

Chapter 4, Ecosystems and Communities *(continued)*

Section 4–3 Biomes (pages 98–105)

This section describes the unique characteristics of the world's major biomes. It also describes other land areas.

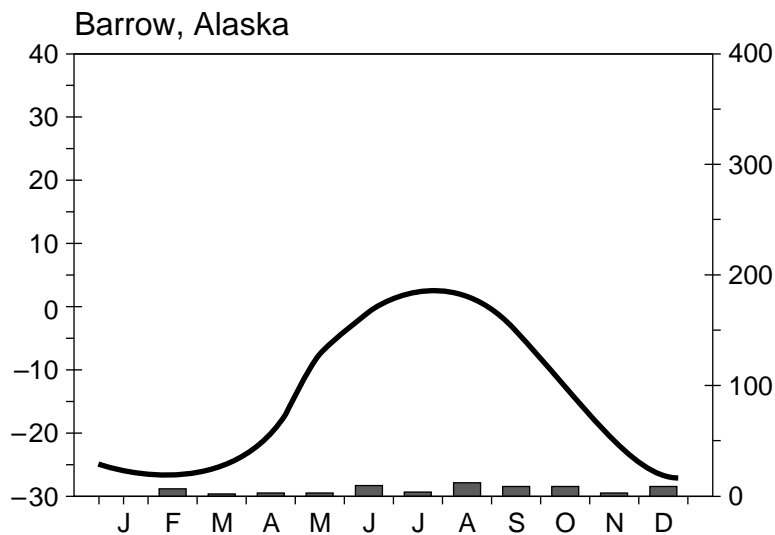
Introduction (page 98)

1. What is a biome? _____

Biomes and Climate (page 98)

2. What does a climate diagram summarize? _____

3. Complete the climate diagram by adding labels to the bottom and both sides of the graph to show what the responding variables are.



4. On a climate diagram, what does the line plot, and what do the vertical bars show?

5. What is a microclimate? _____

The Major Biomes (pages 99–103)

6. Circle the letter of each sentence that is true about how each of the world’s major biomes is defined.
- a. Each is defined by a unique set of abiotic factors.
 - b. Each has a characteristic ecological community.
 - c. Each is defined by the country it is in.
 - d. Each is particularly defined by climate.

Use the map in Figure 4–11 on page 99 of your textbook to match the biome with its geographic distribution.

Biome	Geographic Distribution
_____ 7. Tropical rain forest	a. Forest biome that occurs almost exclusively in the Northern Hemisphere
_____ 8. Tundra	b. Biome that occurs on or near the equator
_____ 9. Boreal forest	c. Biome that occurs near or above 60°N latitude

10. Complete the table about layers of a tropical rain forest.

LAYERS OF A TROPICAL RAIN FOREST

Layer	Definition
	Dense covering formed by the leafy tops of tall trees
	Layer of shorter trees and vines

11. In what kind of place do tropical dry forests grow? _____

12. What is a deciduous tree? _____

13. What is another name for tropical savannas? _____
14. Is the following sentence true or false? Savannas are found in large parts of eastern Africa. _____
15. Circle the letter of each sentence that is true about deserts.
- a. They are hot, day and night.
 - b. The soils are rich in minerals but poor in organic material.
 - c. Cactuses and other succulents are dominant plants.
 - d. Reptiles are the only wildlife.
16. What amount of annual precipitation defines a desert biome? _____

Chapter 4, Ecosystems and Communities *(continued)*

17. What factors maintain the characteristic plant community of temperate grasslands?

18. Why is fire a constant threat in temperate woodland and shrubland? _____

19. Communities that are dominated by shrubs are also known as _____.

20. What kinds of trees do temperate forests contain? _____

21. What is a coniferous tree? _____

22. What is humus? _____

23. What is the geographic distribution of the northwestern coniferous forest?

24. Boreal forests are also called _____.

25. What are the seasons like in a boreal forest? _____

26. Circle the letter of each sentence that is true about boreal forests.

- a. Dominant plants include spruce and fir.
- b. They have very high precipitation.
- c. They have soils that are rich in humus.
- d. Dominant wildlife include moose and other large herbivores.

27. What is permafrost? _____

28. What happens to the ground in tundra during the summer? _____

29. Why are tundra plants small and stunted? _____

Other Land Areas (page 105)

30. When are the polar regions cold? _____

31. What plants and algae can be found in the polar ice regions? _____

32. In the north polar region, what are the dominant animals? _____

33. The abiotic and biotic conditions of mountain ranges vary with _____.
34. Number the sequence of conditions you would find as you moved from the base to the summit of a mountain. Number the conditions at the base 1.
- _____ a. Stunted vegetation like that in tundra
 - _____ b. Grassland
 - _____ c. Forest of spruce and other conifers
 - _____ d. Open woodland of pines

Reading Skill Practice

You can often increase your understanding of what you've read by making comparisons. A compare-and-contrast table helps you to do this. On a separate sheet of paper, make a table to compare the major land biomes you read about in Section 4-3. The characteristics that you might use to form the basis of your comparison could include a general description, abiotic factors, dominant plants, dominant wildlife, and geographic distribution. For more information about compare-and-contrast tables, see Organizing Information in Appendix A of your textbook.