

HISTORY & GEOGRAPH

STUDENT BOOK

7th Grade | Unit 2



HISTORY 702

What Is Geography?

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LIFEPAC Test is located in the center of the booklet. Please remove before starting the unit. **Author:** Alpha Omega Staff

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What Is Geography?

Introduction

Geography is a science that deals with the ways in which man adapts to the conditions of the earth's surface, both natural and man-made.

In this LIFEPAC® we shall study geography within the framework of the major regions of the earth. We shall learn about the shape, movement, climatic regions, and surface of the earth as a whole.

We shall learn that geography is a relationship between man and his environment. As man adjusts to his environment, he also modifies or changes it from a natural environment to a cultural environment. Cultural environment includes such man-developed features on the earth's surface as cities, roads, railroads, canals, fields, cemeteries, dams, drainage ditches, and irrigation systems.

Objectives

Read these objectives. The objectives tell you what you will be able to do when you have successfully completed this LIFEPAC. When you have finished this LIFEPAC, you should be able to:

- 1. Identify the different classes of geography.
- 2. Describe the shape of the earth and give its dimensions.
- 3. Recognize the seasons and tell how they are determined.
- 4. Identify the major land forms and describe each one.
- 5. Recognize the different kinds of maps.
- 6. Read a map by using latitude and longitude.
- 7. Perform an experiment in geography.

Survey the LIFEPAC. Ask yourself some questions about this study and write your questions here.

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1. GEOGRAPHY AND THE PLANET EARTH

Geography is the study of the earth's surface, climate, continents, countries, peoples, industries, and products. The term *geography* is derived from the Greek word *geographia* which means *earth description*. Geography is dependent upon geology, biology, chemistry, physics, mathematics, astronomy, and anthropology for much of its basic material and information.

The geography of the earth has a tremendous effect upon the lives of all men. To a very large degree, it determines the way we live. But what determines the geography of each area of the earth? Much of the earth's geography is determined by the planet itself and its relationship to the sun. In this section we shall study the different kinds of geography and the shape and the movement of the earth.



SECTION OBJECTIVES

| Geography is the study of the earth

Review these objectives. When you have completed this section, you should be able to:

- 1. Identify the different classes of geography.
- 2. Describe the shape of the earth and give its dimensions.
- 3. Recognize the seasons and tell how they are determined.

VOCABULARY

Study these words to enhance your learning success in this section.

anticyclone (an' tē sī ' klō n). Winds moving around and away from the center of high pressure, which also moves.

axis (ak' sis). A straight line around which an object turns.

cyclone (sī ' klō n). A storm or winds moving along and spiraling toward a calm center of low pressure, which also moves.

elevation (el' u vā' shun). The height above sea level.

ionosphere (ī on' u sfir). The region of the atmosphere between the stratosphere and the exosphere.

perpendicular (pė r' pun dik' yu lur). Intersecting at or forming right angles.

rain forest (rā n' fôr' ist). A large, dense forest in an area of heavy rainfall.

savanna (su van' u). A grassy plain with few or no trees.

STATE HISTORY AND GEOGRAPHY PROJECT

This project is designed to help you learn more about your own state. Over the next few weeks, work through the following instructions. The items you are adding to your state booklet will give you the opportunity to apply the text material you are learning. Organize your booklet any way you would like. The divisions used here will help organize your time and coordinate your booklet with your studies.

Possible items that can be used for the booklet are a spiral notebook, a scrapbook, a three-ring binder, or a folder. All of the work can be done on a computer if you have word-processing and drawing software. This is not something that should be completed in one day. It may take some time to obtain the maps and resources you will need. Your booklet should tell a story about your state.

Maps:

- 1. Begin this booklet by drawing a map of the United States and putting your state on it in the color of your choice.
- 2. Write the natural landform in which your state is located.
- 3. Draw a large map of your state and mark the major natural features on it, such as lakes, mountains, rivers, desert. Label them.

Climate:

- 4. Write a few sentences describing the climate in your state.
- 5. Find out what the average monthly rainfall is in your state.
- 6. Draw a chart showing this annual rainfall.

General State information:

7. Find out and write down the following information: your state motto, your state bird, your state flower, your state tree.

