

UNDERSTANDING AND USING MAPS AND GLOBES

A Unit of Study
Cat. No. 2984

BLACKLINE MASTERS

VIDEO ONE

UNDERSTANDING AND USING GLOBES

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UNDERSTANDING AND USING GLOBES**Video Quiz**

At the end of the video production is a short quiz. You may write the answers to the quiz on this sheet.

1. The four oceans are _____, _____, _____, and _____.

2. The seven continents are _____, _____, _____, _____, _____, _____, and _____.

3. The four hemispheres are _____, _____, _____, and _____.

4. What are lines of latitude?

5. What are lines of longitude?

6. How does the earth's tilt on its axis cause the seasons?

7. Why is a globe a good model of the earth?

8. What is a scale model?

9. How can you figure out distances on a globe?

10. What is the Prime Meridian?

UNDERSTANDING AND USING GLOBES
Vocabulary

Directions: Write a definition for each of the terms listed below. Use the back of this sheet if necessary.

1. continent

2. revolution

3. axis

4. key

5. equator

6. latitude

7. longitude

8. Prime Meridian

9. hemisphere

10. scale

UNDERSTANDING AND USING GLOBES

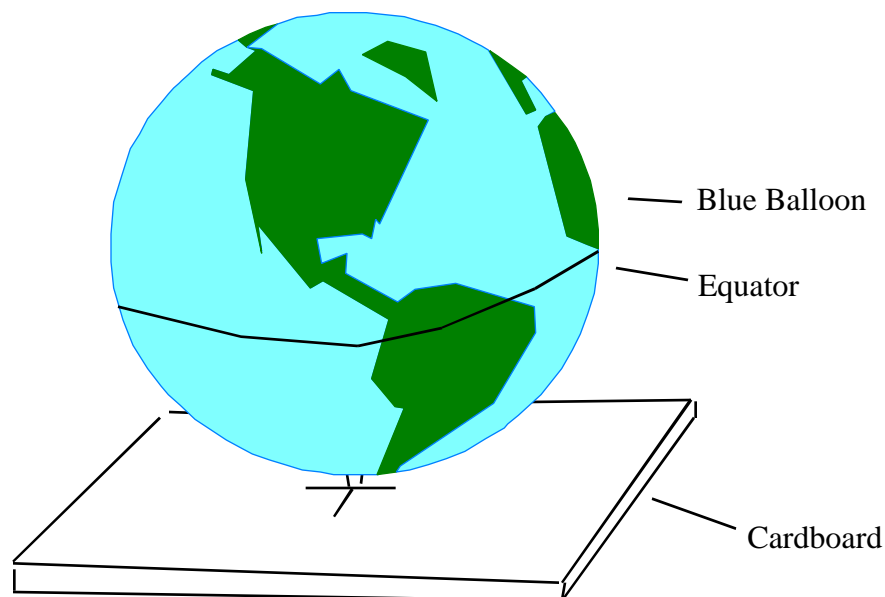
Making A Balloon Globe

Directions: Make your own globe using the following materials.

Materials: a blue round balloon
heavy paper or cardboard about 6" square
a permanent marker
scissors

Procedure:

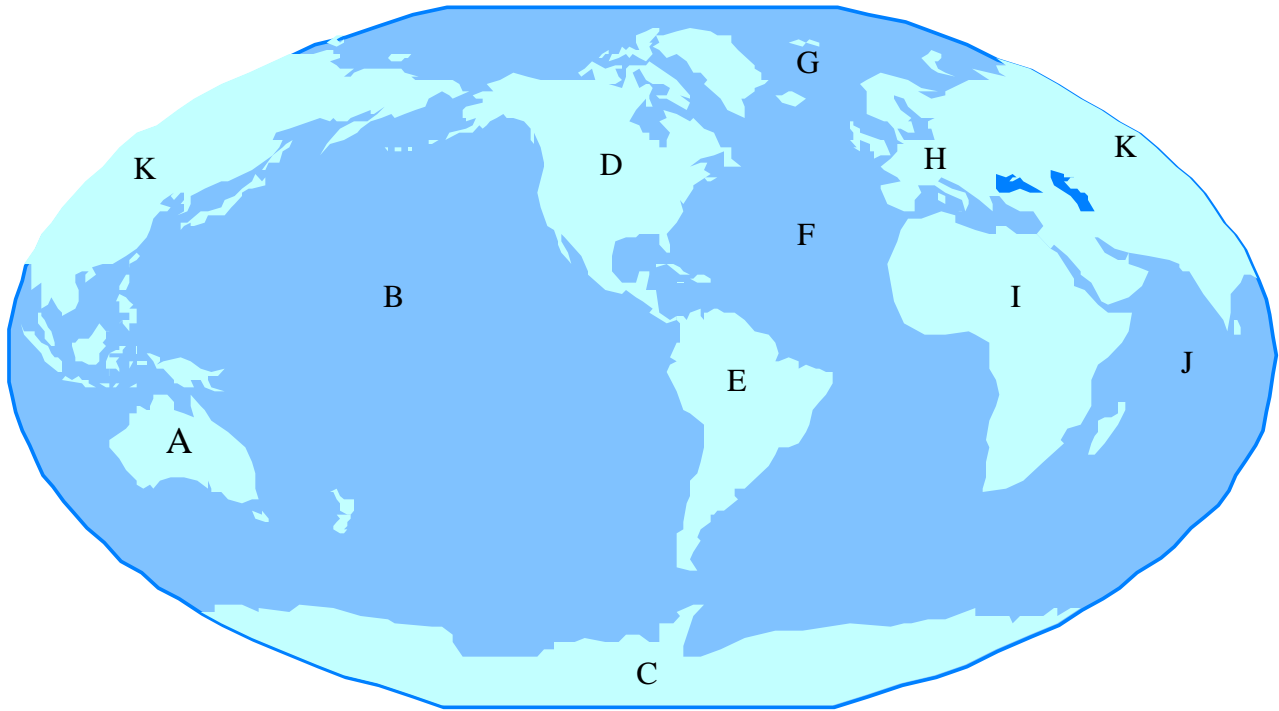
1. Blow up the balloon and tie the neck.
2. Use the marker to make a dot at the top of the balloon for the North Pole. The knot will be the South Pole.
3. Draw the equator around the center of the balloon.
4. Draw the continents onto the surface of the balloon. Look at a real globe while you do this part.
5. The cardboard will become a support for the balloon so it can stand on its own.
6. Use the scissors to cut an X in the center of the cardboard. Slip the knot of the balloon through this hole. The cardboard will act as a stand for the balloon.



UNDERSTANDING AND USING GLOBES

Continents and Oceans

Directions: Place the letter from the map that corresponds to the places listed below the map.

