



Population Geography

Main Ideas

- People are not distributed equally on the earth's surface.
- The world's population continues to grow, but at different rates in different regions.

Places & Terms

birthrate	population pyramid
fertility rate	push-pull factors
mortality rate	population density
infant mortality rate	carrying capacity
rate of natural increase	

A HUMAN PERSPECTIVE In 1999, the world's population reached 6 billion people. To get an idea of how many people that is, consider this:

If you had a *million* dollars in thousand dollar bills, the stack would be 6.3 inches high. If you had a *billion* dollars in thousand dollar bills, the stack would be 357 feet high, or about the length of a football field including the end zones. Now multiply by 6. Six billion dollars would be almost 6 football fields high.

At the world's natural growth rate in 1999, that 6 billion population figure was reached by the births of 230,000 people each day.

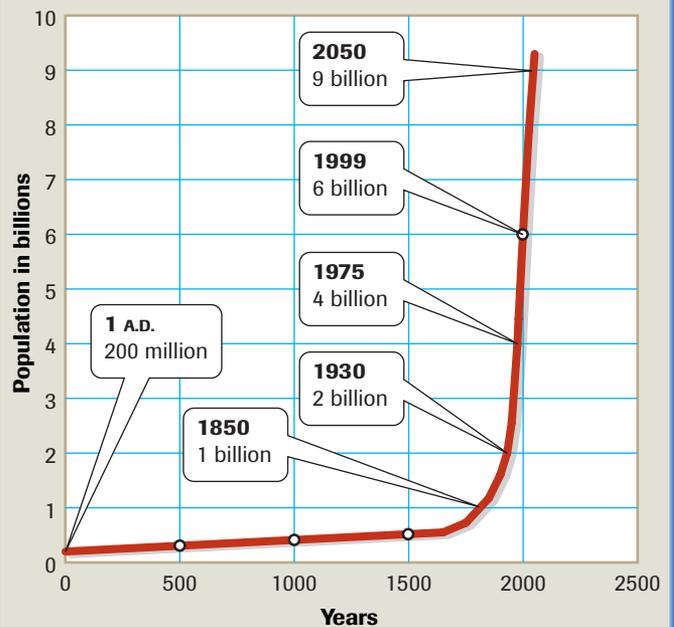
Worldwide Population Growth

The earth's population hit the one billion mark in the early 1800s. As the world industrialized, people grew more and better food and improved sanitation methods, and the population of the world began to soar. As more and more women reached childbearing age, the number of children added to the population also increased. As you can see in the diagram at the right, by 1930 two billion people lived on the earth. Notice that the number of years between each billion mark gets smaller.

BIRTH AND DEATH RATES A population geographer studies aspects of population such as birth and death rates, distribution, and density. To understand population growth, geographers calculate several different statistics. One is the **birthrate**, which is the number of live births per thousand population. In 2000, the highest birthrate in the world was more than 54 per thousand in Niger, and the lowest rate was about 8 per thousand in Latvia. The world average birthrate is 22 per thousand.

Another way to study population is to look at the fertility rate. The **fertility rate** shows the average number of children a woman of childbearing years would have in her lifetime, if she had children at the current rate for her country. A fertility rate of 2.1 is necessary just to replace current population. Today, the worldwide average fertility rate is about 3.0.