History:

- 8. Write about a historical event in your state.
- 9. Write a few sentences describing which nation first explored and claimed the land that is now your state.
- 10. What year was your state admitted to the Union?

Additional Mapping:

- 11. Find and fill in on your state map the following things: capital city, largest city, your town or city.
- 12. Write down what large bodies of water your state is nearest.
- 13. Write down what time zone your state is in.
- 14. Make a chart showing the average monthly temperatures of your state.

Industry:

- 15. How long is the growing season in your state?
- 16. Find out and write down the following information: the major crops raised in your state, the major industries of your state and the local natural resources used in these industries.
- 17. Name and mark on your map an area that tourists visit in your state. Explain why tourists come to visit these areas in your state.

Other information:

- Use an encyclopedia or books provided by your teacher to find more information about your state. Write it up for your booklet.
- 19. Make a cover for your booklet.
- 20. Hand in your booklet to your teacher.



TEACHER _________

steppe (step). A vast, treeless plain in southeastern Europe and in Asia.

stratosphere (strat' u sfir). The region of atmosphere that extends from ten to twenty miles above the earth.

taiga (tī ' gu). A coniferous evergreen forest just south of the Arctic zone.

topography (tu pog' ru fē). The surface of an area or a detailed description or drawing of that area.

tropical jungle (trop' u kul jung' gul). A dense jungle, having a heavy rainfall.

troposphere (trō ' pu sfir). The lowest region of the atmosphere that extends ten miles above the earth's surface.

tundra (tun' dru). A region mostly within the Arctic Circle with permanently frozen subsoil and vegetation for 3 months of the year.

Note: These words appear in boldface print the first time they are used in this LIFEPAC. If you are not sure of the meaning when you are reading, study the definition given in this LIFEPAC.

Pronunciation Key: hat, āge, cãre, fär; let, ēqual, tėrm; it, īce; hot, ōpen, ôrder; oil; out; cup, put, rüle; child; long; thin; /*τ*H/ for then; /*z*h/ for measure; /u/ represents /α/ in about, /e/ in taken, /i/ in pencil, /o/ in lemon, and /u/ in circus.

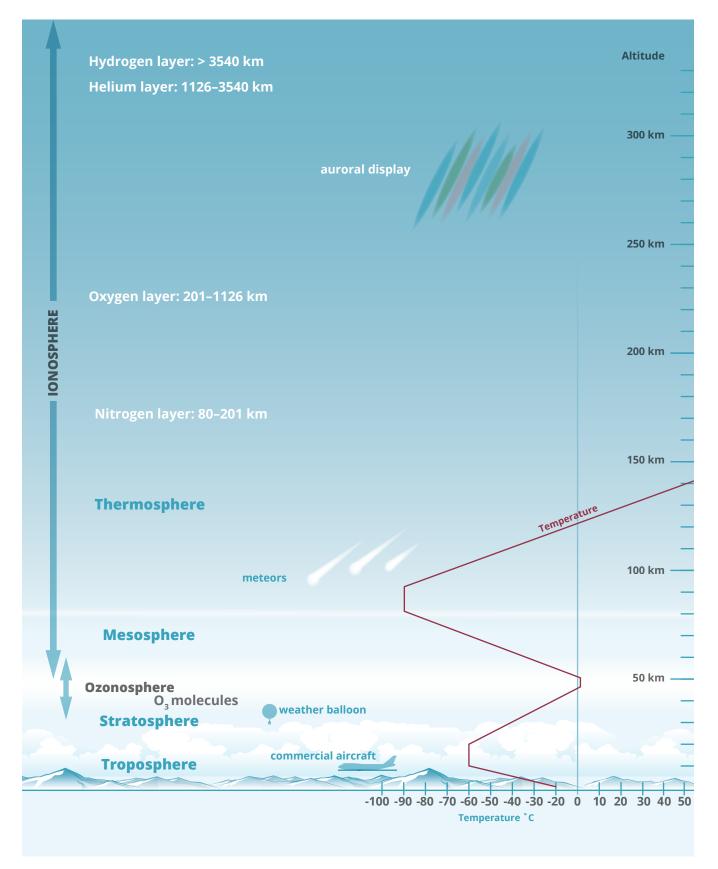
CLASSES OF GEOGRAPHY

In your study of geography, you will discover the different kinds of geography. Geography is divided into the following classes: physical geography, meteorology, climatology, economic geography, urban geography, political geography, mathematical geography, cultural geography, and regional geography.

