CHAPTER 3

Human Geography

ESSENTIAL QUESTION

How do natural resources affect a country's population distribution and economy?

CONNECT Geography & History

Use the satellite image and the timeline to answer the following questions.
1. How much did the world's population grow between 1 A.D. and 2000?
2. How different would this image have appeared when the population of the world hit one billion?

1000 B.C.

History

- 1000 B.C. Bantu migrations in Africa

Geography

1 A.D. Total world population hits 300 million.

History

180 Roman Empire at its peak →
The gold color indicates a concentration of lights.

The blue color indicates areas where little or no vegetation is found.
**Key Ideas**

**BEFORE, YOU LEARNED**
The interlocking physical systems of the Earth make life on the planet possible.

**NOW YOU WILL LEARN**
People are not equally distributed on the Earth’s surface.

**Vocabulary**

**TERMS & NAMES**
- **population** the number of people who live in a specified area
- **birth rate** the number of births per 1,000 people per year
- **death rate** the number of deaths per 1,000 people per year
- **rate of natural increase** the death rate subtracted from the birth rate
- **population density** the average number of people who live in a certain area
- **urbanization** the process of city development
- **demographer** a geographer who studies the characteristics of human populations

**BACKGROUND VOCABULARY**
- **habitable lands** lands suitable for human living
- **urban** relating to, or located in, a city
- **rural** relating to the country or farming

**Visual Vocabulary** Urbanization (Los Angeles, California)

**Reading Strategy**
- Re-create the web diagram shown at right. As you read and respond to the **KEY QUESTIONS**, use the diagram to help you identify important details to compare and contrast population growth, distribution, and density.

See Skillbuilder Handbook, page R9
The Geography of Population

Connecting to Your World

Do you know how many people there are in the world? About 6.5 billion! In the time it takes you to read this paragraph, another 140 people will be born somewhere in the world. Where do the 6.5 billion people live? More than half of them live in Asia. In fact, over 2 billion are located in just two countries—China and India. The world’s third most populous country is the United States, which has over 300 million people.

Population Growth

KEY QUESTION What challenges does rapid population growth cause?

Geographers use the term population to mean the total number of people who live in a specified area. The population of the world today is more than 6 billion. It did not reach one billion until about 1804. Yet, over the last 200 years, the number has jumped by some 5 billion. What factors are responsible? The most important factors were increases in food production, discoveries in medical science, and improvements in sanitation. As a result, more babies survived and people lived longer, healthier lives.
Measuring Growth Geographers measure population growth by figuring out how many people have been born and how many have died, how many have moved into and how many have moved out of a specific area. The birth rate measures the number of births per 1,000 people per year. The death rate measures the number of deaths per 1,000 people per year. To find out the rate of natural increase, the death rate is subtracted from the birth rate. This is the population growth that results from natural processes of birth and death.

Today, in most of Asia, Africa, and South America, the rate of natural increase is very high. Farming is a major way of life in these regions, and families need many children to help with the farm work. In most countries of Europe and North America, and also in Japan, the population growth rate is much lower. In these countries, most people live in cities and have few children, making their rate of natural increase much lower than in regions with a higher rural population.

Growth Challenges The expanding population creates serious challenges. The Earth’s resources are limited and not evenly distributed throughout the world. In many countries, it is difficult just to provide the basic needs such as food, clean water, and housing. Many people move from rural areas to cities to make a better life for themselves and their families. If they cannot find housing, they often build houses on the outskirts of cities with whatever materials they can find. Some of these squatter settlements become very large, even as large as the city itself, but they often lack clean water, sewers, or paved roads.

**SUMMARIZE** Explain the challenges of rapid population growth.
Population Distribution and Density

KEY QUESTION What are the factors that influence where people choose to live?

As you read earlier, people are not distributed equally around the world. Where they choose to live is partly affected by climate, elevation, and resources such as fertile soil and fresh water. Today, the largest populations are found in what are called habitable lands.

Population Distribution Only a small portion of the Earth’s surface is suitable for humans to settle. Almost 75 percent of the Earth’s surface is water. In addition, between 35 and 40 percent of the Earth’s land is too hot, too cold, too wet, or too dry for large-scale settlement. Most people live in the Northern Hemisphere, between 20° North and 60° North latitude. Fewer people live in the Southern Hemisphere because there is less land available. The edges of continents are more heavily populated than interior lands. Many people choose to live in coastal lands and in river valleys because these locations offer people opportunities to earn a living. About two-thirds of the world’s population is found within 300 miles of ocean waters.

COMPARING Urban Populations

More than 400 cities have populations of one million or more. Many cities in Africa and Asia, such as Lagos, Nigeria, and Mumbai, India, are expected to grow rapidly in the 21st century.