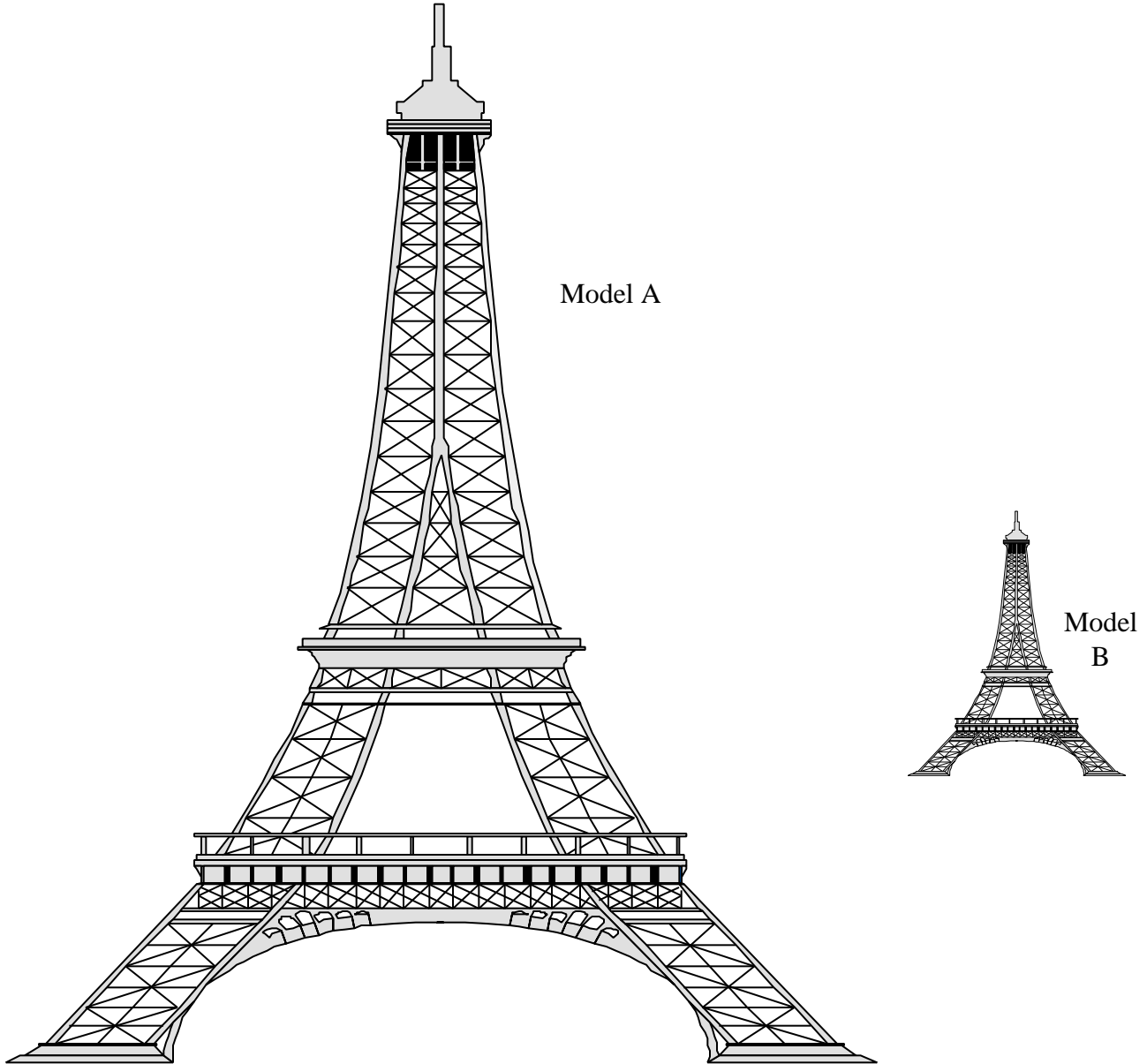


1. Arctic Ocean _____
2. Atlantic Ocean _____
3. Indian Ocean _____
4. Pacific Ocean _____
5. Africa _____
6. Antarctica _____
7. Asia _____
8. Australia _____
9. Europe _____
10. North America _____
11. South America _____

UNDERSTANDING AND USING GLOBES

Scale Models

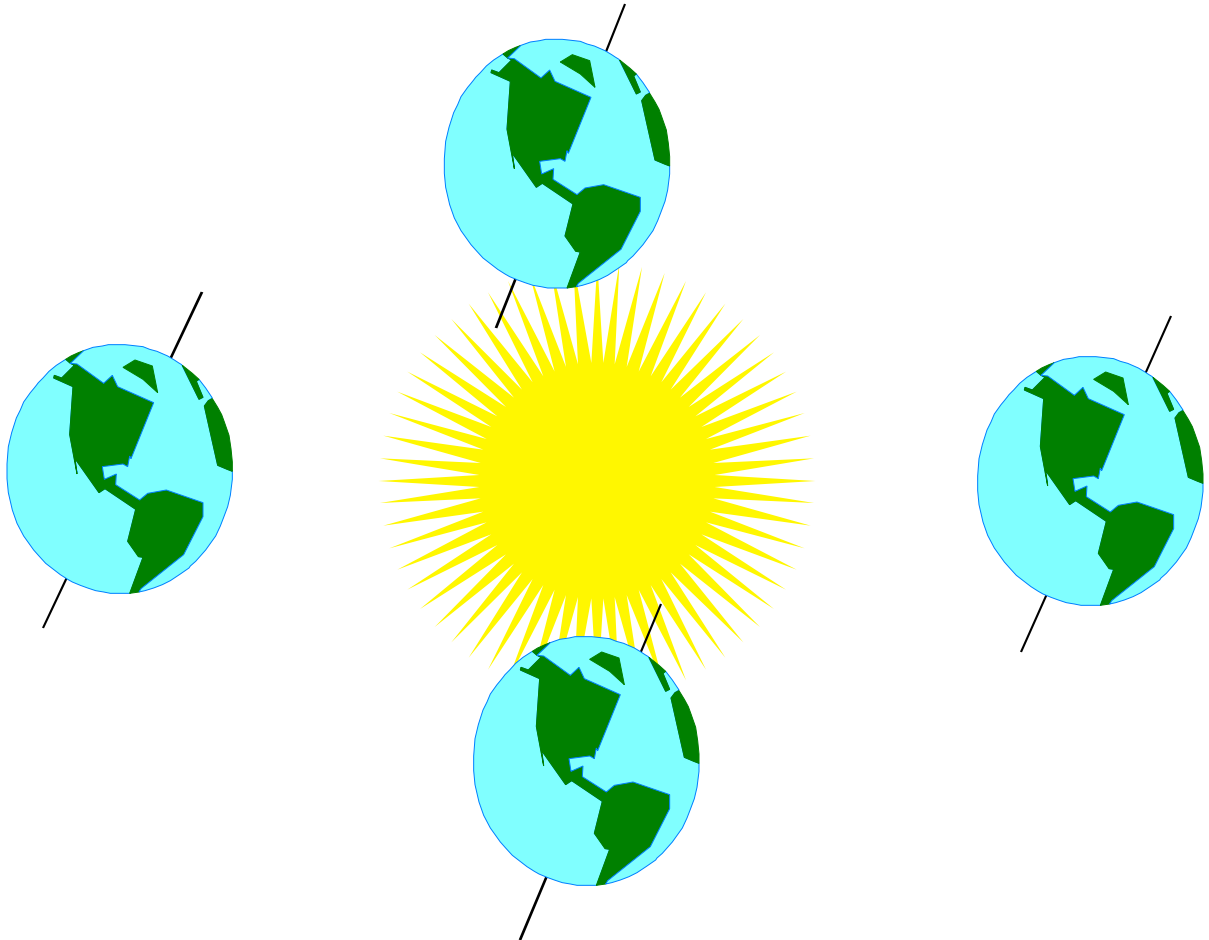
Directions: Follow the steps below to determine the scale of the two objects labeled A and B. Use the metric side of the ruler and make your readings in centimeters.



Procedure: Measure the height of model A and record it here _____ centimeters. Measure the height of model B and record it here _____ centimeters.

How much bigger is model A than model B? _____

The original (model A in this case) is given the value of 1. What is the scale of model B? 1: _____.

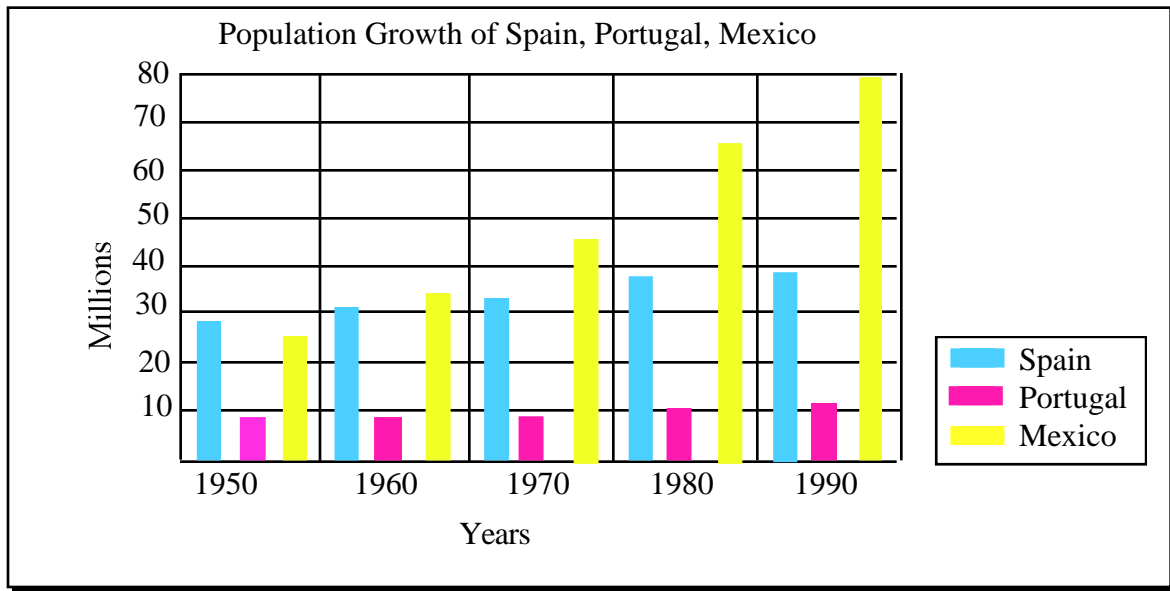
UNDERSTANDING AND USING GLOBES**Earth's Tilt**

The tilt of the earth on its imaginary axis is the reason for the seasons. Explain why this tilt is responsible for the seasonal changes most areas experience during four seasons: fall, winter, spring, and summer.

