

**SOCIAL STUDIES
GEOGRAPHY SKILLS
UNIT OBJECTIVES**

- GS 1 Identify and define the five themes of geography
- GS 2 Explain how the movements of the Earth cause night and day, as well as the seasons
- GS 3 Understand how a globe is marked with a grid to measure features on Earth
- GS 4 Learn how to use longitude and latitude to locate a place
- GS 5 Compare maps of different projections
- GS 6 Describe distortions in map projections
- GS 7 Identify and use the parts of a map
- GS 8 Understand and use political maps
- GS 9 Understand and use physical maps
- GS 10 Understand and use climate maps
- GS 11 Understand and use language maps
- GS 12 Learn why people migrate
- GS 13 Understand how migration affects environments
- GS 14 Understand and use a land use map
- GS 15 Learn how land use and economic structures are linked

I think I already know about _____

I'd like to learn more about _____

My plan to learn these objectives is _____

Geography Skills
Pages MSH – M1
Identify and define the five themes of geography

The five themes of geography are tools you can use to _____
and to answer the _____, _____, and _____ of geography.

Theme #1: _____ - answers the question “where is it?”

A. _____ - example: 2200 Pine Lake Road

B. _____ - example: 9 miles south of Lincoln

Theme #2: _____ - areas that share at least one common feature

A. _____ - countries, states, and cities

B. _____ - refers to the average weather of an area

C. _____ - refers to a way of life for a group of people

Theme #3: _____ - the natural and human features that make one place different from every other place, a geographic signature

You can identify a specific place by its:

_____	_____
_____	_____
_____	_____

Theme #4: _____ - answers the question, “How do people, goods, and ideas move from one place to place?”

Use this theme to help you trace the spread of _____, _____, and _____ from one location to another.

What happens in one place often affects _____

Theme #5: _____ - focuses on the relationship between people and the environment.

As people live in an area, they often begin to _____,
usually to make their _____.

The environment can affect how people:

_____	_____
_____	_____
_____	_____

Themes of Geography

Name: _____

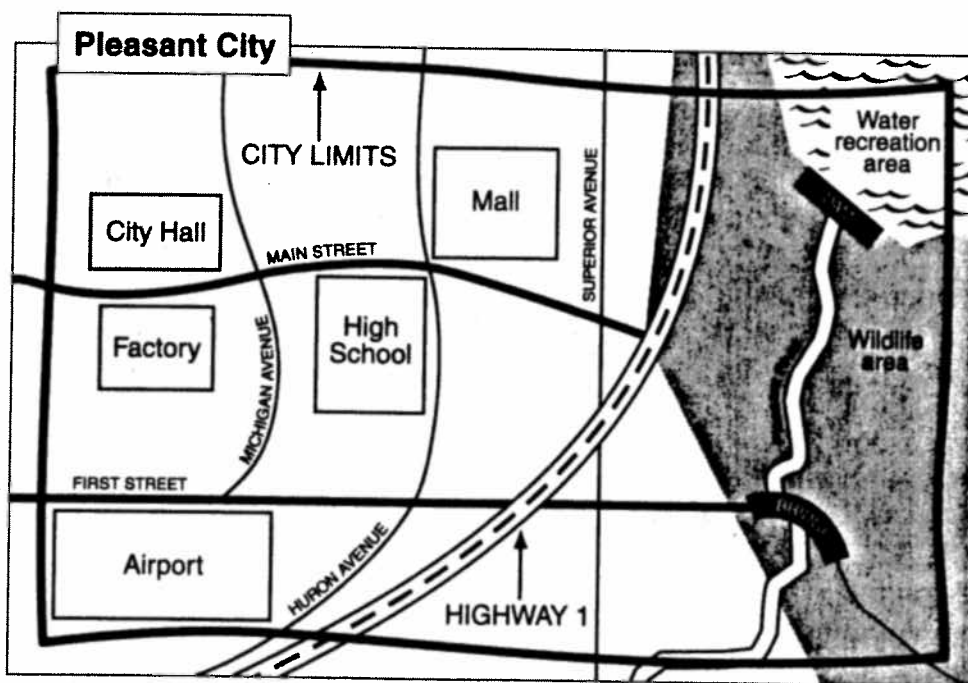
Answer the questions below by circling the correct answers that belong in the blank spaces.

- _____ is the area of study that grew out of the questions "Where am I?" and "Where are the things I need to live?"
 - geometry
 - geography
 - geology
 - geophysics
- The "global address" for a particular location is expressed in degrees of _____ and _____ and is referred to as "absolute location." (CIRCLE TWO)
 - ladders
 - latitude
 - longitude
 - shoots
- The United States military placed a network of low-orbiting satellites called the _____ into space.
 - global positioning system
 - satellite tv system
 - military war system
 - worldwide geography system
- With _____, we describe a place by comparing it to one that we already know.
 - relative location
 - absolute location
 - imaginary location
 - real location
- The culture of an area, or its customs, beliefs, and ways of doing things, helps to distinguish one _____ from another.
 - location
 - whereabouts
 - climate
 - place
- Interactions between people and the natural features around them help to develop the concept of _____ within a place.
 - dependency
 - characteristics
 - relationship
 - friendship
- _____ is how people express their thoughts, intentions, and values.
 - typing
 - language
 - literature
 - shouting
- _____ is a system of attitudes and beliefs and often includes organized forms of worship.
 - religion
 - language
 - ancestry
 - culture
- Ethnicity describes where you come from; _____ describes your biological heritage.
 - geography
 - relationship
 - location
 - race
- _____ occurs when a dominant culture has contact with, and influence over, another culture.
 - assimilation
 - acculturation
 - preservation
 - disappearance

MapMaster Skills: The Five Themes of Geography

The five themes of geography are location, regions, movement, place, and human-environment interaction. These five themes are tools that can help you organize information. You can use the five themes to gain additional insight about the people and places you are studying.

Directions: Read the sentences below and decide which of the five themes of geography can be applied to each sentence. Then, write your answer in the blank space next to each sentence.



- _____ 1. Pleasant City is at 40°N and 100°W, about 400 miles west of the Mississippi River.
- _____ 2. People who live outside Pleasant City take Highway 1 to work in the factory.
- _____ 3. City Hall is located within the boundaries of Pleasant City.
- _____ 4. The residents of Pleasant City built a dam to protect the city from flooding. The dam also created a water recreation area.
- _____ 5. Pleasant City is known for the plants and animals that live along the river.

Geography Skills

Pages M2 – M3

Explain how the movements of the Earth cause night and day, as well as the seasons

Earth revolves around the _____ in a nearly circular path called an _____

_____ - one complete orbit around the sun
takes _____ days or one _____

As earth orbits the sun, it also spins on its _____ - this movement is called

_____ - an invisible line through the center of the Earth from the North Pole to
the South Pole.

Earth takes about _____ to make one full rotation on its axis.

As earth rotates, it is _____ on the side facing the sun.

As earth rotates, it is _____ on the side away from the sun.

Earth's axis is tilted at an _____

Because of this tilt, _____ strikes different parts of Earth at different times
in the year, creating _____

The seasons in the Northern Hemisphere and Southern Hemisphere are _____

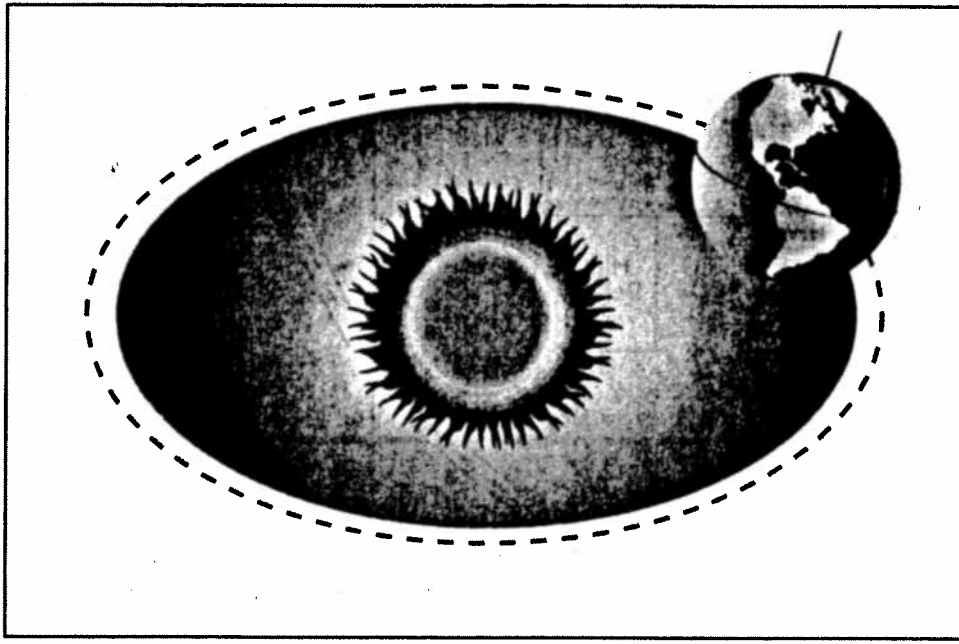
Seasons:

1. _____ - begins on June 21 or 22; sun is directly overhead the
Tropic of Cancer; the Northern Hemisphere receives the greatest number of
sunlight hours
2. _____ - begins on September 22 or 23; sun is directly overhead
the Equator; the hemispheres receive almost _____ hours of sunlight
and darkness
3. _____ - begins around December 21; sun is directly overhead at
the Tropic of Capricorn; Northern Hemisphere is tilted away from the sun
4. _____ - begins on March 20 or 21; the sun is directly overhead
at the Equator; the hemispheres receive almost equal hours of sunlight and
darkness

MapMaster Skills: Understanding Movements of the Earth

Earth, the planet where we live, is constantly moving. Earth spins on its axis (the invisible line that runs through the center of Earth) at the same time it orbits the sun. Earth is also tilted at an angle. As Earth moves around the sun, the parts of Earth that are tilted toward the sun experience more warmth. For example, summer in the Southern Hemisphere occurs when that half of Earth is tilted toward the sun. We experience day, night, and the changing seasons depending on where we live on Earth and where Earth is in relationship to the sun.

Directions: Study the diagram below. Then, answer the questions that follow.



1. Which season is the Northern Hemisphere experiencing? _____
2. What season is it in the Southern Hemisphere? _____
3. Place an X on the dotted orbit line to show the position of Earth when it is summer in the United States.
4. What would happen to the seasons if Earth were not tilted on its axis?

MapMaster Skills: Understanding Hemispheres

The word *hemisphere* means half of a sphere. The earth can be divided into hemispheres in two different ways. When it is divided along the Equator, the two hemispheres are the Northern Hemisphere and the Southern Hemisphere. When it is divided along the Prime Meridian from the North Pole to the South Pole, the two hemispheres are the Western Hemisphere and the Eastern Hemisphere.

Directions: Study the illustrations of the earth's hemispheres below. Then, on a separate sheet of paper, answer the questions that follow.

NORTHERN HEMISPHERE



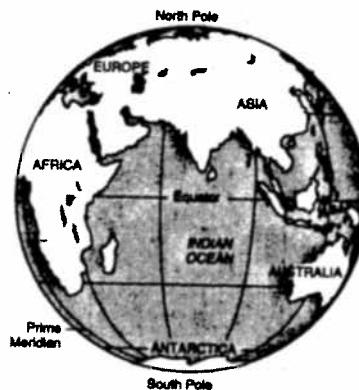
SOUTHERN HEMISPHERE



WESTERN HEMISPHERE



EASTERN HEMISPHERE



1. In which two hemispheres is the United States located?
2. What is the line that divides the Northern Hemisphere from the Southern Hemisphere?
3. In which two hemispheres is Australia located?
4. Which ocean is not found in the Western Hemisphere?
5. Which hemisphere is the only one in which Antarctica is not found?

Geography Skills

Pages M4-M5

Understand how a globe is marked with a grid to measure features on Earth

Learn how to use longitude and latitude to locate a place

_____ - a scale model of the Earth

It shows the actual _____, _____, and _____ of all Earth's landmasses and bodies of water

Features on the surface of Earth are drawn to _____ on a globe

This means that a _____ unit of measure on the globe stands for a _____ unit of measure on Earth

_____ - imaginary horizontal lines that divide the globe; these lines **lay** down; they are parallel – they never touch

latitude lines measure distance north and south of the _____

Parallels of latitude are measured in _____

_____ - the 0° latitude line; divides Earth into Northern & Southern hemispheres

One degree of latitude represents a distance of about _____

_____ - imaginary vertical lines that divide the globe

meridians of longitude are measured in _____

_____ - the 0° longitude line; divides the Earth into Eastern & Western hemispheres

meridians of longitude measure the distance _____ of the Prime Meridian

The Prime Meridian runs from pole to pole through _____

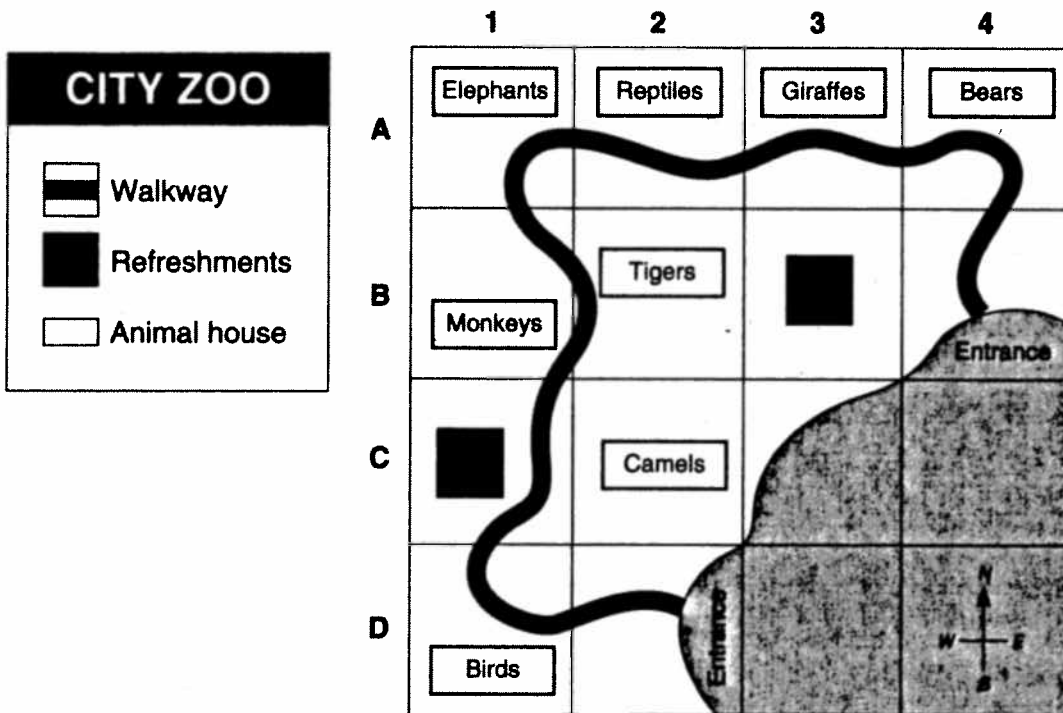
All meridians of longitude come together at the _____

_____ - the pattern of parallels of latitude and meridians of longitude

MapMaster Skills: Understanding Grids

Maps often have grids drawn on them to help you find the exact location of a place. A grid is a system of horizontal and vertical lines that cross each other to form squares. The squares are labeled with numbers from left to right and with letters from top to bottom. That way, each square has its own number/letter combination. A grid map of a city zoo appears below.

Directions: Study the map and the grid below. Then, answer the questions that follow.



- In what square are the bears located?

- What animals are located in A3?

- In what two squares are the zoo entrances?

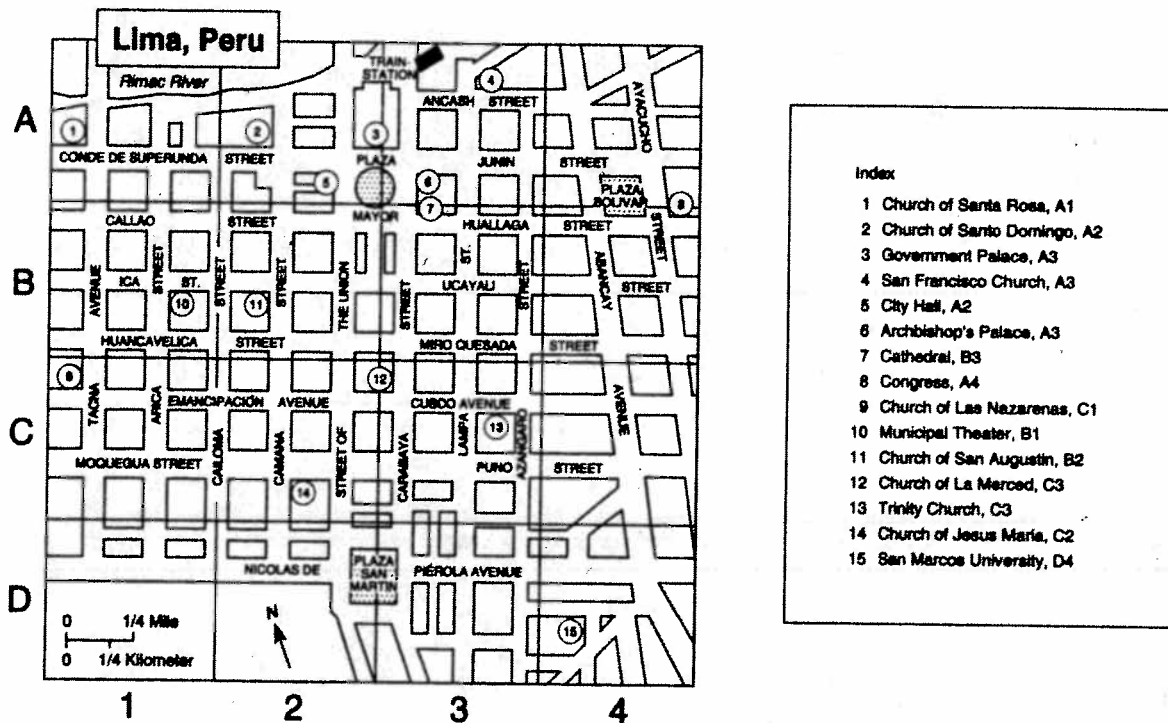
- If you were to follow the walkway from the west entrance to the elephant house, what squares would you pass through?

