INSTRUCTIONS

Welcome to your Continental Academy course. As you read through the text book you will see that it is made up of the individual lessons listed in the Course Outline. Each lesson is divided into various sub-topics. As you read through the material you will see certain important sentences and phrases that are highlighted in yellow (printing black & white appears as grey highlight.) **Bold, blue** print is used to emphasize topics such as names or historical events (it appears **Bold** when printed in black and white.) Important Information in tables and charts is highlighted for emphasis. At the end of each lesson are practice questions with answers. You will progress through this course one lesson at a time, at your own pace.

First, study the lesson thoroughly. (You can print the entire text book or one lesson at a time to assist you in the study process.) Then, complete the lesson reviews printed at the end of the lesson and carefully check your answers. When you are ready, complete the 10-question lesson assignment at the [www.ContinentalAcademy.net](http://www.ContinentalAcademy.net) web site. (Remember, when you begin a lesson assignment, you may skip a question, but you must complete the 10 question lesson assignment in its entirety.) You will find notes online entitled “Things to Remember”, in the Textbook/Supplement portal which can be printed for your convenience.

All **lesson** assignments are open-book. Continue working on the lessons at your own pace until you have finished all lesson assignments for this course.

When you have completed and passed all lesson assignments for this course, complete the End of Course Examination on-line. Once you pass this exam, the average of your grades for all your lesson assignments for this course will determine your final course grade.

If you need help understanding any part of the lesson, practice questions, or this procedure:

- Click on the “Send a Message to the Guidance Department” link at the top of the right side of the home page
- Type your question in the field provided
- Then, click on the “Send” button
- You will receive a response within ONE BUSINESS DAY
About the Author…

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World Cultural Geography
by Caroline Grant

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LESSON 1

THE EARTH

- The Structure of the Earth
- Location
- Studying the Earth

THE STRUCTURE OF THE EARTH

The earth is part of the solar system made up of nine major planets and their moons. All of these revolve around the Sun which is a star and the center of our solar system. The earth rotates once every 24 hours and it takes 365 ¼ days to make one orbit around the sun.

Geographers examine and study the physical features of the earth and the ways in which humans interact with and adapt to their physical environment. Most of what is known about the interior of the earth is based on observing and studying earthquakes and volcanoes. The Crust is the outer layer which forms the base of the continents and ocean floors. The Mantle or the middle layer is composed of rock and contains two sections. It is approximately 1,800 miles deep. The innermost layer is the Core. This layer is extremely hot and is composed of two areas. The outer area is made up of molten liquid metal core and the inner is made up of solid metal core.

Many of the physical features on earth have been formed over the past 100,000 years by movements that have taken place within the earth. The theory of plate tectonics concludes that the earth’s crust is made up of many rigid plates of rock on which the oceans and continents are based. The plates move relative to each other and can move as much as several inches per year. As these plates collide or move against faults or cracks in the earth, deep ocean trenches or mountains are formed. Other collisions or openings along the plates of the earth have resulted in earthquakes and the formation of volcanoes.

LOCATION

In studying the regions of the earth geographers have to first identify where places are located. Location refers to a position on the earth’s surface and every place has its own location. The location of a place can be expressed in two ways: absolute and relative. Absolute location is a precise, exact
spot on the earth. This location is visually noted on global grid maps using measurements of latitude and longitude.

**Relative location** provides accurate information about a place because it is the location of one place in relation to other places. For example, if you describe the relative location of your home, you might refer to the major shopping areas, business centers, churches, lakes, farms, rivers, or mountains in the same locality.

The World: Absolute Location, Lines of Latitude, Longitude and the Prime Meridian

Grid maps have a set of imaginary lines that circle the globe. They are called lines of latitude and longitude. Lines of latitude are also called **parallels**, because they do not converge and remain the same distance apart as they circle the earth. Parallels circle the globe from east to west. They originate at the **equator** (the imaginary line around the middle of the earth) located at 0 degree latitude. They are used to measure distances that are north and south of the equator. Parallels end at the North and South poles at 90 degrees. Places with low latitudes that are near the equator have hot climates and those with high latitudes are near the poles and have cold climates. The **Tropics** are two imaginary lines that divide climatic regions above and below the equator. The **Tropic of Cancer** is located 23 ½ degrees North latitude and the **Tropic of Capricorn** is 23 ½ degrees South latitude.
Lines of longitude are also called *meridians*. They measure the distance east or west of the **Prime Meridian** which is numbered as 0 degrees and is located at Greenwich in England. Meridians originate at the Prime Meridian and circle the globe from north to south. They are different from lines of latitude because they converge and meet at the North and South poles. They end at the **International Date Line** which is numbered 180 degrees and is located in the Pacific Ocean.

The absolute location of any place can be expressed using the measurement coordinates of latitude and longitude. Every city has specific coordinates to mark its location. For example, Los Angeles is 34 degrees N. latitude, and 118 degrees W. longitude.

The equator divides the earth into halves or **hemispheres**. The hemisphere to the north of the equator is called the **Northern Hemisphere**. The hemisphere that is south of the equator is called the **Southern Hemisphere**. The Prime Meridian also divides the earth into two hemispheres the **Eastern Hemisphere** and the **Western Hemisphere**.

**STUDYING THE EARTH**

The tools geographers use to represent the surface regions of the earth are globes and maps.

**Globes**

A globe is a sphere-shaped model of the earth that represents a map of the surface. The globe is a **scale model** of the Earth, which means that a smaller unit of measurement represents a larger unit. It shows continents, countries and waterways in their proportions, distances, and directions. **Terrestrial** globes can show physical features such as mountains and deserts. They also represent political regions showing countries and cities.
Globes are extremely accurate in relation to the shapes of water bodies and land masses. They also show the true compass direction from one point to another. These directions can be north, south, east or west and are shown by global grid lines of latitude and longitude. Based on these factors, the locations of all continents, countries, and oceans are more easily found than by using maps.

Maps

A map is a graphic representation of the earth’s surface drawn to scale on a flat or two-dimensional surface. It is a scale model of the real world and serves as a reference source because it helps us to find routes to places, especially in relation to places with which we are familiar such as towns or highways. Maps can also be regarded as valuable instructional tools, for they show the distribution of physical features, human activities and migration.

Maps also provide pictorial information about places. They show directions by using compass points. They have titles that explain their main focus. Symbols are used to represent special features such as bodies of water and boundaries of states and countries. Some symbols used are pictures, lines, colors and marks. For example, on a political map, a state’s capital is usually indicated by a star. Keys are used to explain the meanings of the symbols. Scales refer to the ratio between the actual size of an area on the earth’s surface and the area on the map. In addition, scales show what distances on the map represent. For example, two inches on the distance scale can represent a distance of two hundred miles on earth. Scales can also be represented by fractions or graphs. Grids are often drawn on maps to help people find the exact location of places. Spaces between grid lines are usually marked by letters or numbers from right to left and/or from top to bottom. Maps are easier to transport than globes.

Types of Maps

1. **World Maps:** Illustrate the continents, islands, oceans, rivers and seas of the world.

2. **Political Maps:** Show trade relationships between countries and also outlines borders between states or countries.

3. **Topographical Maps:** Show natural, physical land features such as mountains, plains and deserts, and man-made features of the earth’s land surface.

4. **Population Maps:** Illustrate the way in which people are distributed throughout the world.

5. **Demographic Maps:** Show the distribution of segments of a population in certain areas.

6. **Weather Maps:** Show forecasted weather as well as the climate of a specific region.

7. **Special Purpose Maps:** These maps are used as road maps, or to illustrate such features as land use, natural resources and types of transportation.
Tables and Charts

Tables are used in geography to list facts as related to any topic such as countries, imported products, minerals, and population.

Charts are similar to tables in that they list facts, but they can show more than one set of facts in different columns or rows and can have illustrations or symbols. Charts are used to record and compare information that can be used for study or research.

**Bar Graph: World Population Growth From 1750 to 2000**

One type of chart that shows specific periods of time and the important developments and events that take place within a time period is a **timeline**. Another type is **the flow chart**, which shows how things are processed, related, or organized.

**Graphs**

Graphs are drawings or pictographs that are used to present facts or groups of facts. Facts that are related to quantities or amounts are shown on **bar graphs**. A bar graph shows comparisons as well. It has one scale of measurement that is placed along the right or left side of the graph so that it runs from the bottom to the top.
Line graphs use lines to show relationships such as trends or patterns and how things increase or decrease in number. They are often used to show and measure the average temperature, and/or the precipitation of places and one or the quantity of things in relation to years, dates or fixed goods.

**Line Graph: The Average Temperatures in the Cities of Anchorage and Barrow, Alaska**

Circular graphs are called **pie graphs**. They are used to show how individual parts are related to the complete whole of something. The circle on the left represents 100% or the whole and the segments of the pie represent the parts that comprise the whole.
LESSON 1 STUDY QUESTIONS.

ANSWER TRUE OR FALSE. CHECK YOUR ANSWERS.

1.______  The theory of plate tectonics emphasizes that the earth’s crust is made up of rigid plates of rock that continually move against each other.

2.______  The Mantle or the middle layer is composed of molten liquid rock and is approximately 1,800 miles deep.

3.______  The sun rotates once every 24 hours, and it takes 365 ¼ days to orbit around the earth.

4.______  The Prime Meridian also divides the earth into the Northern and Southern Hemispheres.

5.______  Places with low latitudes near the Equator have hot climates.

6.______  The relative location of a place is the location of one place in relation to another.

7.______  Flow charts are used to show how cultures are distributed throughout the world.

8.______  Symbols represent the ratio between the actual sizes of an area on the earth’s surface and the area on the map.

9.______  Bar graphs show the relationship between parts and wholes.

10.______  Maps that illustrate land use and natural resources are political maps.

ANSWERS TO LESSON 1 STUDY QUESTIONS

1. TRUE   6. TRUE
2. FALSE   7. FALSE
3. FALSE   8. FALSE
4. FALSE   9. TRUE
5. TRUE   10. FALSE
LESSON 2

PHYSICAL GEOGRAPHY

- Landforms of the Earth
- Water Forms of the Earth
- World Climate

LANDFORMS OF THE EARTH

An important theme in geography is place. This term is used to describe a location’s natural and cultural features. All places on earth have distinct features that make them unique. When you visit a place, you may refer to its physical features by describing its snow-capped mountains, sandy beaches, tall palm trees or crystal-clear lakes. From a cultural perspective, for example, you can describe a place by referring to its cuisine, language, or the architecture of its buildings.

The largest landmasses on earth are the continents. They make up one quarter of the earth’s surface and consist of varied types of natural or physical features. They range from landforms like mountains to water forms like rivers. The polar regions of the Arctic and Antarctic are uninhabitable because the terrain is frozen. However, the rest of the continents with the exception of a few places are well populated by humans.

| THE EARTH’S CONTINENTS AND THE PERCENTAGE OF THEIR LANDMASS |
|-----------------|------------------|
| Asia            | 30.1 %           |
| Africa          | 20.2 %           |
| North America   | 16.2 %           |
| South America   | 11.9 %           |
| Antarctica      | 9.3 %            |
| Europe          | 6.6 %            |
| Australia and Oceania | 5.7 % |

Mountains were formed as a result of massive movements that took place in the earth’s crust at different times in its geological history. The oldest mountains on earth are dated in hundreds of millions of years and the “young” ones in tens of millions of years. The older mountains usually have lower elevations because they have been worn down for millions of years by rain, wind, ice, and other forces of erosion. For example, the United States has old mountains in the eastern regions called the Appalachians and younger, higher ranges in the west called the Rocky Mountains.