UNDERSTANDING AND USING GLOBES

Reading a Bar Graph

Directions: Use the bar graph on the population of Spain, Portugal, and Mexico to answer the questions at the bottom of the page.



Questions:

1. Which country had the greatest population growth from 1950 to 1990?
2. Which country's population has stayed almost the same throughout this forty-year period?
3. Aproxiamately how much did Mexico's population increase from 1950 to 1990?
4. How much did Spain's population increase over the same period?
5. In 1980, how many more people did Spain have than Portugal?

UNDERSTANDING AND USING GLOBES
Making a Bar Graph

Directions: Use the blank chart below to make a bar graph. Be sure to label the horizontal and vertical axis and give a name for the bar graph. The information at the bottom of the page is the data you will graph.

Data: Life Expectancy in years of selected countries.

Canada 78

Brazil 66

China 69

Japan 79

India 60

Egypt 64

United States 76

Mexico 72

Sweden 78

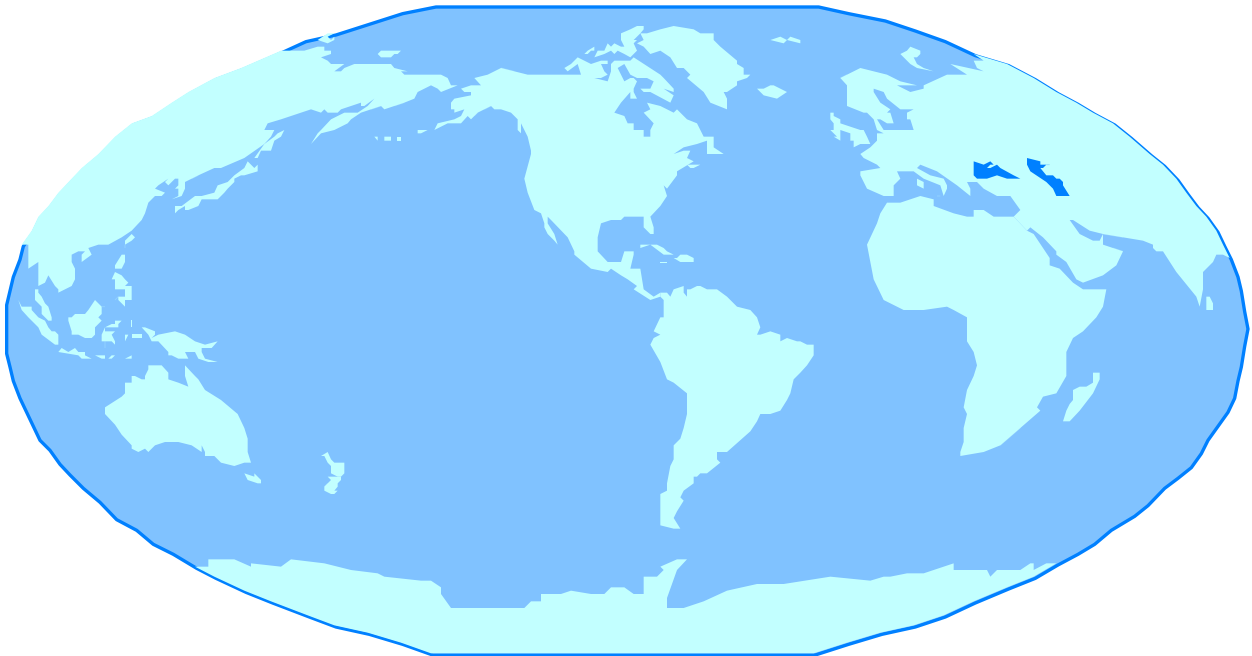
Peru 66

Ethiopia 50

UNDERSTANDING AND USING GLOBES**Quiz**

Directions: Use the space provided to answer the following questions:

1. Why is a globe a good model of the earth?
2. What is a scale model?
3. How are lines of latitude organized on a globe?
4. How is the grid system of lines of latitude and longitude used on a globe?
5. Label this globe with the four oceans and seven continents. Write on the picture.



UNDERSTANDING AND USING MAPS AND GLOBES

A Unit of Study

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BLACKLINE MASTERS

VIDEO TWO

UNDERSTANDING AND USING MAPS

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UNDERSTANDING AND USING MAPS**Video Quiz**

At the end of the video production is a short quiz. You may write the answers to the quiz on this sheet.

1. We can find out what symbols on a map stand for by looking at the _____.
2. Why don't maps do a good job of representing the entire earth?
3. What does a political map show?
4. What does a physical map show?
5. What is a compass rose?
6. What are the cardinal directions?
7. What are the intermediate directions?
8. What is a map scale?
9. How do we use a map scale?
10. How do lines of latitude and longitude help us find locations on the earth?

UNDERSTANDING AND USING MAPS
Vocabulary

Directions: Write a definition for each of the terms listed below. Use the back of this sheet if necessary.

1. political map

2. physical map

3. oceanographic map

4. map key or legend

5. map scale

6. compass rose

7. cardinal directions

8. intermediate directions

9. map symbol

10. elevation

UNDERSTANDING AND USING MAPS**Bird's-Eye View**

A map is a drawing of an area on earth. It is usually a view from above, as if we were floating above the area and looking down. That's why they call it a "bird's-eye view." Now, most maps are made from pictures taken from airplanes or satellites.

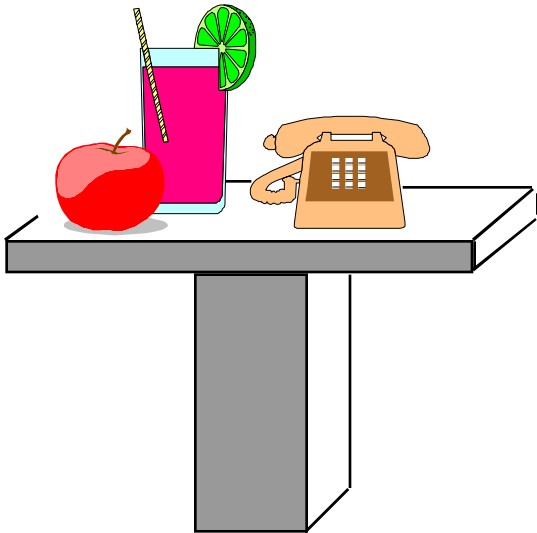
Directions: Try the next activity to see the difference between a drawing made from a side view and one made from above.

Materials: a table, objects to place on the table, two sheets of paper, some drawing tools.

Procedures:

1. Place the objects on the table.
2. Look at the table and draw how the objects appear from the side.
3. Get above the table and look down on the objects from above. Draw what you see from this view.
4. Compare the two drawings. How are they different? When looking from above, can you always tell how tall an object is?

Draw what it would look like from the side.



Then draw what it looks like from a bird's eye view.



UNDERSTANDING AND USING MAPS

Scales and Grids

Maps are made to scale. They are always smaller than the area they represent. A scale is used so that all sizes, shapes, and distances are true to the real area being mapped. A grid of horizontal and vertical lines drawn over a map to help find places is used to improve the map.

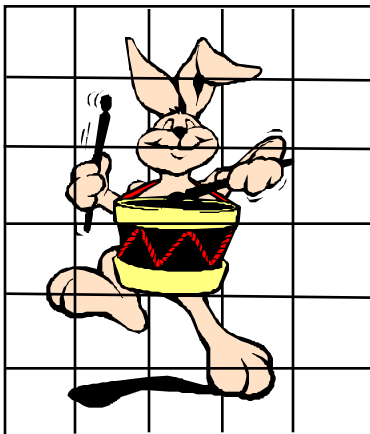
Directions: Make a scale drawing with the help of a grid system. The only difference is that instead of making the drawing smaller, you will make it larger.

