td>
<td>138° 45' 6&quot; E</td>
</tr>
</tbody>
</table>

1. Which of these cities are located in the Southern Hemisphere?
2. Which of these cities are located in the Western Hemisphere?
3. Which city is located nearest the prime meridian?
4. Which city is located nearest the equator?
5. Which city is located directly east of Buenos Aires?
6. Which city is located south of Cairo?
7. What direction would you be going if you were traveling from Moscow to New Delhi?
8. What direction would you be going if you were traveling from Los Angeles to Anchorage?
BASICS OF GEOGRAPHY: Water and Landforms

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BASICS OF GEOGRAPHY: Water and Landforms
Map Exercise: Using Maps and Globes
BASICS OF GEOGRAPHY: Water and Landforms
Locating Oceans and Continents

DIRECTIONS: Label the map below with the four main oceans and the seven major continents. Then answer the questions that follow.

1. Which ocean lies entirely within the Northern Hemisphere?
2. Which ocean is located mainly in the Southern Hemisphere?
3. Which is larger, the Pacific Ocean or the Indian Ocean?
4. Which continents are located entirely within the Southern Hemisphere?
5. Which continents are located entirely within the Eastern Hemisphere?
6. Which continents border the Atlantic Ocean?
7. Through which continents does the equator pass?
8. Through which continents does the prime meridian pass?
9. Which is the smallest continent?
10. If Antarctica is only the fifth-largest continent, why does it appear to be so much larger on this map?

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DIRECTIONS: The drawing below illustrates some various landforms and bodies of water. Study this drawing and read each of the geographic descriptions that follow. Then write in the term that best matches each of the geographic descriptions. Not all terms will be used.

1. A deep narrow valley with steep sides.
2. A large group or chain of islands.
3. A row or chain of mountains.
4. Part of an ocean or sea that extends into the land, usually smaller than a gulf. The place where a river empties into another body of water. A projecting part of a coastline that extends into an ocean or sea.
5. A narrow waterway or channel connecting two larger bodies of water.
6. Land formed at the mouth of a river by deposits of sand, silt, and pebbles. A river or stream that flows into a larger river or stream.
7. Part of an ocean that extends into the land and is usually larger than a bay.

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BASICS OF GEOGRAPHY: Water and Landforms
Water, Landforms, and You

DIRECTIONS: Describe some of the ways in which the water and landforms where you live affect your lifestyle. For example, you might want to discuss what effect the land and water have on the kind of recreational activities you enjoy, or perhaps what effect they have on the way you travel.
BASICS OF GEOGRAPHY: Water and Landforms
Quiz

DIRECTIONS: Circle the letter next to the phrase that best completes the sentence.

1. Physical geography includes the study of: a) landforms b) bodies of water c) climate
d) natural resources e) all of the above

2. Historically, people settled near water for the following reasons: a) ease of transporting
goods  b) energy source for mills  c) water source for crops d) source of drinking water
e) all of the above.

DIRECTIONS: Write a "T" in front of true statements and an "F" in front of false statements.

3. _____ The ocean floor is mostly flat.

4. _____ Many mountains were formed by the movement of glaciers.

DIRECTIONS: Fill in the blank with the correct geography terms.

5. Lines of latitude and lines of longitude are measured in degrees. Degrees are further divided into
__________ and ____________.

6. Northwest is one example of an ______________ direction.

7. People can access one source of fresh water called _______ _______ by digging wells.

8. Africa and Asia are connected by a narrow strip of land called the

9. The study of the forces within the earth that cause the earth's crust to move is called

10. The stages of the water cycle are and

________
BASICS OF GEOGRAPHY: Water and Landforms
Water, Landforms, and You

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