

# Exploring World Geography

## Map Skills Assignments

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### Unit 3 Map Skills Assignment

Take out a clean 8 1/2" x 11" sheet of paper and draw a map of the area around you right now. Answer these questions to describe your map.

Is your position at the center of the map? Did you draw looking down from above or did you draw with your perspective at one edge?

Do you show distances accurately to scale?

Do you indicate the presence and relative sizes of any hills, rivers, streets, and other buildings?

Are the locations of objects relative to one another accurate?

Are the sizes of buildings shown in accurate scale?

Are the streets intersecting accurately? Do you show any curves in the roads that are there?

How might you use this map, and how might someone else use it?

How does this exercise help you appreciate the science and art of a map?

### Unit 4 Map Skills Assignment

#### Using a World Map

Look at the world map at the front of the *Gazetteer*. Record your observations on a separate sheet of paper.

Do you have a firm grasp of north, south, east, and west?

What do you notice about the size, location, and relative positions of the continents?

What do you notice about the relative sizes of the continents?

What do you notice about the relative coverage of the continents and the oceans on the earth's surface?

Does anything surprise you about the relative positions of North and South America?

Compare your location at this moment to another location north or south of you, and to another location east or west of you.

What other information do you gain from studying this world map?

What questions do you have from studying this world map?

Just about any time you study any map, you can (1) get the information you are looking for, (2) see what other information you can learn, and (3) take note of questions you have and look for ways to find the answers to your questions.

## Unit 5 Map Skills Assignment

### Kinds of Maps

Lesson 7 in Unit 2 discussed different kinds of maps that people use. We can learn the big picture by using a globe or an atlas, which is a collection of maps. Review some of the specific types of maps and answer these questions.

1. Political maps that show the borders of countries. Look at the regional map of the Middle East on page 1 of the *Gazetteer*. How many other countries does Oman touch?
2. Physical (or topographic) maps show features of terrain. This could be a detailed map of a trail or national park or a larger map of a country or region. See the topographic map of Uruguay on page 42 in the *Part 1* textbook. Green indicates lower elevations and red indicates higher elevations. Is the average elevation higher near Colonia del Sacramento on the Rio de la Plata or at Rivera near the border with Brazil (Brasil)?
3. Thematic maps show different kinds of information, such as where farm products are grown; where natural resources are found; how population is distributed (the world map on the back flyleaf shows this); where certain economic activity takes place; the general areas where various cultures originate and where various languages predominate; and maps that show information of immediate concern such as where occurrences of COVID-19 are heaviest. In the thematic map on page 42, production in Uruguay of what crop is shown?
4. Weather maps, such as those used by weather bureaus and television news programs, may show weather conditions. They may also show historical trends or averages. In the 1915 isotherm map on page 43, what color is the area where you live?
5. Navigational maps help people get from here to there. These include road atlases, city street maps, bus or subway route maps, and maps for use at sea or on rivers. Using a printed or online map, answer this question: What roads would you need to use to get to your state capitol building?

## Unit 6 Map Skills Assignment

Lesson 7 in Unit 2 described the typical elements of a map. Refer to the maps on the following two pages and answer these questions. The first map is the cover page of a booklet of maps. The second page is one of the sections indicated on the cover page.

A map key explains symbols and colors used on a map. The key on the cover page is hard to read, but it explains how elements of buildings are shown on the map, including what the buildings are made of (frame, brick, stone, etc.) and the location of doors, windows, and firewalls (barriers to slow the spread of fire).

1. What is the title of this set of maps?
2. What organization created these maps?
3. When was this set of maps created?
4. What is the scale of the detailed maps inside this booklet (look on the cover page)?
5. What is the orientation of the map? Which direction indicates north?
6. What guides are provided on the cover to help the user find specific locations?
7. Who do you think would have been interested in this set of maps?

## Unit 7 Map Skills Assignment

### Surface of the Earth

Geographers have devised imaginary lines to help locate places on the surface of the earth. Lesson 8 described these lines. Review the information in that lesson and locate these lines on the world map at the front of the *Gazetteer*.

- **International Date Line:** the line of 180 degrees longitude in the Pacific Ocean where by international agreement the day begins. (This “line” is not straight because of the desire of different countries to be on one side of the line or the other.)
- **Equator:** the parallel of latitude that is equidistant from the North Pole and the South Pole.
- **Arctic Circle:** the southern boundary of the Arctic region
- **Antarctic Circle:** the northern boundary of the Antarctic region
- **Tropic of Cancer:** The region between the equator and the Tropic of Cancer is the northern tropical zone. The region between the Tropic of Cancer and the Arctic Circle is the northern temperate zone.
- **Tropic of Capricorn:** The region between the equator and the Tropic of Capricorn is the southern tropical zone. The region between the Tropic of Capricorn and the Antarctic Circle is the southern temperate zone.

