

The Continents

The Earth's land is divided into seven large areas called continents. A **continent** is a large area of land separated from other areas by water, mountains, or other natural features.

Asia is the largest continent. It covers one-third of the Earth's surface. Asia also has the largest population. Over half of the people on Earth live in Asia! The ten highest mountain peaks in the world are in Asia. **Europe** is separated from Asia by a mountain range. Europe is a crowded continent. It is the world's second-smallest continent, but it has the second-largest population.

Africa is the second-largest continent. The equator passes through the middle of the continent, so it has hot weather throughout the year. **Antarctica** is the coldest, driest, and windiest continent. Antarctica is considered a frozen desert. It gets only 8 inches of rain a year. Since it is very cold, no one lives there year round. **North America** is the only continent that has every kind of climate.

South America is home to the world's biggest rainforest and the world's biggest river. **Australia** is the largest island. It is also the smallest continent. Because Australia is entirely south of the equator, it is called "the land down under." Two-thirds of Australia is desert.

Models of the Earth

Geographers use different models of the Earth to show the features of our planet's surface.



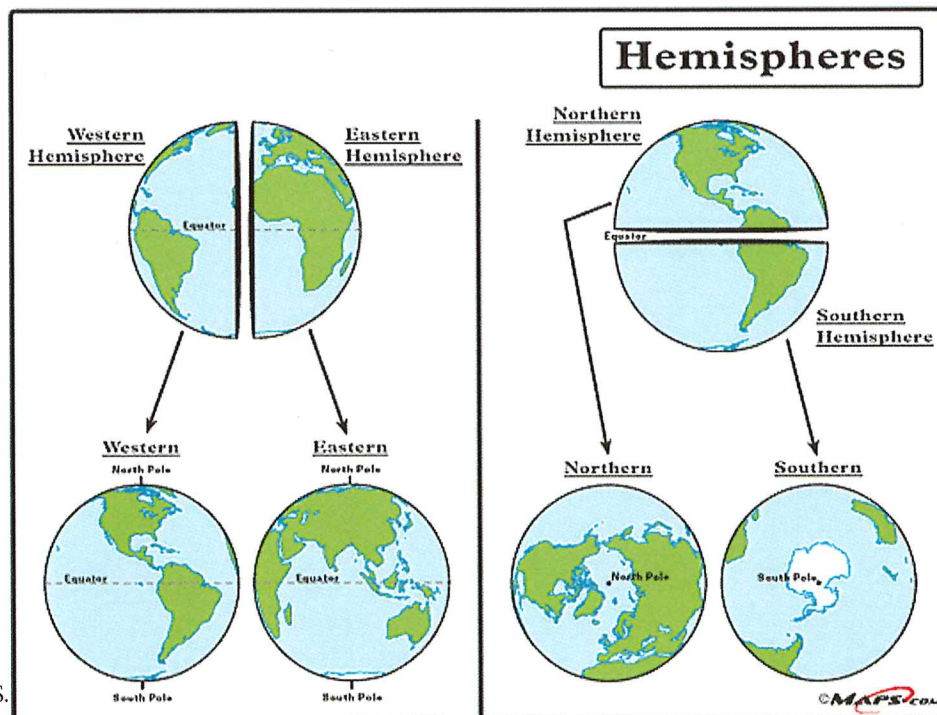
Globes

The Earth is so large that we cannot see all of it at once. A model of the earth helps us to see what the whole Earth looks like. A **globe** is a model of the Earth. A globe is shaped like a sphere, or a ball, just like planet Earth. The areas at the top and bottom of the globe are called the **poles**. The North Pole is at the top, and the South Pole is at the bottom. The poles are the coldest places on Earth.

Because it is round, you can only see half of the Earth at time on a globe. The part of the globe that you can see is called a **hemisphere**, which means half of a sphere.

We can divide the Earth into a top half and a bottom half along the **equator**. The top half of the globe is called the Northern Hemisphere and bottom half is called the Southern Hemisphere.

We can also divide the Earth into two different equal parts if we split it into the eastern side and the western side. These two halves are called the Eastern Hemisphere and the Western Hemisphere. The line that divides the Earth into these two hemispheres is the **Prime Meridian**.