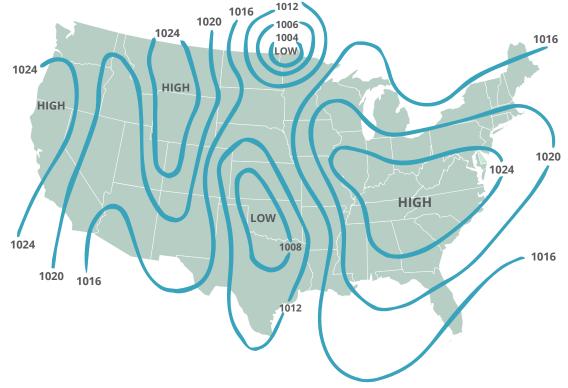
Physical geography. Physical geography is the study of the physical features of the earth and the influence that these features have on man. Physical geography includes almost everything from the earth as a planet through the major features of the earth's crust. It also includes the changes that occur on the earth's surface such as land erosion (weathering) and stream erosion. Physical geography includes the formation, description, and effect of the landforms of plains, plateaus, and mountains. It also includes the work of ice, rivers, oceans, atmosphere, as well as plant and animal distribution. You will study about landforms later in this section.

Meteorology. Meteorology is the study of the earth's atmosphere. Meteorology was at one time considered a branch of geography; however, today it is considered a branch of physics. Meteorology deals with the various parts of the atmosphere: The **troposphere**, stratosphere, and ionosphere. Meteorology is also concerned with the methods and instruments used in recording the weather. In addition, it deals with the problems of condensation, evaporation, precipitation, temperature changes and their variations, wind systems, local winds, air masses, weather fronts, cyclones and anticyclones. Meteorology also includes weather analysis and forecasting. Thus, meteorology becomes very important in the study of geography in order to understand how our lives are affected by the changes in weather in different parts of the world.

Climatology. Climatology deals with the study of average weather, called climate. Climate is the summary of all the various weather



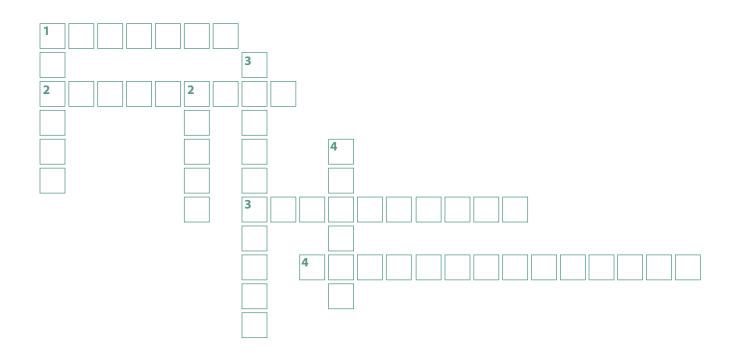
| Atmospheric Layers by Altitude

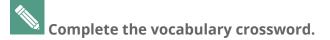


| Weather Map of Barometric Pressure

influences and is one of the most influential factors of the physical environment. The importance of climate and its influence on man are better understood when the way of life of the desert dweller is compared with the customs and activities of people living in a humid, marine type of climate. The elements *of* climate are temperature, pressure, wind, and moisture. The elements that *control* climate are altitude, the relationship between continents and oceans, pressure belts, wind belts, ocean currents, and **topography**.

Climatic regions are based on vegetation and include **rain forests**, **tropical jungles**, **savannas**, **steppes**, deserts, **taigas**, and **tundras**.





1.1 Use across and down clues to complete crossword puzzle.

ACROSS

- 1. A grassy plain with few or no trees.
- 2. The height above sea level.
- 3. A large, dense forest in an area of heavy rainfall.
- 4. Dense jungle having a heavy rainfall. Found in the area between the Tropics of Cancer and Capricorn.