### Hemispheres

We can divide the globe in half two different ways. The equator divides the Northern Hemisphere from the Southern Hemisphere. The Prime Meridian and the International Date Line divide the Eastern Hemisphere from the Western Hemisphere.

## Unit 8 Map Skills Assignment

### Projection and Distortion

We pointed out in Lesson 7 that projection of the round earth’s surface onto a flat map allows us to use information about the earth’s surface in practical ways. The tradeoff is that such an action distorts the presentation of the earth’s surface. We discussed various ways that people have projected the surface of the earth and how these have attempted to limit the distortion presented. People who use maps have determined how to use maps despite the distortion. Review the descriptions of these projections and the illustrations of them in Lesson 7.

It is important to remember that the surface of the earth is so huge compared to the relatively small areas in which we live that the small, flat maps we use such as road maps still represent the round surface of the earth but the distortion used in this projection is so small as to be inconsequential. In other words, you do not have to be concerned about the road map you use leading you off course when you are driving two hours to Grandma’s house. If she lived in Greenland, that would be another matter.

## Unit 9 Map Skills Assignment

### Absolute and Relative Location

Geographers have given us two ways to describe the location of a given place. We can describe it in absolute terms—its location on the surface of the earth—or in relative terms—how far away it is and in what direction it is from another location.

Both ways have their uses. Sometimes we just want to know that Duluth is in northern Minnesota, at 46.7867° north latitude, 92.1005° west longitude. At other times we want to know that Duluth is at the western end of Lake Superior, 144 air miles north of Minneapolis and 1,193 air miles east of Boise, Idaho.

The system of parallels of latitude and meridians of longitude helps us with both absolute and relative location. We have given you Duluth's absolute location. If we say that X is at X latitude and X longitude, and we know how long each degree of measurement is, we have an idea of where the other location is and how far away it is.

You can find the following information on the Internet or in a world atlas if it has a mileage chart.

Find the absolute location of Tokyo, Japan, in terms of its latitude and longitude.

Find the relative location of Tokyo in terms of its distance from Los Angeles, California.

Find the absolute location of your hometown in terms of its latitude and longitude.

Find the relative location of your hometown in terms of its distance from Washington, D.C.

## Unit 10 Map Skills Assignment

### Regions

A map of the world or of a country helps in many ways, but sometimes we want more information about a part of the whole. We call this smaller part a region. Identifying regions helps to break down the larger picture and its complexity.

Places in a region share one or more characteristics: close to mountains or the coast, or just located near each other.

Look at the map of Southern Europe on page 82 of the *Gazetteer*. Answer the following questions about this region.

1. What large sea separates Southern Europe from Northern Africa?
2. What large island is located close to the southern tip of Italy?
3. Arrange these countries west to east: Greece, Spain, Italy.
4. What large island is located south of Greece?
5. What two countries in this region touch the Atlantic Ocean?

## **Unit 11 Map Skills Assignment**

### **Street and Road Maps**

Probably the most common use you will make of maps will be street and road maps, and probably the most common way you will access this information will be by a navigation app on a smartphone. These apps use GPS information transmitted from satellites.

These physical or digital maps help you find the route you want to take to a destination, provide directions (where to turn and so forth; even walking directions in a big city can be helpful), and give travel time so you can plan when to leave.

Information that a smartphone app doesn't usually provide involves places along the way that you might want to see (some apps can tell you restaurants and stores that are near your destination). Consulting a state-issued road map or a published road atlas can often offer you some of this information. If you see a town along the route that interests you, you might be able to look up possible things to see there on the Internet. Doing this research ahead of time allows you to plan extra time and leave a little earlier for your trip.

Ask your parent to show you how a navigation app works on his or her smartphone. You can probably request a state road map free from your state's department of transportation or equivalent.

## **Unit 12 Map Skills Assignment**

### **Google Maps, Google Street View**

We discussed in Lesson 2 how Google has taken on the project to map the entire world. You can see the results of this work in Google Maps. Another project by the same company is Google Street View. This involves hundreds of people taking pictures of roads and what is on either side of the roads to come up with a fairly continuous picture of what places look like from the street or road. In this way you can know the place you are looking for or find out what a certain property address looks like.

Ask your parent to help you find an address in Google Maps, then see if you can find the picture of the same address in Google Street View.