Mountains are landforms that are elevated over 1,000 feet and usually have steep rocky inclines on all sides. They have rounded or pointed tops. Mountains are found throughout the world. They can
stand alone or form a mountain system. A large string of mountains is called a mountain chain or range.

<table>
<thead>
<tr>
<th>IMPORTANT MOUNTAIN RANGES OF THE WORLD AND WHERE THEY ARE FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Rocky Mountains</td>
</tr>
<tr>
<td>United States</td>
</tr>
<tr>
<td>The Andes Mountains</td>
</tr>
<tr>
<td>South America</td>
</tr>
<tr>
<td>The Alpine Mountains</td>
</tr>
<tr>
<td>Europe</td>
</tr>
<tr>
<td>The Himalaya Mountains</td>
</tr>
<tr>
<td>Asia</td>
</tr>
<tr>
<td>The Atlas Mountains</td>
</tr>
<tr>
<td>Africa</td>
</tr>
</tbody>
</table>

Mountains play a significant role in human and cultural development. They contain a wide range of mineral resources that people have learned to extract and use. The lowland areas between the mountains are called **valleys**, which contain fertile soil that has been washed down from the slopes of the mountains. As a result, valleys have been used by man for farming and for raising animals. Mountains often act as boundaries between countries, cultural groups, and different climatic regions.

**Hills** are land elevations that are less than 1,000 feet high and have sloping sides and rounded or flat tops. They also occur in ranges in the same way that mountains do. When hills are close to mountains, they are referred to as the foothills of the mountains. Hills can be utilized by humans in the same way as mountains.

**Plains** are large areas of flat or gently rolling land. They generally have few mountains or hills, are covered with layers of fertile soil and usually contain streams and lakes. Plains have been used for farming throughout the world and have been characterized by large numbers of human settlements. One of the largest plains in the world, which has become one of the most successful farmlands, is the Central Plains or Great Prairies found in the central United States.

A **plateau** is an area of land that is higher than the land that surrounds it. The top of a plateau is flat like a table and usually stretches for hundreds of miles without any significant change in its altitude. Plateaus have thinner soil layers than mountains and are drier and cooler than plains. A major plateau is the Deccan Plateau in India. Plateaus that are rich in mineral deposits have become centers of industry. An example is the Columbia River plateau in Oregon.

A **basin** is an area of land that is drained by a river system and is lower than the land area that surrounds it. The Amazon Basin in South America is a good representation of this.

A **peninsula** is an area of land that is almost surrounded by water. An example is the Malay Peninsula in Malaysia.

A **desert** is an area of land that is dry, barren and usually covered with sand. This is due to the fact that it receives such a small amount of rainfall that little animal or plant life can survive there permanently. Deserts are usually very hot, like the Sahara Desert in North Africa.
WATER FORMS OF THE EARTH

The largest bodies of salt water on the earth are oceans. The main oceans are the Atlantic, Pacific, Indian and Arctic, and they cover 72 percent of the earth’s surface. The deepest parts of the oceans are called trenches and are located near the continents. Currents of water move in different directions throughout the oceans. By carrying cold water to the tropical regions and warm water to the polar regions, ocean currents have a profound effect on the world’s weather. For example, the currents of the warm Gulf Stream affect the eastern coastal regions of the United States, northwestern Europe, and the British Isles. These regions generally have mild climates as a result.

For thousands of years, ocean side communities have imported and exported foods/goods. Ocean current had a significant effect on these trade routes. Ocean currents contribute significantly to the world’s food supply. Some of the largest and richest fishing grounds are located where warm and cold waters come together. Another resource that is found in oceans is petroleum.

A sea is a large body of salt water that is either partly or completely surrounded by land. Many seas are also smaller parts of oceans. Often the name of a sea is related to the people who live near it or its geographic location. For example, the names of the South China Sea and the Arabian Sea are directly related to the countries they surround and the people who live nearby. The North Sea lies to the north of Western Europe.

A lake is a body of water completely surrounded by land. Lakes range in size from small to immense. Two of the largest lakes in the world are Lake Superior in the United States and Lake Victoria in East Africa. Lakes usually contain fresh water. However, if there is no outlet, the water usually becomes salty as in the case of the Great Salt Lake in Utah.
A bay is an inlet of an ocean, lake or sea that curves inwards into the mainland coastal region. An example is the Bay of Bengal between India and Myanmar.

A gulf is larger than a bay. It is a large body of water that is almost completely surrounded by land. Gulfs occur where large curving sections of an ocean wash over the surrounding coastlines. Two significant examples are the Gulf of Mexico and the Persian Gulf.

A strait is a narrow and short body of water that connects two larger bodies of water to each another. The Strait of Gibraltar connects the Mediterranean Sea to the Atlantic Ocean.

Rivers are large streams of water that originate at a source or starting place. The source may be a glacier, lake or spring that overflows and widens to form a river. Rivers play a vital role in human settlement and development. They are used as essential means of transportation in many parts of the world.

Many nations began as small agricultural communities that depended on rivers to provide fertile soil and water for their farms. The advanced civilization of the ancient Egyptians began in the valley of the Nile River. Many present-day countries have settlements that are built around rivers. In many parts of the world, rivers are also used as sources of electric energy. Small rivers that flow into larger ones are called tributaries.

### SOME MAJOR RIVERS OF THE WORLD AND THEIR LOCATION AND LENGTH

<table>
<thead>
<tr>
<th>River</th>
<th>Location</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nile</td>
<td>Northeast Africa</td>
<td>4160 miles</td>
</tr>
<tr>
<td>Amazon</td>
<td>South America</td>
<td>4000 miles</td>
</tr>
<tr>
<td>Huang Ho</td>
<td>China</td>
<td>2903 miles</td>
</tr>
<tr>
<td>Congo</td>
<td>Africa</td>
<td>2718 miles</td>
</tr>
<tr>
<td>Mississippi</td>
<td>United States</td>
<td>2340 miles</td>
</tr>
</tbody>
</table>

A delta is a lowland area made up of soil that is rich in minerals. This soil is deposited at the mouths of rivers and is very fertile. As a result, most deltas of the world are important crop-growing areas. A well-known example is the delta of Egypt’s Nile River, which is utilized as an important cotton-growing area.
WORLD CULTURAL GEOGRAPHY

MAJOR INLAND WATER FORMS

A. River and Tributaries    B. Delta    C. Lake

WORLD CLIMATE

The atmosphere is the blanket of air that covers the earth. It is made up of layers composed of gases that protect humans from the harmful rays of the sun. The atmosphere stretches approximately 600 miles above us. The layers of the atmosphere that are closest to us are constantly moving and producing variations in weather such as tornadoes, thunderstorms and bright clear days.

The term weather refers to the daily condition of the atmosphere. It is measured in two ways by precipitation and temperature. Precipitation is all the water that falls to earth in the form of rain, snow, hail or sleet. “Temperature” refers to the degree of heat or coldness of an area based on a measurement scale. The factors that influence temperature are latitude, altitude, ocean currents, distance from the sea, winds, time of day and the amount of impurities and dust in the air.

Climate is the typical or average weather in a particular region over a long period of time. Climates vary worldwide.

Hot tropical climates occur in the tropics in the low latitudes close to or on the equator. Tropical climates have wet and dry seasons or are wet and hot all through the year. In these regions, especially those around the equator, vegetation is usually dense and the trees are large and form wide canopies. Parts of Central Africa and South America are characterized by large tropical rainforests. Another low latitude climate is that of savanna or grassland regions. They are usually located to the north and south of rainforests. Savanna climate has a dry winter season and a wet summer season.

Dry climates are found in the low latitudes and north and south of grassland regions. These areas have several deserts that are very hot and receive less than 10 inches of rainfall per year. They
also have sandy soils. In deserts, the temperatures vary greatly between day and night. At night temperatures can become very cold and may drop as much as 50 degrees. The Sahara Desert in North Africa and the Arabian Desert in the Middle East are good examples.

Another middle latitude climate zone is **continental steppe**, which is found in the interiors of large continents in regions that are far away from the oceans. The soils in these regions are rich and the natural vegetation consists of short grasses. Winters are cold and summers are hot and most rainfall occurs in the spring and summer. The continental steppe regions are used mostly for farming and livestock grazing and most of the world’s wheat is grown within this climate zone. The regions with this type of climate are the Central Plains or Great Prairies in the United States, the Pampas in Argentina, and the steppes in Asia.

**Continental deserts** are areas that are right beside the continental steppe regions. They are dry and receive less than 10 inches of rainfall per year and cannot be farmed unless irrigation technology is used. Continental deserts are found in the southwest United States, the Gobi Desert of Asia and the smaller deserts of Africa, Peru and Chile.

In the middle latitudes of the world there are variations in the climate.

- **The Mediterranean climate** is found on the western coasts of countries that are between 30 and 40 degrees latitude, north and south of the equator. Mediterranean climate has mild rainy winters and hot dry summers. It also has a long growing season and many crops are grown in this climate such as grain and fruit. This type of climate is found in the regions around the Mediterranean Sea, California, South Africa and Central Chile.

- **Humid-subtropical climate** is found in places to the north and south of the tropical latitudes. These areas have mild winters and hot, humid summers with rainfall throughout the year. They also have rich soils. Humid-subtropical climate is found along the southeastern coast of Australia, and in the United States, South America, Japan and the mainland region of China. These areas are very conducive to agricultural development and have many growing seasons because of their fertile soils. A wide variety of crops can be grown in these regions such as grains, cotton, rice, tobacco and vegetables.

- **Marine climate** is mild with rainy winters and summers and with very little seasonal change. The lands in this climate have mixed forest vegetation and are nearly or completely surrounded by water. Marine climate is found in New Zealand, Western Europe, the British Isles, the Northwest regions of the United States and the Pacific regions of Canada.

- **Humid-continental climate** is located in the middle of large land areas in the mid latitudes. This climate is influenced by the winds that pass over the land and has abundant rainfall. There are mixed forests and varied types of soils and vegetation. Some of the largest and best farmlands in the world are found in this climatic zone. Humid-continental climate is found in the central and northern United States, southern Canada, the central regions of the Soviet Union and northern China.
Cold/polar climate is located at the high latitudes near the poles. Winters are long and severe and few people can live in these regions. In these subarctic climates, temperatures rise for at least three months to above 50 degrees. The summers are short, the winters are long, and the snowfall is very heavy. The main type of vegetation is termed taiga, which consists of coniferous forests. This is found north of Eurasia and North America.

Sub-polar/tundra climate the average sub-polar temperature remains below 50 degrees Fahrenheit. These regions are characterized by great variations between day and night throughout the year. During the summer, daylight lasts 24 hours. During winter night lasts for 24 hours. The ground remains frozen most of the year. The vegetation consists only of herbaceous plants, mosses and ferns. This climate is found at the extreme southern portion of South America, northern Canada and northern Asia.

Ice cap/glacial climate is the coldest climate. Places that have this type of climate are permanently covered with ice even in the summer months. There is also little precipitation throughout the year. The Arctic and Antarctic regions of the world are characterized by this type of climate.

Vertical climate is a climate formed by high mountain altitudes. Temperature is warmer in lowland areas than in areas that have higher altitudes. In highland areas and mountains, air pressure and temperature decrease with altitude while the amount of precipitation increases. Also, the air in high mountain regions is dust-free and therefore cannot absorb much heat. As a result, the higher the altitude, the cooler the climate becomes.