- What squares would you pass through if you came in at the north entrance and followed the walkway to the elephant house?

MapMaster Skills: Using a Grid

Map grids are very useful for locating places on a street map or a road map. Imagine that you arrive in a city you've never visited before and that you need to locate a particular street. You don't want to read all of the street names on the map to find the one you need. Instead, you use the map index. The map index will give the number and the letter of the square in which the street you want is located. Once you find the correct square, you will find the street in that square.

Directions: Study the street map of Lima, Peru, and the index to some of its main buildings. Then, answer the questions that follow.



- At the intersection of which two streets is the Church of Santa Rosa?

- What is the grid location of San Marcos University? _____
- If you were walking from the Church of La Merced to Trinity Church, what avenue would you walk along? _____
- What street would you take to get from the Church of San Augustin to the Church of Jesus Maria? _____
- If you were telling someone the location of the building where Congress meets, what two streets would you name?

MapMaster Skills: Understanding Latitude and Longitude

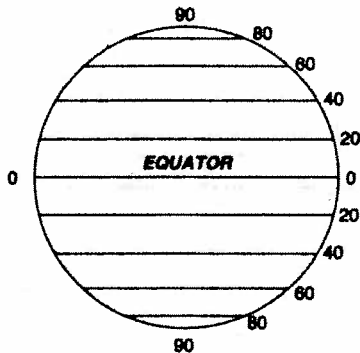
Lines of latitude and longitude work somewhat like a map grid, but on a global scale. These two sets of imaginary lines circle the globe. Lines of latitude run east and west; lines of longitude run north and south. Together, they form a grid. Locations on these lines are stated in degrees. Each degree is divided into 60 minutes.

Lines of latitude are also called parallels because they are parallel to each other. The Equator is located at 0° latitude. All the other lines of latitude are said to be so many degrees north or south of the Equator.

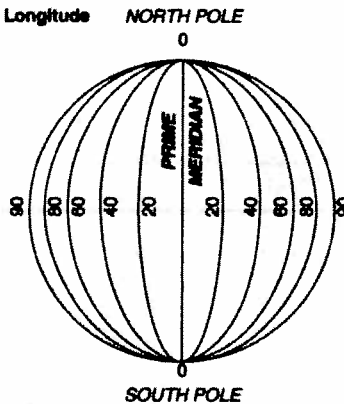
Lines of longitude are also called meridians. All lines of longitude pass through the North Pole and the South Pole. The line for 0° longitude passes through Greenwich, England. It is called the Prime Meridian. All other lines of longitude are measured in degrees east or west of the Prime Meridian. East and west meridians meet at 180° in the Pacific Ocean.

Directions: Study the illustrations of latitude and longitude below. Then, answer the questions that follow.

Lines of Latitude



Lines of Longitude



1. What are two names for the lines that run north to south?

2. What are two names for the lines that run east to west?

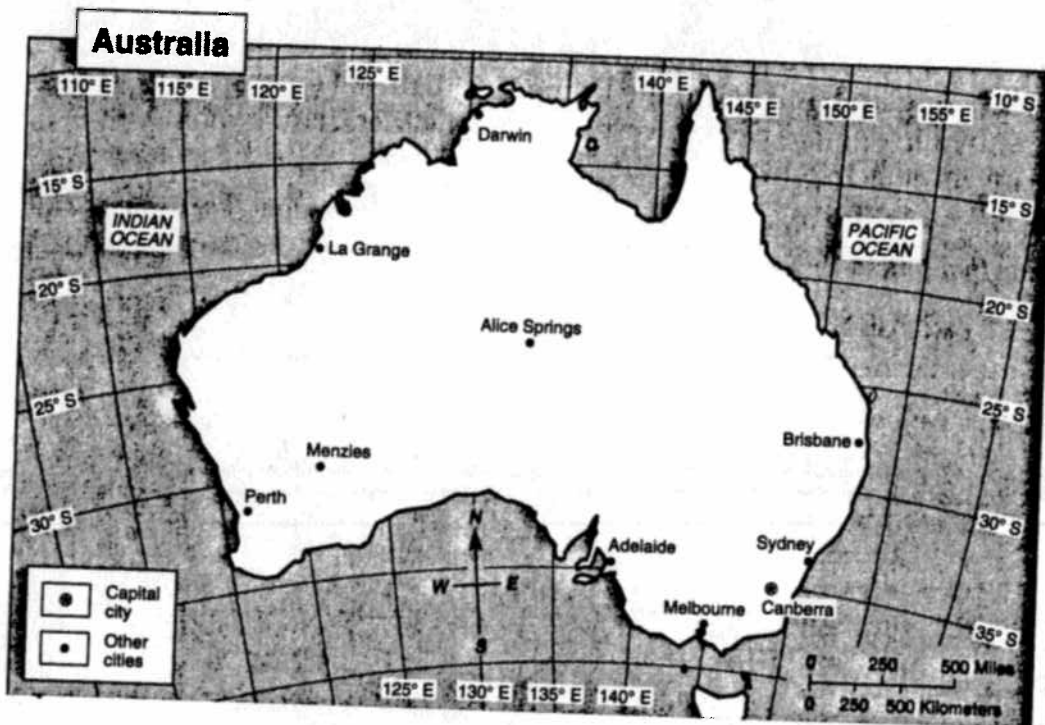
3. What would be the line of latitude for a place that is halfway between the Equator and the North Pole?

4. What would be the line of longitude for a place that is west of the Prime Meridian, halfway between the Prime Meridian and the 180° line of longitude?

MapMaster Skills: Using Latitude and Longitude

Every place on earth has two points, or coordinates, that mark its location. These coordinates are measured in degrees of latitude and degrees of longitude. Imagine that you want to find out where Beijing, China, is. You start with the index section of an atlas. This index gives you not only the page number of the map of China, but also the coordinates for Beijing: 40°N, 116°E. So you know that when you turn to the map of China, you will look for the line of latitude marked 40°N. Then, you will look in the area between 110°E and 120°E and you will find Beijing.

Directions: The map of Australia below shows lines of latitude and lines of longitude, each labeled in degrees. Give the approximate locations of the cities listed below the map.



	Latitude	Longitude
1. Canberra		
2. Melbourne		
3. Darwin		
4. Perth		
5. Brisbane		

Finding Places on Maps and Globes

WHAT DO YOU KNOW ABOUT FINDING PLACES ON MAPS AND GLOBES

Answer the following questions. When all questions have been answered, check the Answer Key to learn if your answers are correct, and WHY they are correct or incorrect.

Answer Yes (Y) or NO (N)

- ___1. A grid system has often been used by city planners.
- ___2. Parallels of latitude run parallel to the Equator
- ___3. Parallels of latitude meet at the North and South Poles.
- ___4. Lines of longitude go north and south from the North Pole to the South Pole.
- ___5. There is no natural dividing line for lines of longitude.
- ___6. Lines of latitude are known as meridians.
- ___7. The Prime Meridian was chosen by scientists in the late 1800s..
- ___8. A specific parallel of latitude and a specific meridian of longitude cross at many points.
- ___9. The lines of longitude are divided into 360 degrees.
- ___10. The parallels of latitude are divided into 180 degrees.

Name _____ Class _____ Date _____



Finding Places on Maps and Globes

Master 4

VOCABULARY MATCHING

Match up the definitions in Column 2 with the terms in Column 1.
There is one extra definition in Column 2.

Column 1

___ 1. vertex

___ 2. distorted

___ 3. longitude

___ 4. hurricane

___ 5. imaginary

___ 6. intersection

___ 7. Prime Meridian

___ 8. parallel

___ 9. grid

___ 10. latitude

Column 2

a. a tropical storm with winds more than 73 miles per hour

b. the polar regions of the earth

c. point in an angle where two sides meet

d. any of the imaginary circles around the earth that show distance from the Equator

e. east-west lines and north-south lines that form equally spaced patterns on maps and globes

f. distance north and south of the equator measured in degrees

g. change of normal appearance

h. distance east and west on the earth's surface measured in degrees

i. point on line where another line crosses it

j. north-south line of longitude marking zero degrees longitudes

k. make-believe; not real

Name _____ Class _____ Date _____



Finding Places on Maps and Globes

Master 5

FACTS

Choose the correct answer.

- ___ 1. The Equator is located:
a. at the Poles b. midway between the North and South Poles
c. in the south polar region
- ___ 2. The Northern Hemisphere is located opposite the:
a. Western Hemisphere b. Eastern Hemisphere c. Southern Hemisphere
- ___ 3. A grid system can be created by making use of:
a. lines of latitude b. lines of longitude
c. lines of latitude and longitude
- ___ 4. Lines of latitude run:
a. north and south b. parallel to the Equator
c. parallel to the Prime Meridian
- ___ 5. A degree of latitude and a degree of longitude:
a. will never meet on a map b. will meet several times on a map
c. will meet only once on a map
- ___ 6. In order to help locate a place on a map we need:
a. several lines of longitude b. lines of latitude and longitude
c. a map key
- ___ 7. The Prime Meridian is the starting meridian for measuring:
a. lines of longitude b. lines of latitude c. lines of latitude and longitude
- ___ 8. A map of the world will show:
a. 90 degrees of latitude b. 180 degrees of latitude c. all maps and globes
- ___ 9. A grid system helps in location places on:
a. road maps b. neighborhood maps c. all maps and globes
- ___ 10. Meridian is another name given:
a. either lines of latitude or longitude b. a line of longitude
c. a line of latitude

Name _____ Class _____ Date _____

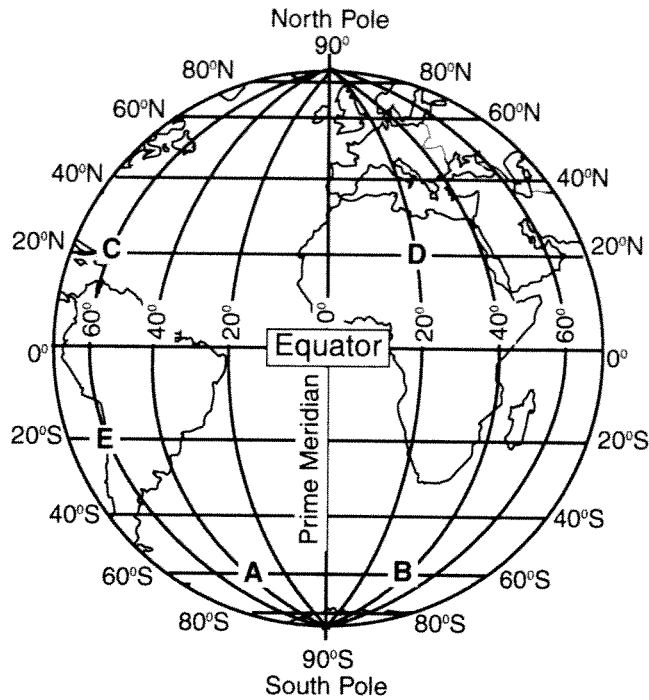


Finding Places on Maps and Globes

Master 8

USING LATITUDE AND LONGITUDE TO FIND LOCATIONS ON A MAP

Study the map on this page and then answer the questions below.



A. If the X on Maps A, B and C on p.14 was put on the map on this page: what would be its longitude location? _____

What would be its latitude location? _____

B. Look at the globe-map above and answer the following:

What letter is located at:

___1. 20° N. latitude, 20° E. longitude

___2. 60° S. latitude, 40° W. longitude

___3. 60° S. latitude, 40° E. longitude

___4. 20° N. latitude, 60° W. longitude

___5. 20° S. latitude, 60° W. longitude

Name _____ Class _____ Date _____

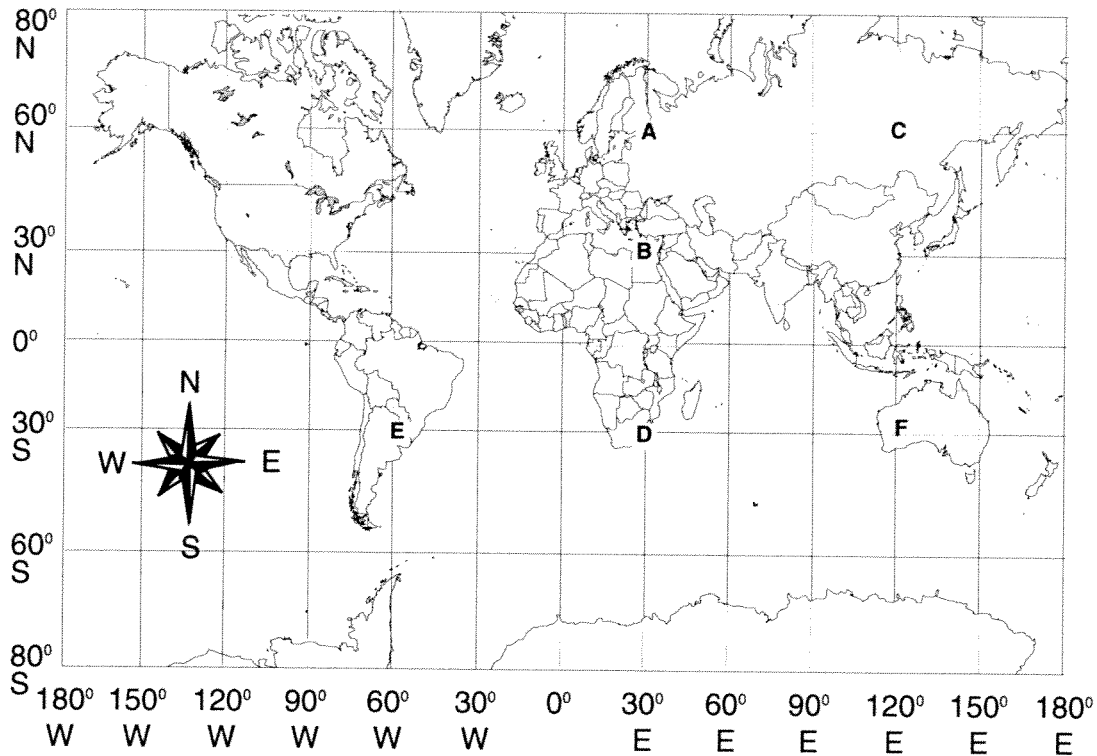


Finding Places on Maps and Globes

Master 9

REVIEW QUESTION

Lines of latitude and longitude form a grid that make it possible to establish the location of places shown on a map. In this grid the lines of latitude and longitude are divided into degrees ($^{\circ}$). The 90° N and S latitudes are not on the map because they are at the North and South Poles and are not shown on a flat map.



To show how well you can read this map, answer these questions.

1. A is on the continent of _____ at ___ latitude and ___ longitude.
2. B is on the continent of _____ at ___ latitude and ___ longitude.
3. C is on the continent of _____ at ___ latitude and ___ longitude.
4. D is on the continent of _____ at ___ latitude and ___ longitude.
5. E is on the continent of _____ at ___ latitude and ___ longitude.
6. F is on the continent of _____ at ___ latitude and ___ longitude.

Name _____ Class _____ Date _____



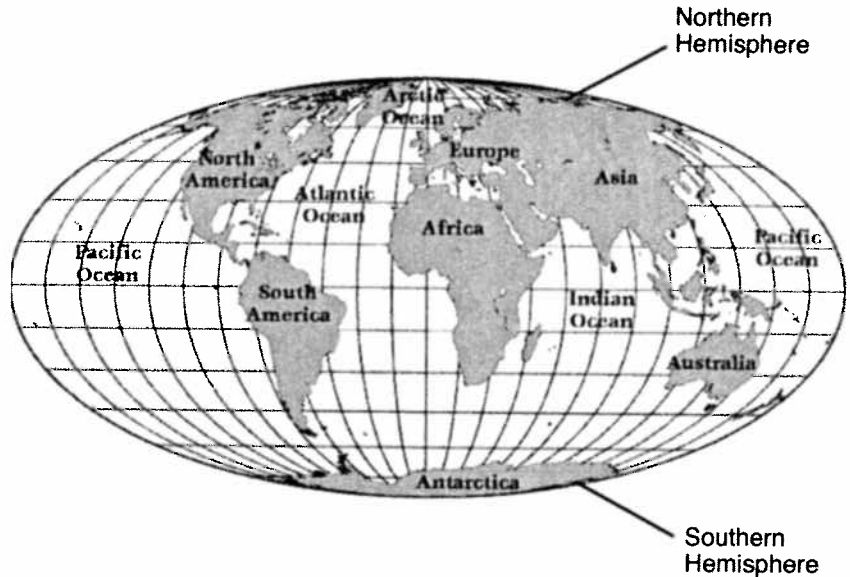
Understanding Maps of Earth

The Surface of Earth

Astronauts in the International Space Station looking down on Earth see it as a beautiful planet covered with land and water. Only about 30% of Earth's surface is land! The remaining 70% of the surface is covered with water.

The land on the surface of Earth is divided into seven major pieces called continents: Asia, Europe, Antarctica, Australia, Africa, North America, and South America.