## **Unit 13 Map Skills Assignment**

### **State and National Park Maps**

The National Park Service and individual state park systems have produced maps of the parks to aid visitors in finding hiking trails, historic sites, and other features in the parks. They often have a list of trails that gives the length and level of difficulty of each. The trails on the map will usually show prominent features so hikers can know where they are, how much farther they have to go, and where campgrounds, visitor centers, and other services are located.

Find a National Park Service map of Yellowstone National Park. (Visit [NOTGRASS.COM/EWGLINKS](http://NOTGRASS.COM/EWGLINKS) to download a free PDF.) Locate these places on the map: Old Faithful, Mammoth Hot Springs, Mud Volcano, and Yellowstone Lake.

The next time you go to a state or national park, obtain a map and see how much useful information it gives you.

## Unit 14 Map Skills Assignment

### Ocean Maps

We usually think of land when we think of geography, but oceans cover most of the earth's surface and play a major part in the earth's story. A map of the ocean can tell you about coastlines and islands and indicate water currents. A map of the ocean floor can open up a fascinating world that few people ever see.

Study the world map at the front of this *Gazetteer* and answer these questions:

1. What is the largest ocean in the world?
2. Which continent has the point closest to Antarctica?
3. What two oceans are east and west of the Americas?
4. What two oceans are east and west of Africa?

## Unit 15 Map Skills Assignment

### Historic Maps

A good map will give you a representation of reality as of the date of its publication. However, as we noted in Lesson 4, geography doesn't stand still. What might have been true at the time of a map's publication might no longer be true. Countries change their names, borders change, small towns become big cities, new highways are built, and even entire countries get absorbed by other countries.

Historical maps also help us see how mapmaking technology and geographic knowledge have changed over time. However, historical maps are not necessarily a good source of information about the way things are now. Maps of the U.S.S.R., East and West Germany, and Czechoslovakia, for instance, might be interesting to look at but they won't help you know the current status of those areas. Those countries don't even exist anymore!

Look at the historic map on page 245 in the *Exploring World Geography Gazetteer* and answer these questions:

1. How important does the map portray Rome (represented as a circle around the word "Roma" with a king in the middle of the word)?
2. How is the rendering of the Mediterranean Sea inaccurate?
3. Is the dominance of Italy in the geography of the Mediterranean region portrayed accurately? Is this portrayal understandable given Italy's importance in Western Civilization and the history of the Roman Catholic Church?
4. How does the map need to be changed to relate to a modern person's worldview?

## Unit 16 Map Skills Assignment

### Ways People Use Maps

Maps are much more than interesting compilations of information. They do more than get people from here to there and give high school students geography assignments. Important, professional people use maps in many different ways as tools to do their work.

- Maps help city planners determine the best place to locate a new park or shopping center. Planners will want to keep a factory from being located on a wetland or too close to a residential area.



- Maps help people who are buying property to know where the property boundary lines are. Home buyers will want to know the floor plan of the house they are considering and the school district boundaries in a city or county. Maps help an election commission know in which precinct a new voter lives. State legislatures use maps in drawing congressional districts every ten years.
- Maps are essential for military activities. Commanders need to know the best way to get from Point A to Point B, where enemy targets are located, and obstacles they will have to eliminate or avoid.
- Some maps are predictive. For instance, they use past and current data to predict (guess) how a city will grow. These predictions influence street projects, the building of residential developments, and the planning of business districts. The discovery of a sinkhole or a community suffering a business downturn will send planners literally back to the drawing board.

Look at the map of Azerbaijan on page 3. In the southeast part of the country is the region of Nagorno-Karabakh. This region is majority Armenian. It is not part of Armenia, but many of its people want to be. The region is mountainous. What would be some geographic obstacles if Armenia wanted to provide arms or other assistance to the people of this region?

Look at the map of Taiwan on page 164. The Strait of Taiwan, which lies between it and China, is about 100 miles wide. How is the strait a protective barrier between China and Taiwan and what would be some possible ways that either side could overcome that barrier in military or economic terms?