The distance from the sea influences climate in that the sun’s heat is absorbed and released at a slower rate by water than by land. For example, in the temperate latitudes in winter, the sea air and surrounding coastal regions are warmer than the land that is further inland. Ocean currents also raise or lower the temperature of land surfaces.

In temperate latitudes, prevailing winds from the land lower winter temperatures and raise summer temperatures. Winds from the sea raise winter temperatures and lower summer temperatures. The main wind systems that influence the world’s climates are the northeast and southeast trade winds, the westerly winds and the polar winds.
LESSON 2 STUDY QUESTIONS.

ANSWER TRUE OR FALSE. CHECK YOUR ANSWERS.

1. The term “place” is used to describe a location’s natural and cultural features.
2. The largest landmasses on earth are the continents.
3. Mountains are landforms that are elevated more than 10,000 feet and usually have steep rocky inclines on all sides.
4. Plains are large areas of flat or gently rolling land.
5. A peninsula is an area of land that is almost surrounded by water.
6. Oceans cover 22 percent of the earth’s surface.
7. A gulf is larger than a bay, and is a large body of water that is almost completely surrounded by land.
8. Hot tropical climates occur in the tropics in the higher latitudes close to or on the equator.
9. Weather is measured in two ways: by precipitation and by temperature.
10. In the sub polar/tundra climate the average sub-polar temperature remains above 50 degrees Fahrenheit.

ANSWERS TO LESSON 2 STUDY QUESTIONS

1. TRUE 6. FALSE
2. TRUE 7. TRUE
3. FALSE 8. FALSE
4. TRUE 9. TRUE
5. TRUE 10. FALSE
LESSON 3

HUMAN GEOGRAPHY

- Culture
- Europe
- Asia
- Africa
- Australia and New Zealand
- North America
- South America

THE CONTINENTS AND OCEANS OF THE WORLD

THE HEMISPHERES AND TROPICS OF THE WORLD
**CULTURE**

Culture refers to the values, beliefs, customs, behaviors, social institutions and skills that are learned and practiced within a society. A part of culture is material culture, which includes physical objects created by humans which give meaning to life, such as clothing, cars and other artifacts.

Cultural geography deals with the relationship between people and their physical environment. It examines the ways in which people use the land and how its characteristics affect their lives. For example, people who live on inland fertile plains have a cultural tradition that is related to farming and raising animals. The extent of these activities is also affected by the weather patterns of the particular region. People who live near the sea or rivers also have a cultural tradition that is directly affected by the geographic region. Many people earn their living by fishing, building boats or trading in products or goods related to the sea.

Cultural geographers also study ethnicity, which is the study of cultural features in ethnic groups handed down from one generation to another. They also examine the composition and distribution of these groups throughout the world. The term race is also used interchangeably with ethnicity. However, a race is an identifiably distinct group of people who have similar inherited biological characteristics. Some of these distinguishing characteristics include facial features, hair texture and skin pigmentation.

A society can be defined as a population that has the same culture, political authority and occupies the same territory.

Technology is the way in which humans apply scientific or mechanical knowledge to manipulate the environment for practical purposes.

**The Main Distinctive Racial Groups of the World**

1. African
2. Asian
3. Australian (aboriginal inhabitants)
4. Caucasian
5. Indian (South Asian)
6. Indigenous American
7. Melanesian
8. Polynesian
**Location:** The continent of Europe is located in the Northern Hemisphere. It is 4,053,309 square miles in area. It is north of the continent of Africa and west of Asia. The continent of Europe occupies the western portion of the landmass of Eurasia. It is bordered by the Arctic Ocean to the north, the Mediterranean Sea to the south, the Atlantic Ocean to the west and the Ural Mountains to the east. Europe is divided into the Northern, Central, Eastern, Southern, and Western regions. During the last fifty years, the greatest political and cultural divisions have been between Eastern and Western Europe.

**Climate:** Western Europe is influenced by the warm ocean currents of the Atlantic and has a mild, temperate climate. The countries of Northern Europe have short summers and long, cold winters. In Eastern Europe the climate is mid-continental. Winters are cold and summers are hot. In the Southern regions, the climate is the Mediterranean type with hot summers and mild winters.

**Landforms:** Europe has many peninsulas and most of the region is surrounded by water. The Atlantic and Arctic Oceans and the North, Baltic and Mediterranean Seas are the largest surrounding water forms. There are abundant coastlines and navigable rivers. Some of the most important rivers are the Rhine, Rhone and Danube. The land topography is divided into four regions: the Alpine mountains in the south, the Central Uplands, the Western Uplands and the North European Lowland. The Ural Mountains are regarded as a natural boundary that separates Russia into two distinct cultural regions: western Russia, which is European, and eastern Russia, which is Asian.
Languages: The languages spoken in Europe are extremely diverse. English is spoken in the United Kingdom and Ireland. The Romance languages derived from Latin are spoken in France, Spain, Portugal, Italy, Switzerland and Belgium. Germanic languages are spoken in Germany, Austria and the Netherlands. Slavic languages are spoken in Poland, the Czech Republic, Slovakia, Slovenia, Croatia and Bulgaria. Other distinct languages are Hungarian, Albanian and Finnish.

Religion: Many different religions are practiced in Europe. The main one is Christianity. In Spain, Italy, Portugal and southern Germany, Roman Catholicism is the main religion. In northern Germany, the United Kingdom, Denmark, the Netherlands and Sweden the Protestant religion dominates. The Eastern Orthodox Church is the main religion of Greece, Bulgaria, Romania and other countries of Eastern Europe. There are also many other religions that are practiced according to the diversity of the population.

Economy: There are many natural resources in Europe that include forests, minerals, farmlands, rivers and seas. Western Europe in particular has become economically strong due to its abundant resources. Large forests are found in many high mountain areas and in Scandinavia. Because of this, many people, especially in Finland and Sweden, are engaged in the lumbering industry, and these countries are major exporters of timber.

The European region has many large deposits of coal and iron ore. These resources are found primarily in Sweden, Britain, France and Germany. There are also deposits of oil and natural gas in the North Sea and other parts of the continent. Oil, natural gas and large amounts of coal and copper are found in Eastern Europe. Therefore, mining is a major industry throughout Europe. In Western Europe in particular, these resources have facilitated the growth of the large manufacturing industries that produce chemicals, steel, machinery, transportation vessels, textiles, electrical products and other commodities. Also, its many rivers provide water power.

In Europe, good farming land is limited and farms are usually small. The development of farming cooperatives has helped European farmers to increase production and benefit financially as they pool their resources and share all costs and profits. Technological and scientific interventions have enhanced the productivity of the land. For example, in Holland, dikes were constructed to keep the waters of the Atlantic from flooding the surrounding regions and removing the fertile soils. Fertilizers are also used to increase productivity. As a result, Western Europe has been able to grow large amounts of food. The main crops that are grown are wheat, oats, potatoes and vegetables. Wines are also produced. In Eastern Europe, there are many fertile plains, and the main crops that are produced and exported are grains such as wheat, barley and oats. The European region is also a great producer of dairy products, and many European farmers raise beef cattle, sheep and chickens. All of these products are produced on a large scale and are also exported to other parts of the world.

Another geographic feature that contributes to the economic prosperity of Europe is the many rivers that have facilitated the development of trade and industry. These rivers have made it possible for goods to be transported to and from the inland cities and seaports.

Government: In Western Europe, countries in general are ruled by democratic governments. Laws are made by representatives chosen by the people. This system is called the parliamentary form of government. In this administration, there are two law-making bodies consisting of a lower and upper
house. The upper house has most of the power. The leaders of the government are the prime minister and his cabinet.

Most countries of Eastern Europe have made great strides in their political development since they gained independence from the domination of the Soviet Union. Nevertheless, people of the region have faced many political and social problems that have included ethnic hostilities and economic difficulties. They now have western-style democratic governments and practice free-market capitalism. Many of these countries have become member states of the European Union. However, the nations of Belarus, Ukraine and Moldova are still strongly socially and politically affiliated to Russia and have not become a part of the western democratic process.

Society: As a result of its many natural assets, Europe is highly developed and prosperous. The population is approximately 728,110,000. Most Europeans (seven out of ten) live in or near large cities. The standard of living is high, especially in Western Europe, which has a 99% literacy rate. For centuries, trade has played a major role in the rise of many great cities in Western Europe such as London, Paris and Rome. These cities grew along rivers and in close proximity to ports providing easy access to local and foreign trade. In the 18th century, England’s abundant water, iron and coal resources led to the Industrial Revolution, which changed the way in which modern man worked and lived. This later spread to Europe and North America and had a major influence on the rest of the world.
Location: Asia is located in the Eastern Hemisphere and is the largest continent in the world. It is 16,838,365 square miles in area. It is found east of Europe and Africa and northwest of Australia. In the west it is bordered by the Red Sea and the Mediterranean Sea, in the north by the Arctic Ocean, in the south by the Indian Ocean, and by the Pacific Ocean in the east. The cultural regions of Asia are divided into the subcontinent of India, the countries of Northern and Eastern Asia and the countries of Southeast Asia.

Climate: The climate of Asia is variable due to the great size of the continent. In the northern regions winters are long and cold and the polar regions are very dry. Southwest and central Asia are mostly dry deserts which have long hot summers with little rain. Eastern Asia has a more temperate climate with hot summers and cold winters. Southeast Asia has a hot climate all year round.

Landforms: Asia has many mountains, deserts, plateaus and rivers. The world’s highest mountain range, the Himalayas, are found in Asia. The highest peak on earth is Mount Everest in Nepal, which is 29,028 feet. Other important mountain ranges are the Tien Shan, Hindu Kush and Zagros. The largest desert is the Gobi Desert located in northern Asia and Mongolia. There are many plateaus, the most famous of which are the Deccan Plateau in India and the Anatolia in Turkey. Some of the world’s longest rivers are found in Asia. The Indus, Hwang Ho, Tigris and Euphrates contributed to the growth and development of early civilizations and are still essential for the survival of the cultures that live in the regions through which they flow.
Languages: There are many different racial and national groups in Asia. The racial groups include European, Indian and Asian. As a result, there are many language families. In the north, most people speak Russian. Arabic is the most common language in the southwest, and in the south Hindi is the predominant language. The people in the central regions speak Chinese. In the east, and southeast many languages and dialects are spoken.

Religion: All of the world’s major religions are found in Asia. In the southwestern regions, the main religions are Judaism and Islam. Hinduism is widely practiced in south Asia. There are many Muslims in India; however, the majority of the population are Hindu. The religious principles of Hinduism have been practiced in India for more than 4,000 years and have survived in spite of political and social changes. In Southeast Asia, Buddhism, an ancient religion, is still widely practiced. In the north, most people follow either Islam or Christianity. The Islamic faith has spread significantly throughout Asia over the last six centuries and is found in the northern, central and eastern regions. In East, Southeast, and Central Asia, Buddhism is also practiced. In Eastern Asia, Confucianism, Shintoism and Taoism are the main religions practiced.

Economy: Due to Asia’s large population, most of the available land resources are used for growing crops rather than for animal rearing. In general, Asians eat less meat than Americans and Europeans, and animals such as cows are reared to provide milk and their dung is used as fertilizer. In Southwest and Central Asia, there are many nomadic herders. The most common foods grown are grain products, fruits and olives. In the eastern regions, the main crop is rice. Other crops that are grown primarily for export are tea, coffee, sugarcane and tobacco. Wheat, fruits, vegetables, and meat are produced for domestic consumption and export. China and other parts of Asia have used terrace cultivation to maximize the amount of arable land that is available for farming and to reduce soil erosion and water loss. This method entails constructing flat areas on the sides of hills or mountains to create more agricultural land. As a result, it is possible to grow more crops on these highland slopes.