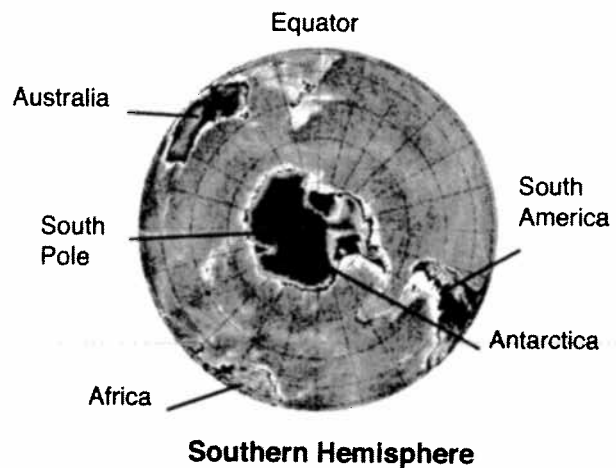
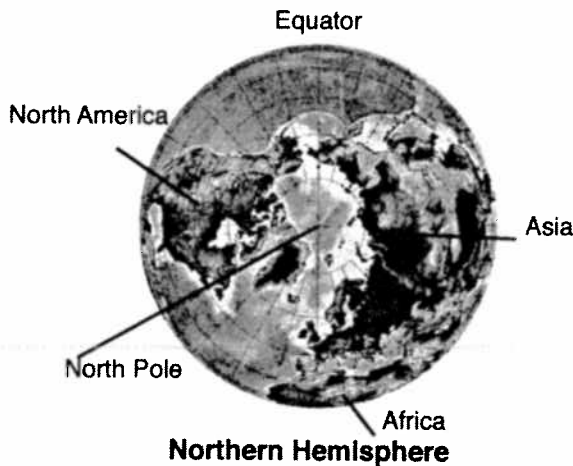
The largest bodies of water are the oceans. The four major oceans, from largest to smallest, are the Pacific Ocean, Atlantic Ocean, Indian Ocean, and Arctic Ocean. There are many bodies of water smaller than oceans called seas.



Hemispheres

Earth is approximately spherical with an average radius of 4000 miles. This spherical Earth can be divided into equal halves called hemispheres. If we separate Earth half way between the North and South poles (at the equator), we get the Northern Hemisphere (centered around the North Pole), and the Southern Hemisphere (centered around the South Pole).

Notice that the Northern Hemisphere is 39% land and 61% ocean, while the Southern Hemisphere is 19% land and 81% ocean.



Latitude and Longitude

Maps and globes usually have lines on them to help locate places on Earth. These lines are called latitude and longitude lines. These lines are not actually on the planet, but are imaginary lines used to help us find our way around the curved surface of Earth. The imaginary lines circling the globe in an east-west direction are called the lines of latitude (or parallels, as they are parallel to the equator). They are used to measure distances north and south of the equator. The lines circling the globe in a north-south direction are called lines of longitude (or meridians). They are used to measure distances east and west. Lines of latitude and longitude crisscross to form a grid. The location of any point on the surface of Earth can be described by two coordinates: its latitude and its longitude.



Latitude

Latitude measures how far north or south a point lies from the equator. The equator is at 0 degrees (0°) latitude, and it divides Earth into its northern and southern hemispheres. It is the starting point for measuring distances in degrees north or south of the equator. Values for latitude range from 0° to 90° North for locations north of the equator, and from 0° to 90° South for locations south of the equator.

Notice on the figure that the lines of latitude run in the east-west direction and are parallel to the equator. Any other location directly east or west of you lies at the same latitude that you do.

ISS EarthKAM

Understanding Maps of Earth

ISS EARTHKAM COORDINATES

ISS EarthKAM measures latitude and longitude using decimal degrees and N, S, E, W notation. For example, 39.2° N and 120.7° W.

Other formats for reporting latitude and longitude that you may see include:

$39^\circ 12' 00''$ and $120^\circ 42' 00''$
(degrees, minutes, and seconds)

39.2° and -120.7° (south and west are negative)

ONE DEGREE OF LATITUDE

One degree of latitude is equal to about 111 kilometers at any place on the globe. If you know that two cities, at the same longitude, are 10 degrees of latitude apart, then you know they lie about 1110 kilometers ($10 \text{ degrees} \times 111 \text{ km/degree}$) from each other.



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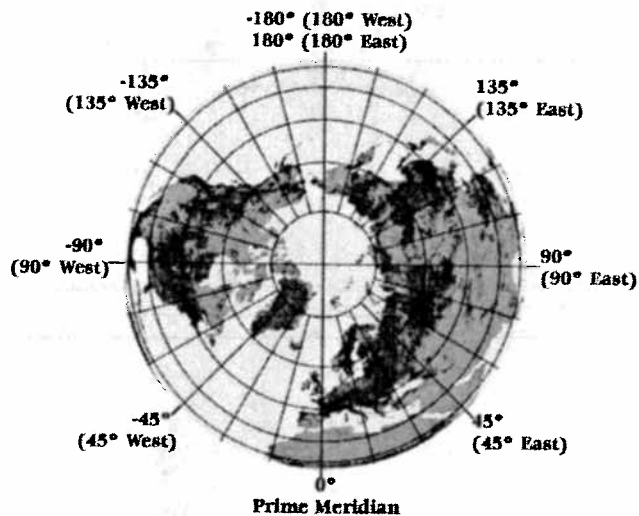
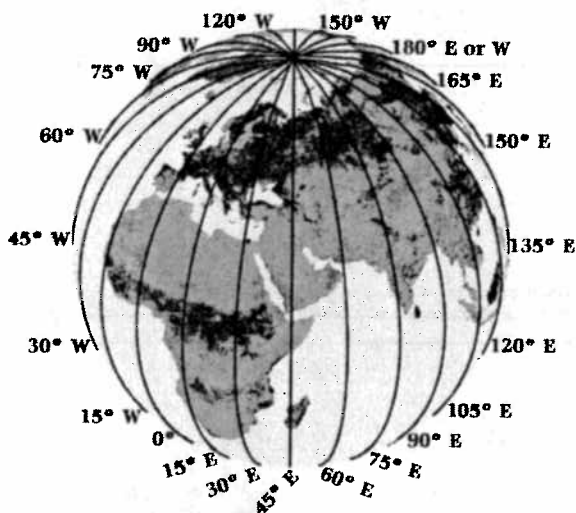
Longitude

The lines circling the globe in a north-south direction are called lines of longitude (or meridians). Greenwich, England (near London) was selected to be zero degrees longitude in 1884 because it was the home of the most advanced observatory at that time. The "Prime Meridian" runs from the North Pole to the South Pole through Greenwich and is the starting point for measuring east and west longitudes. Locations with 0° longitude lie exactly on the Prime Meridian.



ONE DEGREE OF LONGITUDE

As you go further north or south of the equator, the distance between the two lines of longitude becomes smaller, because all longitude lines intersect at the poles. At the equator (0° latitude), 1° of longitude corresponds to approximately 110 kilometers. At 30° N or S, 1° of longitude corresponds to approximately 96.5 km, and at 60° N or S, 1° of longitude corresponds to approximately 56 km.



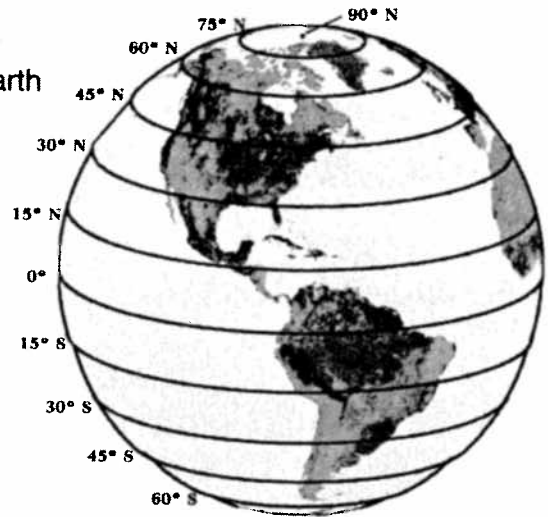
Longitude measures how far east or west a point lies from the Prime Meridian. Values for longitude range from 0° to 180° E for locations east of the Prime Meridian and 0° to 180° W for locations west of the Prime Meridian. 180° E and 180° W are the same longitude line.



Important Facts about Latitude and Longitude

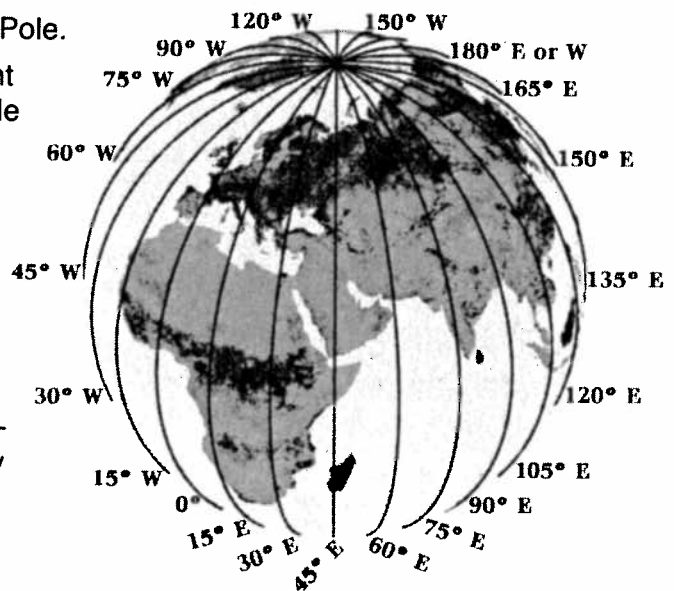
Latitude

- Latitude lines circle the globe in an east-west direction.
- Latitude measures how far north or south a point on Earth lies from the equator. (Latitude lines are also called parallels, as they are parallel to the equator.)
- The equator is at 0° latitude and separates Earth into Northern and Southern hemispheres.
- Locations north of the equator have latitudes between 0° (the equator) and 90° N (the North Pole).
- Locations south of the equator have latitudes between 0° (the equator) and 90° S (the South Pole).



Longitude

- Longitude lines run from the North to the South Pole.
- Longitude measures how far east or west a point on Earth lies from the Prime Meridian. (Longitude lines are also called meridians.)
- The Prime Meridian, the line of longitude which passes through Greenwich, England, is the 0° longitude line.
- Longitude values to the east of the Prime Meridian can be specified by either 0° to 180° E or by positive values 0 to $+180^\circ$
- Longitude values to the west of the Prime Meridian can be specified by either 0° to 180° W or by negative values 0 to -180° .



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Latitude and Longitude

Name: _____

Find and label the approximate locations of the following cities on the accompanying map. Then, answer the questions below.

	<u>LATITUDE</u>	<u>LONGITUDE</u>
1. LONDON, England	51.30 NORTH	0.07 WEST
2. SAN FRANCISCO, USA	37.45 NORTH	122.26 WEST
3. WARSAW, Poland	52.15 NORTH	21.05 EAST
4. MELBOURNE, Australia	37.52 SOUTH	145.08 EAST
5. CAIRO, Egypt	30.00 NORTH	31.17 EAST
6. SHANGHAI, China	31.14 NORTH	121.27 EAST
7. BUENOS AIRES, Argentina	34.20 SOUTH	58.30 WEST
8. BOMBAY, India	18.58 NORTH	72.50 EAST
9. MOSCOW, Soviet Union	55.45 NORTH	37.37 EAST
10. MONTRÉAL, Canada	45.30 NORTH	73.35 WEST

11. What is the longitudinal degree for the Prime Meridian? _____

12. What is the latitudinal degree for the Equator? _____

13. Which cities are in the Southern Hemisphere? _____

14. Which cities are in the Northern Hemisphere? _____

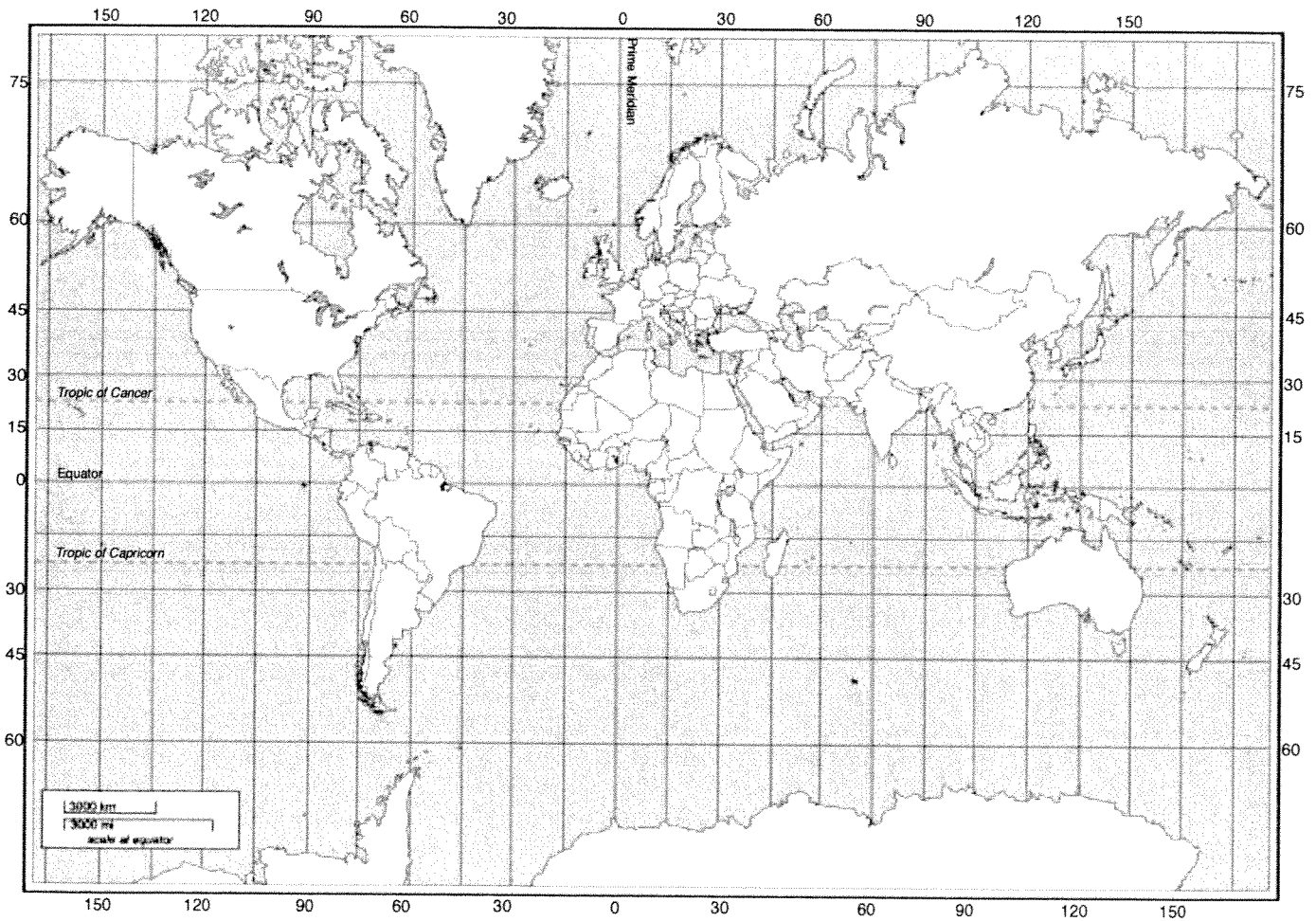
15. What is the city west of Montréal? _____

16. What eastern city is closest to Bombay? _____

17. What are the approximate latitudinal and longitudinal coordinates for your town or city? _____

Latitude and Longitude

Name: _____



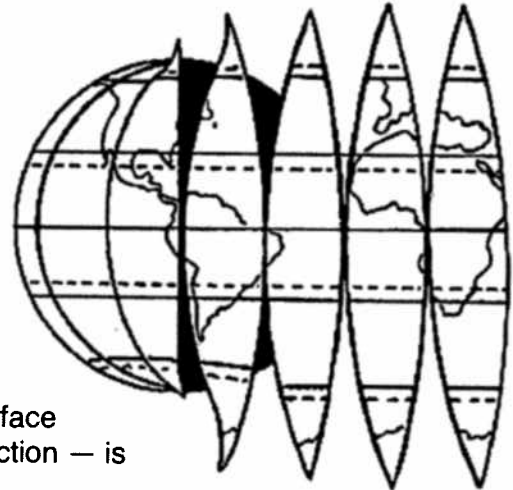
Globes

The best representation of Earth is a globe. Globes do not distort the geometry of Earth (except, of course, its size!). Since globes are hard to carry around and you can't see the entire surface of Earth all at once, map makers produce flat maps of Earth. This is not an easy thing since the surface of Earth is curved.

ISS EarthKAM
Understanding Maps of Earth

Flat Maps of Earth

One way to get a flat map of the curved Earth is to cut the outer layer of the globe from top to bottom in equal sections. These long sections (called gores) are pointed on both ends.

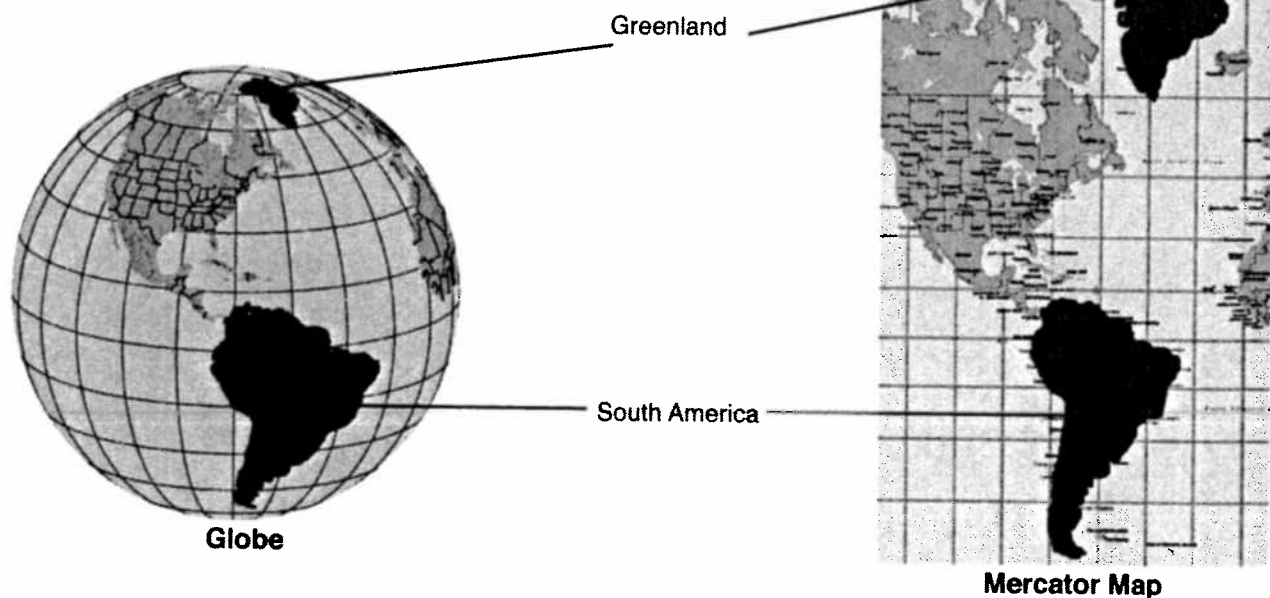


Mercator Maps

There are numerous mathematical methods — called projections — used to transfer information about Earth's curved surface to a flat, rectangular map. One method — the Mercator projection — is the type used for the ISS EarthKAM Slider Map.

