Section Review 15-1

1. Beagle

2. theory of evolution

3. varied

4. Darwin’s curiosity might have led him to make many

observations and ask questions about the natural world. His

analytical nature may have helped Darwin to record and

organize his observations, allowing him to recognize

patterns and trends.

5. The vice-governor of the Galápagos Islands told Darwin

that the shell shape of a tortoise could be used to identify the

island it inhabited.

6. Because the Isabela Island tortoise has such a short neck,

it would require a habitat where food is easy to reach.

7. Because of its long neck, the Hood Island tortoise would

most easily obtain food that is hard to reach.

8. Because birds use their beaks to eat or capture food,

differently shaped beaks would mean that the birds lived on

different diets.

Section Review 15-2

1. a

2. b

3. c

4. b

5. a

6. b

7. a

8. Darwin asked, If Earth could change over long periods of

time, then could life change as well? He also realized that if

life could change as he was suggesting, then it would take

many, many years to occur.

9. Lamarck’s idea that species are adapted to their

environment is true. Lamarck’s idea that acquired

characteristics are inheritable is false.

10. Darwin realized that plants and animals often produce

thousands or millions of seeds or eggs, yet most potential

offspring die. He asked what factors determine which

offspring die and which survive and reproduce.

Section Review 15-3

1. Darwin stated that nature provides the variation among

organisms, and humans select and breed for the variations

they find useful or appealing.

2. Over time, natural selection results in a change in the

inherited characteristics of a population, increasing the

population’s

fitness.

3.–6. (in any order) the fossil record, geographic distribution

of living species, homologous body structures, and

similarities in early development of animals

7. The higher an animal’s level of fitness in its particular

environment, the better its chances for survival and

reproduction.

8. The forelimbs have the same kinds of bones in

approximately the same positions.

9. The bones are noticeably similar in structure and

arrangement. It is, therefore, reasonable to assume that they

derived from a common ancestral form.

Chapter 15 Vocabulary Review

1. a

2. c

3. b

4. i

5. g

6. j

7. d

8. e

9. f

10. h

11. A theory is a well-supported, testable, explanation of phenomena that

have occurred in the natural world.

12. Artificial selection occurs when humans select naturally occurring

variations that they found useful.

13. “Survival of the fittest” is a phrase that implies that those organisms

best adapted to their environments will live the longest and have the most

reproductive success.

14. Descent with modification means that each living species has

descended, with changes, from other species over time.

15. a

16. d

17. b

18. c

19. a

20. a

21. To Darwin, fossils provided a detailed record of the evolution of

different life forms over Earth’s long history.

22. High birth rates lead to potentially large populations that require more

resources than are available to meet their needs.

23. Successful adaptations enable organisms to become better suited to

their environment and thus better able to survive and reproduce.

24. Descent with modification implies that today’s different species have

had common ancestors in the distant past.