On May 12, 2008 central China was hit with that country’s costliest earthquake: $86 billion, 69,000 killed and millions homeless. Ten days earlier, Asia’s poorest country, Myanmar (formerly known as Burma) was hit by Tropical Cyclone Nargis, killing 1 million people and causing $10 billion in damage.

Russia also has vast areas of farmlands and many mineral resources such as oil, natural gas, iron, coal and other minerals. These resources have been used by the local populations, and many have been exported, but the cost of exploitation has been high. During the communist era the country had large farming cooperatives to increase food production. At the moment, it is moving toward becoming a free market economy. Japan is one of the world’s wealthiest and most industrialized nations. It has many industries producing such items as automobiles, electronic appliances, and computers while maintaining a large export market.

Government: Asia has experienced many political and cultural transitions. Since the decline of the influence of communism in Russia and China, the governments in these countries have adopted more democratic policies, but some of the old influences still remain. Since 1945, many Asian countries including India and Pakistan have gained independence and have experienced many religious, cultural and political conflicts establishing in their own national governments. The governments in other regions of Southeast Asia and Japan have pursued pro-Western policies.
**Society:** Over half of the world’s population lives in Asia. The total population is approximately 3,669,732,000. China has a population of over 1 billion, and India has over one-half billion. Current projections show that unless India takes the issue of family planning seriously, it will surpass China as the world’s most populous country by 2050.

Due to the fact that a large portion of Asia’s physical environment consists of deserts and mountains, most of the people are crowded into the lowland plains and fertile river valleys. As a result, there are some areas where the population densities are high. For example, in Japan there are about 848 people per square mile. Most people in Asia are small farmers who practice intensive subsistence farming on small, scattered plots.

Many parts of Asia have become highly urbanized. The cities of Beijing in China, Tokyo in Japan and Seoul in South Korea have populations of almost 10 million each. In many areas, the standards of education, housing and health are low. Families are usually large based on the culture of the region, but in China, the size of families has now been limited by government policy.

**AFRICA**
Location: Africa is located in the Eastern Hemisphere. However two-thirds of the continent is situated in the Northern Hemisphere and a third in the Southern Hemisphere. Africa is approximately 11,712,434 square miles in area. It is south of Europe and southwest of Asia. It is the second largest continent after Asia. It is divided into two regions: North Africa and sub-Saharan Africa.

Climate: Much of the climate in sub-Saharan Africa is either of the savanna or rainforest type. Its temperature ranges from warm to hot. In some parts of Africa, there are extreme differences between daytime and nighttime temperatures, especially in the desert regions. In these areas, temperatures are extremely hot in the day but are very cold at night. The heaviest rainfall occurs in Central Africa, but varies greatly throughout the rest of the continent. In Northern and Southern Africa, rainfall is limited.

Landforms: Most of Africa’s landmass is at a high elevation with a few mountain ranges. The continent is a gigantic plateau covered with deserts, rainforests and grasslands. Deserts cover approximately two-fifths of Africa. The largest desert in the world, the Sahara, is found in North Africa. In the south the principal deserts are the Kalahari and the Namib. Rainforests make up one-fifth of the continent and the largest one is the Congo rainforest in Central Africa. The grasslands are situated between the tropical rainforests and the deserts. The major mountain ranges are the Atlas Mountains in the northwest and the mountains of East Africa where Mount Kilimanjaro is the highest peak. In Africa, there are many large rivers and lakes. The Nile River, which is the longest in the world, the Congo, and Zambezi are three major river systems. Giant waterfalls are found on these rivers, including Victoria Falls, located on the Zambezi River. This waterfall is one of the largest in the world. Another distinctive feature is the Great Rift Valley system that runs from north to south for hundreds of miles in the eastern regions of the continent.

Languages: Africa contains over 2,000 ethnic groups and is the third most populated region in the world. More than 800 languages are spoken, of which the most culturally widespread are Arabic, European languages, Bantu, and Berber. The Africans that live in the sub-Saharan regions speak one or more of the native African languages. Most of these languages fall into the Niger-Kordofanian category, which includes Akan, Ibo and Yoruba. The other main language families are Bantu, Dinka, Swahili and Masai.

Religion: Throughout the continent of Africa, hundreds of religions are practiced based on local traditions and ethnic groups. The fundamental similarities between all of them are the belief in many gods and ancestor worship. The next most popular religions are Christianity and Islam. Christianity is practiced throughout Sub-Saharan Africa. In some areas, native Africans have combined Christian and traditional beliefs. Islam is the main religion practiced in North Africa, and most people there are Muslim.

Economy: Africa has many natural resources. One valuable resource, land, has been destroyed in many regions by traditional farming practices such as the “slash and burn” method, whereby farmers clear away the forest by burning the vegetation. In parts of northwest Africa known as the Sahel, this practice has caused desertification, which means that areas that once had trees and grasslands have now become deserts. This has led to famine and the death of many people as well as migration of the population to other regions.
Most people live in rural areas and are engaged in farming. The climate of Africa does not support large-scale farming. Most farmers continually change the location of their farms in order to preserve the fertility of the soil. The main crops produced are corn, yams, rice, palm oil, fruits and vegetables. In some areas, plantation farming produces crops for the local market and for export. Some of these crops are coffee, tea, timber and rubber.

The most important industry in Africa is mining, and the richest areas in mineral wealth are mostly in Zimbabwe and South Africa. Three of the world’s most important minerals, uranium, gold and diamonds, are mined in South Africa. The wealth of the city of Johannesburg is based on the profits from mining. Oil deposits are found in different regions such as Nigeria, Angola and the Congo. Iron ore is mined in South Africa, Liberia and Sierra Leone.

In spite of these abundant resources, the people of Africa have not significantly benefited economically until recently. The importance of mining has had a significant effect in changing the lives of many African people. Many have left their homes and farms to work hundreds of miles away with the mining companies. This, in turn, gives them the opportunity to work for wages and to move into the cities. However, until recently most of the mines were directed by foreigners who took the profits back to Europe and America and provided the skilled labor. In addition, Africa’s leaders do not have enough financial resources to develop all of their natural resources. Almost all the countries depend on foreign aid to help them exploit and develop their resources.

**Government:** After World War II, most African countries achieved independence from European colonial powers. Since that time, many political leaders have become dictators or have not encouraged the democratic process or protected their citizens’ civil rights in spite of independence. As a result, many African countries have been engaged in civil conflicts that have been exacerbated by ethnic and cultural differences. However, since 2000, there has been more political stability in many areas.

**Society:** Africa’s population is approximately 800,810,000. Africa is the third most populated region in the world with many different racial and ethnic groups. It is divided into two regions that are environmentally and culturally different. North Africa is largely desert and most people have African-Arab ancestry. Sub-Saharan Africa refers to the regions of Africa that are south of the Sahara desert and the majority of the people are native Africans. Other racial variations include a small number of Asians, Arabs, whites and people of mixed heritage. The black African ethnic groups are identified by their own cultural characteristics, traditions and customs.

Most people live in traditional rural village communities. However, urban growth is rapidly increasing the number of people in cities, suburbs and towns. The main reason for the rapid urbanization is the large amount of unemployment in the rural areas. In many parts of Africa, there is much poverty, and the standards of education and health are low. The spread of the AIDS epidemic has become a major concern, especially in Nigeria and South Africa.

Village houses are simple and are based on environment and culture. The people of some rural communities are nomadic herders. Small percentages of the population are hunters and gatherers and live in ways that are considered primitive by modern standards because the people wear little clothing and hunt animals with bows and arrows.
Location: Australia is referred to as the “island continent” because it is the only country in the world to occupy an entire continent by itself. It is located in the southern hemisphere. It is south of Asia and east of Africa and is approximately 3 million square miles in area. To the southeast of Australia are the two islands of New Zealand.

Climate: Australia has a varied climate. In the northern region, the climate is of the savanna type. In the eastern region, the climate is mild with plenty of rainfall. In the west, there is less rainfall because the region is drier and similar to steppe climate. In the south, the climate is of the Mediterranean type. New Zealand has a marine climate with mild summers and winters and abundant rainfall all year round.

Landforms: The continent of Australia has a narrow coastal plain. In the inland area, there are the highlands called the Great Dividing Range. In the west are the great central plains called the Outback. Australia does not have great river systems, so in many regions lack of water is a serious problem. The largest river is the Murray-Darling, which rises in the eastern highlands. New Zealand has lush, green vegetation, with many waterfalls, mountains, hills, and lowland regions.

Language: The main language spoken in Australia and New Zealand is English. The Aborigines in Australia and the Maoris in New Zealand also speak their own indigenous languages.
**Religion:** In Australia, the main religious denominations are Anglican, Roman Catholic, and mixed Christian faiths. In New Zealand, Protestant religions are predominant, and a small percentage of the population is Roman Catholic.

**Economy:** Much of the land in Australia is too dry for farming. Nevertheless, Australia is one of the world’s largest food exporters. On the western plains, wheat is grown on a large scale for local consumption and export. The extensive grasslands, which are too dry for wheat farming, are used for sheep grazing. The export of wool is the nation’s number one industry, and the natural environment of the Outback plains makes extensive sheep farming possible. The areas of land that are more arable are found along the coastal regions and are used to raise dairy cattle and produce fruits, sugar cane, and other crops. In New Zealand the lowlands and hills are conducive to raising dairy cattle, sheep, resulting in dairy products and wool which are the chief exports.

Australia has much mineral wealth. It produces bauxite, coal, gold and uranium. It also has sources of oil and natural gas. It has a flourishing export trade in foodstuffs and raw materials to Europe, North America and Japan.

**Government:** Both Australia and New Zealand have democratic forms of government modeled after the parliamentary system in the United Kingdom. The head of the government is the prime minister.

**Society:** Australia and New Zealand have small populations. Australia’s current population is approximately 18,784,000 and New Zealand’s is 3,625,000. In Australia, the majority of the population is made up of people mostly from the United Kingdom. However, during the last 25 years, people from Indochina, Europe and North America have migrated there. The native inhabitants, the Aborigines, make up just over 1% of the total population. They were forced off their lands by white settlers and compelled to live in reservations. Many still retain their cultural traditions, and a large percentage of them live in the cities and have adapted to a modern lifestyle. In New Zealand, the native Maoris make up 15% of the population and have the same rights as the white settlers, who are the descendants of Irish immigrants. The Maoris play an important role in the social and political development of the islands.

In Australia and New Zealand, 85% of the people live in the cities which have a high standard of living. Educational and health standards are also very high. In Australia, about 15% of the population live in the Outback regions, mostly on ranches and plantations.
Location: North America is the third largest continent and is located in the northern and western hemispheres. It lies north of the continent of South America and is bordered by the Pacific Ocean to the west, the Atlantic Ocean to the east, and the Arctic Ocean to the north. It extends from the Arctic Ocean in the north to South America and consists of more than 17 million square miles of land.

The northern region of North America consists mainly of Canada and the United States. The island of Greenland in the north is also considered a part of this region. The southern region includes Mexico, the countries of Central America and the islands of the Caribbean.

Climate: The climate of North America is extremely varied. The Arctic regions to the north of Canada remain very cold all year round and the only precipitation is snow. In the central regions,
including Canada and the United States, most places have temperate climates with warm summers and
cold winters. In Central America, the coastal climates are tropical with hot temperatures and heavy
rainfall all year round. The plateau and highland regions are cooler with temperate climates.