Mercator maps give true directions, but they exaggerate the size of the land that lies far from the Equator.

Compare the two figures: the globe and the Mercator map. They show the same regions of Earth, but the details of the regions look different. Greenland is much smaller than South America on the globe, but appears to be longer than South America on the Mercator projection map. Also notice how the longitude and latitude lines are curved on the globe but straight on the Mercator projection map.



Map and Globe Uses

Master 1

WHAT DO YOU KNOW ABOUT FINDING PLACES ON MAPS AND GLOBES?

Answer the following questions. When all questions have been answered, check the Answer Key to learn if your answers are correct, and WHY they are correct or incorrect.

Answer Yes (Y) or NO (N)

- ___ 1. Flat maps are more accurate than globes
- ___ 2. Flat maps are especially useful in showing local areas.
- ___ 3. Scale is always the same on all maps.
- ___ 4. A compass rose is more important on flat maps than on globes.
- ___ 5. Physical relief maps show the landforms on earth.
- ___ 6. Political maps undergo many changes over a period of years.
- ___ 7. Weather maps can be used to describe the weather pattern likely to develop in a future period.
- ___ 8. Population density maps show, in any given area, the numbers of people and how closely they live near one another.
- ___ 9. Scale can only be shown in miles.
- ___ 10. Symbols appear on a map in the map "Key" or "Legend."

Name _____ Class _____ Date _____



Map and Globe Uses

Master 4

VOCABULARY MATCHING

Match up the definitions in Column 2 with the terms in Column 1.
There is one extra definition in Column 2.

Column 1

- ___ 1. key
- ___ 2. precipitation
- ___ 3. climate
- ___ 4. population density
- ___ 5. lowlands
- ___ 6. vegetation
- ___ 7. symbols
- ___ 8. scale
- ___ 9. temperature
- ___ 10. resources

Column 2

- a. lands up to 500 feet above sea level
- b. the kind of weather a place has over a long period of time
- c. areas far from the Equator
- d. contains an explanation of symbols on a map
- e. how close or far from each other people live
- f. rain, snow, sleet, or hail that falls in an area
- g. plant life in an area
- h. actual and possible wealth of a country or area
- I. used to determine what the actual distance is in terms of one inch on a map or globe
- j. special marks on maps that stand for real things
- k. degree of heat or cold in an area

Name _____ Class _____ Date _____



Map and Globe Uses

Master 5

FACTS

Choose the correct answer.

- _____ 1. Scale on maps is used to show
a. land and water areas b. distance c. natural resources
- _____ 2. The key on map explains the
a. names of places on the map b. shape of the map
c. meaning of symbols on the map
- _____ 3. Maps that show landforms on an area are called
a. relief maps b. political maps c. flat maps
- _____ 4. The boundaries of nations or states are shown on
a. climate maps b. political maps c. all maps
- _____ 5. Road maps do not show
a. highways between cities b. weather conditions c. cities and villages
- _____ 6. Weather maps can show
a. wind direction and air pressure b. temperature and precipitation
c. both a. and b.
- _____ 7. Vegetation maps are related to
a. population density maps b. weather maps c. climate maps
- _____ 8. High-density population is mostly found in
a. city areas b. farming areas c. non-productive areas
- _____ 9. A product map will show
a. resources of a country b. the size of a country
c. the population of a country
- _____ 10. Highlands and lowlands are shown on
a. weather maps b. political maps c. physical relief maps

Name _____ Class _____ Date _____



Map and Globe Uses

Master 6

IDENTIFYING MAPS

Write in the letter of the map below that matches the following:

The letter ___ matches the products map.

The letter ___ matches the land use map.

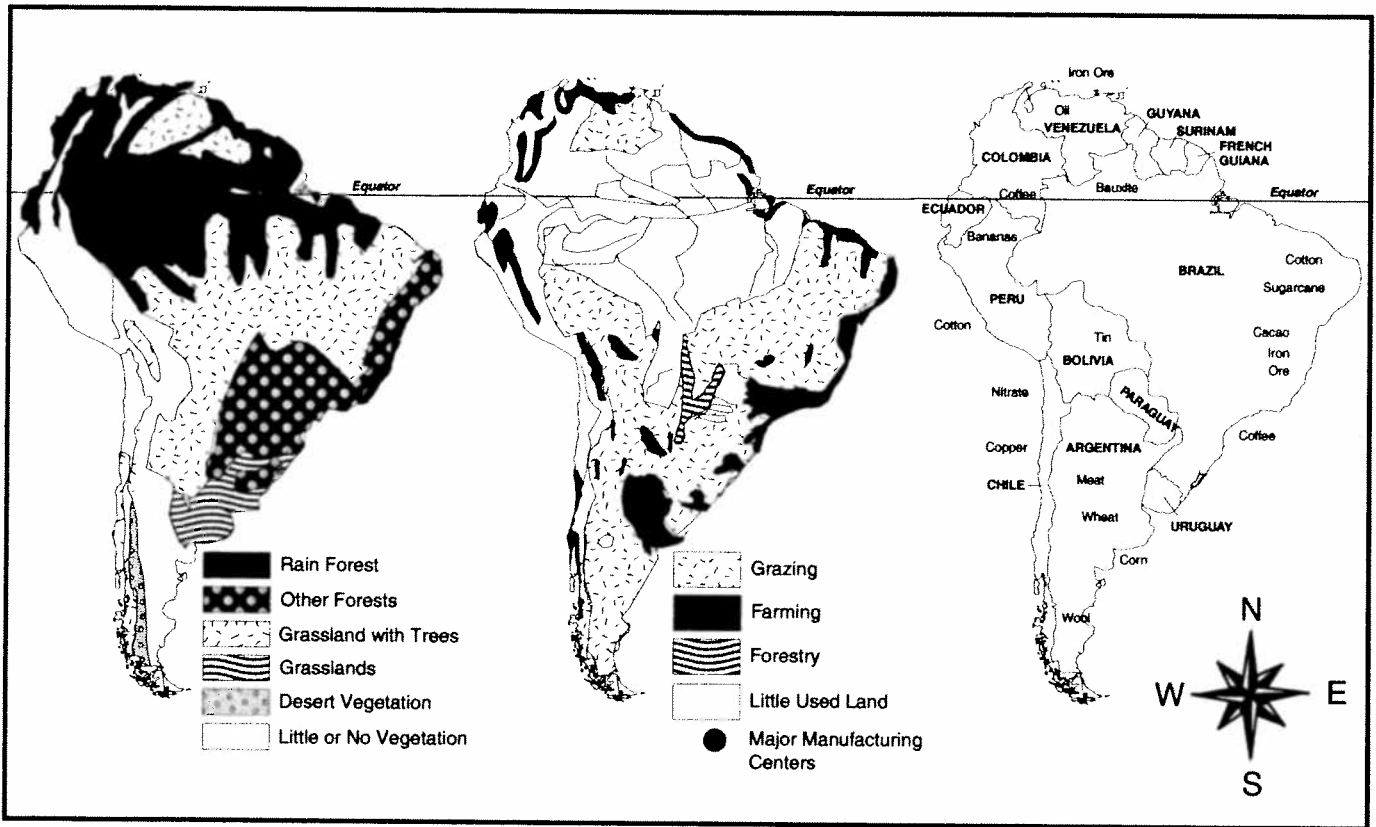
The letter ___ matches the vegetation map.

SOUTH AMERICA

A

B

C



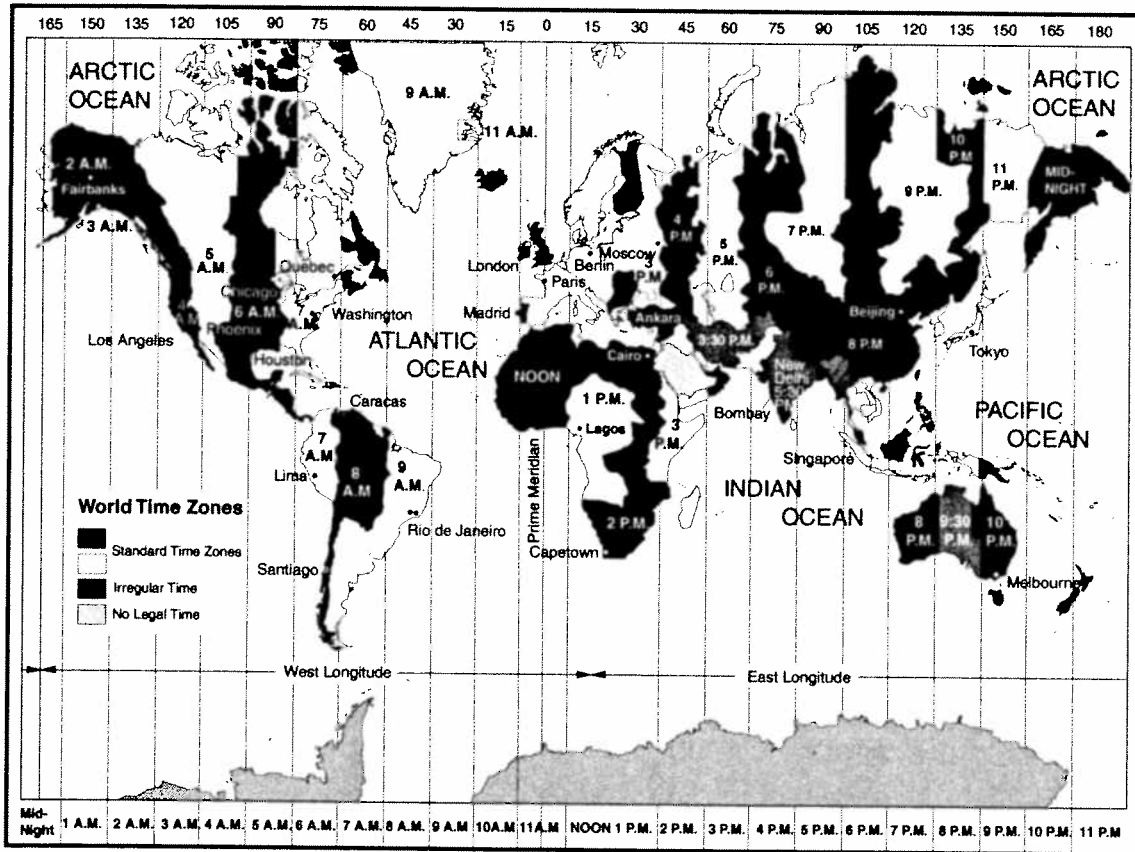
Name _____ Class _____ Date _____



Master 7 **Map and Globe Uses**

IDENTIFYING MAPS AND GLOBES

Look at the Time Zone map and answer the questions below it.



1. When it is 4 A.M. in Los Angeles, what time is it in
 Washington, D.C.? _____
 Paris, France? _____
 Capetown, South Africa? _____
 Beijing, China? _____

2. How many time zones are there in the mainland area of the United States?

3. In at least two sentences tell why a time zone map might be useful to
 some one living in Chicago. _____

Name _____ Class _____ Date _____

Map and Globe Uses

Master 8

CONCLUSIONS

Political maps can tell a story of great changes. Below are maps of African 1914 and 1998. What do these maps tell us about the changes that have taken place in Africa to date? Name ONE general change and three specific changes.

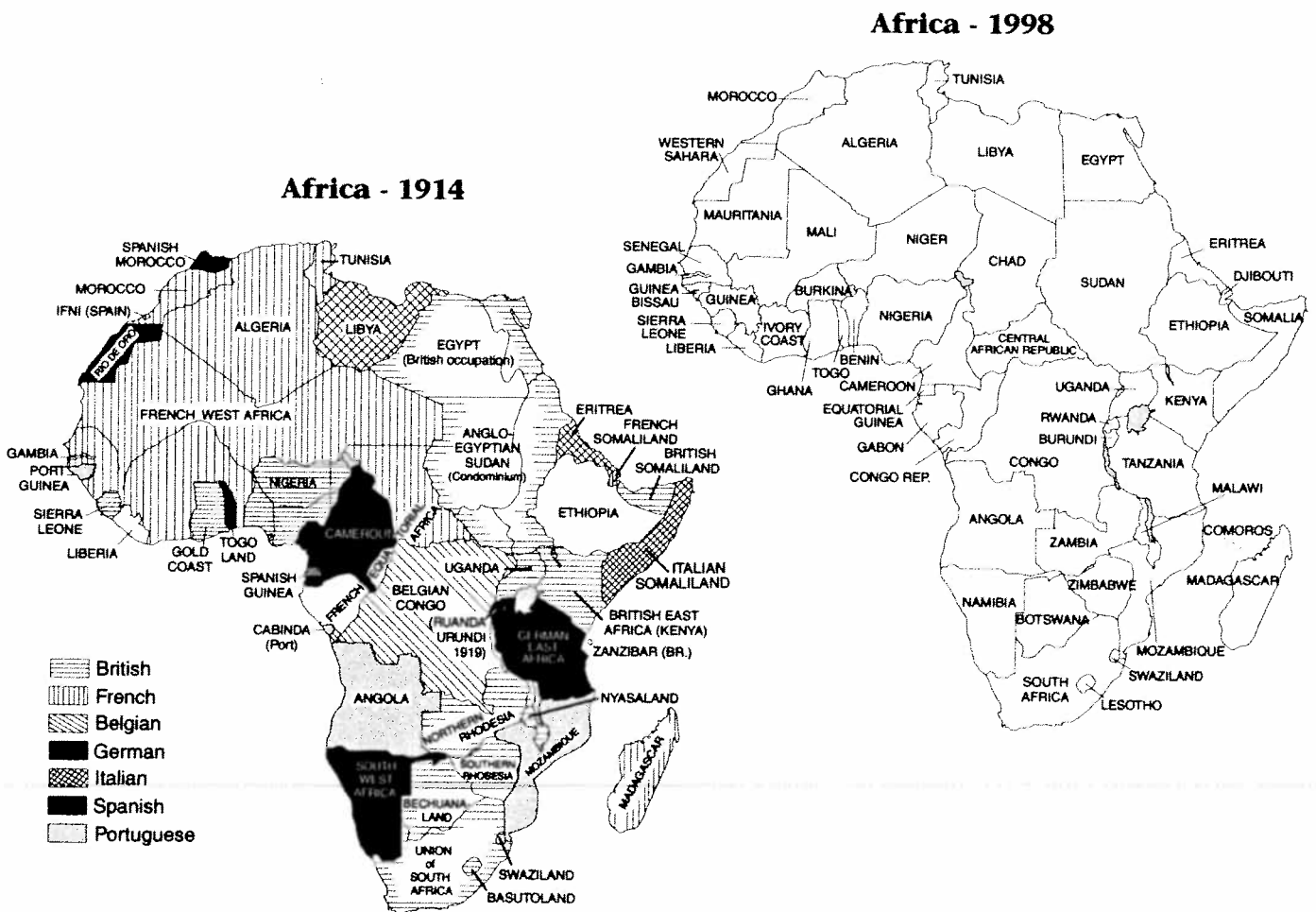
1. General change in Africa _____

2. Three specific changes:

a. _____

b. _____

c. _____



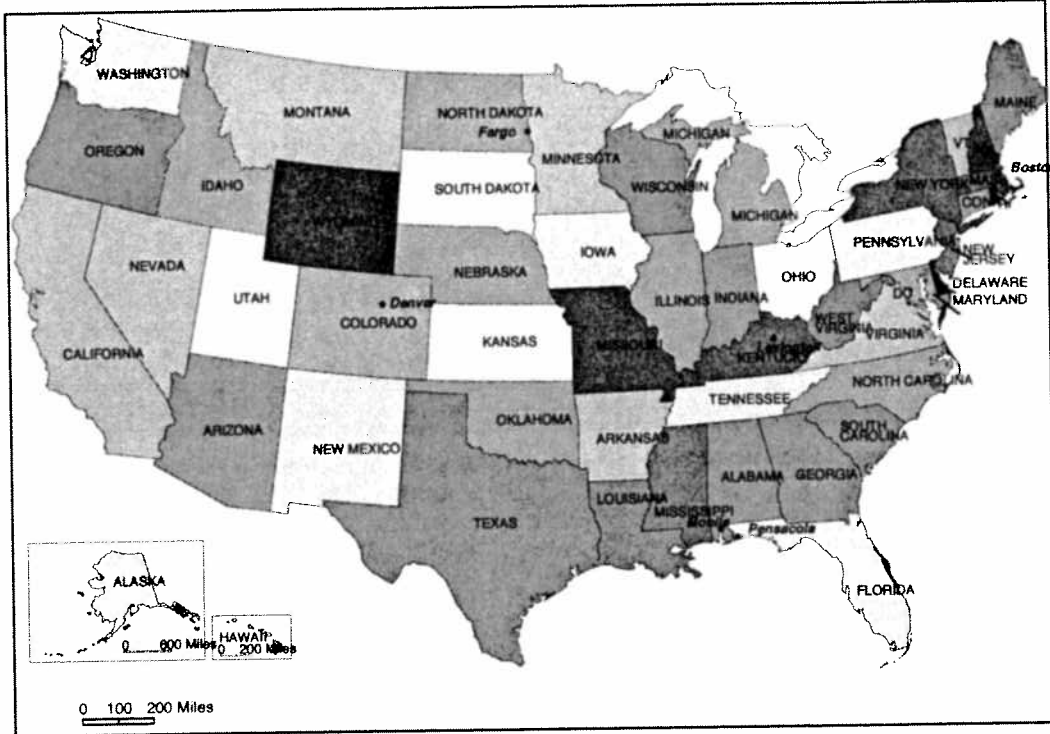
Name _____ Class _____ Date _____



Using Scale

Name: _____

Below is a map of the United States. Six cities are highlighted. Using the scale at the bottom of the map, answer the questions below. For some questions, you will need to measure the scale with a ruler and then use the ruler to measure the distance between the cities. Write the distance in miles.