DOWN

- 1. A vast, treeless plain in southeastern Europe and in Asia.
- 2. A coniferous evergreen forest just south of the Arctic zone.
- 3. The surface of an area or a detailed description or drawing of that area.
- 4. A region mostly within the Arctic Circle with permanently frozen subsoil and vegetation for 3 months of the year.

	Complete these	activities.				
1.2	Physical geograph	ny is the study of the a	features of the			
	earth and the influence that these features have on b					
1.3	Two kinds of erosion that change landforms, and hence the earth's surface,					
	are a	erosion (weathering) and b)			
1.4	Physical geography includes the formation of the landforms mentioned above					
	such as a	, b	, and			
	C	·				
1.5	What are three pa	arts of the atmosphere?				
	a					
	b					
1.6	List nine problem	s with weather.				
	a					
	b					
	d					
	i.					

_

Match these vocabulary words with their definitions.

- **1.7** _____ anticyclone
- **1.8** _____ axis
- **1.9** _____ perpendicular
- 1.10 _____ cyclone
- 1.11 _____ ionosphere
- 1.12 _____ stratosphere
- 1.13 _____ troposphere

- a. between the earth and stratosphere and extends ten miles above the earth's surface
- winds moving around and away from the center of high pressure; an atmospheric disturbance
- c. region of atmosphere that extends from ten to twenty miles above the earth
- d. straight line about which an object turns
- e. region of the atmosphere between the stratosphere and the exosphere
- f. the relationship of one line to another
 when they meet and form a right triangle,
 or 90° angle
- g. storm or winds moving along and spiraling toward a calm center of low pressure

Complete these statements.

1.14 Meteorology is the study of the earth's ______.

1.15 The study of the climate is called ______.

1.16 ______ is the summary or average of all the various weather influences in an area.

1.17 The elements of climate are a. ______, b. _____,

c. ______ , and d. ______ .

Complete this list.

1.18 List six elements that control climate.





| Urban geography is the study of city growth.

Economic geography. Economic geography is the study of man's economic activities over the earth's surface, specifically those activities by which he earns a living or supports life. Economic geography deals with the agricultural, industrial, and commercial activities of man on the earth's surface.

Urban geography. Urban geography is the study of city growth, city decline or decay, city planning, and the problems that cities have. Whether the city is large or small, it is affected by urban geography. For example, a city may be located between two large mountains with no room to grow. The urban geographer would

try to find the best possible way for that city to grow, whether by building on the mountain sides, or possibly by leveling the mountain.

Political geography. Political geography is the study of the earth and state and is concerned with the earth in relation to government and societies of man. Political regions are influenced by the different landforms of the world. For instance, Belgium is a land of flat plains, which resulted in its being overrun by the German army during World War II. On the other hand, Switzerland is protected by mountains from ground invasion by neighboring countries.

Complete these sentences.

1.19 Economic geography deals with agriculture, industrial activities, and

1.20	Political	geography	deals with	
		0000.000.000	0.00.00 11101	

1.21 Urban geography deals with city planning, city decline, and ______

Mathematical geography. Mathematical geography deals with the measurement of the earth and considers the earth as a globe. Actually the earth is an imperfect sphere; it bulges at the equator and is somewhat flattened at the polar areas. Because the earth is not a perfect sphere, its size varies. The circumference of the earth is 24,902 miles (40,075 km) around the equator. The circumference from pole to pole is 24,860 miles (40,008 km). The diameter of the earth is 7,900 miles (12,714 km) from north to south and, 7,926 miles (12,756 km) from east to west. You will study more about the measurement of the earth later in this LIFEPAC.

Cultural geography. Cultural geography is the study of a society's activities, beliefs, institutions and behavior patterns. Regardless of where you live, culture plays a very important role in your life. If an American traveled from the United States to Mexico, he would encounter a culture unlike what he lived around at home. If a Vietnamese traveled to South Africa, he would also encounter a different culture from his home. Every country has unique traditional cultures. Even within each country, certain regions have cultures unique to that particular region.

Regional geography. Regional geography is a method of studying an area by applying the principles of all the different branches of geography to a given area. In many schools, geography is taught as a regional subject, such as the geography of New York State, North America, Asia, Europe, or Russia.