**Landforms:** There is a great variety of landforms in North America. There are many high
mountain ranges such as Mount McKinley in Alaska and the Rocky Mountains in the west of Canada
and the United States. The low mountain ranges of the Appalachians are found along the eastern coast.
The Sierra Madre ranges are located along the eastern coast of Mexico. In the central region running
from the southern United States to Canada are the fertile Central Plains. There are many rivers in the
United States and Canada. The Mississippi River and its tributaries, which include the Ohio and
Missouri Rivers, drain a large area of the continent. The freshwater lake with the largest surface area in
the world, Lake Superior, is one of the many lakes that are found in the north-central area of North
America. Many plateaus and basins as well as various types of forests are found in the western parts of
North and Central America.

**Language:** The main languages spoken in North America are English, French and Spanish. In
the United States and Canada, English is the main language. In eastern Canada, French is spoken by
many people. In Central America, Spanish is the dominant language, and there are Native Indian
languages. In the Caribbean English, French, Spanish, Dutch, Creole and some mixed dialects are
spoken.

**Religion:** In the United States and Canada, the primary religions are Protestant, Roman
Catholic and a variety of other faiths. In Central America, the majority of the people are Roman
Catholics. There are also other religions that reflect the diversity of the population. Some of these are
Judaism, Hinduism and Buddhism.

**Economy:** North America is a leading producer of consumer goods. The United States and
Canada have two of the strongest industrialized economies in the world. Both countries have abundant
natural resources that have contributed to their high level of industrialization. These resources are
water systems, fishing grounds, farmlands, forests and minerals.

Many manufacturing and trading centers are found in or around the major cities and many of
these cities are near rivers or lakes. In Canada, the greatest industrial region is found along the Great
Lakes and the St. Lawrence River in the provinces of Ontario and Quebec. These watercourses provide
vital electricity as well as transportation for goods from the inland region to the Atlantic ports. The
surrounding lowlands facilitate the building of railroads and roadways that make the transportation of
goods to other parts of the world easier.

Twenty-five of the largest cities in the United States are located in this industrial region. Some
of the great industrial cities are New York, Pittsburgh, and Chicago. Some of the main manufacturing
industries are food processing, aircraft and automobile production, publishing, and garment
manufacturing. The waterpower projects on the St. Lawrence and Columbia rivers provide electricity
for the homes and factories in nearby regions. A large number of dairy and fruit farms are located
around the Great Lakes and their neighboring cities. Chicago is one of the largest meat-producing
centers in the region. Pittsburgh is the largest iron and steel center in this area. The fishing industry is a
large export earner and has developed along most of the eastern and western coastal regions of the United States and Canada.

The United States has the highest agricultural production in the world. The Central Plains or Prairies are the largest agricultural belt in the country. This area is very productive due to the fertile nature of the land. Many crops are grown, but the chief ones are corn and wheat. The wheat farms extend from Kansas to Canada. The vast grassland plains are also used for sheep and livestock farming. Farmers from other states ship their cattle to the cornfields to be fattened. The result is a large and flourishing meat industry that has contributed to the settlement and growth of many cities including Chicago. The majority of the beef and pork for domestic consumption and export comes from the Midwest.

Citrus growing and packing are major industries in Florida and California. Citrus is not a commercial crop in Canada. In the southern states, the warm climate and irrigated land are perfect for many crops such as sugarcane, grain, cotton, rice, and fruits. Manufacturing, especially of electrical products, has developed considerably along the Mississippi River, which is used for transportation of goods. New Orleans on the south coast is a valuable port for export and for receiving imports from Latin America. In the west, there are many farms in the fertile valleys of California. A wide variety of dairy products, crops, and fruits are produced. There is also sheep farming.

In both the United States and Canada, about one-third of the land is covered by forests. Forestry therefore plays a major role in providing lumber for building, and providing pulp for paper-making industries.

Both the United States and Canada have vast deposits of coal, oil, and natural gas. In the United States, coal reserves are found in the Appalachian mountain regions in the east, the Central Plains, and the mountain regions in the west. Coal provides the fuel to heat homes and the energy to run machinery in industries. Iron deposits are found around Lake Superior, and are used as a major source for the iron and steel mills in the region. Other minerals produced in the United States are copper, lead and gold. Canada and the United States are also the world’s leading manufacturers of aluminum.

Oil is the largest energy resource in the United States, providing one-fifth of the world’s supply. In Canada, oil and natural gas industries are found in the Rocky Mountains, British Columbia, and the coastal regions. In the United States, the largest oil and natural gas fields are in Alaska, Texas, and Wyoming. Many oil refineries are located in Texas and Louisiana. Natural gas is used to supply heating and fuel for homes.

In Mexico, oil and natural gas on the Gulf Coast are the main sources of export income. Mexico is also the world’s largest producer of silver. Other important minerals are gold and zinc. Exports include fruits and vegetables. In Central America, the main industries are textiles, tobacco, furniture and food. The leading products and the largest exports are coffee and bananas.

**Government:** The United States is a democratic federal republic. The government is guided by the Constitution, and the country is led by an elected president. Canada is a parliamentary democracy and the head of government is the prime minister. In Mexico and Central America, in spite of political
instabilities, the governments operate under the political principles of democracy with elected presidents.

**Society:** In the United States and Canada, there is a high standard of living. Most people live in the cities or near large urban centers. All cities have many modern facilities and highly developed educational and health services. The majority of the people who live in rural areas enjoy the same services and conveniences as those in urban areas.

The population of North America is approximately 477,418,000. There is great cultural and ethnic diversity in North America. In the United States, 75% of the population is of European, Middle Eastern and Latin American origin. People of African descent make up 12% of the population, followed by those of Asian descent who make up 3.5%. The native inhabitants are the Native American Indians, who now comprise only 1% of the population. After the Europeans migrated to the region, the Native Indians lost their lands and their numbers declined drastically. Presently, they live in different areas of the United States and Canada. In Canada, over 45% of the people are of British descent. About 30% are of French descent and about 2% are Native American. The rest of the population is made up of immigrants from Southeast Asia, Germany, Scandinavia, the Caribbean and West Africa.

The population of Central America is over 160 million people. Most of the people of Mexico and Central America are a mixture of the original Native Indians, Spanish explorers, and settlers who conquered the area in the 16th century. The others are pure Spanish or pure Indian. Although there are many cities, the majority of the people in Central America live in rural areas and are poor. Very few people own their own land, and those who do are subsistence farmers. An exception is Mexico, where the majority of the people live in cities and towns. Mexico City is one of the largest cities in the world and is the center of the country’s cultural life and industry. It is also one of the most densely populated cities in the world.
**Location:** South America is the world’s fourth largest continent and has an area of 6,880,700 square miles. Most of South America is in the Southern Hemisphere. In the west it is connected to Central America by the Isthmus of Panama. The Equator runs through the northern regions of the continent and the southernmost tip extends into the Antarctic Ocean. It is surrounded by the Caribbean Sea to the north, the Atlantic Ocean to the east, the Pacific Ocean to the west and the Antarctic Ocean to the south.

**Climate:** The climate in South America ranges from tropical to temperate. A large part of the continent is near the equator and is within the tropical rainforest climate, which is characterized by heavy rainfall and warm temperatures. Areas to the north and south of this region have tropical savanna climates. Other areas outside the tropical zone are very arid and have temperate climates. In the south, climates vary from hot and dry to cool and damp. In many parts of South America, climates can vary significantly within short distances and even in tropical climates. Elevation rather than
location is the main reason for climate differences for parts of Peru, Colombia, and Ecuador, because they are located near the equator but are very cold. The reason is that these places are high in the Andes Mountains.

**Landforms:** South America has many geographical features. One of the most prominent features is the gigantic Amazon River Basin, which contains the Amazon River (the world’s largest river) and its tributaries that number over a thousand. Two other great river systems in South America are the Orinoco and the Plata. Another distinctive feature is the Andes, the second highest mountain range in the world. It extends southward along the entire western side of the continent. There are also many highland and plateau regions. In the northwest, the Atacama Desert occupies a large area. In the eastern and western regions, there are extensive grassland plains. The plains in the east are called *Llanos* and the ones in the west are called *Pampas*.

**Languages:** Spanish is the main language spoken in the majority of the countries. Portuguese is the national language of Brazil. Other languages spoken in South America are English, French, and Dutch, as well as indigenous languages.

**Religion:** More than 80% of the population is Roman Catholic. Smaller numbers of Protestants, Hindus, Jews and followers of indigenous religions exist.

**Economy:** South America has many resources that are distributed unevenly throughout the continent. Argentina and Brazil are the most industrialized countries. The main mineral resources found in South America are copper, tin, oil and iron ore. Throughout the continent mining is a major source of employment.

Over a quarter of the world’s copper reserves are found in northern Chile. Tin is found along the length of the Andes Mountains and in Bolivia. Most of South America’s oil reserves are found in Venezuela and 80% of this country’s export earnings come from petroleum. Iron ore is mined in Peru and Brazil.

Only a small percentage of South America’s land resources can be used for agriculture because so many regions are covered by high mountains, jungle, tropical rainforests and deserts. In the lowlands of Venezuela, rice is the major crop. A number of crops are grown in the highland regions. The main one is coffee, which is grown in Brazil and Colombia and is mainly exported. The grassland plains of Brazil, and Argentina are used for cattle-raising. The grasslands of the *Pampas* are the mainstay of Argentina’s economy. Corn and wheat are grown on a large scale. Livestock farming in this region has made Argentina one of the world’s largest exporters of beef and hides. It has also led to the development of other related industries such as food processing and meat-packing. Most products from Latin America are exported to Europe, the United States, and Japan.

**Government:** In South America, most countries have republican governments led by presidents. Some countries with this type of government are Argentina, Brazil, Chile, Peru, and Ecuador. These governments are characterized by many different political parties and regional divisions. Some countries such as Colombia have enjoyed much political instability even with this type of system.
Society: From a linguistic, historical, and cultural perspective, South America is linked to Central America and the Caribbean islands. As a result, these areas are referred to as Latin America.

In South America, there are people of Native American Indian, European, African, and Asian ancestry. There are many who are of mixed heritage. Throughout South America, Native American Indians were the first inhabitants, and they lived as nomadic hunters who became farmers from about 8000-2000 B.C. Most of these people are now found in Bolivia, Peru, Ecuador, and the Amazon Valley. The white population is descended from the first settlers who came from Spain, Portugal, Holland, France and the United Kingdom. The black population is found mainly in Brazil and the Guyanas. The largest number of East Indians are found in Guyana and Suriname.

The total population of South America is approximately 341,626,000. Half of the population in South America lives in Brazil. Many people live in the rural areas, but a large percentage have moved to the cities for better opportunities. As a result, many cities have become densely populated with many poor people living in shantytowns. Some of the cities that have developed in this way are Rio de Janeiro, Lima, and Bogotá. In the rural areas, most people live in village communities and are farmers with small plots of land or owners of small businesses.

A strong sense of community cooperation, and family life is important. In many areas, educational standards are low. Health standards in villages and many cities are also inadequate. One of the main problems is lack of clean water.

However, countries like Chile, Uruguay and Argentina enjoy a higher standard of living than many other countries in South America. Argentina in particular has a high adult literacy rate, because school attendance is compulsory. Health care is very good, and Buenos Aires has many modern facilities and well developed communication systems.
LESSON 3 STUDY QUESTIONS.

ANSWER TRUE OR FALSE. CHECK YOUR ANSWERS.