1. What type of scale is shown on this map? _____
2. Is this a large-scale or small-scale map? Why? _____

3. What is the distance between Fargo, North Dakota, and Mobile, Alabama? _____
4. What is the distance between Denver, Colorado, and Boston, Massachusetts? _____
5. What is the distance between Lexington, Kentucky, and Pensacola, Florida? _____
6. Why are there different scales for Alaska and Hawaii? _____

BONUS QUESTION: Using another map, locate where your city or town is in your state. Label it on the map above and measure its distance from the nearest city. _____

Geography Skills

Pages M6-M7

Compare maps of different projections
Describe distortions in map projections

Maps are drawings that show regions on _____,
but they cannot show the correct _____ and _____ of every feature
on Earth's surface. This is because the surface of the earth is _____.

Maps must _____ some places and _____ others.
This is called _____

To make up for the distortion on maps, mapmakers used different map _____

No one projection can accurately show the correct _____, _____,
_____, and _____ for all of Earth's surface.

Mapmakers use the projection that has the _____ for the area they
are presenting.

Types of Map Projections

1. _____
show correct size of landmasses
distort shapes – greater at the edges of the map and less at the center
2. _____
accurately show the shapes of landmasses
often greatly distort the size of landmasses as well as distance between them
Most common one is the _____
accurately shows shape and direction, but distorts distance and size
3. _____
a compromise between the Mercator and equal-area projections
gives a useful overall picture of the world
keeps the size and shape relationships of most continents and oceans
distorts the size of the polar regions
is the least distorted at the equator

Map Projection	Shape	Size	Direction	Distance
Same-Shape				
Mercator				
Equal-Area				
Robinson				

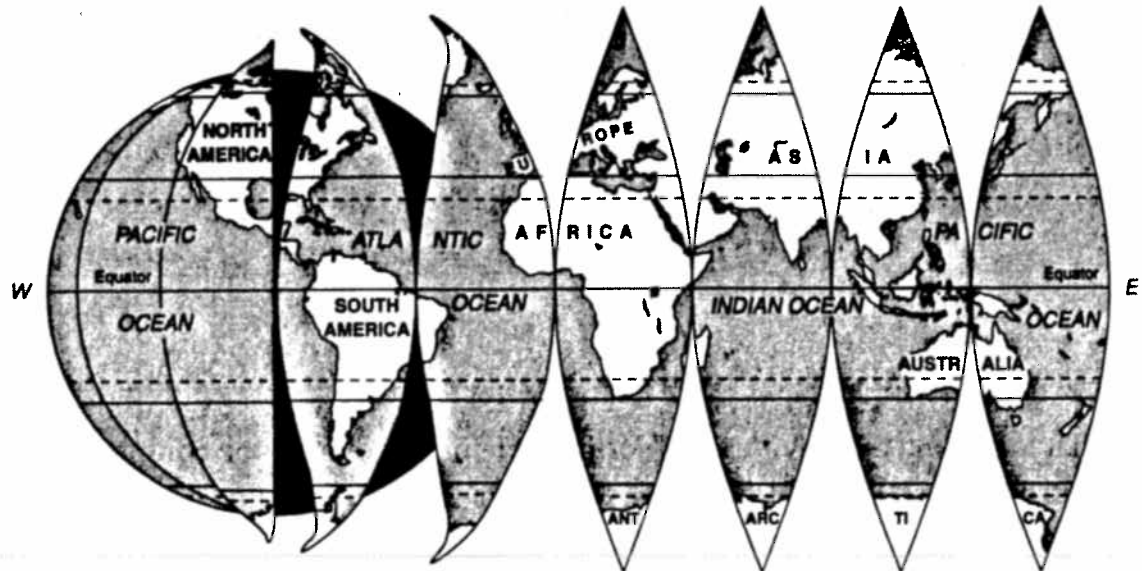
MapMaster Skills: Comparing Globes and Maps

Globes and maps are used frequently in geography. To make the best possible use of maps and globes, you need to understand how they relate to one another and what kind of information each can provide.

Directions: Read the information about globes and maps below. Then, answer the questions that follow. Use a separate piece of paper for your answers.

Globes. A globe is the most accurate way of showing the world's surface. It is a scale model of the earth, showing actual shapes, relative sizes, and locations of landmasses and bodies of water. A globe also provides accurate information about distances and directions between two points. Globes, however, are very small representations of the earth. Even a large globe cannot show much detail. Also, globes are difficult to carry around, and you can look at only one half of a globe at any one time.

Maps. Maps are flat representations of the curved surface of the earth. Because they are flat, they can be shown in a book. They can be folded up and used for planning trips. They can show very large areas or very small areas. They are flexible tools that can provide large amounts of information very efficiently. Maps are not as accurate as globes, however. To create a flat representation of the curved surface of the earth, something has to be distorted. You can understand this by studying the illustration below. The surface of the globe has been "peeled off" and cut along the lines of longitude. The resulting map is not easy to read.



1. What advantage does a globe have over a flat map?
2. What are the main disadvantages of a globe?
3. What advantages do maps have over globes?
4. Why are maps less accurate than globes?
5. What does the illustration on this page tell you?

MapMaster Skills: Understanding Projection

The method used to show the curved surface of the earth as a flat map is called a projection. The three most common kinds of projections are based on different ways of placing a piece of paper around the globe and "pulling" the images off the globe and onto the paper. Other projections are based on mathematical formulas.

Directions: Study the projections described and illustrated below. Then, answer the questions that follow. Use a separate piece of paper for your answers.

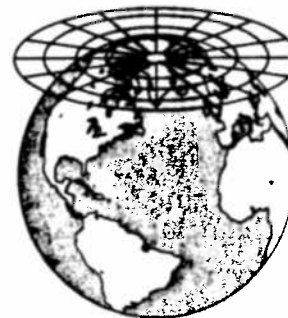
Cylindrical Projection. This projection is made by placing a rectangular piece of paper around the globe so that it touches the Equator. Lines of longitude that meet at the poles on a globe are parallel. The areas near the poles are distorted and look much larger than they really are.

Conic Projection. Here, a cone-shaped piece of paper is placed over the globe. The areas where the paper touches the globe are most accurately represented. Those near the tip of the globe are most distorted.

Flat-Plane Projection. Here a flat piece of paper is placed against the globe. The map is accurate at the point of contact. Distortion increases as you move away from the center. Flat-plane projections are often used to show polar regions.

Other Projections. An example of a map based on a mathematical formula is the Robinson projection, which balances different kinds of distortion to make maps that are easy to read.

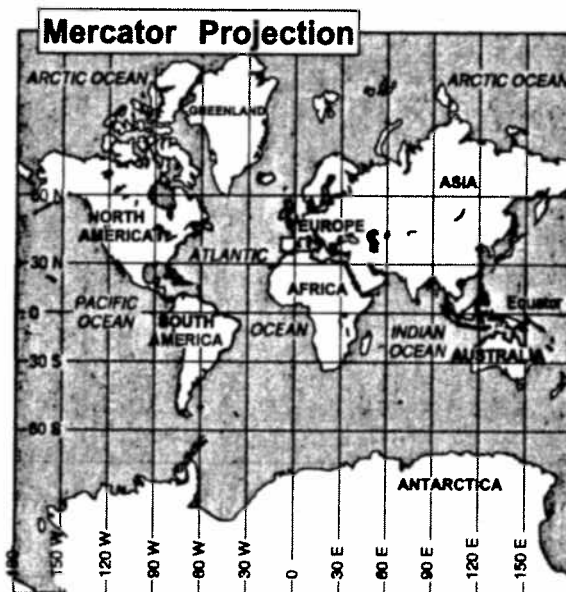
1. What is a map projection?
2. Which areas of the earth are most distorted on a cylindrical projection?
3. Which kind of projection is often used to show polar areas?
4. Which projection, based on mathematical formulas, balances different kinds of distortions?



MapMaster Skills: Maps with Accurate Shapes: Conformal Maps

Directions: Read the information about conformal maps, and study the map below. Then, answer the questions that follow.

Conformal maps are so named because the shapes of the landmasses conform to, or look like, the shapes that appear on the globe. Directions are also correct. However, distances and size are greatly distorted, especially in the polar regions. Lines of latitude and longitude cross at right angles. The lines of longitude that meet at the poles on a globe, however, are parallel on this map. The Mercator projection below is an example of a conformal map.



1. Use a globe to compare the size of Antarctica on this map with the size of that continent on the globe. What do you observe?

2. Look at the comparative sizes of Greenland and Africa on the map and on the globe. What do you observe?

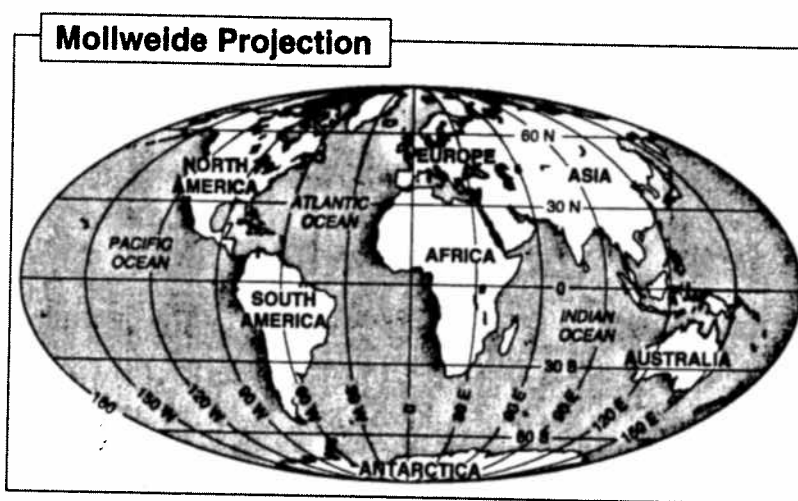
3. Which aspects of this map are correct and which are distorted?

4. Why do you think this projection is often used for making navigational charts?

MapMaster Skills: Maps with Accurate Areas: Equal-Area Maps

Directions: Read the information about equal-area maps, and study the map below. Then, answer the questions that follow.

Equal-area maps show the correct sizes of landmasses in relation to other landmasses. A nation that is twice the size of another nation will appear that way on the map. However, in order to depict correct size, an equal-area map distorts both shape and direction. The Mollweide projection below is an example of an equal-area map.



1. Which aspects of this map are correct and which are distorted?

2. Describe the lines of longitude on this map.

3. Compare the shape of North America on this map with the shape of North America on a globe. What do you observe?

Geography Skills
Pages M8-M9
Identify and use the parts of a map

Maps provide different _____, depending on their _____ or _____

Most maps have several clues in common:

1. _____ - helps you find the actual distances between points shown on the map. Often shows distances in miles and kilometers
2. _____ - shows the symbols and colors used on the map, and what each one means; sometimes called a legend
3. _____ - tells you the subject of the map
4. _____ - shows where on the globe the area of the map is located
5. _____ - shows direction by displaying this symbol with the directions north, south, east, and west

Cardinal directions are _____

Intermediate directions are _____

Maps are drawn to different _____, depending on their _____

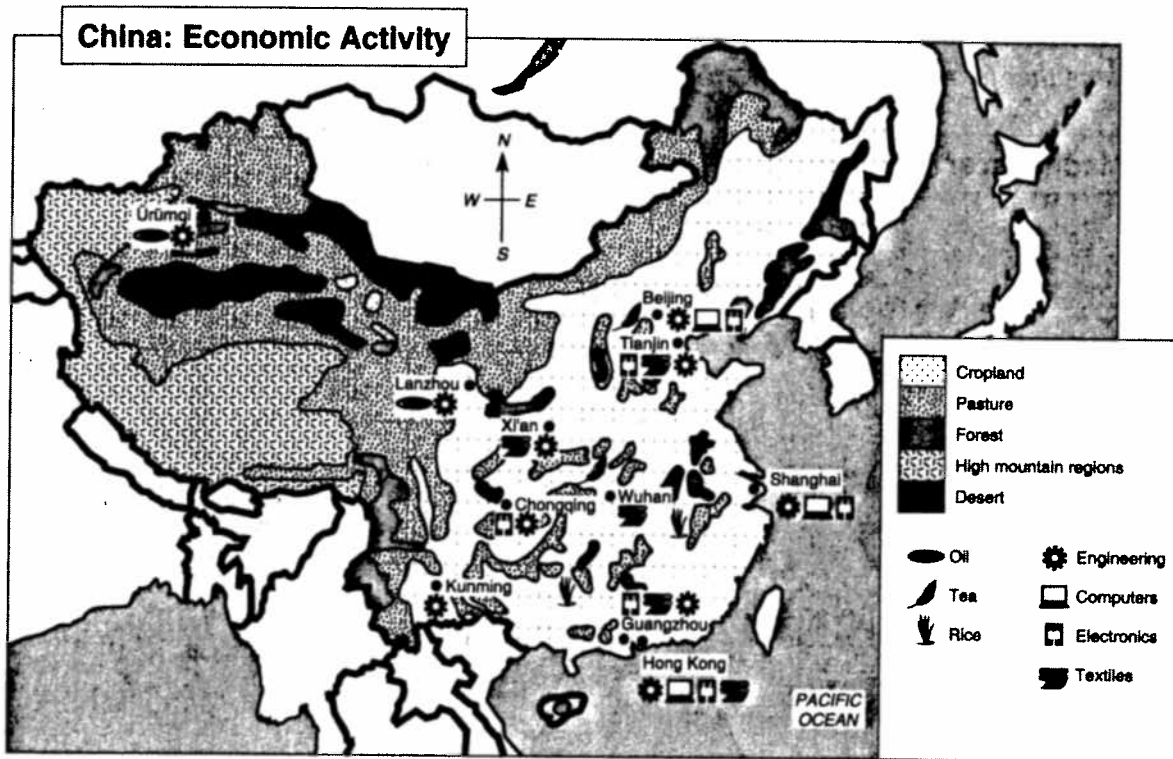
Maps showing LARGE AREAS have _____ scales

Maps showing small areas have _____ scales

MapMaster Skills: Using the Map Key

A map key explains what the symbols, shading, and colors on a map represent. Symbols range from simple dots and circles that represent cities and capitals to tiny drawings that represent types of manufacturing and industry or agriculture. Shading and colors are used to show elevation, population density, political divisions, and so on. The map key for the map of China below uses a combination of shading and drawings to represent economic activity and resources.

Directions: Study the map and the map key. Then, on a separate sheet of paper, answer the questions that follow.



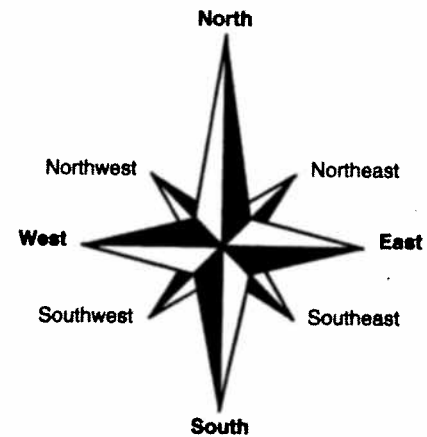
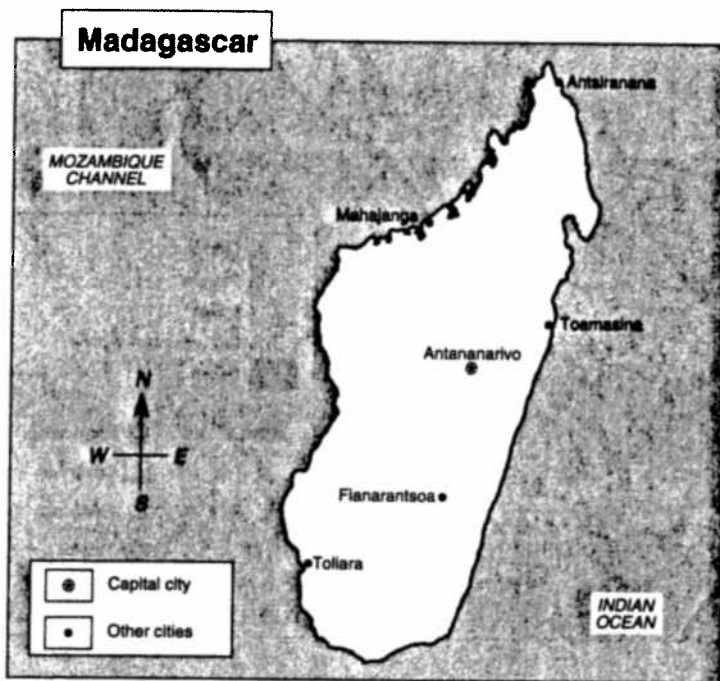
1. How many different types of shading are represented on the map key?
2. What symbol is used to represent oil?
3. Which part of China is least developed economically?
4. Describe the economic activity and resources around Beijing.
5. Based on the map, which city in China has the most varied manufacturing and industry?
6. Why does the map use a combination of shadings and drawings to show economic activity and resources?

MapMaster Skills: Using the Compass Rose

Most maps include a symbol to tell you which direction on the map is north. On some maps the symbol is a single arrow pointing toward the letter N. The N stands for north, and the arrow is pointing toward the North Pole. You can figure out the other directions from that single arrow.

Other maps show the four main directions of the compass—north, east, south, and west. These are called the cardinal directions. However, some maps provide a compass rose that indicates intermediate directions as well as the cardinal directions. Intermediate directions are northeast, southeast, southwest, and northwest.