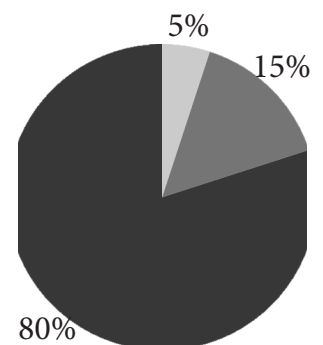
## Unit 17 Map Skills Assignment

### Graphs and Charts

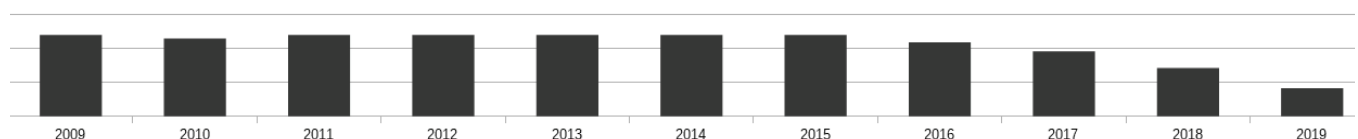
This assignment is not about reading maps, but it deals with how to portray information that is related to what a map displays.

Numbers tell us information that we like to know. However, a list of numbers is sometimes difficult for our minds to process. We like to see visual representations of this information. One main use of these representations is to show comparisons: how large one group is compared to another, or how much something has grown over time

A pie chart is a good way to show how various parts make up the whole. In Lesson 37, we said that 80% of the people of Malawi are Christian, 15% are Muslim, and the rest (some 5%) are adherents of folk religions or other beliefs. This is what those figures look like on a pie chart. How does a chart like this help you visualize the relationship of the numbers involved?



A bar chart can compare values from place to place or over time. For instance, the bar chart below shows changes in crude oil production in Venezuela over a ten year period. After relative stability for several years, political and economic factors led to a sharp decline.



A graph is another way to show change in amounts over time. A graph shows two variables. The x-axis or horizontal axis represents time, while the y-axis or vertical axis represents amount. Look at the graph of world population on page 804 in *Part 2*. We see that about the year 1800 the world population was one billion. As more people had more children and as health care has improved, the world population has grown much more quickly in more recent years.

## **Unit 18 Map Skills Assignment**

### **Maps Showing Human Characteristics**

Maps can use colors, arrows, and other to show trends in human behavior. Look at the map at the back of the *Gazetteer* that shows the relative concentration of population around the world.

1. How does this map use color to illustrate population concentration?
2. What are five areas on the map (either countries or regions) that stand out to you as having a large population?

## **Unit 19 Map Skills Assignment**

### **Using an Atlas**

An atlas is a collection of maps, usually around a theme, such as a collection of maps of countries of the world, geographic maps of the United States, or a road atlas of the United States. Your family might have one or more atlas in your home. A gazetteer such as the one that is part of this curriculum provides additional information besides the maps.

Here are two important attributes to look for in an atlas. One, be sure the atlas provides the information you are looking for. For instance, a U.S. road atlas will probably not show where crops are grown, while a gazetteer of the states might not show the highways you want to take on a trip.

Two, make sure the atlas is large enough to give you all of the information you want. For instance, a small or pocket road atlas might be able to get you on the main road; but it might not be large enough to show a federal or state highway you need to take on your trip or the interchange you have to navigate carefully.

Look at an atlas in your home or, when you can, at the library. For what is it helpful, and for what would it not be helpful?

## **Unit 20 Map Skills Assignment**

### **Satellite Images**

You will find it helpful—and fascinating—to become familiar with satellite and high altitude images of the earth's surface. On the Internet you can find images of your house and other small areas, and you can also see images of large areas of cities or parts of states. The quality of satellite imagery has increased greatly over the decades, providing more and more detail of the surface of the earth and the things people have built on it.

Mapping apps, such as Google Maps, and various NASA websites, including <https://worldview.earthdata.nasa.gov>, provide easy access to satellite imagery.

Look at the satellite images in this curriculum on pages 36 and 133 in *Part 1* and pages 641 and 666 in *Part 2*. What can you see, and what can you not see?



As you look at these images, be amazed at the accuracy of maps that cartographers drew before they had high altitude perspectives.

## **Unit 23 Map Skills Assignment**

### **Mental Maps (Part 1)**

What is your image of Los Angeles, California? Movie stars? Sunshine and palm trees? Wall to wall people and endless highways? Homeless people and smog?

What are your mental images of other places in the world: Mumbai, India; the Australian Outback; Siberia in Russia; the Midwestern United States? What about “that part” of your town or city where you never go, especially at night?

Whatever you think of a place is your mental map of it. It is the perception you have of that place that you carry around with you. The concept of mental maps came from a sub-discipline of geography called behavioral geography. Mental maps relate to human geography because they are part of how people interact with geography. Mental maps also relate to worldview because they are part of how you perceive and understand the world. Mental maps are important because they are the aspect of geography that you have with you all of the time. They influence your thoughts and actions on a continual basis.