1. “Culture” refers to the way a group of people in a society live and work.
2. Most Europeans live in or near large cities.
3. People from Poland, Croatia and Bulgaria make up the Slavic ethnic group.
4. All of the world’s major religions are found in Asia.
5. The majority of the people in North Africa are Muslims.
6. The continent of Australia has steppe, Mediterranean and marine climates in the same regions.
7. The United States provides one fifth (20%) of the world’s petroleum.
8. The climate of North America is extremely varied.
9. South America’s largest oil reserves are found in Venezuela.

ANSWERS TO LESSON 3 STUDY QUESTIONS

1. FALSE  6. TRUE
2. TRUE   7. TRUE
3. TRUE   8. TRUE
4. TRUE   9. TRUE
5. TRUE   10. TRUE
LESSON 4

POPULATION GEOGRAPHY

- Demography and Settlement
- Regions of the World with Large Populations
- Regions of the World with Small Populations
- Population Growth

DEMOGRAPHY AND SETTLEMENT

The scientific study of population is called demography. Demographers study how people are distributed in relation to their settlement patterns as well as their growth and decline. These studies also examine gender, age, occupation, fertility and health.

The world’s population is concentrated in five major regions. The largest clusters are found in Western Europe, eastern North America, East Asia, South Asia, and Southeast Asia. Settlement patterns in these regions have two distinct similarities. The first is that two-thirds of the world’s population lives near oceans or rivers. The second is that population clusters occupy low-lying areas with temperate climates and fertile soils.

From a global perspective, modern human population has a number of distinct geographical features. At the moment, 80% of the world’s population lives in the less developed countries of the world. These countries are in Asia (excluding Japan), Africa, Latin America, the island nations of the Pacific and the Caribbean. One third of the world’s population is found in China and India. The fastest growing populations are also found in the less developed countries of the world. For example, Brazil contains more than a half of the total population of South America. In addition, people are living longer in most parts of the world. During the past 50 years, the global life expectancy has risen from 45 to 65 years.

REGIONS OF THE WORLD WITH LARGE POPULATIONS

Asia

One fourth of the world’s population live in East Asia. The world’s third largest country is China, which has the world’s largest population. Most of the population is clustered in and around the many fertile river valleys that are found in the inland regions, such as the Yangtze and Huang Ho valleys. Three-fourths of the population live in the rural areas and work as farmers. The major cities also have millions of inhabitants. On the other hand, in Japan and South Korea more than one-third of the population live in the urban metropolitan areas of Tokyo and Osaka in Japan and Seoul in South Korea. They work predominantly in industrial or service jobs.
The second largest concentration of people in the world is found in South Asia and includes India, Pakistan, Sri-Lanka, and Bangladesh. India contains more than three-fourths of the population of South Asia and is the world’s second most populous country. The largest concentrations of the population are located on the plains of the Ganges and Indus rivers and along the coastlines of the Arabian Sea and the Bay of Bengal. In this region, only one fourth of the population lives in urban areas. Most people live in rural areas and are farmers.

Southeast Asia has approximately one-half billion people and is the world’s fourth largest population cluster. This region encompasses the islands that lie between the Pacific and Indian Oceans. These islands include Indonesia, Borneo, New Guinea, the Philippines and Sumatra. As in other parts of Asia, the largest populations are concentrated along the fertile river valleys and deltas. The main occupation for most people in the rural areas is farming.

Europe

The populations of Western Europe, Eastern Europe and the European regions of Russia form the world’s third largest population clusters and one eighth of the world’s total population. In contrast to the settlement patterns in Asia, most Europeans live in cities and fewer than 20% are farmers. The reasons for this pattern are related to the effects of the Industrial Revolution, which began in Europe during the 18th century. The development of steam power led to the growth of factories, which resulted in the mass production of goods on a large scale. Based on this industrial phenomenon, many people left the rural areas to find jobs in the cities where most factories were located at the time. Presently, the highest concentrations of population in Europe are found near the coalfields of Germany, England and Belgium, which are historically the major sources of energy for industry.

North America

In the western hemisphere, the largest population concentration is found in the northeastern United States and southeastern Canada. This cluster extends from Boston on the Atlantic coast, westward along the Great Lakes to the city of Chicago. Approximately 2% of the world’s total populations live in this area. Like Europeans most Americans live in urban areas, and less than 5% are farmers.

THE WORLD’S MOST POPULOUS COUNTRIES

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>1,255,100,000</td>
</tr>
<tr>
<td>India</td>
<td>935,700,000</td>
</tr>
<tr>
<td>The United States</td>
<td>281,400,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>197,600,000</td>
</tr>
<tr>
<td>Brazil</td>
<td>165,800,000</td>
</tr>
</tbody>
</table>
REGIONS OF THE WORLD WITH SMALL POPULATIONS

Dry Environments

Environmental factors determine to a large extent human settlement patterns and population distribution. In areas of the world where the physical environment is too dry for farming, such as the vast Sahara Desert in Africa, human settlement is widely dispersed, and many desert dwellers are nomads. Desert regions lack sufficient water for humans to grow crops, and those who live in these regions survive by raising animals that have adapted to the climate, such as camels.

In other cases throughout the world, desert inhabitants have modified their environments to make the region conducive to agriculture. By building irrigation systems, people have been able to bring water from wells or springs to extremely dry areas. This has led to the growth of farming and settlement in some areas like the desert regions of Libya in North Africa. A number of the earth’s major resources, such as oil, are found in deserts and play a role in settlement patterns. In the Middle East, the continued demand for oil has led to the growth of settlements in or near the Arabian Desert, where oil is plentiful.

Wet Environments

Land areas that receive very high levels of precipitation are also considered to be inhospitable for human settlement. The tropical rainforest regions found in the interiors of South America, Southeast Asia, and Central Africa have rainfall averages of 50 inches per year. In these regions, the combination of heat and rain undermines the fertility of the soil by depleting the vital nutrients, thus hindering the development of agriculture. People in these regions generally live in one area until the soils become infertile, and then they move to another area.

Highland Environments

Most of the highest mountain regions in the world are sparsely populated. Human settlement is difficult because the mountains are usually steep and snow covered. In Switzerland, for example, approximately half of the country’s terrain is more than 3,300 feet high, but only 5% of the country’s total population lives there.

People in many parts of Latin America and Africa prefer to live in highland regions where the temperatures are cooler and the precipitation less than in the surrounding lowland areas. Mexico City in Central America is one of the world’s most populated cities and is located at 7,360 feet above sea level. The 1.5 million people in Quito, Ecuador (at the Equator) live 9,000 feet above sea level.

Cold Environments

The coldest regions of the world are near the North and South Poles. Most of the land and water in these areas is permanently covered with ice. Polar regions are not suitable for raising animals, as very few animals can survive the extreme cold. In addition, these regions are unsuitable for agricultural development. Consequently, very few humans live in these areas.
LEAST POPULOUS COUNTRIES

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vatican City</td>
<td>1,000</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>9,000</td>
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<tr>
<td>Nauru</td>
<td>10,000</td>
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<tr>
<td>Palau</td>
<td>16,200</td>
</tr>
<tr>
<td>San Marino</td>
<td>24,000</td>
</tr>
</tbody>
</table>

POPULATION GROWTH

Patterns of Population Growth

Population density refers to the number and distribution of people occupying an area of land per square mile at a given time.

The size and the density of a region’s population are unrelated to the level of its economic development. Currently, the Netherlands, which is one of the world’s wealthiest countries, has a population density of 1,120 persons per square mile. On the other hand, Mali, which is one of the poorest nations, has a population density of only 21 persons per square mile.

At the same time, an extremely large population does not necessarily indicate a high density per square mile, as in the case of China, which has a population of over one billion and a population density of 327 persons per square mile.

Rate of Population Increase

Population increase occurs more rapidly in places where there are more births than deaths. Geographers measure population change and increase in the following ways:

1. The Birth Rate/Fertility Rate
   This measures the number of births in a society. It is the annual number of births per thousand women in a population. In underdeveloped countries, birth rates are higher than in industrialized or developed countries.

2. The Death Rate/ Mortality Rate
   This is the annual number of deaths per thousand members of a population. In underdeveloped countries, the death rates are higher than in industrialized countries. The death rate is linked to life expectancy, which is the number of years that an average newborn is expected to live. From a worldwide perspective, life expectancy has increased throughout most parts of the world.
especially in developed countries. The current worldwide life expectancy is approximately 65 years.

3. **The Migration Rate**
   Migration rate is the annual difference between the number of people per thousand entering a region (immigrants) and the number leaving (emigrants).

4. **The Growth Rate**
   Differences in population size are measured annually by the growth rate of a country. This is the difference between the number of people added and the number of people subtracted from a population. In industrialized countries, growth rates are generally under 1%. In less developed regions the rates are above 2%.

5. **The Demographic Transition Theory**
   This theory states that there is a tendency for birth rates to drop and population to stabilize when a society has reached a certain level of technological and economic development. This is evident in the low population growth in North America, Japan and Europe.
STUDY QUESTIONS LESSON 4.

ANSWER TRUE OR FALSE. CHECK YOUR ANSWERS.

1. One third of the world’s population is found in South America.
2. In the western hemisphere, the largest population concentration is found in the northeastern United States and southeastern Canada.
3. The Industrial Revolution in Europe during the nineteenth century led to the growth of factories and cities.
4. Deltas, river valleys and mineral resources contribute to the development of human settlements.
5. In the desert regions of the Middle East, the discovery of oil has led to the growth of settlements in these areas.
6. The few inhabitants who populate the polar regions have been able to survive in their environment by building irrigation systems.
7. Population density refers to the number of people added and subtracted from a population.
8. The size and the density of a region’s population are related to the level of its economic development.
9. The “birth rate” refers to the rate of natural increase or number of births in a society.
10. The countries with the largest populations have the highest population densities.

ANSWERS TO LESSON 4 STUDY QUESTIONS

1. FALSE  6. FALSE
2. TRUE  7. FALSE
3. TRUE  8. FALSE
4. TRUE  9. TRUE
5. TRUE  10. FALSE
LESSON 5

HUMAN IMPACT ON THE PHYSICAL ENVIRONMENT

- Soil Erosion
- Deforestation
- Water Resources
- Fossil Fuels and Air Pollution

SOIL EROSION

The Earth contains many valuable natural resources that have sustained all life forms and have significantly influenced the ways humans live. A number of these resources can be renewed in the natural cycle of life. However, due to the activities of man, many natural resources are now non-renewable.

Soil

Soil is the layer of material that is formed as a result of the breakdown of rocks on the surface of the Earth’s crust. In some areas, this layer is many feet thick, whereas in other places it is only a few inches in depth. Most of the world’s soil is *inorganic* matter, which is crumbled rock. The remaining portion is *organic* matter, which is formed from the decay of living organisms or their products. The organic part is called *humus*. The most fertile soils in the world contain large amounts of humus. Fertile soils also contain many nutrients. Soil is a valuable resource that can be renewed. However, new soil forms slowly, and it can take decades or centuries for new layers of soil to be formed by natural forces.

In many parts of the world, farmers have destroyed and altered the soil in their regions due to various cultural practices or beliefs and/or their level of technological development. *Soil erosion*, which is the breakdown or deterioration of the soil, is often caused by the removal of the natural vegetation, whether forests, plants, or grass. The loss of vegetation weakens the soil because the roots of plants bind soil particles together. Plants also protect the soil from rain and wind.