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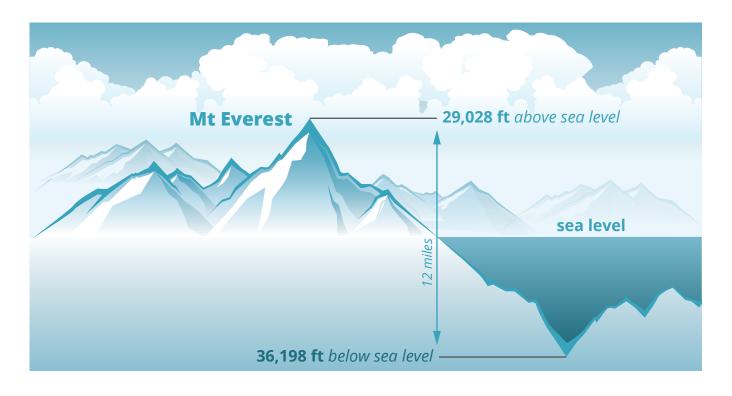
Complete these statements.

SHAPE AND MOVEMENT OF THE EARTH

We will want to learn something about the shape, movement, climatic regions, and surface of the earth as a whole. To do this, let us first take an imaginary trip out through space to Mars. Only from such a distant vantage point can we watch the behavior of our planet as it revolves around the sun.

Shape of the earth. From Mars or the other planets, Earth seems like an almost perfect sphere, but its surface is not smooth. The unevenness of the earth's surface is caused by mountains and ocean depths. Viewed from far off, however, the ridges are less noticeable than the specks on an egg. The deepest floor of any of the earth's oceans is the Mariana Trench near the Mariana Islands in the Pacific, with a depth of 36,198 feet (11,033 m) below sea level. The highest point above sea level, Mount Everest in the Himalaya Mountains, is 29,028 feet. Altogether, the difference in **elevation** between the deepest and highest points on the globe is slightly over twelve miles, an easy day's hike. You can see what a tiny difference the ridges and valleys of the world's surface make to the great outline of the earth which measures 24,902 miles in circumference at the equator.

Later in this LIFEPAC we will see how important the very slight unevenness of the land (in the form of mountains, hills, plateaus, and plains) can be in the daily lives of the earth's people. While we are still looking at the world as we would see it from Mars, let's observe a few important facts about its location and movement through space.



	Complete these activities.	
1.30	The deepest spot in the ocean is the a	with a depth of
	b feet.	
1.31	The highest point above sea level is a	at
	b feet.	
1.32	The difference in elevation between the Mariana Trench and Mt. Everest	
	is about miles.	
1.33	The four major landforms mentioned are a,	
	b, c, and d	

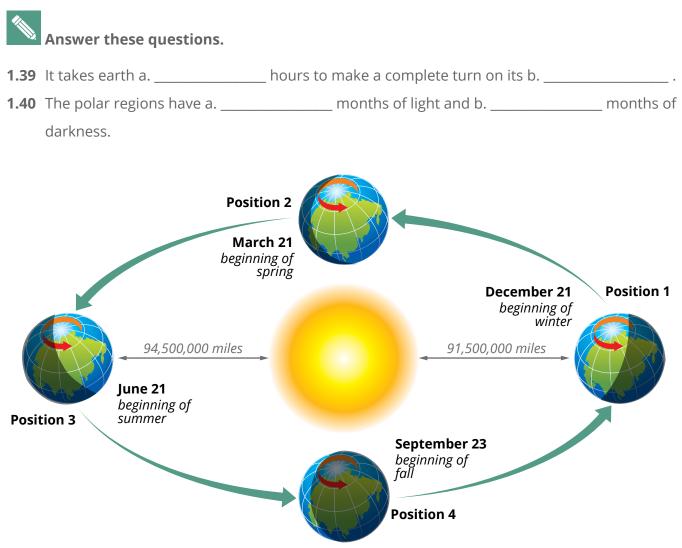
Location and movement of the earth. The earth is approximately 93 million miles (150 million km) away from that huge ball of fiery gases, the sun. Our planet requires 36514 days to make a complete trip around the sun. Our calendar year is 365 days. So every leap year we must add an extra day to February, making it 29 days instead of the usual 28. In this way we take care of the four extra "quarter days" that accumulate every four years.