Materials: a cartoon frame from the newspaper
a ruler (centimeters are easy to work with)
a pencil
a large piece of paper such as construction paper

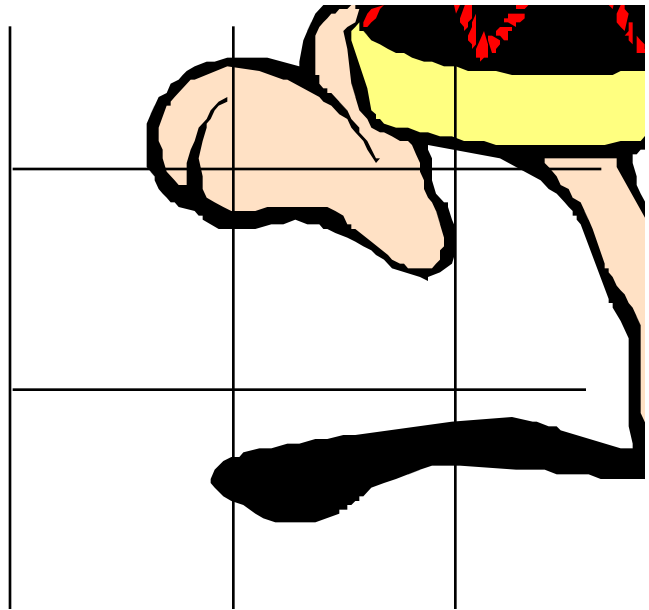
Procedure:

1. Use the centimeter ruler to mark off horizontal and vertical grid lines on the cartoon frame. Make lines one centimeter apart.
2. Decide how much you want to enlarge the picture. To double the size, mark grid lines two centimeters apart. To triple the size, mark lines three centimeters apart.
3. Make sure you have the same number of squares as in the cartoon frame.
4. Once the grid has been made on the larger paper, you can recreate the cartoon frame.

Make a grid over the cartoon frame



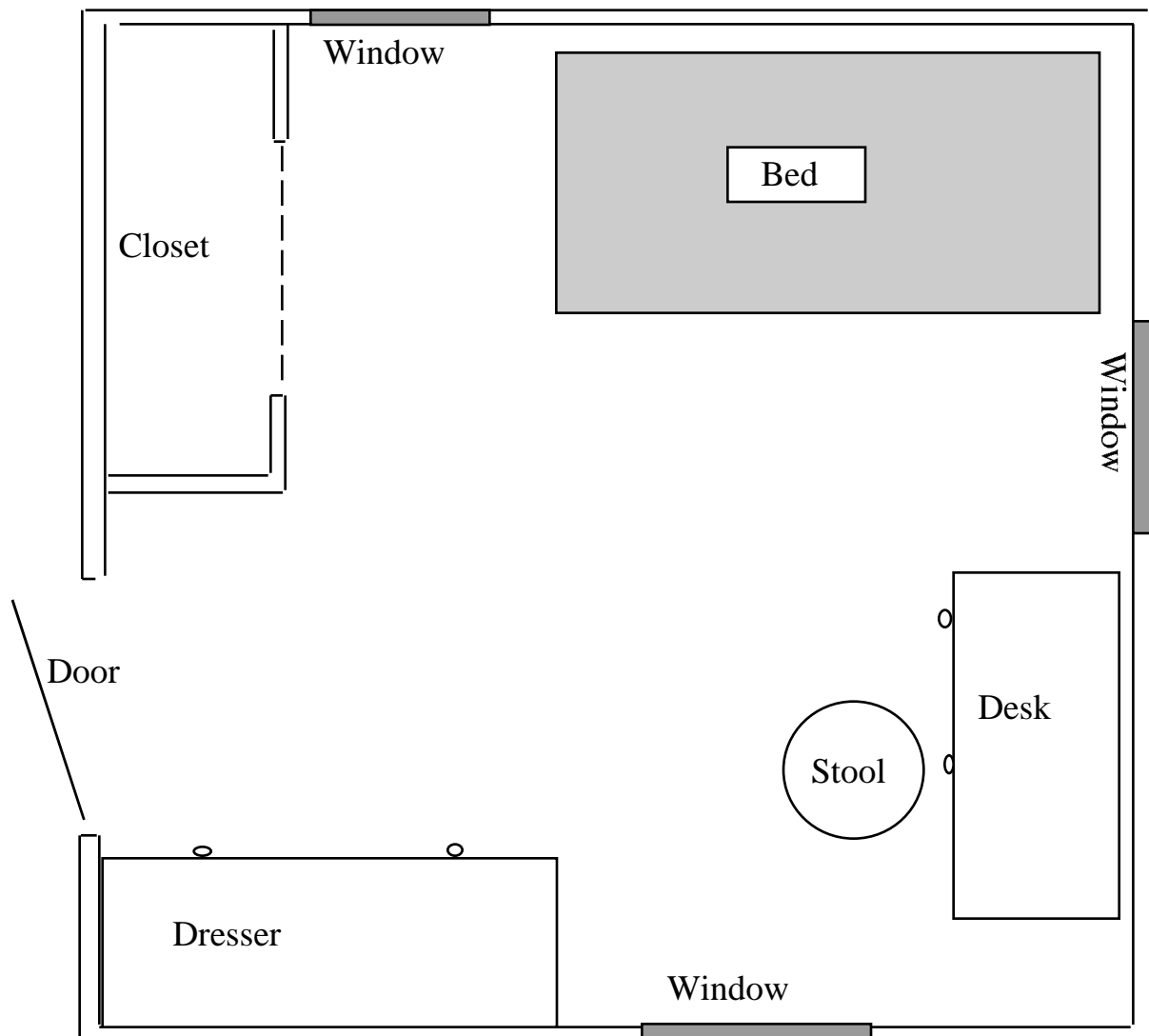
Then draw grids on the construction paper at a larger scale. This one is three times as big as the original.



UNDERSTANDING AND USING MAPS

Mapping Your Room

Directions: On a piece of graph paper, make a drawing of your room at home. First, make measurements in your room. How wide and long is the room in feet? How big is the bed? How big is the dresser? How big is your desk? Once you have all the measurements written down, decide on a scale and draw a view of the room from above as if the roof were gone. Maybe you want the scale to be every square on the graph paper is equal to one foot.



