Answer key

Directed Reading A

SECTION: LAND BIOMES

1. abiotic
2. biotic
3. biome
4. temperate deciduous forests, coniferous forests, tropical rain forests
5. to save water during the winter or during the dry season
6. Most produce seeds in cones and have leaves that are like needles with a thick, waxy coating.
7. helps keep coniferous leaves from drying out; protects needles from damage by cold winter temperatures; allows conifers to keep leaves all year
8. The ground beneath conifers is often covered with a thick layer of needles, and little light reaches the ground.
9. because they have more kinds of plants and animals than any other land biome
10. in the canopy
11. in plants
12. C
13. B
14. B
15. C
16. C
17. Desert plants grow far apart to avoid competition for water; have shallow, widespread roots to take up water after a storm; have fleshy stems and leaves to store water; and have a waxy coating to prevent water loss.
18. C
19. D
20. A
21. B
22. tundra
23. permafrost
24. The layer of thawed soil is too shallow for deep-rooted plants.
25. It is located at the top of tall mountains.
26. an area on a mountain above a certain elevation where trees cannot grow

SECTION: MARINE ECOSYSTEMS

1. marine ecosystems
2. blue whales
3. plankton
4. They use photosynthesis to make their own food.
5. A
6. C
7. D
8. B
9. C
10. D
11. A
12. Through evaporation, oceans provide much of Earth's precipitation; ocean temperatures and currents affect world climates and wind patterns; and people and animals depend on oceans for food.
13. mudflats, sandy beaches, rocky shores
14. Some have rootlike structures called holdfasts to attach themselves to rocks; others release a special glue that attaches them to rocks.
15. Answers may vary. Sample answer: algae, brightly colored fishes, sponges, sea stars, sea urchins
16. estuary
17. plankton
18. Most of the animals in the Sargasso Sea are the same color as sargassums.
19. because the icy waters are rich in nutrients that support plankton, which in turn are eaten by these other animals

SECTION: FRESHWATER ECOSYSTEMS

1. melting ice or snow and a spring
2. river
3. tributary
4. how quickly water moves
5. C
6. A
7. B
8. B
9. A
10. C
11. Sunlight reaches the bottom of the littoral zone.

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