Directions: Study the compass rose and the map of Madagascar beside it. Then, answer the questions that follow.



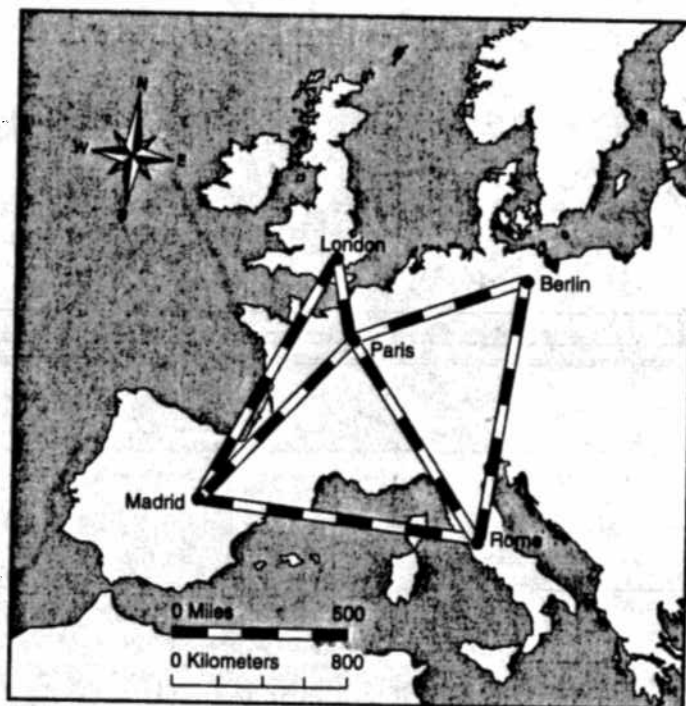
1. What is the direction from Fianarantsoa to Mahajanga? _____
2. In what direction would you travel to go from Toliara to Fianarantsoa?

3. Is the Mozambique Channel east or west of Madagascar? _____
4. On what coast is Antsiranana located? _____
5. If you flew from Antsiranana to Toliara, in what direction would you be traveling? _____
6. Which coast of Madagascar is closest to the capital? _____

MapMaster Skills: Using the Map Scale

In order to figure out distances when using a map, you need to know the scale of the map. The scale on a map tells you the relationship between a distance on a map and the real distance on the earth's surface. You measure a distance on the map. Then you use the scale to convert it to the real distance.

Directions: Study the map and the map scale below. Then, use a ruler along with either a piece of string or the edge of a piece of paper to measure distances and to answer the questions.



1. How many miles is it from London to Madrid?

2. If you were to fly directly from Rome to Paris and then on to Britain, how many miles would you travel?

3. Which city is farther from Paris, Madrid or Berlin?

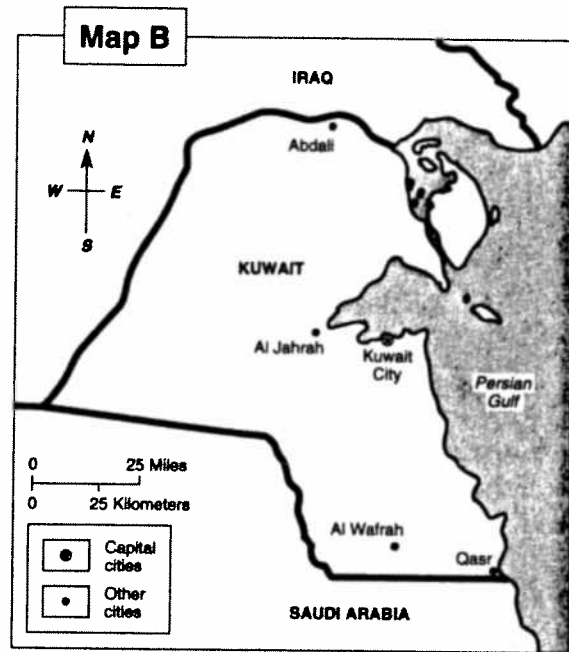
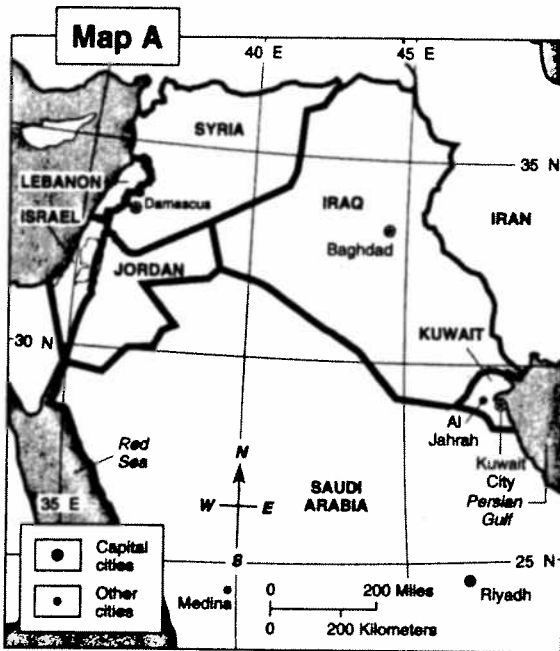
4. If you were to travel from London to Rome via Paris and back again by the same route, how many miles would you travel?

5. How many kilometers would you go if you flew from Madrid to Rome?

MapMaster Skills: Comparing Maps of Different Scale

The scale of a map shows you how a distance on the map relates to the actual distance on the earth's surface. A small-scale map shows a large area; a large-scale map shows a smaller area in greater detail. Map A below is a small-scale map of part of Southwest Asia; Map B is a large-scale map of Kuwait.

Directions: Study the two maps below. Then answer the questions that follow.



1. What does Map A tell you about Kuwait that Map B does not?

2. What does Map B tell you about Kuwait that Map A does not?

3. Which map would you use to describe Kuwait's position in relation to other countries of Southwest Asia?

4. Which map would you use to determine the distance from Kuwait City to Al Wafrah?

Geography Skills

Pages M10-M11

Understand and use political maps

Understand and use physical maps

_____ show political borders: continents, countries, and divisions within countries, such as states or provinces

The colors on political maps do not have _____, but they make the map easier to read

Political maps also include _____ and _____ for capitals, cities, and towns

_____ represent what a region looks like by showing its major physical features, such as hills and plains; often show elevation and relief

_____ - shown by colors, is the height of the land above sea level

_____ - shown by shading, shows how quickly the land rises or falls

Pages M12-13

Understand and use climate maps

Understand and use language maps

Special Purpose Maps

1. _____ - boundary lines do not separate the land into exact divisions; these maps use colors to show the climate of regions
2. _____ - shows the official languages of a region
an official language is the language used by the _____

Other examples of special purpose maps: _____

MapMaster Skills: Reading a Political Map

A political map shows political features such as national or state boundaries, capital cities and other major cities. Some political maps use color to differentiate countries or states. The map of Western Europe below is an example of a political map.

Directions: Study the map and the key below. Then, answer the questions that follow.



1. What does a solid black line on the map signify?

2. Which nations of Western Europe border on the Mediterranean Sea?

3. List the nations that share a border with Belgium.

4. What is the capital of Spain?

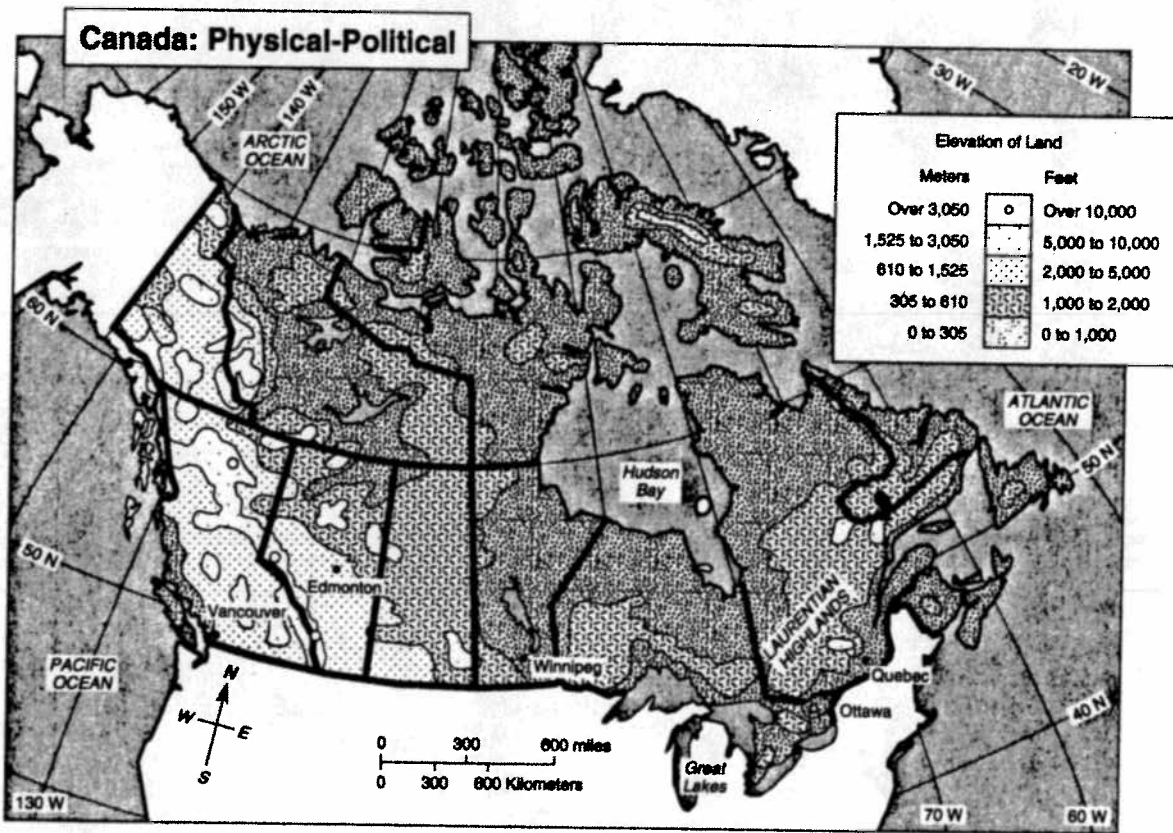
5. What is the capital of Germany?

6. Which western European country lies closest to the North African coast?

MapMaster Skills: Elevation on a Map

Elevation refers to the height of land above sea level. Mountains are the landforms with the highest elevation. Elevation is shown on maps by different colors or different types of shading. On a color map, lower elevations are generally shown in different shades of green, while higher elevations are shown in shades of brown. On the map of Canada below, different elevations are indicated by different types of patterns. The lighter the pattern, the higher the elevation.

Directions: Study the map and the map key below. Then, answer the questions.



1. In which area of Canada are the highest elevations found?

2. What is the elevation of most of the land around Hudson Bay?

3. Which city is at a higher elevation, Quebec or Edmonton?

4. What kinds of landforms would you expect to find in the western part of Canada?

MapMaster Skills: Relief on a Map

A relief map shows the location of major landforms. Some relief maps use shading and symbols to indicate different types of landforms. Others use a technique called shaded relief to show mountain ranges. With shaded relief, the location of mountains can be seen at a glance because the area they cover is shaded as if with a pencil. The relief map of Eastern Russia below uses shaded relief. North-facing slopes appear to be lit up, while south-facing slopes are in shadow.

Directions: Study the map below. Then, answer the questions that follow.



1. Describe the land where the city of Magadan is located.

2. Describe the region near the border of Mongolia and Russia.

3. How does the West Siberian Plain differ from other areas of Eastern Russia?

4. What information does shaded relief provide, and what information is not provided?

MapMaster Skills: Maps of the Ocean Floor

Maps of the ocean floor show that there are mountains and valleys under the oceans as well as on land. Many small islands are actually the tops of underwater mountains. The map below shows the ocean floor of the Atlantic.

Directions: Study the map below. Then, use an atlas to help you answer the questions. Use a separate piece of paper for the answers to the first two questions.

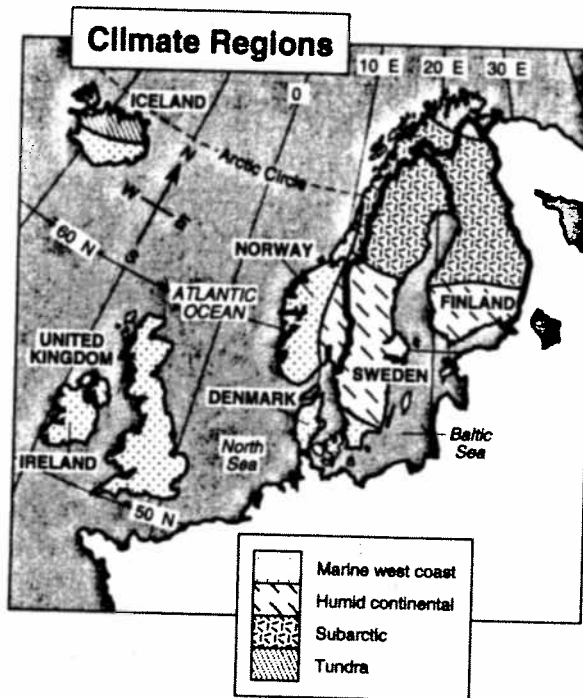


1. What is the name of the mountain range that runs through the Atlantic from north to south?
2. Name three island groups off the northwest coast of Africa that are the tops of mountains.
3. Circle and label the island of Cuba on the map above.
4. Circle and label the Falkland Islands.
5. Circle and label the Galápagos Islands.

MapMaster Skills: Reading a Climate Map

Climate maps divide the world into climate regions. Each type of climate region has specific patterns of temperature, precipitation, and wind. The map below shows the climate regions of the British Isles and the Nordic nations.

Directions: Study the map and the map key below. Then, answer the questions that follow.



1. What is the climate region of the British Isles?

2. What three climate regions are found in Finland?

3. Which climate region is found in the northernmost parts of the area shown on the map?

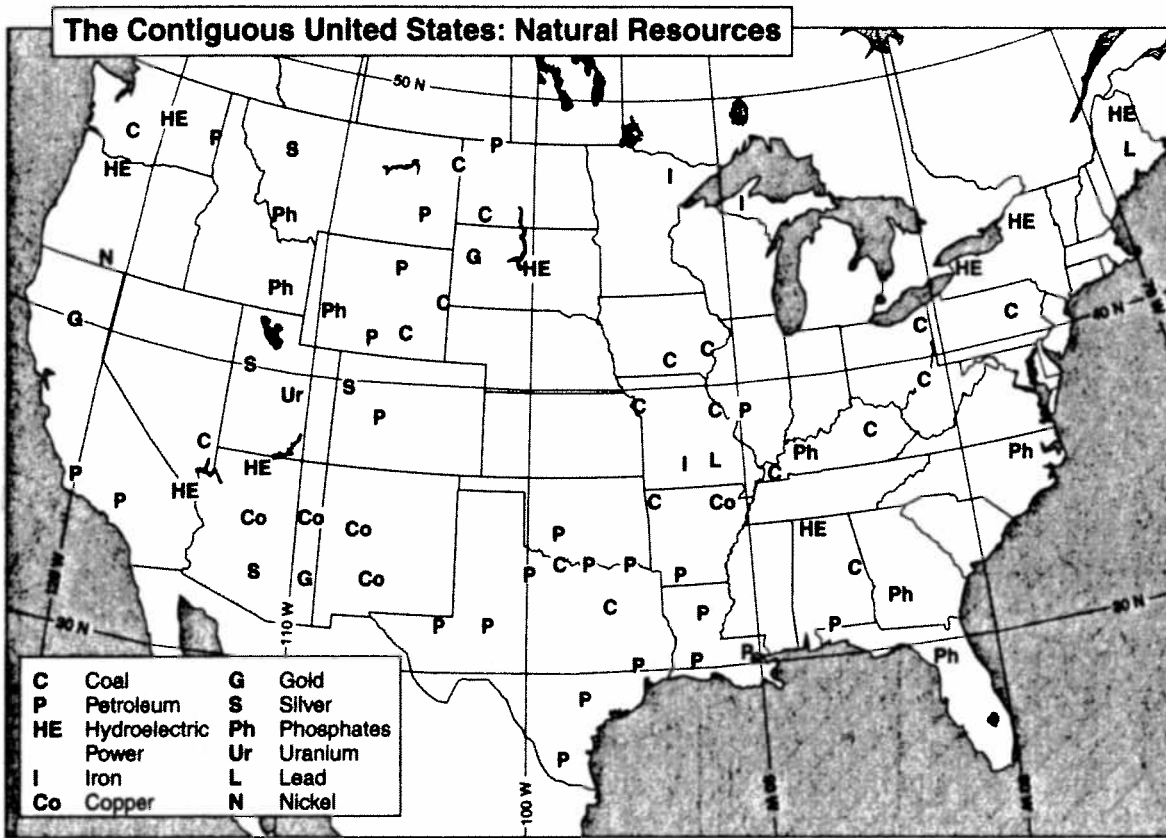
4. If you were to travel from the west coast of Norway to the east coast of Sweden, at about 60°N latitude, which climate regions would you experience?

5. Which of the countries shown have a subarctic climate region?

MapMaster Skills: Reading a Natural Resources Map

A natural resources map shows where natural resources are located. Some maps use symbols to represent different types of resources; others, like the one below, use letters, such as G for gold or L for lead.

Directions: Study the map and the map key below. Then, answer the questions that follow. A political map of the United States will help you identify individual states.



