

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



TEKS FOCUS: 3C Impact of research on society; 12B Predation and parasitism; 12D Long-term survival and limited resource base

This section describes what factors limit population growth.

Limiting Factors (page 124)

1. What is a limiting factor? _____

2. A limiting nutrient is an example of a _____.

Density-Dependent Factors (pages 125–126)

3. What is a density-dependent limiting factor? _____

4. When do density-dependent factors become limiting? _____

5. When do density-dependent factors operate most strongly? _____

6. What are four density-dependent limiting factors?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
7. When populations become crowded, what do organisms compete with one another for?

8. The mechanism of population control in which a population is regulated by predation is called a(an) _____.
9. What are the prey and what are the predators in the predator-prey relationship on Isle Royale? _____

10. Why does the wolf population on Isle Royale decline following a decline in the moose population? _____

11. How are parasites like predators? _____

Density-Independent Factors (page 127)

12. A limiting factor that affects all populations in similar ways, regardless of population size, is called a(an) _____.
13. What are examples of density-independent limiting factors? _____

14. Circle the letter of each sentence that is true about changes caused by density-independent factors.
- a. Most populations can adapt to a certain amount of change.
 - b. Periodic droughts can affect entire populations of grasses.
 - c. Populations never build up again after a crash in population size.
 - d. Major upsets in an ecosystem can lead to long-term declines in certain populations.
15. What is the characteristic response in the population size of many species to a density-independent limiting factor? _____

Reading Skill Practice

A graph can help you understand comparisons of data at a glance. By looking carefully at a graph in a textbook, you can help yourself understand better what you have read. Look carefully at the graph in Figure 5-7 on page 126. What important concept does this graph communicate?