World Population Growth



SOURCE: *The World Almanac*, 2000

SKILLBUILDER: Interpreting Graphs

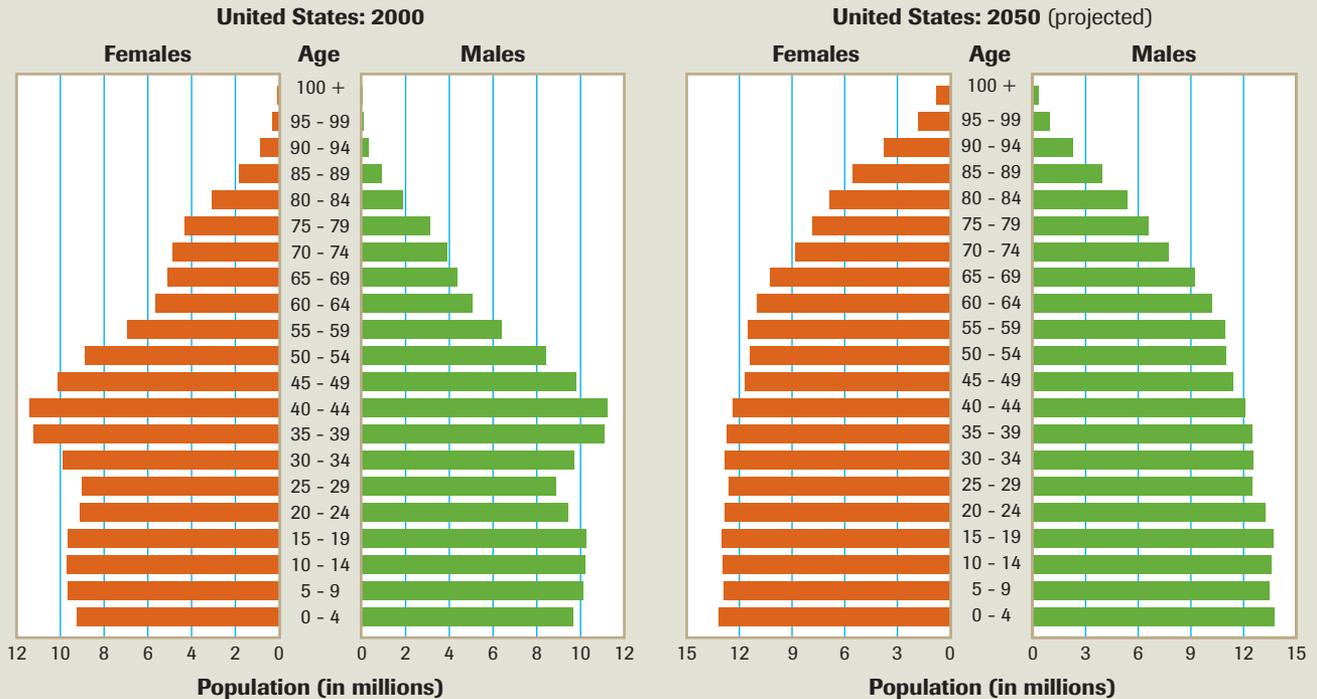
- ANALYZING DATA** How long did it take for the population to reach one billion?
- MAKING GENERALIZATIONS** How have the intervals between increases changed?

U.S. Population Pyramids, 2000 and 2050

A population pyramid presents a quick picture of a country's population distribution by age and sex. The effects of events in society can also be seen. Notice that in the year 2000 pyramid there is a bulge between ages 35 to 49. This reflects the "baby boom" generation born after World War II.

SKILLBUILDER: Interpreting Graphs

- ANALYZING DATA** How old are the people in the "baby boom" generation in the 2000 pyramid?
- DRAWING CONCLUSIONS** Why will the numbers for the very elderly (85+) increase so much by the year 2050?



SOURCE: U.S. Census Bureau

The **mortality rate**—also called the death rate—is the number of deaths per thousand people. In general, a society is considered healthy if it has a low mortality rate. However, some healthy nations have higher mortality rates because they have large numbers of elderly people.

For this reason, geographers also look at infant mortality rates in measuring how healthy the people of a nation are. The **infant mortality rate** shows the number of deaths among infants under age one per thousand live births. In the 1800s, the worldwide infant mortality rate was about 200 to 300 deaths per thousand live births. At the beginning of the 21st century, improved health care and nutrition led to a much lower rate worldwide. However, some parts of the world still record as many as 110 infant deaths per thousand. To find the rate at which population is growing, subtract the mortality rate from the birthrate. The difference is the **rate of natural increase**, or population growth rate. **A**

POPULATION PYRAMID Another way to analyze populations is to use a **population pyramid**, a graphic device that shows sex and age distribution of a population. A population pyramid allows geographers to examine how events in society, such as wars, famine, or epidemics, affect the population of a country or region. Study the population pyramids shown above to learn how to interpret these graphics.



Seeing Patterns

A What will the rate of natural increase be like if the birthrate is high and the mortality rate is low?

Population Distribution

The billions of people in the world are not distributed equally across the earth. Some lands are not suitable for human habitation. In fact, almost 90 percent of the world's population lives in the Northern Hemisphere. One in four people in the world lives in East Asia, and one of every two people lives in either East Asia or South Asia. Several factors, including climate, altitude, and access to water, influence where people live.

