B

Biology Standard
B.8.b.

Teacher's Masters

California Education and the Environment Initiative

Biological Diversity: The World's Riches

California Education and the Environment Initiative

Approved by the California State Board of Education, 2010

The Education and the Environment Curriculum is a cooperative endeavor of the following entities:

California Environmental Protection Agency
California Natural Resources Agency
Office of the Secretary of Education
California State Board of Education
California Department of Education
California Integrated Waste Management Board

Key Leadership for the Education and Environment Initiative:

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Patty Zwarts, Deputy Secretary for Policy and Legislation, California Environmental Protection Agency
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Mark Leary, Executive Director, California Integrated Waste Management Board
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Key Partners:

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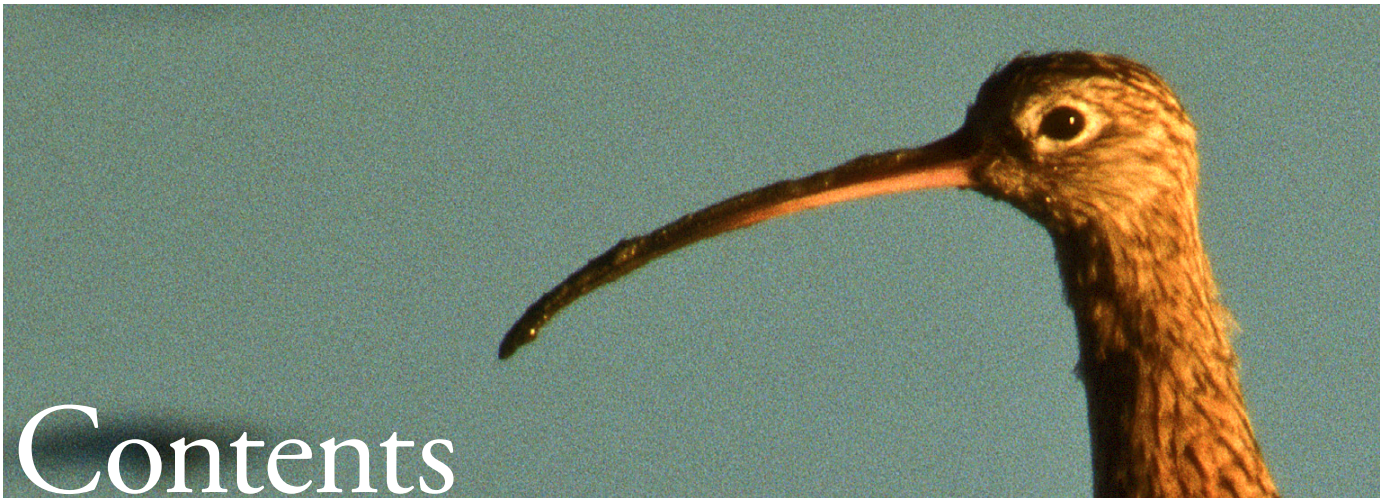

Contents

Lesson 1 Earth's Rich Biodiversity

None required for this lesson.

Lesson 2 Levels of Biological Diversity

None required for this lesson.

Lesson 3 Responses to Change

None required for this lesson.

Lesson 4 Surviving Environmental Change

None required for this lesson.

Assessments

Biological Diversity: The World's Riches—
Traditional Unit Assessment Master 2

Biological Diversity and Surviving Change—
Alternative Unit Assessment Master 5

Name: _____

Instructions: Select the best answer and circle the correct letter. (2 points each)

1. Which of the following statements describes a biome?
   a. a specific area containing an identifiable set of interdependent species that interact with each other and the abiotic components found there
   b. large regions with similar ecosystems characterized by climatic conditions and the type of plant that dominates the area
   c. the place where an organism lives and meets its needs
   d. an area set aside to protect resources and natural systems

2. The geographic extent and biological diversity of ecosystems varies with _____.
   a. the number of niches available
   b. latitude
   c the number of predators in an area
   d. Both a and b.

3. Which factor(s) affect the capacity of a natural system to recover from human-caused alterations?
   a. the scale of the alteration, whether it is local, regional, or national
   b. the scope of the alteration, whether it is small or large
   c. the duration of the alteration, how long it lasts
   d. All of the above.

4. High biological diversity _____.
   a. increases the geographic extent of an ecosystem
   b. decreases the capacity of a natural system to recover from a naturally occurring event
   c. increases the likelihood that some species in an ecosystem can survive environmental changes
   d. only occurs in tropical rainforests and salt marshes

5. Which human practices influence the biological diversity of different biomes?
   a. logging and mining
   b. farming
   c. urban development
   d. All of the above.

Name: _____

Instructions: Answer the following questions and complete the tasks in the spaces provided. (10 points each)

6. Why does biological diversity vary greatly in different ecosystems across the globe?

_____

_____

_____

_____

_____

_____

7. Why is the Sonoran Desert more biologically diverse than the Great Basin Desert?

_____

_____

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8. Describe three ways in which large-scale farming can influence species composition and the geographic extent of a rainforest.

_____

_____

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_____

_____

_____

_____

Name: _____

9. The duration, scale, and scope of a disturbance can influence the capacity of an ecosystem to recover and the rate of that recovery. Describe and give at least two examples of this statement.

10. Why does high biological diversity increase the likelihood that some organisms will survive major changes in the environment?

Name: _____

Instructions: Using all of your assignments from the unit, create a concept map that explains the relationship between biological diversity and the topics in each box. State at least two key points under each heading in the spaces provided. Use specific examples from the unit to support your positions. (10 points for each box)

Biological Diversity

Diversity in Ecosystems and Biomes

Levels of Biological Diversity

Types of Disturbances to Natural Systems

Scope, Scale, and Duration of Natural and Human Disturbances and Effects

Chance of Surviving Change

Human Alterations to Natural Systems

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