

Summary and Review

KEY ISSUE 1

Where Is the World's Population Distributed?

Global population is concentrated in a few places. Human beings tend to avoid parts of Earth's surface that they consider to be too wet, too dry, too cold, or too mountainous.

LEARNING OUTCOME 2.1.1: Describe regions where population is clustered and where it is sparse.

- Two-thirds of the world's people live in four clusters—East Asia, South Asia, Europe, and Southeast Asia.

LEARNING OUTCOME 2.1.2: Define three types of density used in population geography.

- Arithmetic density is used to describe where people live in the world. Physiological density compares population to resources. Agricultural density measures economic efficiency of food production.

THINKING GEOGRAPHICALLY 2.1: Scientists disagree about the effects of high density on human behavior. Some laboratory tests have shown that rats display evidence of increased aggressiveness, competition, and violence when very large numbers of them are placed in a box. Does very high density cause humans to behave especially aggressively or violently?

GOOGLE EARTH 2.1: Egypt's very high physiological and agricultural densities can be seen from the air. What do the brown and green features represent? Would you expect to find most agriculture in the brown area or the green area? Why?



KEY ISSUE 2

Why Is Global Population Increasing?

Virtually all the world's natural increase is concentrated in the developing countries of Africa, Asia, and Latin America.

LEARNING OUTCOME 2.2.1: Understand how to measure population growth through the natural increase rate.

- The natural increase rate is the percentage by which a population grows in a year.

LEARNING OUTCOME 2.2.2: Understand how to measure births and deaths through CBR and CDR.

- The CBR is the total number of live births in a year for every 1,000 people alive. The CDR is the total number of deaths per 1,000 people.

LEARNING OUTCOME 2.2.3: Understand how to read a population pyramid.

- A population pyramid displays the percentage of population by age and gender. A pyramid with a broad base means a country has a relatively high percentage of young children.

THINKING GEOGRAPHICALLY 2.2: Members of the baby-boom generation—people born between 1946 and 1964—constitute nearly one-third of the U.S. population. As they grow older, what impact will baby boomers have on the American population in the years ahead?

GOOGLE EARTH 2.2: Cemeteries such as this one in New Orleans are unusual. People are buried above ground rather than in graves. What physical features of New Orleans's site and situation discussed in Google Earth 1.2 would account for this?



Key Terms

Agricultural density (p. 49) The ratio of the number of farmers to the total amount of land suitable for agriculture.

Arithmetic density (p. 48) The total number of people divided by the total land area.

Census (p. 45) A complete enumeration of a population.

Crude birth rate (CBR) (p. 50) The total number of live births in a year for every 1,000 people alive in the society.

Crude death rate (CDR) (p. 50) The total number of deaths in a year for every 1,000 people alive in the society.

Demographic transition (p. 56) The process of change in a society's population from a condition of high crude birth and death rates and low rate of natural increase to a condition of low crude birth and death rates, low rate of natural increase, and higher total population.

Demography (p. 44) The scientific study of population characteristics.

Dependency ratio (p. 54) The number of people under age 15 and over age 64 compared to the number of people active in the labor force.

Doubling time (p. 50) The number of years needed to double a population, assuming a constant rate of natural increase.

Ecumene (p. 47) The portion of Earth's surface occupied by permanent human settlement.

Epidemiologic transition (p. 64) Distinctive causes of death in each stage of the demographic transition.

Epidemiology (p. 64) The branch of medical science concerned with the incidence, distribution, and control of diseases that are prevalent among a population at a special time and are produced by some special causes not generally present in the affected locality.

Industrial Revolution (p. 56) A series of improvements in industrial technology that transformed the process of manufacturing goods.

Infant mortality rate (IMR) (p. 70) The total number of deaths in a year among infants under one year of age for every 1,000 live births in a society.

Life expectancy (p. 65) The average number of years an individual can be expected to live, given current social, economic, and medical conditions. Life expectancy at birth is the average number of years a newborn infant can expect to live.

KEY ISSUE 3

Why Does Population Growth Vary among Regions?

