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

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. ________________________________  c. ________________________________
   b. ________________________________  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?