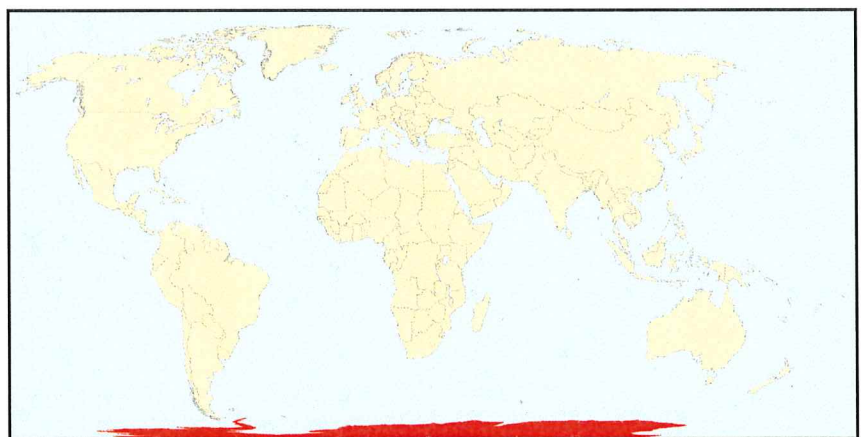
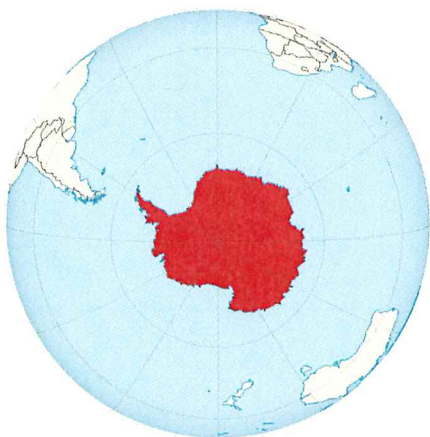
Maps

A map is another way to show the Earth's land and water. **Maps** are pictures of the Earth's surface. They show the distance, direction, and size of places. Maps are a way of showing part of the Earth's surface on a flat piece of paper. A globe always has to show the entire Earth. A map can show the entire Earth, or just a small part of it. A map can show just one continent, or one country, or one city. It can even show just a tiny part of one city, like an amusement park. A map that shows just part of the Earth can show that area with more detail.

Problems with Maps and Globes

Because a map is not the same shape as the actual Earth, some of the shapes on the map are distorted. **Distortion** is when an object loses its original shape and size. Imagine cutting the outside of the globe so you can flatten out the sphere into a flat map. Geographers usually cut the globe through the Pacific Ocean because it's a big area without any land. So part of the Pacific Ocean is on the left side of the map and part is on the right side of the map instead of being connected together. The Pacific Ocean is distorted on a map.

At the bottom of the globe, geographers have to cut through some part of the land. Look at Antarctica on a globe. The continent is shaped almost like a circle. Now look at Antarctica on a map. Antarctica on a map looks long and skinny because it has been cut apart and flattened out. Antarctica is very distorted on a map!

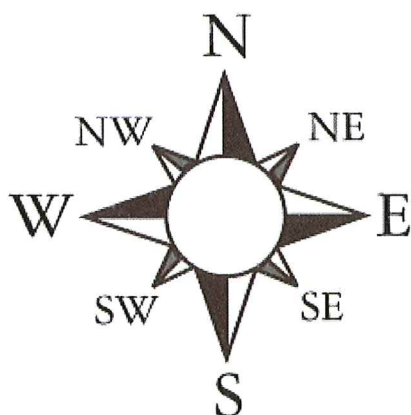
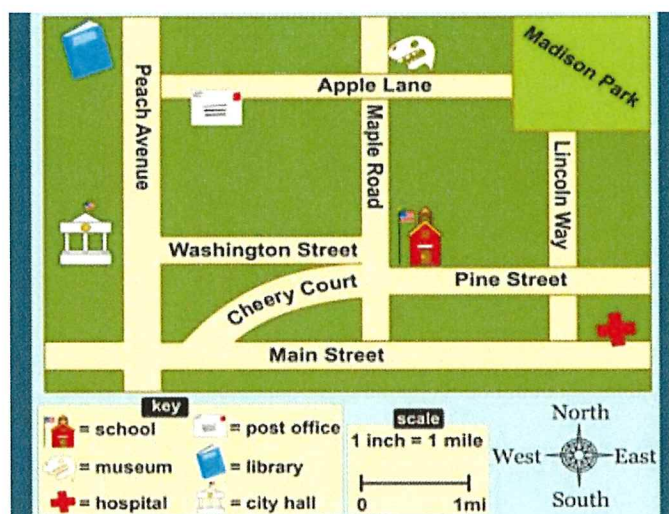


Globes help us understand the shape of our planet. Because globes are the same shape as the Earth, geographers can create very accurate globes without worrying about distortion. But globes have some disadvantages. Because globes represent the entire Earth, it is very hard to show much detail on a globe. Huge continents and oceans have to be made much smaller in order to fit on a sphere that will fit inside your room. That means that only the biggest lakes and rivers will show up on a globe. Smaller objects will be too tiny to see on even the largest globe. On the other hand, maps can zoom in on objects that are too small to see on a globe. Maps can show just a small part of the entire Earth, such as a city or even a park, with more detail.