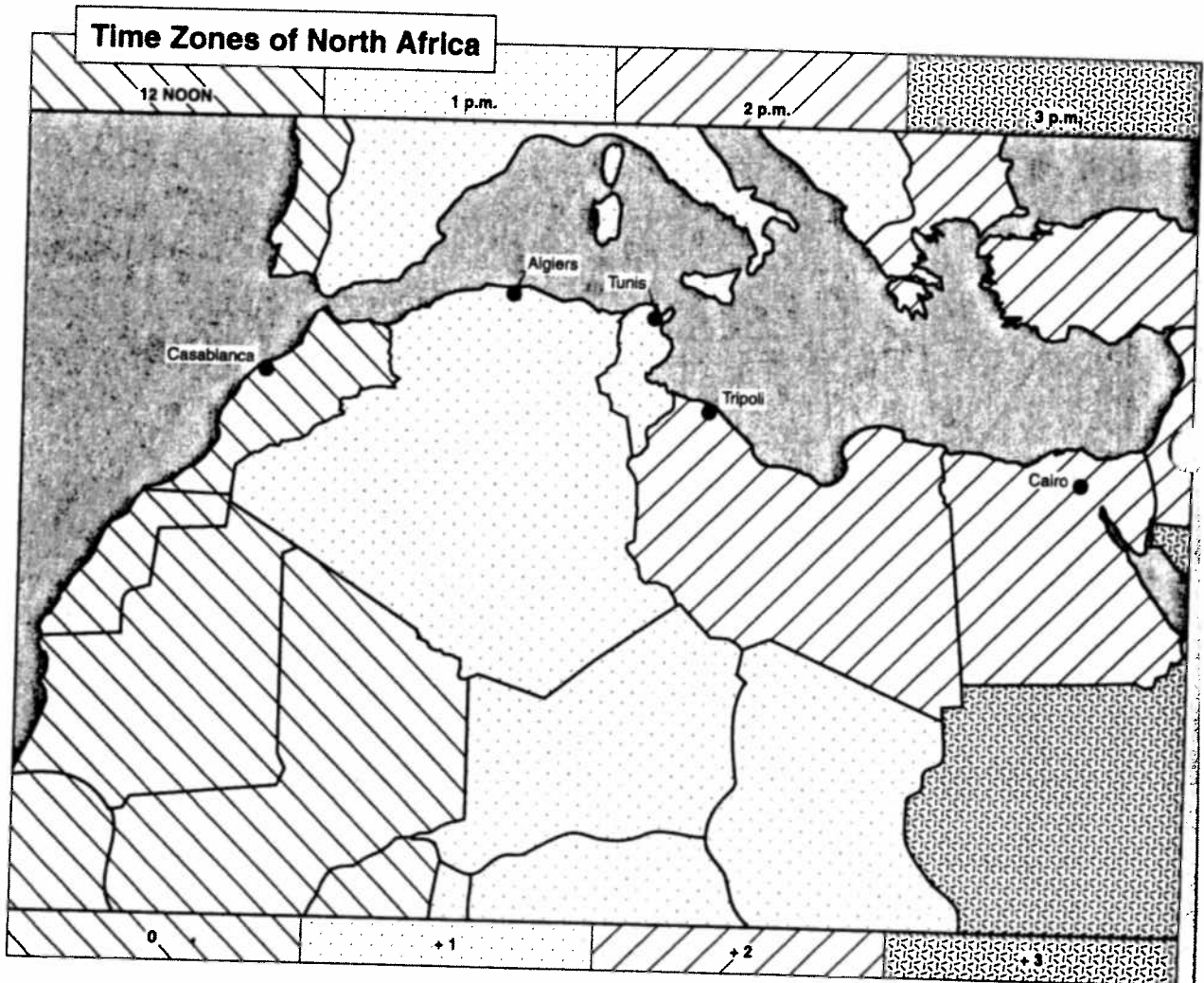
1. What is the symbol for coal? _____
2. Which area of the country is least rich in mineral deposits? _____
3. Which minerals listed are not found in the western half of the United States?

4. Compare this map with the map of the United States in the Atlas at the back of your textbook. Which states on this map have silver deposits?

MapMaster Skills: Reading a Time Zone Map

A time zone map helps you figure out what time it is in different parts of the world. There are 24 time zones altogether—one for each hour of the day. Four of the 24 time zones are shown in the map of North Africa below. The band across the top is a key to the actual time in each time zone. The band across the bottom tells you how many hours to add or subtract for each time zone. It shows that you add an hour for each time zone as you move from west to east.

Directions: Study the map below. Then, answer the questions that follow.



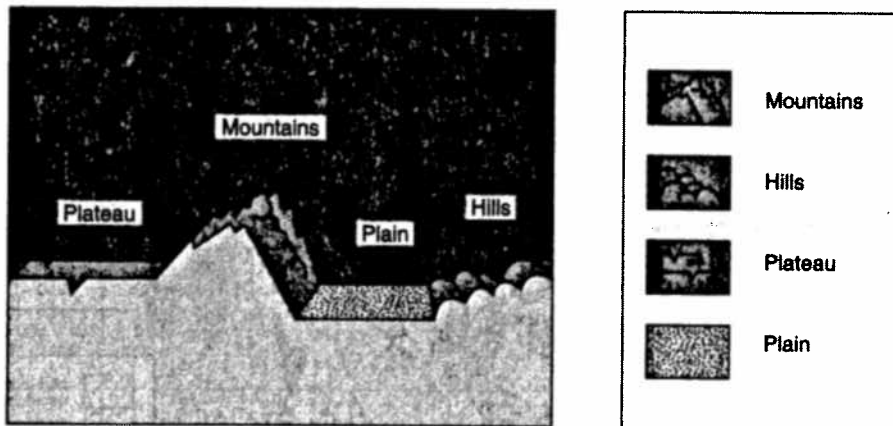
1. If it is 6 p.m. in Cairo, what time is it in a city two time zones to the west?

2. If it is 2 a.m. in Tunis, what time is it in Casablanca? _____
3. When it is 12 noon in Algiers, what time is it in Tripoli? _____
4. When it is midnight in Tunis, what time is it in Cairo? _____
5. When it is 5 p.m. in Tripoli, what time is it in the zone labeled + 3? _____

MapMaster Skills: Four Types of Landforms

Landforms are features that are found on the earth's surface. There are four main types of landforms: mountains, hills, plateaus, and plains. The diagram and the key below show the four types.

Directions: Study the diagram and the key below, and read the descriptions of landforms. Then, answer the questions.



Mountains. Mountains have the highest elevations of all landforms. They usually have steep slopes and a small summit. Mountains that form a line are called a range. The highest mountains in the world are the Himalayas. The hills around mountains are called foothills because they lie at the foot of the mountains.

Hills. Hills, like mountains, rise above the land around them, but they are generally lower and less steep than mountains. Rivers and lakes are often found in hilly areas. There is very little level land in hilly areas.

Plateaus. Plateaus are areas of level land at a high elevation. Plateaus are often called tablelands because they resemble giant tabletops. If a river has worn a deep gap into a plateau, the opening is called a canyon.

Plains. Plains consist of flat, or almost flat, land, usually at low elevations. Coastal plains are found along coasts, and floodplains are found along most large rivers.

1. What is the difference between mountains and hills?

2. In what ways are plateaus and plains similar, and in what ways are they different?

3. What is a canyon?

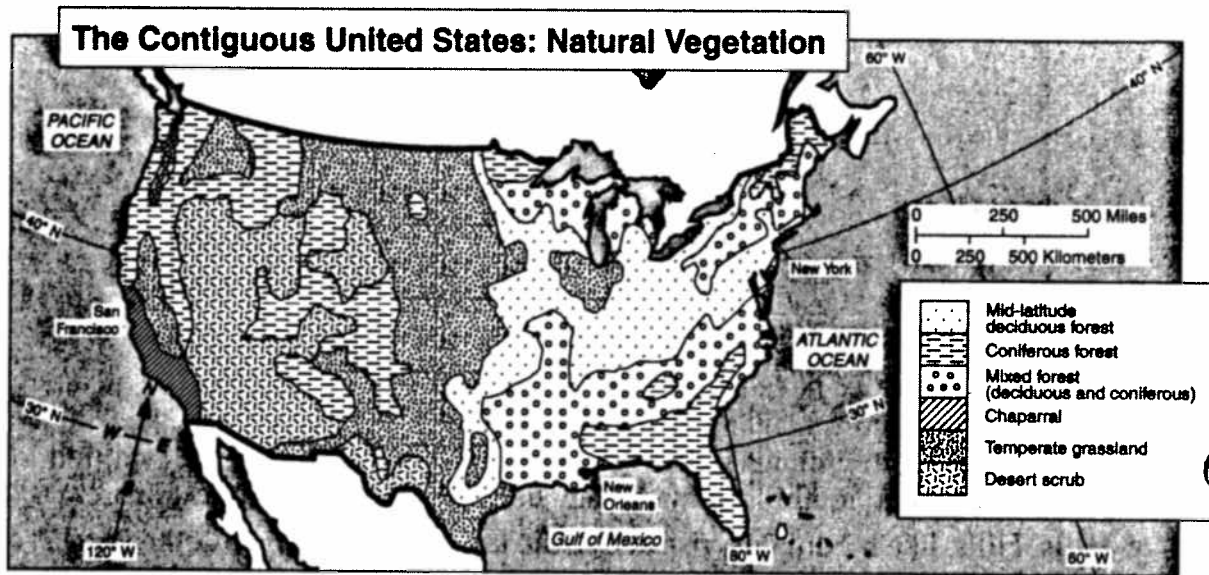
4. What symbol is used here to indicate a plain? _____

5. Why would farmers be more likely to farm on a plain than on hilly ground?

MapMaster Skills: Reading a Natural Vegetation Map

A natural vegetation map tells you what plants grow naturally in places that have not been altered significantly by human activity. The map below shows the natural vegetation regions of the mainland United States.

Directions: Study the map and the map key below. Then, answer the questions that follow. You may wish to consult an atlas.



1. What is the natural vegetation of the area where you live?

2. What is the natural vegetation of the Great Plains?

3. If you were going to northern New England, what vegetation would you expect to find?

4. In the southern part of which state is chaparral the natural vegetation?

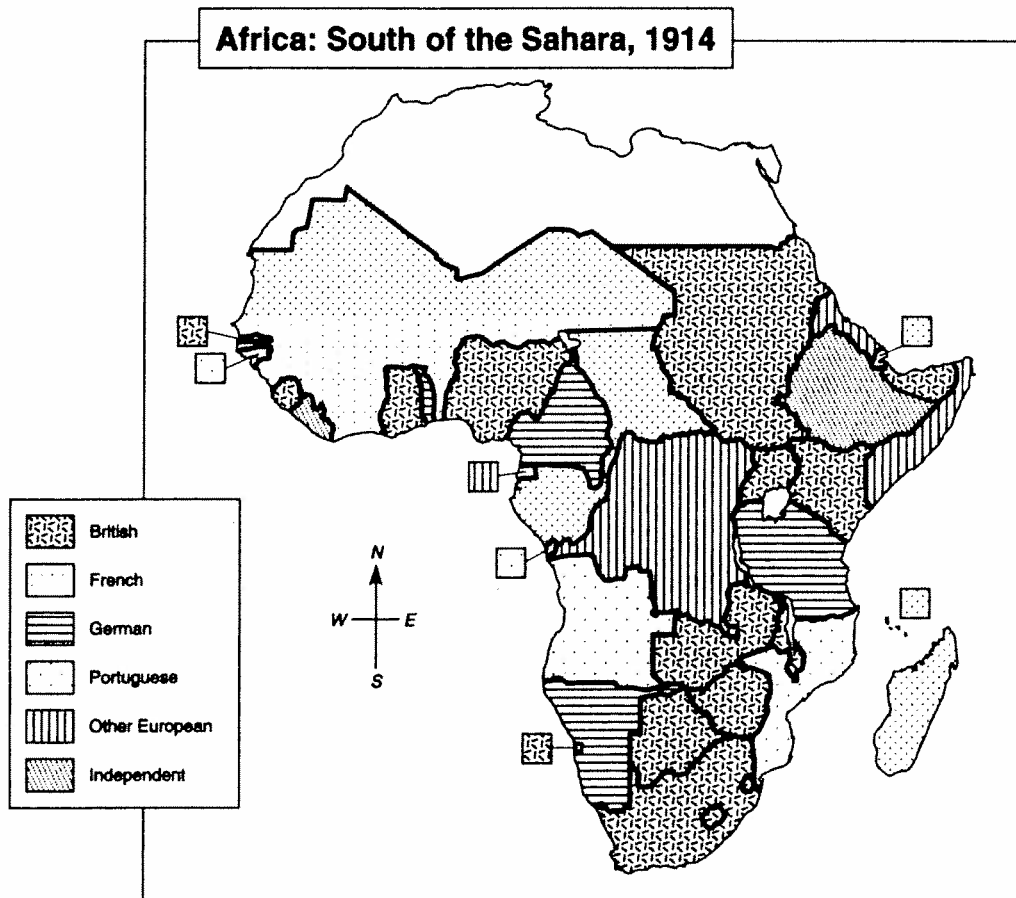
5. What kind of forest would you find in the Rocky Mountains?

6. What kinds of vegetation do the state of Washington and the state of Florida have in common?

MapMaster Skills: Reading a Historical Map

A historical map tells you what was happening in a region at an earlier time in history. Comparing a historical map with a map of the present day can help you to understand the impact of history. The map below shows Africa south of the Sahara in 1914, when most parts of the continent were European colonies.

Directions: Study the map and the map key below. Then, on the other side of this paper answer the questions that follow. You may wish to refer to a map of present-day Africa in an atlas to help you locate places.

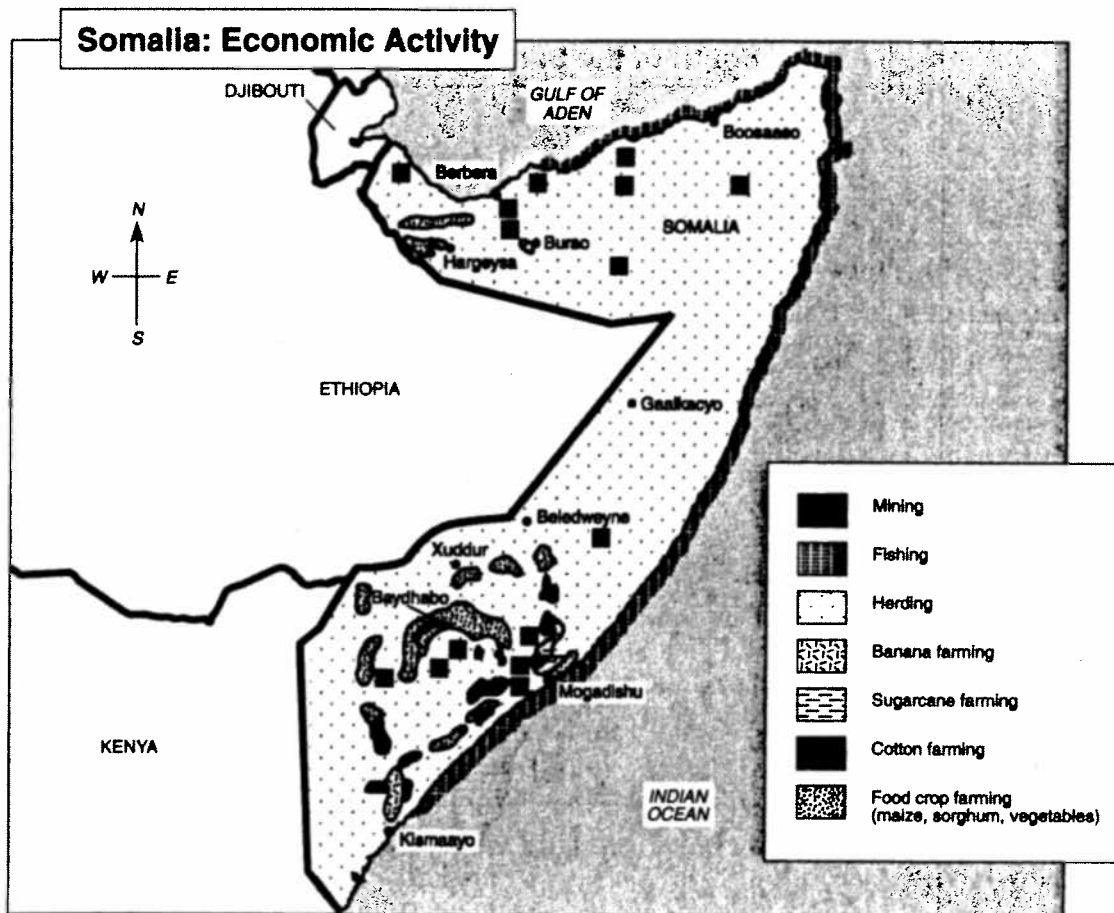


1. Which European country controlled much of the southern part of the region in 1914?
2. Which present-day countries were controlled by the Portuguese?
3. Which two countries remained independent in 1914?
4. Which European country controlled Madagascar and the Comoro Islands?
5. What do present-day Namibia, Cameroon, and Tanzania have in common?

MapMaster Skills: Reading an Economic Activity Map

An economic activity map shows general information about how people make a living in different parts of a country or region. The map below shows economic activity in Somalia, a country in Northeast Africa.

Directions: Study the map and the map key below. Then, on the back of this page answer the questions that follow.

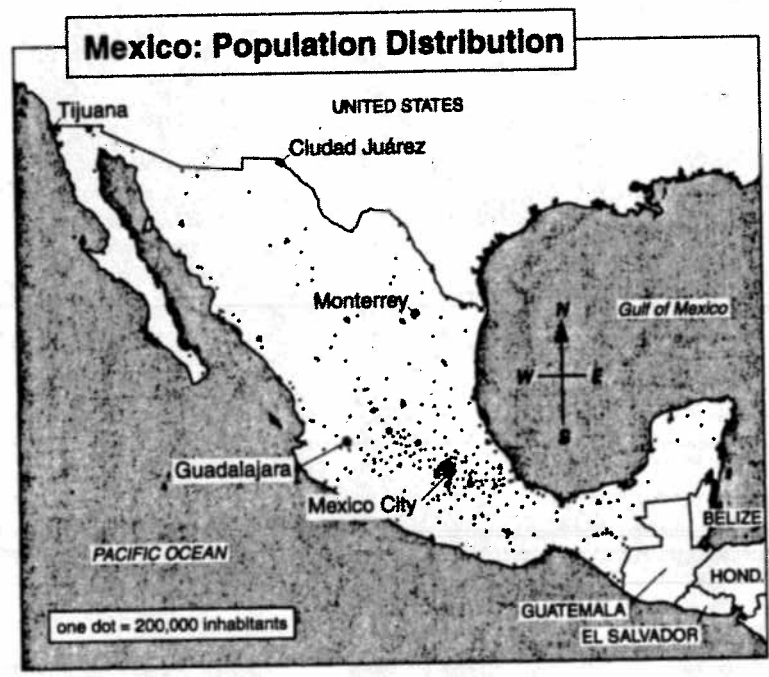


1. What is the main farming activity in the northwestern part of Somalia?
2. What economic activity is the most widespread within the country?
3. What part of the country is more fertile, the north or south?
4. What inland city is located the farthest from any mine?
5. What two farming activities take place in and around the city of Baydhabo?
6. What city is closest to the banana-growing region?

