

# Answer Key

## Concept Review

### MATCHING

- |      |       |
|------|-------|
| 1. b | 7. f  |
| 2. e | 8. g  |
| 3. a | 9. h  |
| 4. d | 10. k |
| 5. c | 11. j |
| 6. i |       |

### MULTIPLE CHOICE

12. b
13. d
14. b
15. d
16. b
17. c
18. d

## Critical Thinking

### ANALOGIES

- |      |      |
|------|------|
| 1. b | 5. a |
| 2. c | 6. b |
| 3. d | 7. d |
| 4. c | 8. c |

### INTERPRETING OBSERVATIONS

9. The passage is referring to mutualism, the process by which two species interact in response to each other, for the benefit of both. The importance of lichens can be inferred by their wide environmental distribution and the role they play in the formation of soils, as well as a source of food for animals higher in the food chain.
10. If lichens disappeared, the lack of a fundamental producer in the ecosystems of the world would generate a serious imbalance in the environment. Soil production would be affected, and plants would lack essential minerals that come from the breakdown of rocks.
11. It is more difficult to capture public attention with pictures of algae, fungi, and microscopic fragments of rock than it is with pictures of cute, fuzzy creatures. The media tend to focus on

such images, fueling misperceptions about where the greatest threats to biodiversity lie.

### AGREE OR DISAGREE

12. Accept any thoughtful answer. Sample answers: Disagree; endangered species are already at the brink of extinction and if further compromised would almost certainly become extinct. Agree; human needs always take priority. We can preserve these species through captive-breeding programs at zoos or in germ-plasm banks.
13. Accept any thoughtful answer. Sample answers: Agree; money given to poorer countries for the protection of potentially valuable species would benefit every country. The United States was right in agreeing to the treaty. Disagree; the treaty should not have placed restrictions on economic and trade agreements and should have given priority to commerce over impact on biodiversity. The United States should not have signed the treaty.
14. Accept any reasonable response. Sample answer: Disagree; some species may need more than 10 percent of an area for their species to survive. Also, it is possible that saving only 10 percent of a biodiversity hotspot may not be enough if the surrounding areas become overstressed from such factors as drought or pest overpopulation.

### REFINING CONCEPTS

15. The gray wolf is important because, as a predator, it helps to maintain balance in this ecosystem, keeping the population of large and small mammalian herbivores in check. Therefore, preserving the gray wolf helps preserve the entire ecosystem.
16. It is possible to study the gray wolf in its habitat to document its diet. One could also review past records kept by ranchers. Ultimately, though, there is

## TEACHER RESOURCE PAGE

probably no way to know beforehand whether one or more wolf populations will begin preying on livestock. (Note: Studies have shown that there is little evidence to support the claim that wolves are responsible for killing large numbers of livestock.)

17. No; we do not fully understand what effects we are having on the environment when we eliminate a species from an ecosystem. However, we have seen many cases where the results have been negative. Such tampering has been at least partly responsible for the losses of additional populations and species that have occurred over the last several centuries.

8. Both co  
importa  
threaten  
9. developi  
fishing, a  
10. They are  
well prot  
11. travel rou  
links to ec  
12. Answers r  
any of the  
by coral re  
\$375 billion  
food, touris  
tion, and so  
is important  
biodiversity.

### SECTION: THE BIODIVERSITY

1. b  
2. d  
3. a  
4. 983  
5. the federal gov  
6. The federal gov  
to carry out an  
harm a listed sp  
7. everyone  
8. d  
9. a  
10. compile a list of  
threatened specie  
11. a fine  
12. The second provi  
people harm, buy,  
an endangered sp

### Map Skills

1. fork-marked lemur;  
mouse lemur  
2. endangered  
3. golden bamboo lemur  
4. Answers may vary. S  
indicate an understar  
that the map shows d  
population, not the po  
So, although the golde  
does not have the sma  
tion, it may have the si  
population.