HABITABLE LANDS Almost two-thirds of the world's population lives in the zone between 20° N and 60° N latitude. Some of the lands in this zone have suitable climate and vegetation for dense human habitation. They are warm enough and wet enough to make agriculture possible. In addition, populations are concentrated along coastal regions and river valleys. The lightly populated areas are in polar regions, heavily mountainous regions, and desert regions. **B**

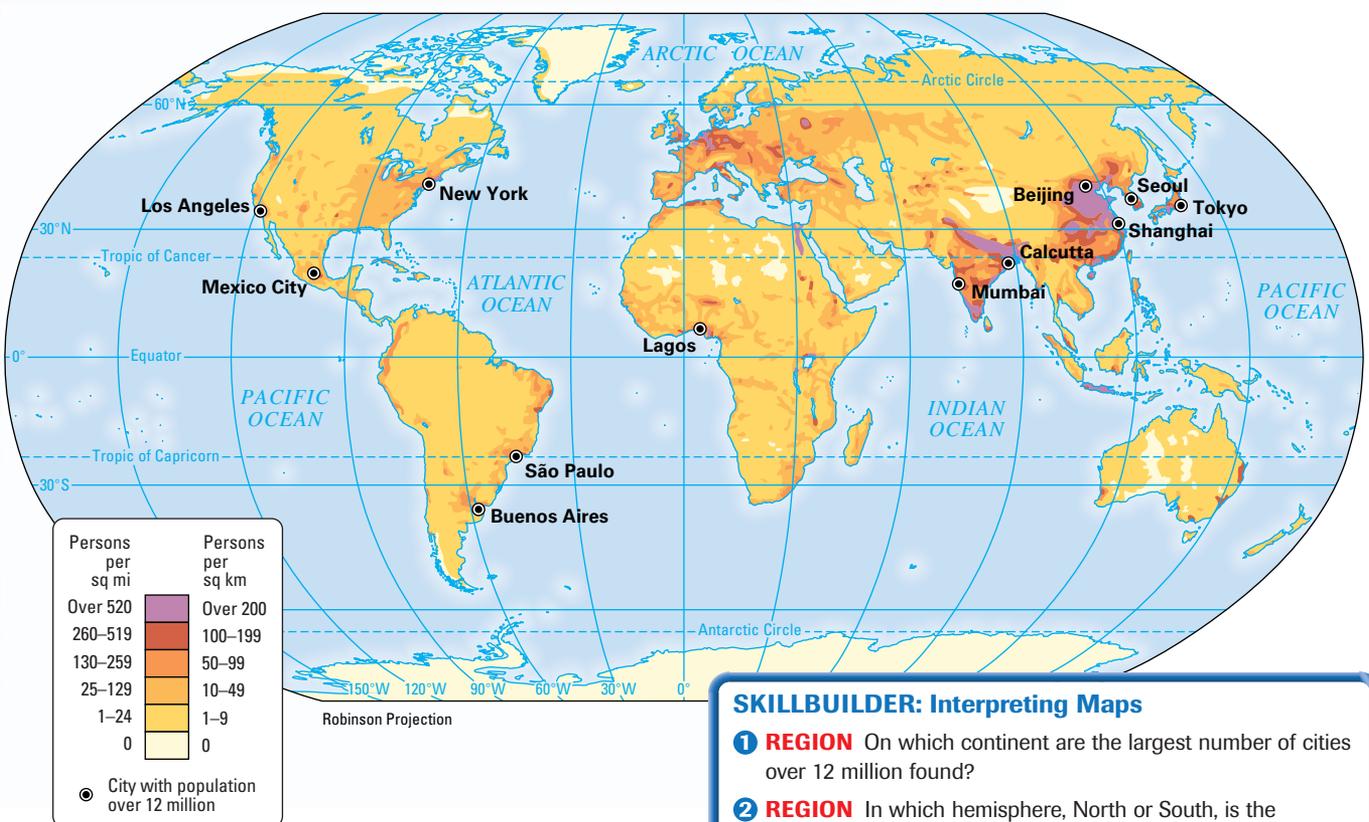
URBAN-RURAL MIX Currently, more than half of the world's population lives in rural areas, but that number is changing rapidly. More people are moving into cities—particularly cities with populations of more than one million people. Twenty-six giant cities, called megacities, are home to a total of more than 250 million people. The largest of these is Tokyo, with more than 28 million inhabitants. These huge cities struggle with overcrowded conditions and immense demand for water and sanitation. You'll learn more about cities and their populations in the Urban Geography section of this chapter.



Seeing Patterns

B Why are populations concentrated along coastal regions and river valleys?

