Section 5–3 Human Population Growth (pages 129–132)

This section describes how the size of the human population has changed over time. It also explains why population growth rates differ in countries throughout the world.

Historical Overview (page 129)

1. How does the size of the human population change with time? It tends to increase with time.

2. Why did the population grow slowly for most of human existence? Life was harsh, and limiting factors kept population sizes low.

3. Circle the letter of each reason why the human population began to grow more rapidly about 500 years ago.
   a. Improved sanitation and health care reduced the death rate.
   b. Industry made life easier and safer.
   c. The world’s food supply became more reliable.
   d. Birthrates in most places remained low.

Patterns of Population Growth (pages 130–131)

4. Why can’t the human population keep growing exponentially forever? Earth and its resources are limited.

5. What is demography? It is the scientific study of human populations.

6. What factors help predict why the populations of some countries grow faster than others? Factors include birthrates, death rates, and the age structure of the populations.

7. The hypothesis that explains why population growth has slowed dramatically in the United States, Japan, and much of Europe is called the demographic transition.

8. Throughout much of human history, what have been the levels of birthrates and death rates in human societies? Human societies have had high birthrates and equally high death rates.

9. What factors lower the death rate? Advances in nutrition, sanitation, and medicine lower the death rate.
10. Is the following sentence true or false? Population growth depends, in part, on how many people of different ages make up a given population. ______ true ______

11. Complete the flowchart about the demographic transition.

12. Circle the letter of each sentence that is true about human population growth.

   a. The demographic transition is complete in China and India.
   b. The worldwide human population is still growing exponentially.
   c. Most people live in countries that have not yet completed the demographic transition.
   d. The demographic transition has happened in the United States.

13. What do age-structure diagrams graph? They graph the numbers of individuals in different age groups in the population.

14. What do the age structures of the United States and of Rwanda predict about the population growth of each country? The age structure in the United States predicts a slow but steady growth rate for the near future. The age structure in Rwanda predicts a population that will double in about 30 years.

**Future Population Growth** (page 132)

15. By 2050, the world’s population may reach how many people? It may reach more than 9 billion people.

16. What may cause the growth rate of the world population to level off or even slow down? That may happen if countries that are currently growing rapidly move toward the demographic transition.
17. What do many ecologists suggest will happen if the growth in human population does not slow down? There could be serious damage to the environment as well as to the global economy.

WordWise

Use the clues to help you write the vocabulary terms from Chapter 5 in the blanks. Then, put the numbered letters in order to find the answer to the riddle.

What kind of limiting factor depends on population size?

1. density dependent

What occurs when the individuals in a population reproduce at a constant rate?

2. exponential growth

What is the movement of individuals into an area called?

3. immigration

4. emigration

What occurs when a population’s growth slows or stops following a period of exponential growth?

5. logistic growth

6. exponential growth

What is a mechanism of population control in which a population is regulated by predation?

7. predator-prey relationship

8. predator-prey relationship

What is the tendency of a population to shift from high birth and death rates to low birth and death rates called?

9. demographic transition

10. carrying capacity

Riddle: What is the scientific study of human populations called?

Answer: demography