Another disadvantage of globes is that their size and shape make them difficult to carry around. Flat maps are much more practical for everyday situations because they are much easier to carry around.

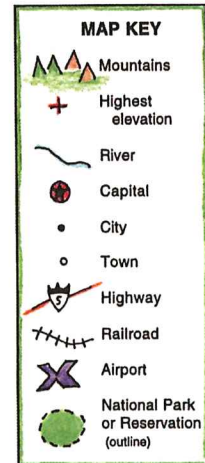
Parts of a Map

All maps have certain basic parts. Every map has a **title** that tells what the map is about. Every map will have a **compass rose**, too. The compass rose shows direction. The compass rose helps you match the direction of the piece of paper to the actual direction on the Earth.



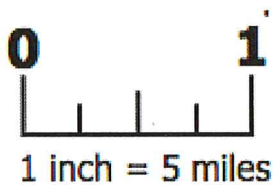
Cardinal directions are the four main parts on a compass: north, south, east, and west. On most maps, the top arrow points to north and the bottom arrow points to south. West is on the left side, and east is on the right side. The points in between the cardinal directions are called intermediate directions. The **intermediate directions** are northwest, northeast, southwest, and southeast.

The objects on a map are shown using colors or **symbols**. Symbols are pictures on a map that stand for something in the real world. Maps use symbols to show many things in a small space. Symbols make maps easy to read.



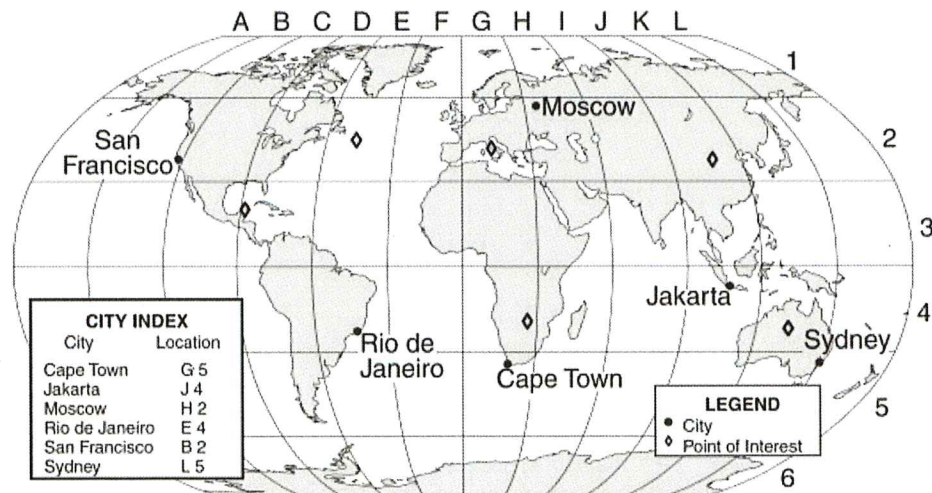
The **map key** shows what symbols on the map mean. The key is usually in a box in the bottom corner of the map. Mountains may be marked with little triangles. A blue line might represent a road or a river. The key shows a small picture of each symbol used on the map along with the meaning of each symbol.

To fit a big place on a map, everything must be drawn smaller than it is in real life, or scaled down. When scaling down a map, every part of the map is scaled by the same amount. The map **scale** will show how the distance between two locations on a map compares to the distance in real life. Most maps use a scale where one inch equals a certain number of miles in the real world. For instance, on a map of New York City, the scale might be one inch equals five miles. In other words, to get from one place to another that is one inch apart on the map, you would really go five miles! On a world map, one inch might equal 500 miles or more.



Mapmakers use different types of scales. A **linear scale** uses a straight line. It looks like a number line or a ruler. A **word scale** just uses words. For example, the scale might say "1 inch = 500 miles."