At the same time that it is moving around the sun, the earth is rotating on its own **axis**. You can better visualize this axis if you think of it as a rod running completely through the earth and sticking out of the surface of the globe at the North Pole and the South Pole. **Periods of light and darkness**. The earth makes a complete turn on its axis every twenty-four hours. During each twenty-four-hour rotation, most places on earth experience a period of light and a period of darkness. The exception occurs in the two polar regions, north and south. At the North Pole during the six summer months, the sun never completely sets; and during the six winter months, it never rises over the horizon. This unique seasonal pattern takes place also at the South Pole, but the periods of light and darkness are the reverse of those at the North Pole. At the South Pole, the sun never rises in summer and never sets in winter.

Match these items.

- **1.34** _____ 93,000,000 miles
- **1.35** _____ 365¼ days
- 1.36 _____ 28 days
- **1.37** _____ 29 days
- 1.38 _____ axis

- a. complete orbit around the sun
- b. February
- c. distance from Venus
- d. rotation of earth
- e. leap year
- f. distance from sun



| Positions of the Earth (Seasons of the Northern Hemisphere)

Tilted axis of the earth. The reason for these conditions is that the axis of the earth is tilted 23½ degrees. You can see in the diagram that the axis is not **perpendicular** to the earth's orbit. In studying the diagram you can also see that the earth is always tilted in the same direction. At every point in its orbit, the earth's axis is tilted so that the North Pole points toward the North Star.

The place in the earth's orbit where the North Pole (and the whole Northern Hemisphere) is farthest from the location of the sun's vertical rays at noon is reached on December 21 (position one in the diagram). This point in the orbit is called the *winter solstice*. (The word solstice comes from the Latin root words which mean "Sun" and "to make stand still.") *Solstice* means *equal day* and marks the first day of winter. After this date, as the sun's vertical rays begin to move northward, our nights stop growing longer, and begin growing shorter again.

The opposite position in the earth's orbit, where the North Pole has moved as close in latitude to the sun's vertical rays at noon as it ever gets, is reached on June 21 (position three in the diagram). This orbital point is the summer solstice, and in the Northern Hemisphere it is the day with the longest period of sunlight. After this date, nights begin to grow longer again in the northern half of the world.

The two positions in the earth's orbit where both poles are equally distant from the sun are called the *fall* and *spring equinoxes*. The word *equinox* means *equal night*. The earth reaches the fall equinox (position four) on September 23, and the spring equinox on March 21 (position two).

The winter solstice. On this date of December 21, illustrated in position one, the northern half of the earth is tilted away from the sun more than at any other time of the year.

At this time the sun's closest and most direct rays strike the earth along a line 23½ degrees south of the equator. This line is called the *Tropic of Capricorn*. As you can see in the diagram, an area around the North Pole will not receive sunlight at all. The imaginary line of the *Arctic Circle* encloses this area. The Arctic Circle is only 23¹/₂ degrees south of the North Pole.

Around the South Pole lies an area which has twenty-four hours of daylight on December 21. This area is bounded by the *Antarctic Circle*, which is 23¹/₂ degrees north of the South Pole.

As you can see in the diagram, the day lasts a shorter length of time as you move north from the equator on December 21. You can see also that the day lasts longer as you move south from the equator.

The spring equinox. In position two you see the earth on March 21. At this time the most direct rays of the sun shine down right on the equator. The Northern Hemisphere and Southern Hemisphere are equally distant from the sun. In both of them, the weather is mild; for it is the first day of spring in the Northern Hemisphere, and the first day of fall in the Southern Hemisphere. On this day every spot on earth will have twelve hours of sunlight and twelve hours of night.

The summer solstice. In position three, the North Pole is inclined as close to the vertical rays of the sun on June 21 as it comes during the year. The equator is now south of the most direct rays of the sun, and the sun shines straight down on the imaginary line called the *Tropic of Cancer*. Summer is the season in the Northern Hemisphere, when winter is the season south of the equator. People who live in the Southern Hemisphere have their longest night of the year of this date, and those in the north have their shortest night.