The demographic transition is a change in a country's population.

LEARNING OUTCOME 2.3.1: Describe the four stages of the demographic transition.

- Stage 1 has high CBR and CDR and low NIR. In stage 2 the NIR rises because the CDR declines. In stage 3 the NIR moderates because the CBR starts to decline. Stage 4 has low CBR, CDR, and NIR.

LEARNING OUTCOME 2.3.2: Summarize two approaches to reducing birth rates.

- The CBR can be lowered either through education and health care or through diffusion of contraception.

LEARNING OUTCOME 2.3.3: Summarize Malthus's argument about the relationship between population and resources.

- Malthus argued in 1798 that population would grow more rapidly than resources. Recent experience shows that population has not grown as rapidly as Malthus forecast.

LEARNING OUTCOME 2.3.4: Summarize the possible stage 5 of the demographic transition.

- Japan and some European countries may be in a possible stage 5, characterized by a decline in population, because CDR exceeds CBR.

THINKING GEOGRAPHICALLY 2.3: Paul and Anne Ehrlich argue in *The Population Explosion* (1990) that a baby born in a developed country poses a graver threat to sustainability than a baby born in a developing country because people in developed countries place much higher demands on the world's supply of energy, food, and other limited resources. Do you agree with this view?

GOOGLE EARTH 2.3: Cape Verde, an example of a stage 2 country, comprises 10 islands off the west coast of Africa. If you zoom in on the largest island, is the population dispersed evenly through the island or is it clustered in a settlement?



Medical revolution (p. 56) Medical technology invented in Europe and North America that has diffused to the poorer countries in Latin America, Asia, and Africa. Improved medical practices have eliminated many of the traditional causes of death in poorer countries and enabled more people to live longer and healthier lives.

Natural increase rate (NIR) (p. 50) The percentage growth of a population in a year, computed as the crude birth rate minus the crude death rate.

Overpopulation (p. 44) A situation in which the number of people in an area exceeds the capacity of the environment to support life at a decent standard of living.

Pandemic (p. 64) Disease that occurs over a wide geographic area and affects a very high proportion of the population.

Physiological density (p. 48) The number of people per unit of area of arable land, which is land suitable for agriculture.

Population pyramid (p. 54) A bar graph that represents the distribution of population by age and sex.

KEY ISSUE 4

Why Do Regions Face Health Threats?

The epidemiologic transition is a change in a society's distinctive types of diseases. Health care is better in developed countries, but even they are threatened by infectious diseases diffused through modern means of transportation.

LEARNING OUTCOME 2.4.1: Summarize the four stages of the epidemiologic transition.

- Stage 1 was characterized by pestilence and famine, stage 2 by pandemics, and stages 3 and 4 by degenerative diseases.

LEARNING OUTCOME 2.4.2: Summarize the reasons for a stage 4 and possible stage 5 of the epidemiologic transition.

- Evolution, poverty, and increased connections may influence the resurgence of infectious diseases.

LEARNING OUTCOME 2.4.3: Describe the diffusion of AIDS.

LEARNING OUTCOME 2.4.4: Understand reasons for variations in health care between developed and developing countries.

- Health care varies widely around the world because developing countries generally lack resources to provide the same level of health care as developed countries.

LEARNING OUTCOME 2.4.5: Understand reasons for variations in health between developed and developing countries.

THINKING GEOGRAPHICALLY 2.4: Health-care indicators for the United States do not always match those of other developed countries. What reasons might explain these differences?

GOOGLE EARTH 2.4: Several hundred thousand died, some from infectious diseases, after an earthquake hit Haiti January 12, 2010, the date this Google Earth image was taken.



The roof of the cathedral in the capital Port au Prince collapsed. What other evidence of the earthquake can be seen in images from January 2010?

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Sex ratio (p. 54) The number of males per 100 females in the population.

Total fertility rate (TFR) (p. 52) The average number of children a woman will have throughout her childbearing years.

Zero population growth (ZPG) (p. 57) A decline of the total fertility rate to the point where the natural increase rate equals zero.