Regional Studies

The horticultural farmers who live in the jungle of the Amazon Rainforest of Brazil have traditionally for hundreds of years used a subsistence strategy to plant food, based on “slash and burn” technology or shifting cultivation. These farmers work on small plots of land with hoes and digging sticks. In order to plant, they clear away areas of land by cutting down and burning the vegetation, which they then use as fertilizer for the soil. This process weakens the soil. The farmers then raise crops for two or three years until the weakened soil erodes and becomes nutritionally exhausted. They then move away and repeat the same process in other locations.
Some other regions in the world where shifting cultivation has been practiced are the savanna regions of Africa, Thailand, and India. Another agricultural practice that has led to soil depletion is the cultivation of the same type of crop on the same land year after year. Most plants make demands on particular mineral compounds in the soil. Ultimately the soil will deteriorate and soil erosion will take place.

Another cultural practice that erodes the soil is overgrazing. In Africa, the Middle East and Central Asia, many subsistence farmers called “pastoral nomads” depend primarily on animals for their survival rather than on crops. These people are referred to as “nomadic” because they usually occupy an area of land that has food and water for a short period of time and then move away when they have depleted these resources. The land in these regions is usually arid or semi-arid, with sporadic areas of grassland and vegetation. The Masai of East Africa and the Bedouins of North Africa are examples of nomadic groups. Their animals graze on the land until there is no more grass, and the soil is eroded. The nomads then leave the area.

Traditionally, these nomads raise mostly sheep and goats. They not only slaughter them for food but raise them to provide milk and for their skins, which are used for clothing and tents. To nomads, the quality and size of their herds is an important measure of prestige and power as well as their source of security when survival becomes difficult in their environment.

**DEFORESTATION**

The world’s vegetation is a renewable resource. However, there are limits to the extent to which these resources can be renewed. Soil erosion has significantly reduced the number of areas where crops can be replanted. The gradual destruction of the world’s forests is a recurring problem.

Another issue that is affecting the physical environment of the world is the rapid rate of deforestation due to cultural and technological factors. Even though forests are renewable resources, it will take many years for them to be renewed if they are continuously destroyed by man. The plant life and forests of the world remove harmful carbon dioxide from the air and produce oxygen, which is vital for sustaining life on earth.

**Regional Studies**

In many parts of the world, the economic policies of the governments, the level of technology and the demands of society have accelerated the rate of forest destruction. Indonesia, the Philippines, and Brazil are some of the countries where the national governments have authorized and subsidized projects that have removed large areas of forests or have converted them into areas for cattle ranching, farms, and industrial sites. The continued demands for food, housing, jobs and land have significantly increased these activities especially in areas where there are large populations as well as poverty.

In Asia, almost half of the national forests have disappeared. In Brazil, the destruction of the rainforest has caused huge gaps in the forest areas and the loss of hundreds of plant and animal species. In Western Africa, the continued removal of forests for timber by the people has led to the gradual desertification of many areas.
The impact of technology also plays an important role in global deforestation. In the United States, the development of the country began with the early settlers cutting down trees to build houses and settlements. Over the last two centuries, the United States has become an advanced, industrial nation due to the exploitation of the national forests. The forests have provided jobs, materials for the logging industries, energy for factories, and mines. They have also been utilized for constructing roads and buildings, and providing manufactured goods including wooden items and paper products. As a result, only 5% of the country’s original forests now remain.

WATER RESOURCES

Water is considered a renewable resource because it is recycled in nature through the earth’s natural water cycle. However, in many parts of the world like the desert regions of Africa, it is a scarce resource.

Throughout the world the development of technology, especially in the industrialized nations, has contaminated or altered the world’s natural watercourses. The consequences are the spread of waterborne diseases such as dysentery, cholera, typhoid and elimination of much of the world’s aquatic life. The main sources of water pollution are as follows:

Industries

Industries such as chemical, steel, paper products and food processing plants are the major water polluters. Industrial accidents that have occurred in the past, such as petroleum spills from ocean tankers, have contaminated large bodies of water. In addition, food-processing plants release chemicals and pesticides into inland rivers and streams.

Sewage Systems

In developed countries, waste water from homes is taken by sewers to municipal treatment plants, where all the pollutants are removed. The treated waste water is then dumped into nearby rivers or lakes. In many developing countries, this type of technology is not available, and in many cases sewer systems are rare. Sewage, therefore, flows untreated directly into rivers. In many cases, drinking water is also taken from the same rivers. If this water is not treated, it becomes toxic, which results in the spread of deadly waterborne diseases and the elimination of aquatic life.

Agricultural Systems

Pesticides and fertilizers that are used to increase the agricultural productivity of fields are often carried into rivers by irrigation systems, precipitation or underground water.
Hydroelectric Water Power

Water has been used as a source of transportation and power since ancient times. From the time of the Industrial Revolution, water power has been used to generate electricity called hydroelectric power.

In order to create this system, the physical environment has been altered using advanced technological methods. Dams have been the main method used. Dams are barriers that are built across rivers or streams to confine or contain the flow of water.

The dam’s purpose is to channel or divert the water in such a way that it can be used for human consumption, flood control, irrigation, or hydroelectric power. One of the most famous dams is Hoover Dam in the United States that holds back the waters of the Colorado River. One of the world’s largest hydroelectric projects is located at Churchill Falls in Newfoundland, Canada. The world’s largest hydroelectric project, completed on October 30, 2008, is the Three Gorges Dam. It dams the mighty Yangtze River in China.

The largest hydroelectric project in North America is the 1942 Grand Coulee Dam on the Columbia River in the state of Washington. The second largest is on the Churchill River in the Labrador section of Newfoundland, Canada. The third largest is on the Niagara River at Niagara Falls, Ontario/New York.

Problems have also resulted from the construction of dams. In many cases, the construction of dams has flooded lands that were formerly useful, caused erosion, and changed the natural ecosystem. The recent construction of a dam on the Euphrates River has caused political and cultural conflict between Syria and Iraq because too much water has been diverted from the river, and the water content has become saltier.

FOSSIL FUELS AND AIR POLLUTION

The resources of the Earth, like coal, petroleum and natural gas that are used for energy production, are limited and are regenerated in nature so slowly that they are considered to be non-renewable. When the present reserves are exhausted, human beings will have to find or create new alternatives in order to survive. These valuable resources are called fossil fuels because it took thousands of years for them to form in the earth from organic matter. Presently, the United States uses more energy from fossil fuels than any other country and consumes 25% of the world’s total energy supplies.

Since the twentieth century, coal has been used as a source for generating electric power and for making coke for steel production especially in the United States. In other parts of the world such as Poland and China, coal is mostly used for heating homes.

Petroleum is also called crude oil and is made of carbon and hydrogen. Natural gas occurs where petroleum is found. Petroleum and its by-products are used worldwide to provide fuel for all types of transportation systems and vehicles as well as chemicals and material for road building.
The mining and extraction of these substances has caused much damage to the physical environment on the land surface and underground. The removal of trees and other vegetation causes soil erosion and underground mining can pollute ground water that flows into streams.

One environmental hazard that has caused a lot of concern is **acid rain**. This is rain polluted with sulphuric acid caused by the sulphur dioxide from the coal burnt to produce energy in power plants and factories.

Another environmental concern is the protection of the **Ozone Layer**, which is the layer of gas above the earth’s surface that protects living organisms from the harmful rays of the sun. Scientific research indicates that this layer is being gradually worn away by the extensive use of chlorofluorocarbons (CFCs) such as freon. Freon is the coolant in air conditioners, refrigerators, and aerosol sprays.

Another environmental issue that is affecting the world’s societies is **global warming**, which is the theory that the earth’s temperatures are gradually rising. This may ultimately have a devastating effect on mankind due to the increasing amounts of methane gases and carbon dioxide produced as a result of industrialization. These gases form a barrier that traps the heat from the sun’s rays on the earth, causing a **greenhouse effect**.
LESSON 5 STUDY QUESTIONS

ANSWER TRUE OR FALSE. CHECK YOUR ANSWERS.

1. The horticulturalists that use the “slash and burn” method to clear land for farming do not use fertilizers.

2. The unrestricted grazing of animals in grassland regions has significantly contributed to soil erosion.

3. The forests of the world have provided jobs and materials for constructing buildings.

4. National governments have contributed to deforestation by authorizing projects that have removed large areas of forests for farming and industry.

5. In most parts of the developing world, sewerage plants treat contaminated wastewater before it flows into rivers.

6. Industrial plants are responsible for contaminating water because they release chemicals and pesticides into inland rivers.

7. The United States conserves more energy than the rest of the world.

8. Pesticides and aerosol sprays have increased the levels of harmful sulphur dioxide in the atmosphere.

9. The Ozone Layer is the layer of gas above the earth’s surface that protects living organisms from the harmful rays of the sun.

10. Acid rain is produced from a buildup of toxic fumes from automobiles.

ANSWERS TO LESSON 5 STUDY QUESTIONS

1. FALSE   6. FALSE
2. TRUE    7. FALSE
3. TRUE    8. FALSE
4. TRUE    9. TRUE
5. TRUE    10. FALSE
LESSON 6

CONSERVATION OF NATURAL RESOURCES

- Land and Forest Resources
- Water and Air Preservation

LAND AND FOREST RESOURCES

Land

As the world’s population increases, more food has to be produced from available land resources. One method that has been used to conserve and protect the soil from erosion and to increase food production is **terrace cultivation**. In this type of farming, the slopes of mountains and hills are cut into wide, step-shaped horizontal ridges on which crops are grown. Terrace farming is widely practiced in many regions of the world, especially in China, which has the world’s largest population. These additional fields increase the land available for cultivation. A large percentage of the country’s rice is grown by this method. During the growing season, the rice terraces are flooded, and the water passes from one terrace to the next, providing water for the crops without causing soil erosion.

Another method of soil preservation is **crop rotation**. This is common in China, Russia, and the United States. It is the practice of rotating fields by planting different crops each year to avoid soil exhaustion and mineral depletion. For example, a field which produces wheat one year may be used to produce soybeans in the following year.

Mixed crop and livestock farming involve the integration of crops and animals on the same farms, and this is another method of soil preservation. Some of the crops are fed to the animals, which in turn provide manure to keep the soil fertile. As a result, there is more fertile land available for farming, and more animal products such as pork, beef, milk, chicken and eggs to satisfy the demands of the population. This method is very common in the farming belt of the Midwestern states of America.

Forests

In places like the Amazon region and the United States, where large areas of forests have been removed, efforts have been made to re-plant young trees to ensure that the forest reserves are not totally depleted. Tree farming is also practiced in many parts of the world.
WATER AND AIR PRESERVATION

Water

New regulations and modernized sewage systems and prohibited the dumping of industrial waste into water. Many governments in the developed world have made attempts to conserve their water sources and prevent their contamination. In the 1960’s, the British government began a massive cleanup of the Thames River. New regulations and modernized sewage systems have prevented the dumping of industrial waste into water. In 1972, the United States government passed the Clean Water Act. This act has helped local governments and states to fund programs to remove toxic waste from rivers and lakes. Since that time, a number of developed nations have adopted similar policies to protect their water sources.

Air

In 1970, the Environmental Protection Agency (EPA) in the United States was formed, and it has greatly reduced the amount of sulphur dioxide produced by power plants. The Clean Air Act of 1970 has helped local governments and states to fund programs to reduce pollution in the air caused by factory and automobile fumes.