MapMaster Skills: Reading a Population Distribution Map

A population distribution map shows how the population is spread out over an area of land. Each dot on a map represents a specific number of people. The areas that have many dots are densely populated; those that have few dots are sparsely populated. The map below shows the population distribution of Mexico.

Directions: Study the map and the map key below. Use a political map of Mexico to help you answer the questions.



1. What does each dot on the map represent?

2. In one or two sentences, describe the population distribution of Mexico as shown on this map.

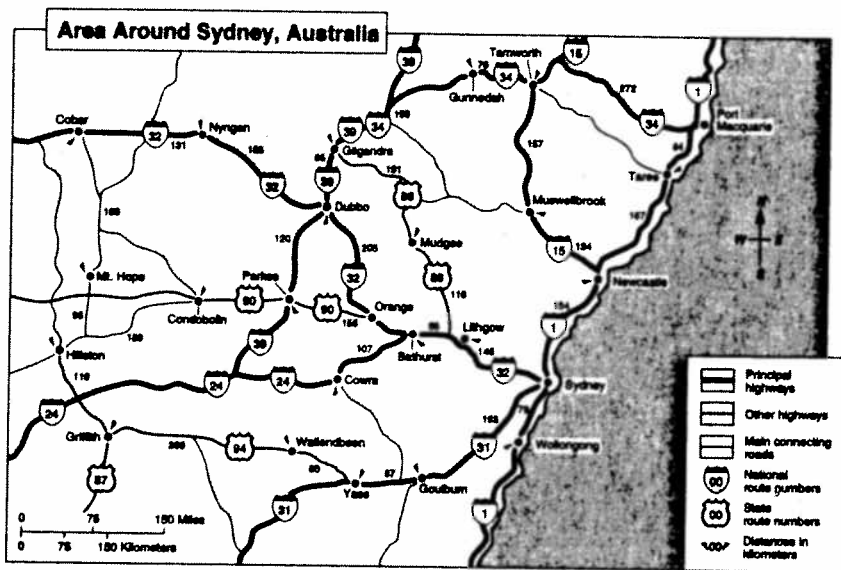
3. What is the name of the major city that lies within the most populated region of Mexico?

4. What population figures are not shown on a population distribution map such as this one?

MapMaster Skills: Understanding Road Maps

Road maps are important tools for anyone who travels by car. Road maps vary in the colors and symbols they use, but all provide similar basic information. They show the location of cities, the roads that link the cities, and the distances between the cities. Major roads are identified so that you can connect what you see on the map with the road signs that you see en route. The map below shows the road system around Sydney, Australia.

Directions: Study the map and the map key below. Then, answer the questions. Use a separate sheet of paper for your answers if you need more space.



1. What are the numbers of the three national routes that you could take to reach Sydney?

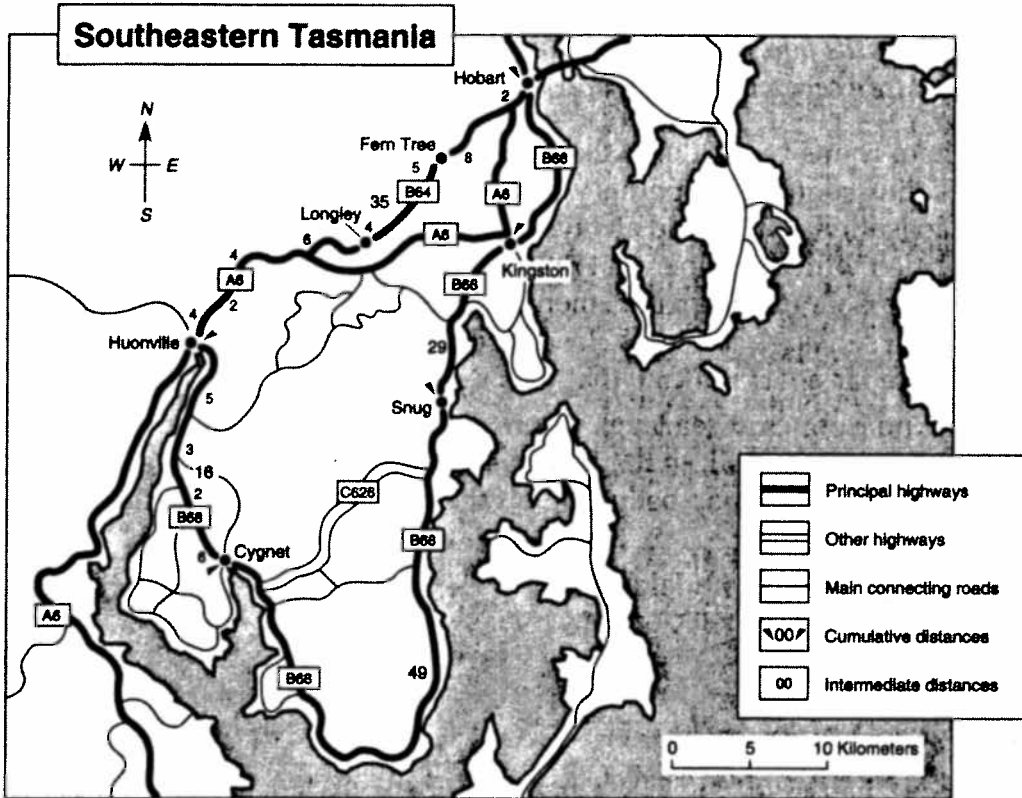
2. What route would you take to get from Sydney to Cobar, which is in the northwest region of this map?

3. Locate Newcastle on the map. It is north of Sydney. If you traveled northwest from Newcastle on route 15 for 124 kilometers, what town would you reach?

4. Assume you are traveling along state route 94, in the south of the area shown on the map. You are driving east from Griffith to Yass via Wallendbeen. How many kilometers will you travel?

MapMaster Skills: Reading a Road Map

Directions: To plan a journey using a road map, you need to understand the symbols used, the scale of the map, and the distances involved. The map below shows the roads in southeastern Tasmania. Study the map and the map key below. Then, answer the questions that follow.



1. What do the heavy black lines on the map represent?

2. List two towns found along B64.

3. Suppose you're planning a journey from Hobart to Snug. You're taking the long route there, by way of Huonville and Cygnet, and you'll travel only on principal highways. You'll take the most direct route back, however. Prepare a travel plan listing roads to take and distances involved.

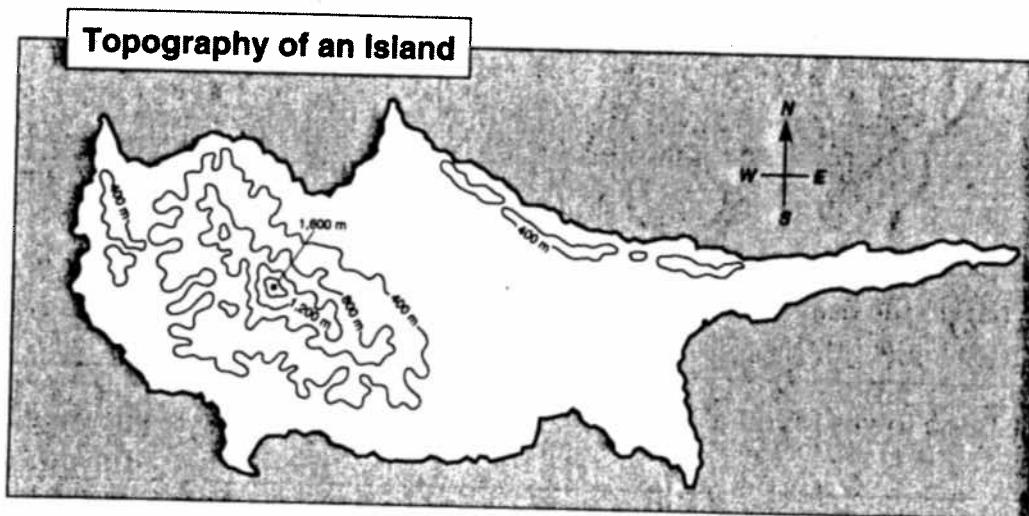
MapMaster Skills: Understanding Isolines

Maps can show you the ways the parts of a place are similar and different with isolines. Isolines are lines on a map that connect points of equal value. Isolines can show elevation, for example, by connecting points on the map that have the same elevation. Another common use of isolines is on a temperature map, where the isolines connect areas of equal temperature.

Directions: Read the information about isolines, and study the map below. Then, answer the questions. Use a separate piece of paper for your answers.

A contour map is one type of map that uses isolines. *Contour* means outline or shape. An isoline connects all points where the elevation is the same. If you were to hike along an isoline, you would always be at the same height above sea level. Each isoline is labeled with a number that tells the number of feet or meters above sea level along that isoline. The arrangement of the isolines tells you how steep the land is. When a series of isolines is close together, it means that the terrain is steep. Isolines that are far apart indicate that the land is relatively flat.

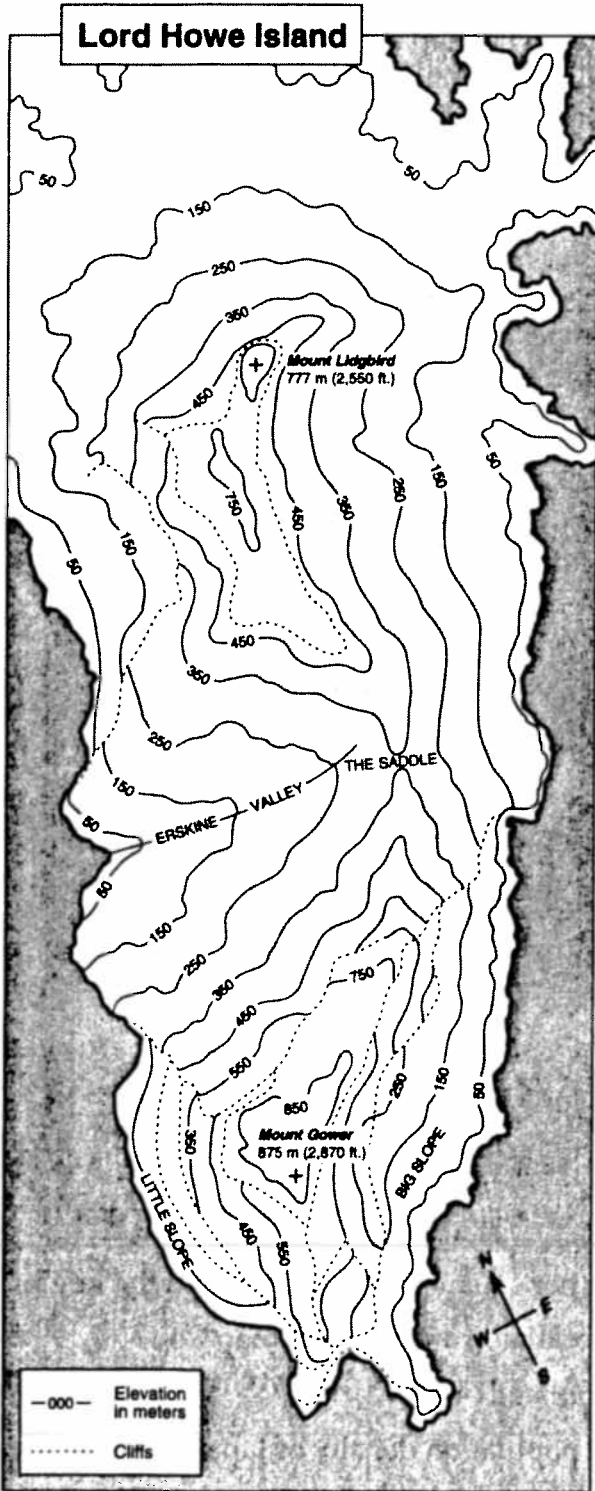
There are no isolines at sea level, where the elevation is 0 feet above sea level. Rivers always run downhill, so they always cross isolines. Lakes are flat, so they never cross isolines. The map below shows the isolines on a small island.



1. What are isolines?
2. What arrangement of isolines on a contour map would tell you that the land is steep? Explain why this is so.
3. What is the highest elevation on the island?
4. In which area of the island is the land steepest?
5. Which area of the island has the flattest land?

MapMaster Skills: Reading a Contour Map

Directions: A contour map tells you about elevation and relief. The contour map below shows Lord Howe Island in the South Pacific. Study the map and the map key below. Then, answer the questions.



1. What elevation, in meters, does the first isoline inland from the coast represent?

2. What is the elevation of the highest point on Lord Howe Island?

3. Are "Big Slope" and "The Saddle" at the same elevation or at different ones?

4. Is the island generally steeper near its northern part or near its southern part?

5. Where is the steepest part of the island?

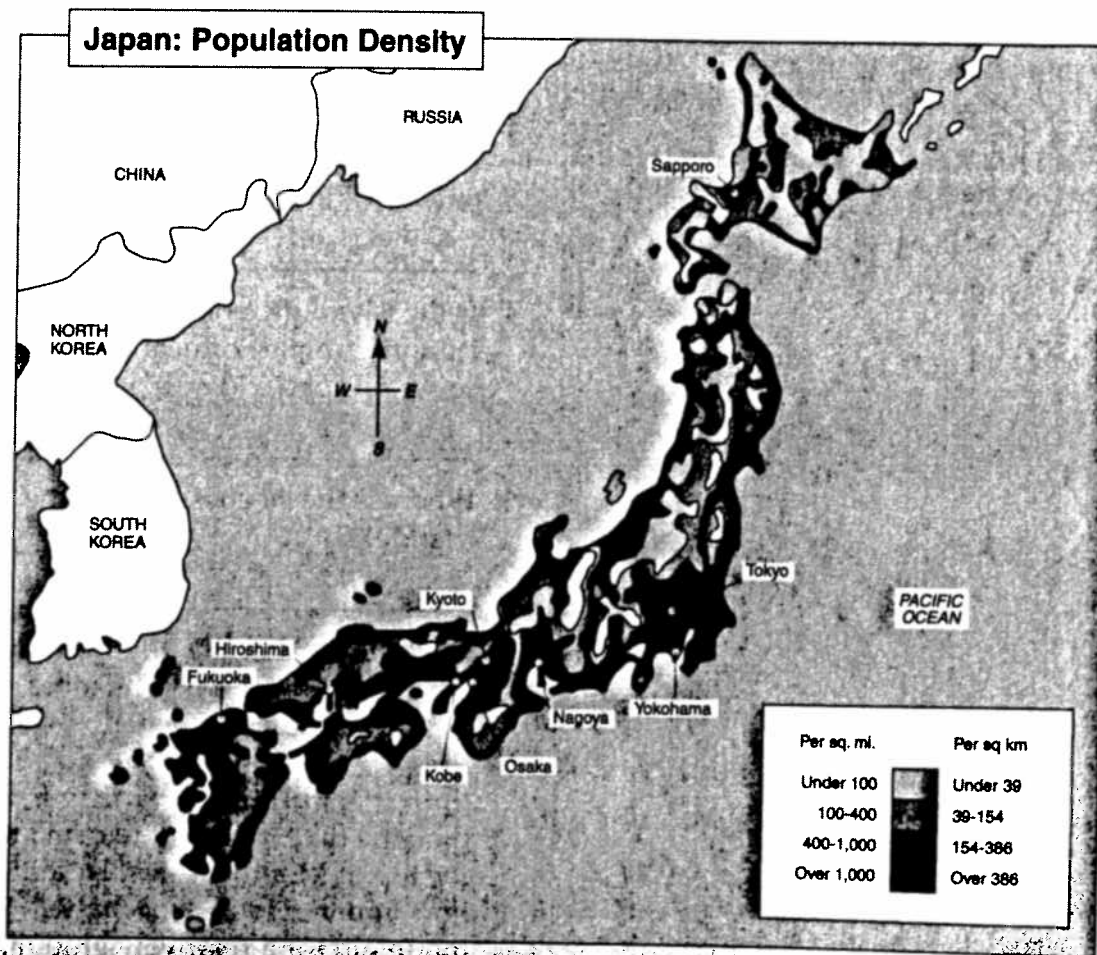
6. Does the northern or southern side of Mount Gower have the more gradual increase in elevation?

7. Imagine that you want to climb to the top of Mount Gower. Describe how you would approach the mountain for a relatively gradual ascent.

MapMaster Skills: Reading a Population Density Map

Another type of map that uses isolines is a population density map. The isolines on a population density map outline the areas with similar population densities. A population density map shows which parts of a region are heavily populated and which parts are sparsely or lightly populated. The map key tells you how many people live in each square mile or square kilometer of the region shown. The map below shows the population density of Japan.

Directions: Study the map and the map key below. Then, on a separate sheet of paper answer the questions that follow. You may need to use a physical map of Japan to help you answer some of the questions below.



1. What is the highest number of people per square mile, as shown on the key?
2. Which cities lie in the most densely populated areas on the map?
3. Which areas of Japan are the least populated?
4. What reasons can you suggest for the population density of Japan's coasts?

Geography Skills
Pages M16-17
Understand and use a land use map
Learn how land use and economic structures are linked

People around the world have many different _____ - or ways of making a living

_____ are one way to learn about these structures

The ways that people _____ tell us about the main ways that people in the region make a living

_____ - the production of food mainly for use by the farmer's own family

In less-developed countries, subsistence farming is often of the _____

In _____ there is little subsistence farming

Besides subsistence farming, _____ is another economic activity in Africa