World Population Density





MIGRATION The large-scale migration of people from one location to another also alters the distribution of population. Reasons for migrating are sometimes referred to as **push-pull factors**. Push factors are those that cause people to leave their homeland and migrate to another region. Environmental conditions, such as drought or other natural disasters, are examples of push factors. Other push factors are political, such as war or the persecution of certain groups of people for ethnic or religious reasons. For example, more than one million Rwandans left their country for other parts of Africa in the wake of a civil war there in 1994. Pull factors draw or attract people to another location. Countries with good economic opportunities and high salaries are the likely destinations for migrants. Favorable climate is another pull factor. ◀

PLACE Nanjing Road in Shanghai, China, is considered one of the busiest streets in the world. **What problems do people in overcrowded cities face?**



Making Comparisons

▶ Do you think push factors or pull factors result in larger migrations?

Population Density

To understand how heavily populated an area is, geographers use a figure called **population density**. This figure is the average number of people who live in a measurable area, such as a square mile. The number is reached by dividing the number of inhabitants in an area by the total amount of land they occupy.

Because population is not distributed evenly across the land, the number may be misleading for an entire nation. Certain areas may be densely populated, while others are quite thinly populated. For example, according to the 1990 census, the population density of the United States was 70.3 people per square mile. But as you can see on the population density table on the next page, Alaska—with its huge land area and small population—had a density of one person per square mile. On the other hand, New Jersey, with a small land area and large population, had a very high density at 1,098 people per square mile. Remember, too, that population density may change over time.

Regional Population Density

Region	Highest Density (per square mile)	Lowest Density (per square mile)
United States and Canada	New Jersey 1,098	Alaska 1.10 Nunavut 0.01
Latin America	Barbados 1,560	French Guiana 6.00
Europe	Monaco 45,333	Iceland 7.00
Russia and the Republics	Armenia 331	Kazakhstan 14.00
Africa	Rwanda 711	Namibia 6.00
Southwest Asia	Bahrain 2,594	Saudi Arabia 26.00
South Asia	Maldives 2,469	Bhutan 48.00
East Asia	South Korea 1,234	Mongolia 4.00
Southeast Asia, Australia, and Oceania	Singapore 16,714	Australia 6.00

SOURCE: Population Reference Bureau 2000 World Population Data

SKILLBUILDER: Interpreting Charts

- ANALYZING DATA** Which region seems to be the most densely populated?
- MAKING INFERENCES** Why might Korea be more densely populated than China, which is in the same region?

CARRYING CAPACITY Another aspect of population density statistics is the ability of the land to support a population. **Carrying capacity** is the number of organisms a piece of land can support. A region with fertile land may be able to support far more people than one with land of poor quality or with little land available for cultivation.

The level of technology of a group living on the land may affect carrying capacity. Improved farming techniques, such as irrigation, use of fertilizers, and mechanized farm equipment, will generally increase the carrying capacity of land.

In some locations, few if any people make their living by farming. However, other aspects of their economy allow a small area of land to support a large number of people. Notice the density of Singapore shown in the chart at left. A city state located at the tip of Malaysia, Singapore is a center of international finance and shipping. The wealth these activities bring allows people to import food. Thus, Singapore is able to support millions of people even though it has little farmable land. **D**

In the next section, you'll learn how the world's population forms into political units.



Using the Atlas
D Use the map on pages A22–A23 to find the location of Singapore. On what bodies of water is Singapore located?

SECTION 2 Assessment

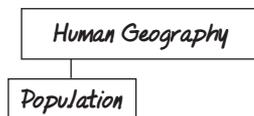
1 Places & Terms

Explain the meaning of each of the following terms.

- birthrate
- mortality rate
- rate of natural increase
- push-pull factors
- population density

2 Taking Notes

PLACE Review the notes you took for this section.



- How does a population pyramid help you understand population in a place?
- What factors influence where people live?

3 Main Ideas

- How is the rate of natural increase determined?
- Why must the population density figures for a country be used with caution?
- Where does the majority of the world's population live?

4 Geographic Thinking

Making Inferences What role has industrialization played in population growth?
Think about:

- infant mortality rate
- improved living conditions

S See Skillbuilder Handbook, page R4.



SEEING PATTERNS Choose one continent to study on the satellite image on page 88. Compare the satellite image with an atlas map of the same area. Write an **explanation** of which landforms or water bodies have played a part in the distribution of population that you see in the satellite image.