Maps usually have a **coordinate grid** to help you find places quickly. The coordinate grid divides the map into spaces. A grid uses lines to make rows and columns. The rows go from side to side. The columns go from top to bottom. Every place on a map is in just one row and one column. Geographers use pairs of letters and numbers to quickly identify a place.

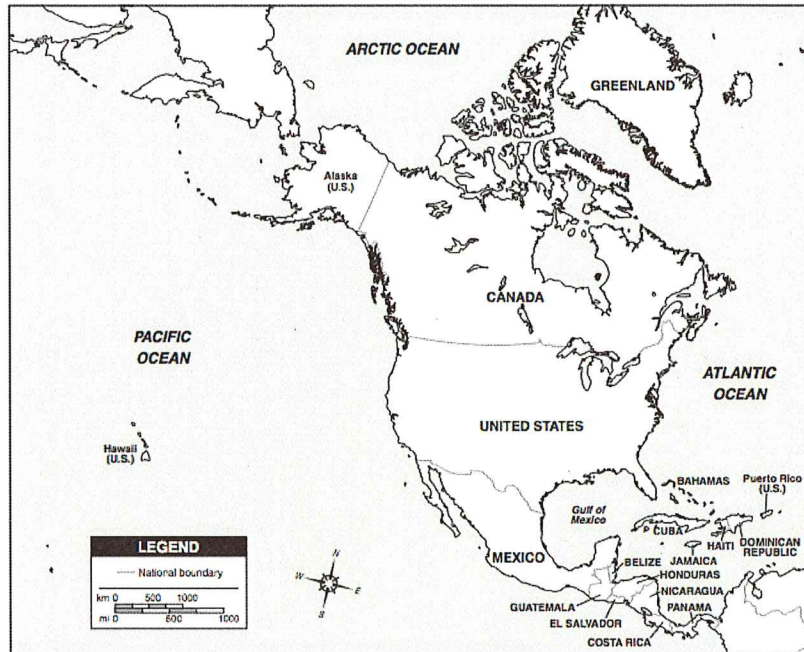


Types of Maps

Geographers use different kinds of maps depending on what they are studying.

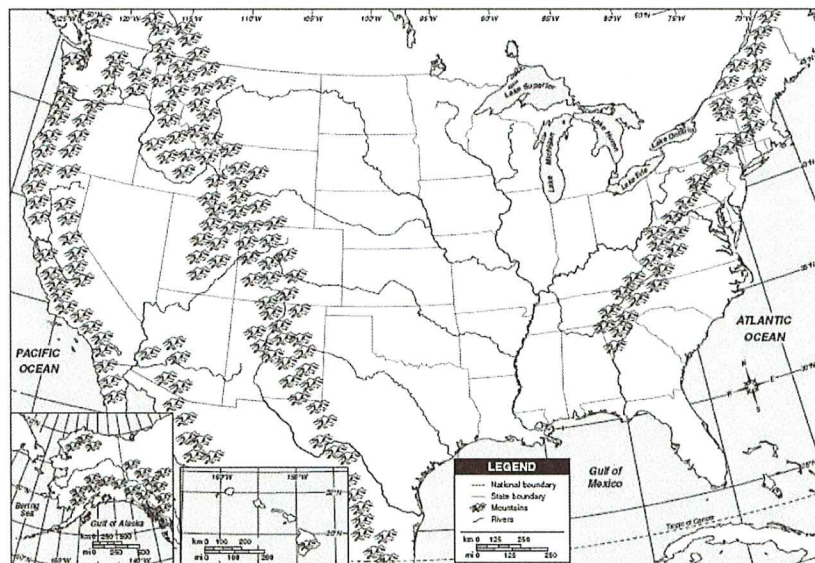
Political Maps

A **political map** shows the borders between countries or states. They can show other human features, such as cities, capitals, or roads. This political map shows the countries of North America. Canada is to the north of the United States and Mexico is to the south of the United States. Several much smaller countries are located in the Caribbean, the group of islands near North America.



Physical Maps

Maps that show natural features are called **physical maps**. Physical maps show landforms, such as mountains, valleys, and plains. Physical maps also show bodies of water, such as rivers, lakes, and oceans. Mapmakers use different colors, shading, or symbols to show the different landforms.



Other Kinds of Maps

Special purpose maps show just one kind of information. **Climate maps**, for example, show the temperature or how much rain falls in different parts of the world. **Population maps** show how many people live in different areas. **Elevation maps** show the height of the land.