The fall equinox. Position four shows the earth on September 23. Again the earth has moved so that the direct rays of the sun fall along the equator. At this time the Northern Hemisphere and Southern Hemisphere are equally distant from the sun, and the weather is mild in both

hemispheres. Again, for one day, every spot on earth has a day and a night of equal length.

The angle of the sun's rays. The changes in temperature we experience from season to season are only partly explained by the long days of summer and the short days of winter. More important than the length of the day is the angle at which the sunlight strikes the surface of the earth. In the summer the sun is high above the horizon, and sun rays strike the earth at much less of a slant than they do in winter. When the sun is overhead, each ray falls on a smaller area of the earth, thus heating it more intensely than it does the larger area upon which it falls in winter. In addition, when the sun's rays strike the earth's surface perpendicularly, they travel a shorter distance through the atmosphere.



- 1.41 _____ December 21
- 1.42 _____ June 21
- 1.43 _____ September 23
- **1.44** _____ March 21
- 1.45 _____ Arctic Circle
- 1.46 _____ equinox
- 1.47 _____ solstice
- 1.48 _____ Antarctic Circle
- **1.49** _____ Tropic of Cancer
- **1.50** _____ Tropic of Capricorn

- a. 23½ degrees south of the North Pole
- b. 23½ degrees south of the equator
- c. winter solstice
- d. fall equinox
- e. 23½ degrees north of South Pole
- f. equal night
- g. sun stands still
- h. summer solstice
- i. 23½ degrees north of equator
- j. spring equinox
- k. equator

Complete this activity.

1.51 Write a report on a trip you have taken. Describe the landforms and places of interest.



Review the material in this section in preparation for the Self Test. The Self Test will check your mastery of this particular section. The items missed on this Self Test will indicate specific areas where restudy is needed for mastery.

SELF TEST 1

Write	the letter of the corr	ect answer on the lin	e (e	ach answer, 2 point	s).	
1.01		g does not control clim b. agriculture			d.	ocean currents
1.02		n the earth and the sur b. 62 million miles			d.	93 million miles
1.03		arth around its own axi b. 365 days			d.	1 hour
1.04		it take the earth to rev b. 365½				
1.05		perpendicular but is t b. 50°			d.	15½°
1.06		hest from the sun on _ b. December 21			d.	March 21
1.07		oth poles are equally c d March 21 June 21				
1.08		isphere the longest day b. June 21				September 23
1.09		most direct rays strike b. Arctic Circle				Tropic of Cancer
1.010		isphere the shortest da b. June 21				September 23
1.011	How often does leap a. every year	year occur? b. every 8 years	C.	every 4 years	d.	every 2 years
Complete these statements (each answer, 3 points).						
1.012	Three parts of the atr	nosphere are the a				
	b		/	and c		·
1.013	The elements of clima	ate are a		, b		
	c, and d					·

1.014 The highest point above sea level is a. ______ and the lowest point below sea level is the b. ______ .

- **1.015** The study of the earth's atmosphere is called ______
- **1.016** ______ geography is the study of a society's activities, beliefs, institutions, and behavior patterns.
- **1.017** _____ geography is the study of city growth and decline.
- **1.018** Two kinds of erosion that change landforms, and hence the earth's surface, are weathering, also called a. ______ erosion and b. ______ erosion.

1.019 A name for average weather is ______.

1.020 The a. _____ Circle is 23½ degrees south of the North Pole while the b. _____ Circle is the same distance north of the South Pole.

Match these items (each answer, 2 points).

- **1.021** _____ Tropic of Cancer a. equal night
- **1.022** _____ circumference around poles b. equal day
- **1.023** _____ Tropic of Capricorn c. 24,860 miles
- **1.024** _____ solstice
- **1.025** _____ equinox
- **1.026** ______ circumference around equator f. 23½° north of the equator

- d. 23¹/₂° south of the equator
- e. 24,902 miles
- g. 7,927 miles

Answer these questions (each answer, 5 points).

1.027 Why do the polar regions have six months of day and six months of night? _____

1.028 What is the shape of the earth? _____







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HIS0702 – May '14 Printing

