Ch 5.Populations.Biology.Landis

Name_____Nickname_____

Section 5–1 How Populations Grow (pages 119–123)

This section identifies the characteristics used to describe a population. It also describes factors that affect population size and explains what exponential growth and logistic growth are.

Characteristics of Populations (page 119)

1. What are the four main characteristics of a population?

2. What is a population's geographic distribution?

3. Another term for geographic distribution is

4. What is population density?

5. What is the equation with which you can calculate population density?

Population Growth (page 120)

6. Circle the letter of each sentence that is true about populations.

- **a.** They can grow rapidly.
- **b.** They can decrease in size.
- **c.** They may stay the same size from year to year.
- **d.** They stay the same size until they disappear.

7. What three factors can affect population size?

8. Complete the table about changes in population.

CHANGES IN POPULATION

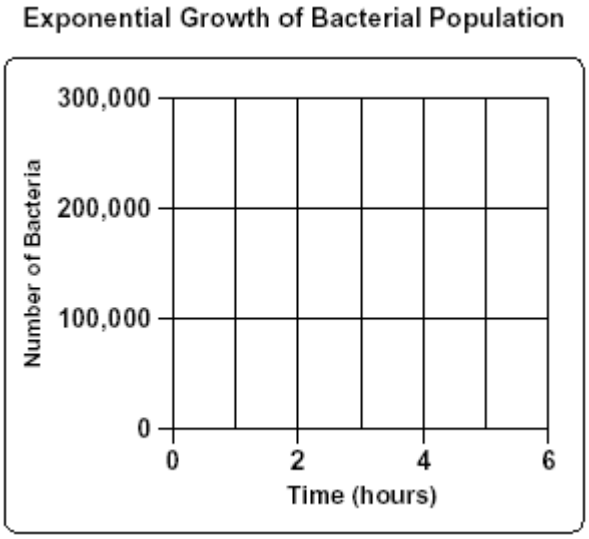
Type of Change	Definition	Resulting Change in Size
Immigration		
Emigration		

Exponential Growth (page 121)

9. When does exponential growth occur?

Ch 5.Populations.Biology.Landis

10. Complete the graph by drawing the characteristic shape of exponential population growth.



Logistic Growth (page 122)

11. When does logistic growth occur?

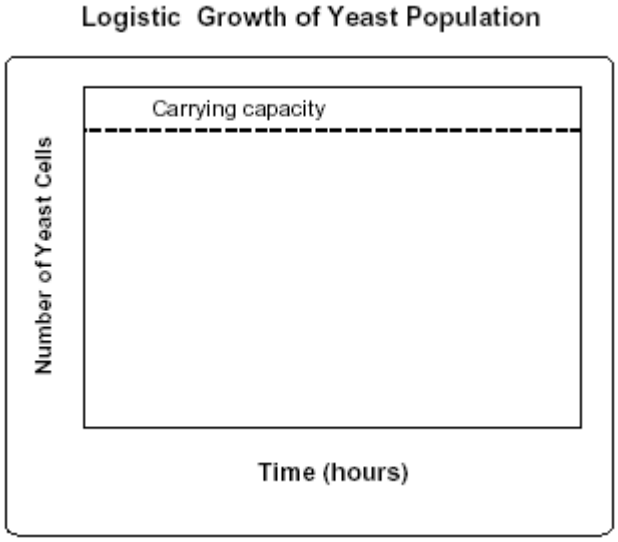
12. Circle the letter of each instance when a population's growth will slow down.

a. The birthrate and death rate are the same.
b. The birthrate is greater than the death rate.
c. The rate of immigration is equal to the rate of emigration.
d. The rate of emigration is less the that rate of immigration.

13. What is the carrying capacity of the environment for a particular species?

14. Complete the graph by drawing the characteristic shape of logistic population growth.

Ch 5.Populations.Biology.Landis



Section 5–2 Limits to Growth (pages 124–127)

This section describes what factors limit population growth.

Limiting Factors (page 124)

15. What is a limiting factor?

16. How do different limiting factors affect populations?

Density-Dependent Factors (pages 125–126)

17. What is a density-dependent limiting factor?

18. When do density-dependent factors become limiting?

19. When do density-dependent factors operate most strongly?

20. What are four density-dependent limiting factors?

Ch 5.Populations.Biology.Landis

Density-Independent Factors (page 127)

21. Define density-independent factors.

22. What are examples of density-independent limiting factors?

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)

23. Why did the population grow slowly for most of human existence?

24. Circle the letter of each reason why the human population began to grow more rapidly about 500 years ago.

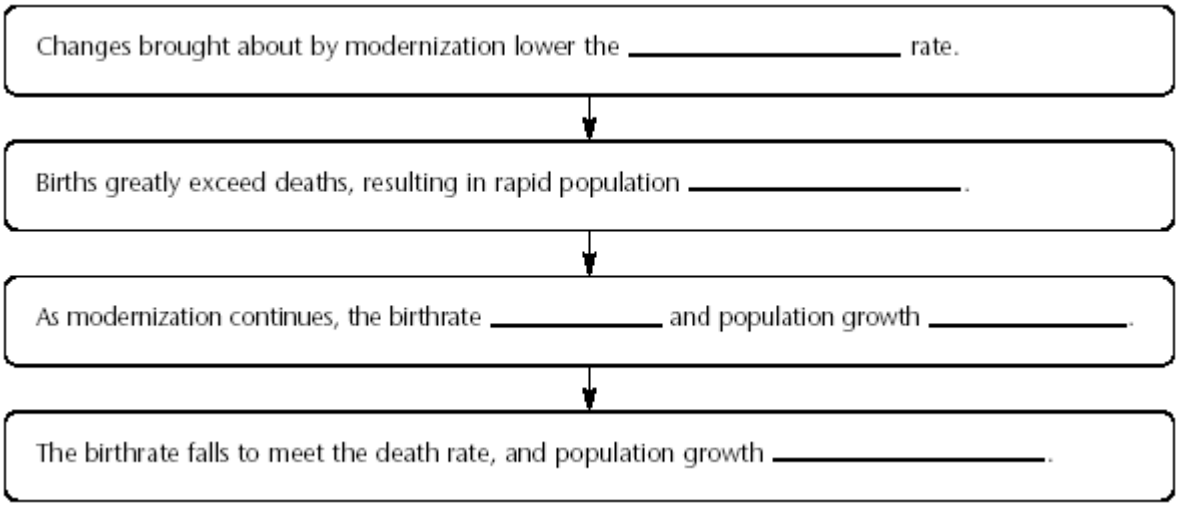
- **a.** Improved sanitation and health care reduced the death rate.
- **b.** Industry made life easier and safer.
- **c.** The world's food supply became more reliable.
- **d.** Birthrates in most places remained low.

Patterns of Population Growth (pages 130–131)

25. Why can't the human population keep growing exponentially forever?

26. Complete the flowchart about the demographic transition.

Ch 5.Populations.Biology.Landis



27. 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.

28. What do age-structure diagrams graph?

28. What do the age structures of the United States and of Rwanda predict about the population growth of each country?