UNDERSTANDING AND USING MAPS

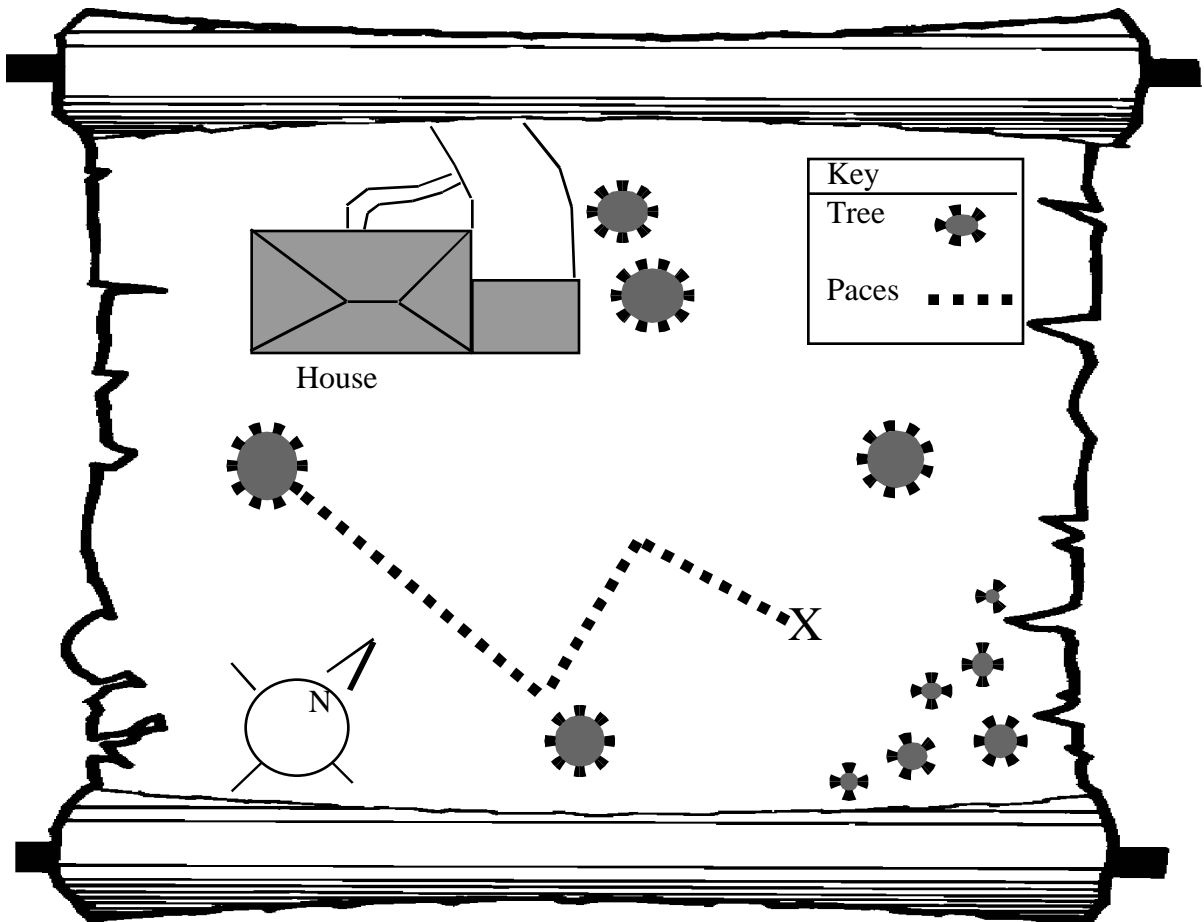
Making A Pirate Map

Did you ever see a picture of a pirate map in a book? You can make a pretend pirate map with some simple supplies. Hide something in your yard or house and then make a pirate map for a friend to use to find the treasure.

Materials: white paper
cold coffee
marker

Procedure:

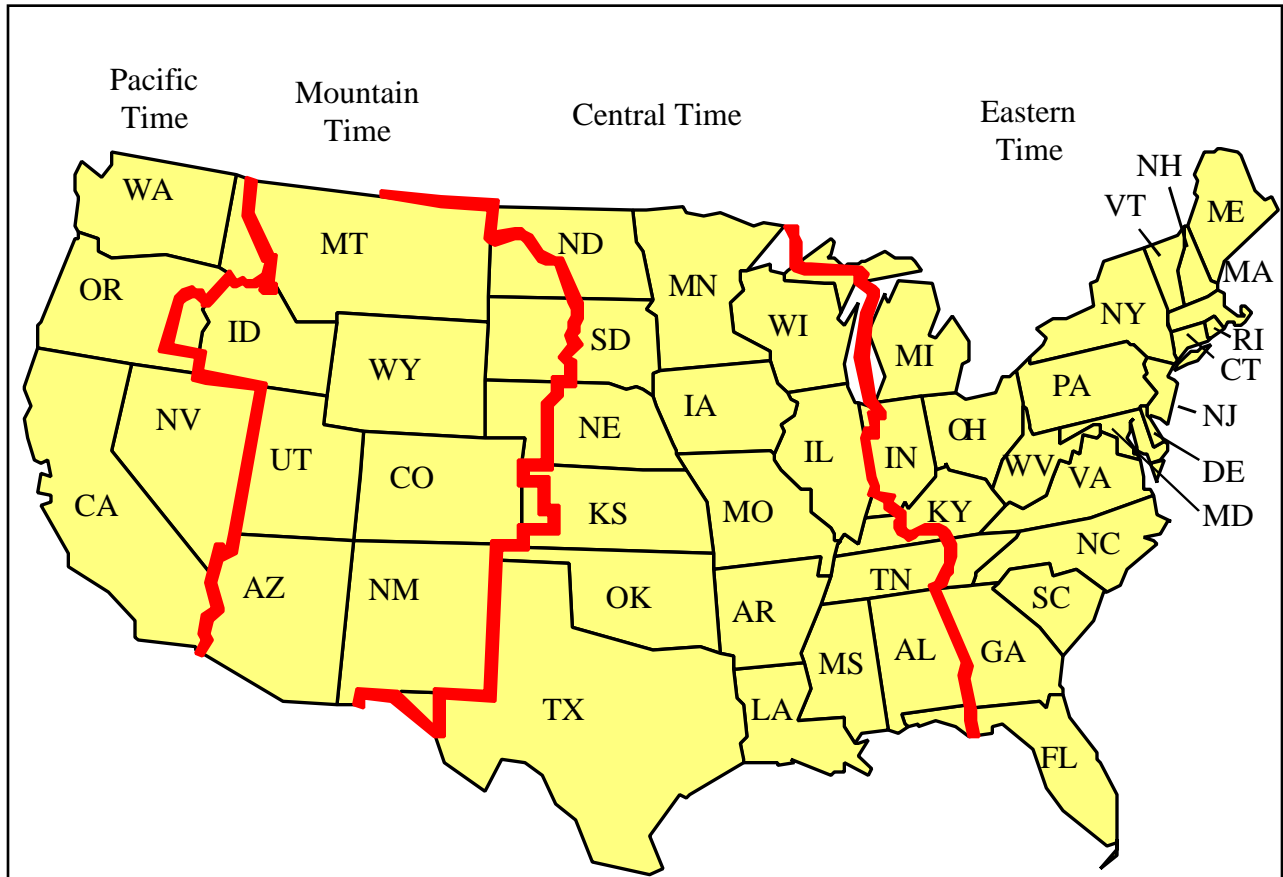
1. Tear strips from the corners of the paper and crumple it up in your hands. This will help to make the map appear ragged and old.
2. Unfold the paper and dip the corners in the cold coffee. This will stain the paper brown to make it look old.
3. Draw your map in the center of the map.
4. Give the map to a friend and see how quickly they can find your treasure.



UNDERSTANDING AND USING MAPS

Time Zones

Directions: There are four time zones in the United States. Use this map to answer questions at the bottom of the page.



1. How many hours earlier is Pacific Time than Eastern Time? _____
2. How many hours earlier is Mountain Time than Central Time? _____
3. If it is 3 P.M. in Florida, what time is it in Texas? _____
4. If it is 9 A.M. in Illinois, what time is it in California? _____
5. If it is 12 Noon in Oregon, what time is it in New York? _____
6. If it is 5 P.M. in Nevada, what time is it in Georgia? _____
7. Central Time is one hour _____ than Eastern Time.
8. Where does the sun set first, in New Jersey or Utah? _____
9. When it is 5:30 P.M. in Nebraska, what time is it in Maine? _____
10. If it is 2 P.M. in New York, what time is it Nevada? _____

UNDERSTANDING AND USING MAPS
Latitude and Longitude

Directions: Use the map on Blackline Master 10 to complete this activity on latitude and longitude.