Top 7 Most Populous Cities

<table>
<thead>
<tr>
<th>City</th>
<th>Population (in millions*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo, Japan</td>
<td>34.45</td>
</tr>
<tr>
<td>Mexico City, Mexico</td>
<td>18.07</td>
</tr>
<tr>
<td>New York City, U.S.A.</td>
<td>17.85</td>
</tr>
<tr>
<td>São Paulo, Brazil</td>
<td>17.10</td>
</tr>
<tr>
<td>Mumbai, India</td>
<td>16.09</td>
</tr>
<tr>
<td>Kolkata, India</td>
<td>13.06</td>
</tr>
<tr>
<td>Shanghai, China</td>
<td>12.89</td>
</tr>
</tbody>
</table>

CRITICAL THINKING

Compare and Contrast What is the total population of the Indian cities listed? How does that compare with the population of Tokyo?
Population density is different from population distribution. Population distribution shows where people live. Population density shows on average how many people are living in a specific size area such as a square mile or square kilometer. The density number helps explain how crowded an area is.

To find the population density number, add up the total number of people living in an area and divide by the total amount of land they occupy. Some areas of Earth are very lightly populated and others are quite densely populated.

**Activity**

**Calculating Population Density**

**Materials**
- a calculator
- paper and pencil

1. Review the paragraph at left to see how population density is calculated.
2. Use the information below to calculate the population density for eight countries.
3. After you have completed your calculations, create a bar graph showing the population densities of the eight nations.

<table>
<thead>
<tr>
<th>Country</th>
<th>Area (km²)</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>647,500</td>
<td>31,056,997</td>
</tr>
<tr>
<td>Brazil</td>
<td>8,511,965</td>
<td>188,078,227</td>
</tr>
<tr>
<td>Chad</td>
<td>1,284,000</td>
<td>9,944,200</td>
</tr>
<tr>
<td>Finland</td>
<td>338,145</td>
<td>5,231,372</td>
</tr>
<tr>
<td>France</td>
<td>547,030</td>
<td>60,876,136</td>
</tr>
<tr>
<td>Iraq</td>
<td>437,072</td>
<td>26,783,383</td>
</tr>
<tr>
<td>Thailand</td>
<td>514,000</td>
<td>64,651,595</td>
</tr>
<tr>
<td>United States</td>
<td>9,631,420</td>
<td>298,444,215</td>
</tr>
</tbody>
</table>

Source: CIA World Factbook, 2006
Rural vs. Urban  Today, about half the world’s population lives in urban areas, such as cities and their suburbs. This is a big change from a hundred years ago. Then, most people lived in rural areas, on farms and in small villages. Only about 14 percent lived in cities. By 2030, population experts believe that 60 percent of all people will live in urban areas. This process of development from small settlements to large ones is called urbanization.

Population Density  Geographers who study the characteristics of human populations are called demographers. They use population density to find out how heavily populated an area is. One of the most densely populated countries is Bangladesh in South Asia, with over 1,900 people per square mile. The average population density of the entire planet is 113 people per square mile.

Statistics can be deceiving because the number is an average. Some areas of a country might be lightly populated, while others are heavily populated. In the United States, the population density is about 80 people per square mile. However, New Jersey has 1,134 people per square mile and Alaska has only 1.1 people per square mile.

UNDERSTAND CAUSES  Identify the factors that influence where people choose to live.

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**Section 1 Assessment**

**TERMS & NAMES**
1. Explain the importance of:
   - birth rate
   - death rate
   - population density
   - urbanization

**USE YOUR READING NOTES**
2. Compare and Contrast Use your completed web diagram to answer the following question:
   How is population density different from population distribution?

**KEY IDEAS**
3. What are three factors that have caused the world’s population to grow so rapidly?
4. What is urbanization?
5. How is population density determined?

**CRITICAL THINKING**
6. Make Inferences  Why are people unevenly distributed on the Earth’s surface?
7. Compare and Contrast  Why do some countries have much lower growth rates than others?
8. CONNECT to Today  What do you think are the major problems that the world faces as the population continues to grow?
9. MATH Create a Population Density Table  Use the Internet to find statistics for population and an average population density for each continent. Create a table and a bar chart showing these statistics. Continents should be listed in order from highest density to lowest density.
Population density is an average figure for a specific area. However, it does not account for the distribution of population in an area. Notice in these two examples how the pattern of population density varies even within a country.

**Australia**

Australia is ranked 54th in the world for total population, but 191st in population density. This is because Australia has a great deal of land but a small population. It has a lot of open space sometimes called the Outback, shown below. The heaviest population is found in the coastal cities.
Indonesia

Indonesia is ranked 4th in the world for total population, but 60th in population density. This is because two Indonesian islands, Bali and Java, and the capital, Jakarta, are heavily populated. Other parts of the island nation are not as densely populated. Jakarta is pictured below.

**Transportation**
Thousands of buses and cars are needed to move Jakarta's population.

**Population Density**
The islands of Indonesia have a greater population density than Australia.

**Critical Thinking**

1. **Compare and Contrast**
   How are the patterns of density different in the two countries?

2. **Draw Conclusions**
   In what ways do the images illustrate how density may affect ways of living in the two countries?