Scientific research has also been able to find new energy alternatives that are safer for the environment such as wind and solar energy (energy from the sun). Implementation of these alternatives has been painfully slow. In Israel, Japan and the United States, solar energy is now used in homes mostly for water heating. The use of electric vehicles is an alternative that has been considered in the more developed countries to save energy and alleviate the dependency on fuel-driven vehicles and to eliminate the amount of harmful emissions in the atmosphere. However, studies from market researchers and motor vehicle companies have shown that most consumers are reluctant to own electric vehicles, even though they could reduce pollution. Electric cars would be very expensive and would have to be recharged frequently.

Efforts have also been made to protect the ozone layer and reduce the high amount of chlorofluorocarbons (CFC’s) in the atmosphere. In recent decades, the United States, Canada, and Western European nations signed a number of international agreements and organized movements to cease using CFCs by the year 2000 and to persuade developing countries to do so by 2010.
LESSON 6 STUDY QUESTIONS.

ANSWER TRUE OR FALSE. CHECK YOUR ANSWERS.

1. Crop rotation is not an effective method of soil conservation.
2. Efforts aimed at forest conservation have been made by continually re-planting young trees.
3. Mixed crop and livestock farming (including using animals to provide manure to keep the soil fertile), an effective way to preserve soil.
4. Terrace cultivation increases farming land by cutting horizontal ridges on the slopes of hillsides, on which crops are grown.
5. The first attempts in Europe to protect water resources began in the 1970’s.
6. The Clean Air Act has not helped local governments in the United States to reduce air pollution.
7. The Environmental Protection Agency has been able to significantly reduce CFCs from fuel driven vehicles.
8. Solar energy is never used in homes in specific parts of the world for water heating.
9. Efforts have been made to protect the ozone layer and reduce the high amount of chlorofluorocarbons in the atmosphere.
10. Scientific research has also been able to find new energy alternatives that are safer for the environment, such as wind and solar energy (energy from the sun).

ANSWERS TO LESSON 6 STUDY QUESTIONS

1. FALSE  6. FALSE
2. TRUE   7. FALSE
3. FALSE  8. FALSE
4. TRUE   9. TRUE
5. FALSE  10. TRUE
LESSON 7

GLOBAL INTERDEPENDENCE

- Developed and Developing Countries
- Globalization and Technology

DEVELOPED AND DEVELOPING COUNTRIES

In the developed or industrialized regions of the world, technological development is characterized by organized government systems, large corporate businesses, complex economies, social class systems, formal education, high standards of living, and highly urbanized cities. In these regions, there is great occupational diversity. The main reason for this level of development is the Industrial Revolution that began in the United Kingdom around 1750.

The Industrial Revolution was the period during which the methods of producing goods changed from manual labor to the use of complex machines and the production of larger quantities of goods at lower prices. The vast supply of natural resources like coal and iron contributed to the growth of industrialization and factories. England’s many navigable canals and rivers provided water power and transportation for raw materials as well as finished goods from factories. Machine technology was significantly enhanced by the invention of the steam engine, which applied steam power to all types of industry and transportation systems. The invention of the steamboat increased the speed by which people and goods could be transported across water. The Industrial Revolution next spread to the rest of Europe and the United States. It caused the countries of the world to become more interdependent because more goods were produced, which resulted in more international trading in different products. By the end of the 19th century, the United States had replaced England as the world’s leading industrial nation.

Many countries are termed “developing nations” where the lives of the people have not been directly affected by the progress of the Industrial Revolution. These countries contain most of the world’s people. Many countries, in Africa and Asia, became independent nations after World War II. Before the war, these nations were colonies of European countries. Colonialism brought more jobs, goods, money, technologies and ideas to native populations. At the same time, its disadvantage was that the indigenous people were not in control of their own social, economic and political development. However, since independence there has been a strong economic interdependence between developing nations and the countries that used to dominate them.

One of the characteristics of developing nations is that they are not able to make full use of their natural resources. This is evident in parts of Central America and Africa. This fact limits their economic wealth. Many developing countries cannot manufacture goods on a large scale, even though they may have the resources and raw materials for production because they cannot afford the technology. As a result, many of them import large amounts of manufactured products from industrialized countries. Generally, imports exceed exports and this leads to an imbalance of trade from which the national economy does not benefit.
Many countries in the developing world supply food crops and raw materials to the developed countries. In many cases, the people in these countries cannot afford to buy the food that their countries export to the developed world. This situation is common in many regions, especially in Africa and Latin America.

In Mexico, strawberries and tomatoes are grown on a large scale in the northern regions. However, many people cannot afford to buy these valuable foods and most of them are exported to the United States.

The industrialized countries of the world depend on the natural resources from the developing countries to provide raw materials for their industries. For example, bauxite is a mineral found mostly in the tropics and is mined in places like Jamaica, Suriname and Ghana. However, these countries do not have the technological and financial resources to manufacture finished goods from bauxite. It is then transported to the United States and Canada, where it is processed into aluminum and manufactured aluminum products. Alternately, the same countries that produced this resource then have to import these products from the United States and Canada for their own domestic use.

The developing countries, in turn, depend on the developed world for financial, economic, medical and technological assistance as well as managerial and educational training.

An indicator of a country’s economic development is its Gross National Product (GNP). This is the total value of goods and services produced by the residents of a country during a specified period, usually a year.

<table>
<thead>
<tr>
<th>Characteristics of Developing Countries:</th>
<th>Characteristics of Developed Countries:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A high rate of population growth.</td>
<td>1. A low rate of population growth.</td>
</tr>
<tr>
<td>3. A lower rate of urban development.</td>
<td>3. A high rate of urban development</td>
</tr>
<tr>
<td>4. A lower literacy rate.</td>
<td>4. A high literacy rate.</td>
</tr>
<tr>
<td>5. A limited industrial sector.</td>
<td>5. A large industrial and service sector.</td>
</tr>
<tr>
<td>6. A low GNP and an economy heavily linked to agricultural activities.</td>
<td>6. A high GNP, and economic growth based on extensive production and resource consumption.</td>
</tr>
</tbody>
</table>

GLOBALIZATION AND TECHNOLOGY

Globalization

In the modern world, many cultural barriers such as language, race, ethnicity and indigenous traditions have been bridged. This process of connecting the people of the world is called globalization. Economic globalization has to do with the way in which goods, services, capital, technology and labor move freely around the world. These developments have been achieved have been through multinational corporations, lowering of trade barriers, modern technology and telecommunications.
Cultural globalization refers to the amount of cultural preferences that have become universal. Presently, in many parts of the world in spite of local cultural traditions, most people desire to drive automobiles, own houses, and have television sets. In many cases, the survival of the local culture can be threatened by continuous interaction with new customs. The customs of wearing jeans, drinking Coca-Cola, and eating McDonald’s hamburgers are now a regular part of everyday life in places like Japan and Russia. Cultural characteristics spread from one region to another through a process called cultural diffusion.

Religion and language also reflect aspects of cultural globalization and a changing world. Historically, the spread of religion throughout the world has been influenced by the work of missionaries. An example is the spread of Roman Catholicism in Central and South America by Spanish missionaries who first settled in these regions in the sixteenth century. Many people have now adapted their traditional religions and incorporated them into Christianity (Catholicism). In some cases, both types of religions are maintained. Many Africans and a growing number of Asians have adopted new religions that are woven into their traditional beliefs.

The English language has now become the most universal in the world and is spoken internationally. Television and the media have also contributed to the diffusion of languages. Many people in English-speaking countries now have the opportunity to learn about other cultures by watching programs in other languages. In the United States, there are many Spanish programs. In the United Kingdom, many television programs are delivered in Welsh.

<table>
<thead>
<tr>
<th>MAJOR WORLD RELIGIONS</th>
<th>Adherents</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHRISTIANITY</td>
<td>2 BILLION ADHERENTS</td>
</tr>
<tr>
<td>ISLAM</td>
<td>1.3 BILLION ADHERENTS</td>
</tr>
<tr>
<td>HINDUISM</td>
<td>900 MILLION ADHERENTS</td>
</tr>
<tr>
<td>BUDDHISM</td>
<td>350 MILLION ADHERENTS</td>
</tr>
<tr>
<td>CONFUCIANISM/TAOISM</td>
<td>225 MILLION ADHERENTS</td>
</tr>
<tr>
<td>JUDAISM</td>
<td>14 MILLION ADHERENTS</td>
</tr>
</tbody>
</table>

Technology

Many recent technological inventions have emerged in the modern world in order to try to alleviate environmental and social problems. For many years, the United States has experimented with and developed atomic (nuclear) energy as an alternative to non-renewable fossil fuels. This energy has been used in only a small part of the nation’s industries. The advantage of nuclear energy is that large amounts of energy, are released from small amounts of material. This could provide much energy for a very long period of time. However, the negative effects, such as pollution and radioactive waste from this type of energy, have prevented its use on a large scale and have encouraged scientists to research alternative possibilities that are safer for humanity. The use of solar energy is growing in popularity because it does not damage the environment and it is being considered for use on a large scale for the future.

A major problem facing the world since World War II has been the rapid rate of population growth. During the last forty years in many parts of the developing world the population has been
growing faster than the availability of agricultural land. During the 1970s and 1980s, many scientific advances were made in agricultural technology which increase crop yields. This was called the **Green Revolution**. Scientific research produced hybrid, high-yield seeds, organic fertilizers and technologically advanced irrigation systems.

A significant problem of this advanced technology is that it is expensive. The developing countries in Asia, Africa and Latin America, which would benefit the most from this technology, do not have the money to pay for it. In addition, many people are subsistence farmers and do not have the land space for large-scale mechanization.

The advantage of this technology, however, was evident during the 1970’s when it was applied in India. The country’s wheat production more than doubled in five years. Since that time, scientists have continued to create higher-yield, hybrid seeds. The Green Revolution has been responsible for preventing starvation in many regions. However, the processes of genetically altering crops have also caused much controversy as to the natural, organic quality of the foods.

Nevertheless, these technological advancements represent a work in progress that is ongoing.
LESSON 7 STUDY QUESTIONS.

ANSWER TRUE OR FALSE. CHECK YOUR ANSWERS.

1. One of the characteristics of developing nations is that they are not able to make full use of their natural resources.

2. Gross National Product (GNP) refers to the total value of goods and services produced in a nation.

3. The Industrial Revolution was the period during which the type of goods produced was changed.

4. A characteristic of industrialized nations of the world is that the birth rate is significantly higher.

5. An advantage of colonialism was that it brought new religions to natives.

6. A high literacy rate is a characteristic of developed countries.

7. The industrialized countries of the world depend on the natural resources from the developing countries to provide raw materials for some of their industries.

8. The most universal language in the world today is Russian.

9. In the United Kingdom, many television programs are delivered in Welsh.

10. A significant problem related to the Green Revolution is that it is not understood by most people.

ANSWERS TO LESSON 7 STUDY QUESTIONS

1. TRUE
2. TRUE
3. FALSE
4. FALSE
5. FALSE
6. TRUE
7. TRUE
8. FALSE
9. TRUE
10. FALSE
WORLD CULTURAL GEOGRAPHY REFERENCES


COURSE OBJECTIVES

Students develop multicultural understanding and use geographical concepts and skills to acquire information and systematically apply decision-making processes to real-life situations. They will acquire an understanding of interrelationships between people and their environment. Students will also:

- Identify the relationships between physical geography and the economic, political, social, cultural and historical aspects of human activity.
- Understand patterns of population growth and settlement in different cultures and environments.
- Understand the interaction between culture and technology in the use, alteration and conservation of the physical environment.
- Understand the inter-relationships and interdependence of world cultures, races and religions.
- Apply research, study, critical-thinking and decision-making skills and demonstrate the use of new and emerging technology in problem-solving.