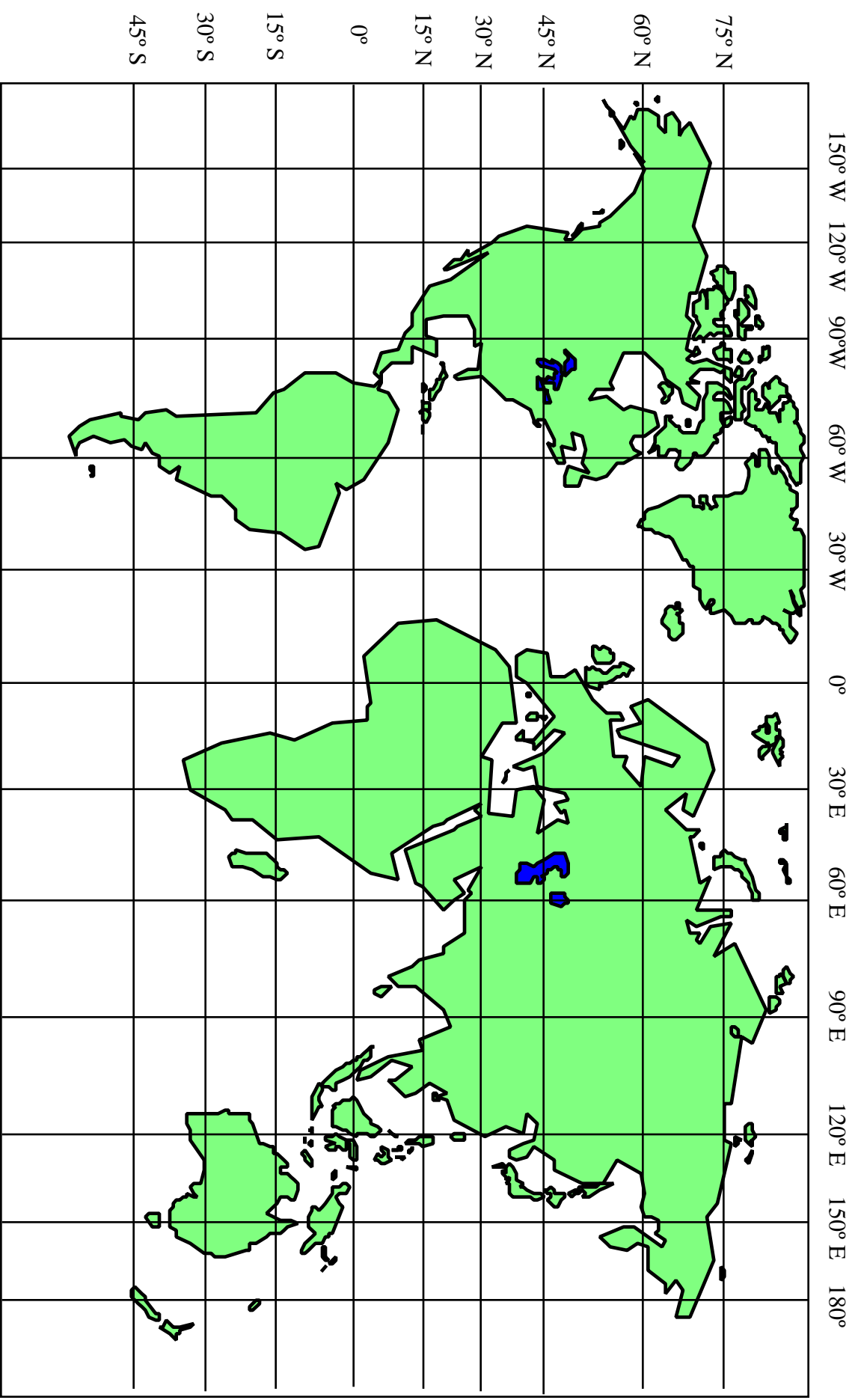
Materials: Colored pencils or markers

Procedure:

1. Place a red dot at the following location: 45° N latitude, 120° W longitude
2. Place a blue dot at the following location: 15° S latitude, 60° E longitude
3. Place a yellow dot at the following location: 30° S; 60° W
4. Place an orange dot at the following location: 0°; 60° W
5. Place a black dot at the following location: 60° N; 60° E
6. Put a brown dot on the map and write its location here: _____
7. Put a green dot on the map and write its location here: _____
8. Trace the Prime Meridian with a red marker or colored pencil.
9. Trace the equator with a blue marker or colored pencil.
10. Anchorage, Alaska is located at 61° N; 150° W. Mark it with an X.
11. Paris, France is located at 49° N; 3° E. Mark it with a capital P.
12. Miami, Florida is located at 26° N; 81° W. Mark it with a capital M.
13. Cairo, Egypt is located at 30° N; 31° E. Mark it with a capital C.
14. Bombay, India is located at 19° N; 72° E. Mark it with a capital B.
15. Where do you live? What would you think is the latitude and longitude of where you live.
latitude _____ longitude _____

UNDERSTANDING AND USING MAPS
Latitude and Longitude

Name _____
Date _____



UNDERSTANDING AND USING MAPS
Cardinal and Intermediate Directions

Directions: Use the map of the southern states in the US to answer the following questions.



1. What state is directly north of Alabama? _____
2. What state is touching Georgia to the west? _____
3. What is the symbol for a state capital? _____
4. If you were in Richmond, what direction would you travel in to reach Nashville? _____
5. Tallahassee is _____ of Atlanta, Georgia.
6. If you were in Jackson, what direction would you travel in to reach Columbia _____

7. Frankfort is _____ of Atlanta.

8. What state capital is northeast of Columbia, South Carolina? _____

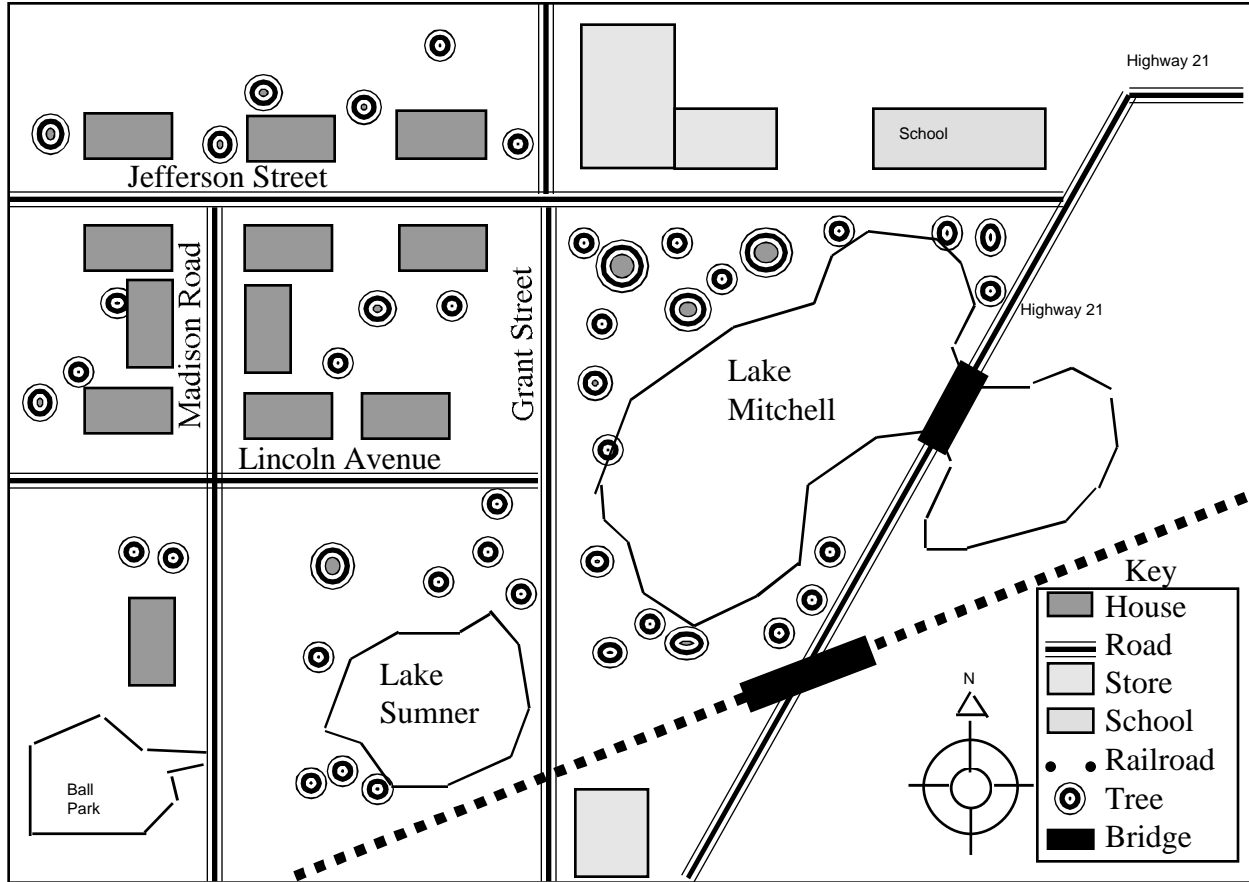
9. What state capital is southeast of Montgomery, Alabama? _____

10. Which state borders West Virginia's southwest border? _____

UNDERSTANDING AND USING MAPS

Using A Map

Directions: Answer the questions below by looking at the map on this page.