**Assignment:** Choose a city, region, or country. On a blank sheet of paper, write the name of the location you chose. Then either write words you associate with that place or draw pictures that illustrate that place.

## **Unit 24 Map Skills Assignment**

### **Mental Maps (Part 2)**

#### **Mental Map of Physical Geography**

A mental map of your physical surroundings helps you be aware of what is going on around you and where you are in relation to it. It can help prevent the question, “Are we there yet?” because you know how long the trip that you are taking will last. A mental map can help in practical ways. If you want to go to the nearest state park, when you get to the end of your street do you turn right or left? You need to become used to knowing these things and making these decisions because your parents won’t always be there to handle these things for you.

It is helpful to know north, south, east, and west wherever you are. For instance, I know that Nashville is west of my home. I want to try to avoid driving to Nashville in the late afternoon because I don’t want to drive for an hour and a half looking into the sun.

Having a compass in your car helps you become familiar with these cardinal directions.

It is also helpful to learn these directions when you are visiting a new place so you can have an orientation or a spatial awareness of the geography of that place.

It’s good to know the direction from which weather patterns come to where you live, so you will know where to plant trees as a windbreak and what side of the house will show weather wear most quickly.

Having an accurate mental map is not automatic. You can develop a good sense of direction, but it takes effort. You have to notice details. You can tell by the sun and by the time of day which

way is east and which way is west. This will help you know north and south. If you are driving on West Main Street toward the sun, you can be pretty sure that East Main Street is behind you.

Sometimes it's hard to get an accurate mental map. For instance, when I am driving home from town, I take a left turn to go across a bridge. It feels as though I am turning east, but on a map that left turn takes me due north. The road that leads to that left turn starts out going south, but it turns east so gradually that I don't think about that left turn taking me north. I have to think about it, though, because I want an accurate mental map.

Looking on a map at the route of a trip or the layout of city streets helps get directions into your head so that you have a sense of where things are around you.

Besides noticing where the sun is at sunrise or sunset, you can find north at night by locating the North Star. That direction will still be north in the daylight, and you can go from there.

**Assignment:** Determine the cardinal directions around your house by looking at the sun or the North Star. When you are traveling, develop the habit of identifying the cardinal directions whether you are riding in a car or walking on a city sidewalk. Notice how far away things are, such as a hill or a store three blocks away. Get a sense in your mind of how long a mile is. You can get a good idea on a straight stretch of Interstate highway by noticing the sign on the Interstate that says "Exit - 1 Mile" and then noticing how far away the exit itself is. You can also watch the odometer on a car to see how far a mile is. If you're familiar with a football field, you can know how far 300 feet (100 yards) is, because that is the length of a football field from goal line to goal line.

## **Unit 25 Map Skills Assignment**

### **Mental Maps (Part 3)**

#### **Mental Maps of Different Parts of the World**

When you hear about or think about Hanoi, Vietnam; Paris, France; or Quebec, Canada, what mental image do you have, if any? Does Cairo, Egypt, look like the town where you live? Is Stockholm, Sweden, just like Tallahassee, Florida, only bigger and colder?

You have somehow learned how to think about those places, but is your mental map accurate? On what do you base that mental image? Sometimes we can base our mental images on uninformed or prejudiced thoughts and concepts.

We have to be open to learning about different places to develop accurate mental maps of those places. Reading descriptions, looking at pictures, and watching videos can help increase your knowledge of other places. The best way to learn about other places is to travel there. Perhaps you will be able to do this, although you might not get to travel everywhere you hear about (or read about in this curriculum).

**Assignment:** With your parent's permission, find a book, website, or video about the place you chose in the Unit 23 Map Skills Assignment. How was your mental map accurate, and how was it inaccurate?

## **Unit 26 Map Skills Assignment**

### **Mental Maps (Part 4)**

Developing accurate mental maps helps you have an accurate understanding of what is going on in the world. When you hear about a news event, you will want to know if the event is 50 miles away or 3,000 miles away. If a missionary speaks at your church, you will want to know where in the world that missionary serves and what issues he faces because of the geography—both physical and human—where he lives.

Having accurate mental maps will help you be a more effective and engaged citizen of your community and the world.

**Assignment:** Develop a mental map about two items in the news and see how that understanding of geography—the place itself and the region of the world in which it lies—helps you understand the news item better. With your parent’s permission, you might be able to find backgrounder articles that tell about the place, or you might look in an encyclopedia, gazetteer, or other resource.

## **Unit 27 Map Skills Assignment**

### **Mental Maps (Part 5)**

Write a paragraph summarizing what mental maps are and why they are important. Give an example of a mental map that you use frequently.