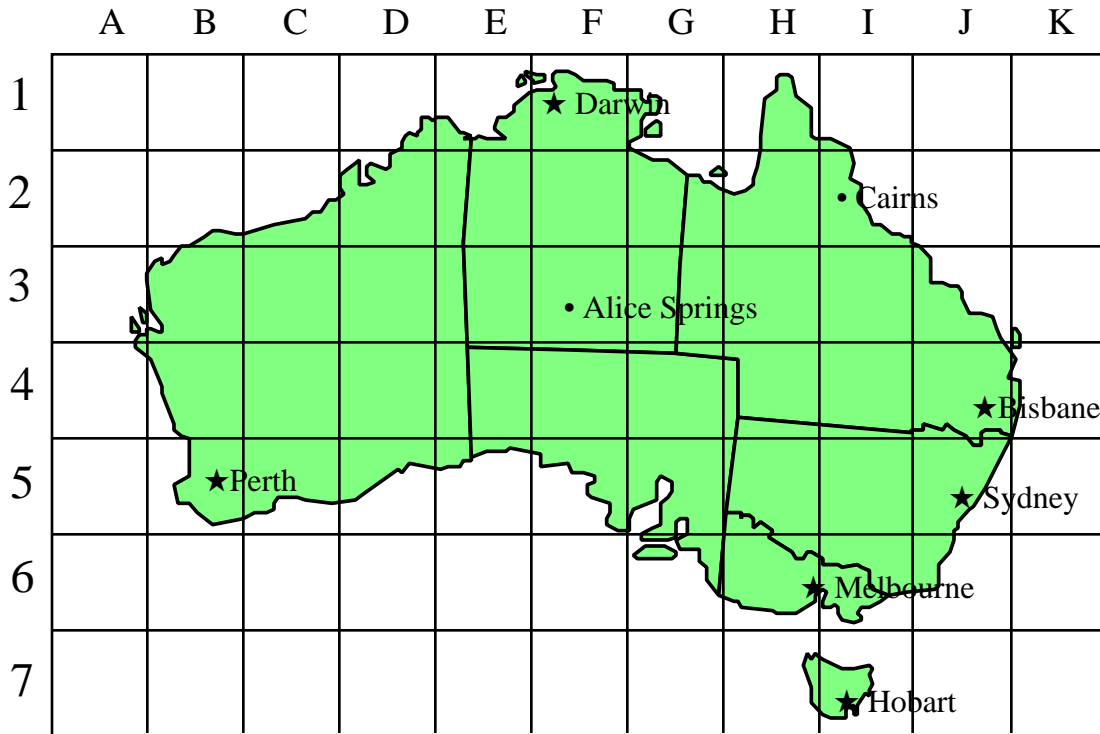
Questions:

1. Give directions to travel from the school to the Ball Park. Remember to use north, south, east or west when describing how to travel.
2. Put a circle at the intersection of Lincoln Avenue and Grant Street.
3. Put an X at the intersection of Jefferson Street and Madison Road.
4. The railroad bridge is what direction from Lake Sumner? (north, east, south, west)
5. If you were traveling from the railroad bridge to the Highway 21 bridge, what direction are you traveling? (north, northeast, east, southeast, south, southwest)

UNDERSTANDING AND USING MAPS
Using A Grid Map

A grid map is designed to help locate things quickly. A person looks up the place they want to find in an index. Listed next to the name of the place they are trying to find are two coordinates; usually a letter and a number. The person goes to the map and finds the letter on one side and the number on a different side. By following the two down and across the person can find where the two coordinates intersect.

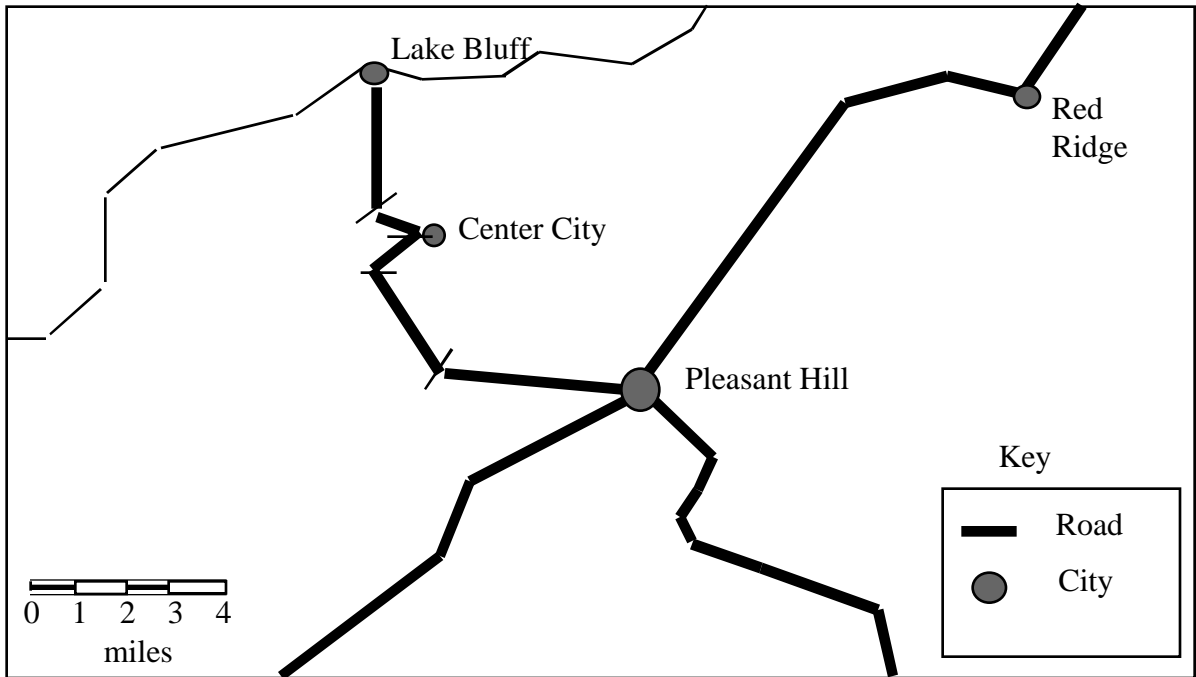
Directions: Figure out what the letter/number coordinates will be for the following cities.



INDEX	
Sample: Perth <u>B5</u>	Brisbane _____
Darwin _____	Melbourne _____
Hobart _____	Cairns _____
Alice Springs _____	Sydney _____

UNDERSTANDING AND USING MAPS
Using a Map Scale to Determine Distance

Directions: When measuring the distance between cities on a map use the scale on the map to determine the mileage.

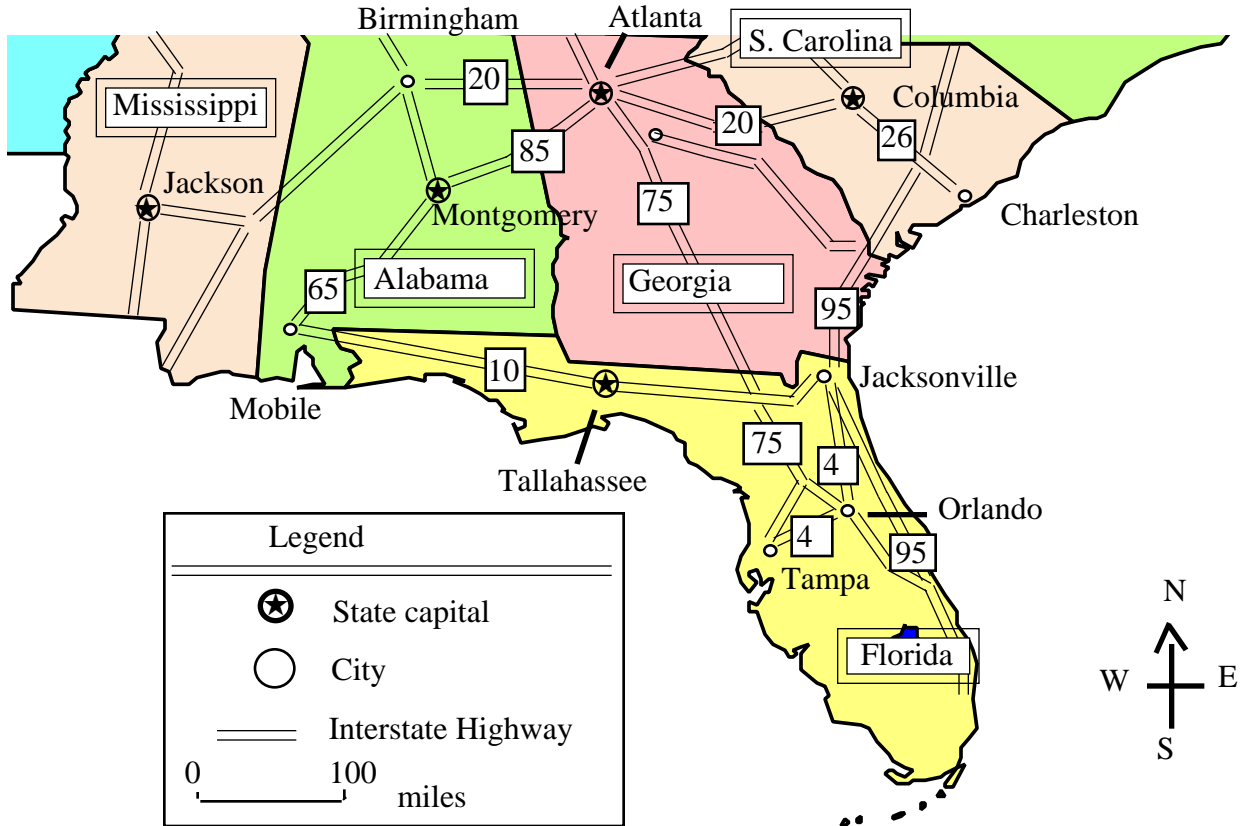


If the road curves and winds around, you can still find out the mileage. Follow these steps to find the distance between Pleasant Hill and Lake Bluff.

1. Make marks on the map that divide it into sections that are almost straight. (Notice the / lines used on this map)
2. Now use the edge of a piece of paper and mark off each of these sections one after the other.
3. Move the marks on the paper edge to the scale and figure out the distance. The distance between Pleasant Hill and Lake Bluff is _____.
4. Now figure out the distance from Pleasant Hill to Red Ridge using the same method. The distance in miles from Pleasant Hill to Red Ridge is _____.

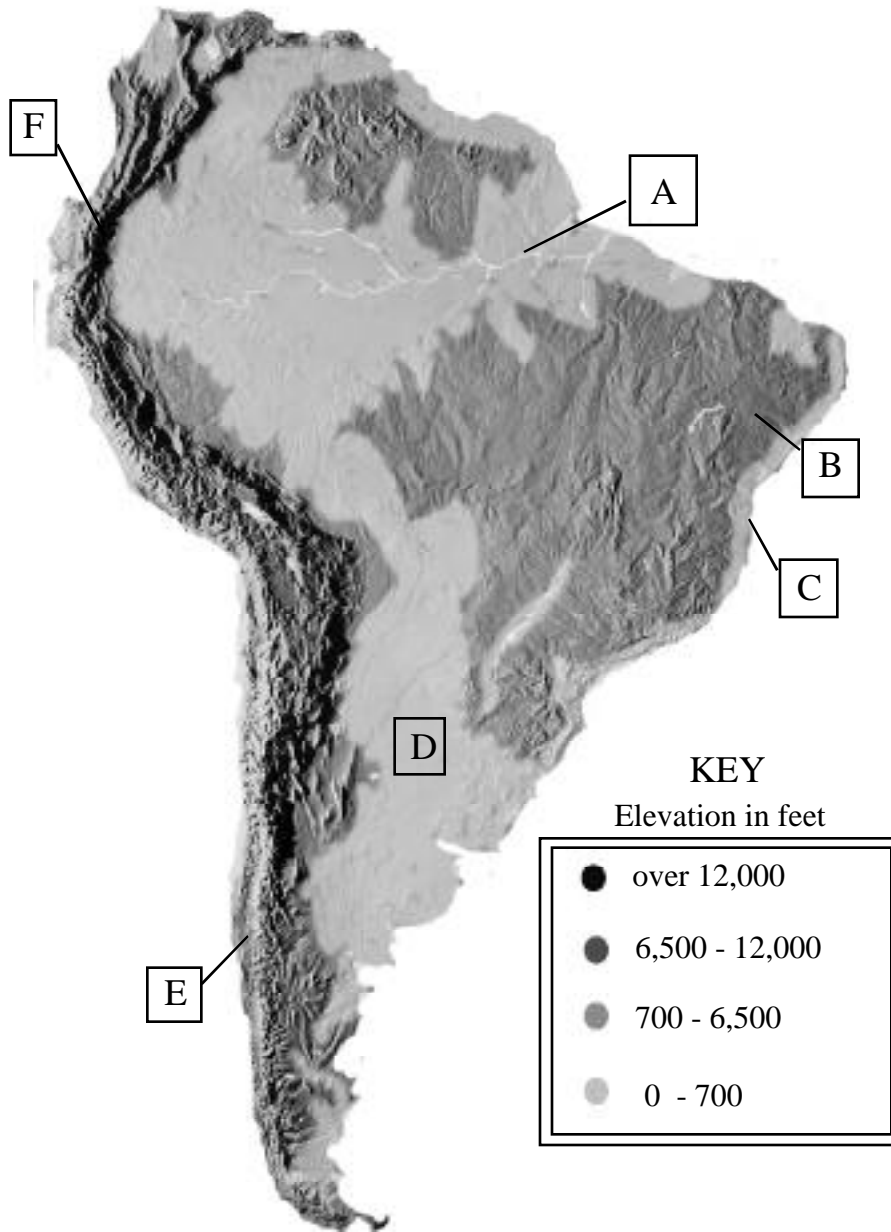
UNDERSTANDING AND USING MAPS
Using a Road Map

Directions: Use the road map below to answer the questions at the bottom of the page.



1. What is the capital of Florida? _____
2. What highway would you take from Tampa to Orlando? _____
3. Birmingham is in what direction from Atlanta? _____
4. What is the capital of Alabama? _____
5. What highway connects Mobile and Montgomery? _____
6. What highway would you take to travel from Atlanta to Columbia? _____
7. What is the capital of Mississippi? _____
8. Highway 10 travels what directions? _____
9. What highway connects Montgomery and Atlanta? _____
10. Approximately how many miles is it from Atlanta to Tampa? _____

UNDERSTANDING AND USING MAPS
Using a Physical Map



Directions: Write the elevation of each area identified by the letters A - F

A _____ B _____ C _____

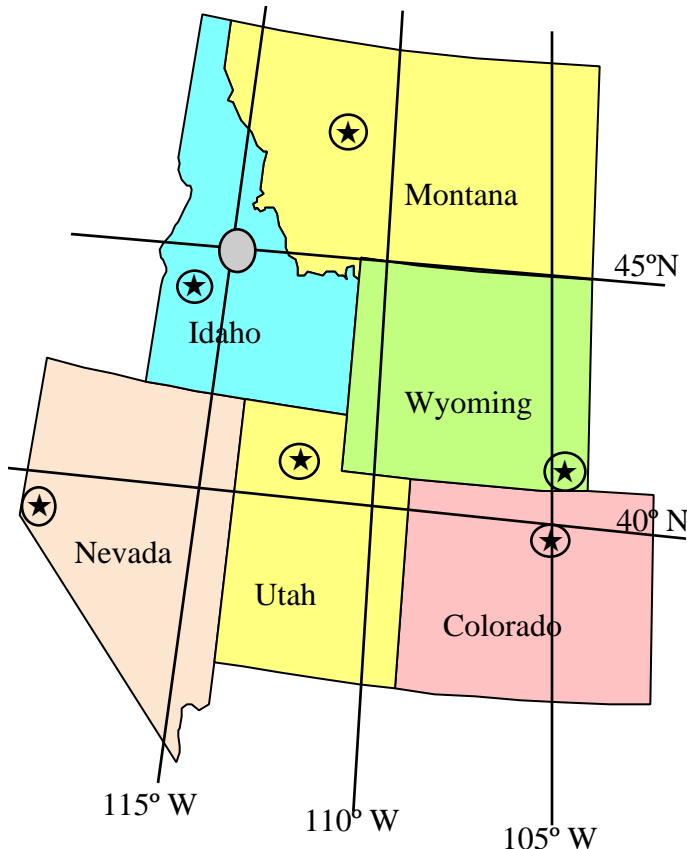
D _____ E _____ F _____


UNDERSTANDING AND USING MAPS
Quiz

Directions: Use the space provided to answer the following questions:

1. What are some of the different kinds of maps used to represent information about the earth?
2. Maps are drawn to scale. What does that mean?
3. Maps that try to represent the entire earth don't always do a good job. Why?
4. What is a compass rose and how does it help us to use a map?
5. Lines of latitude and longitude can be used to identify the location of places on earth. How does this work?

Use this map to answer the following questions.



6. Locate and label the following state capitals:
 - A. Salt Lake City 41° N; 112°W
 - B. Boise 44°N; 116°W
 - C. Helena 48°N; 112°W
 - D. Denver 39°N; 105°W
 - E. Cheyenne 41°N; 105°W
 - F. Carson City 39°N; 119°W
7. Which state is east of Nevada and shares a border?
8. Which state is north of Wyoming?
9. What direction would you travel in to go from Idaho to Colorado?
10. Use lines of latitude and longitude to describe the location of  _____