Teacher's Masters

California Education and the Environment Initiative

E

Earth Science Standard E.5.e.

Rainforests and Deserts: Distribution, Uses, and Human Influences

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:

Linda Adams, Secretary, California Environmental Protection Agency
Patty Zwarts, Deputy Secretary for Policy and Legislation, California Environmental Protection Agency
Andrea Lewis, Assistant Secretary for Education and Quality Programs, California Environmental Protection Agency
Mark Leary, Executive Director, California Integrated Waste Management Board
Mindy Fox, Director, Office of Education and the Environment, California Integrated Waste Management Board

Key Partners:

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Contents

Lesson 1 California's Desert Blooms

None required for this lesson.

Lesson 2 Global Distribution of Rainforests and Deserts

None required for this lesson.

Lesson 3 Rainforests' and Deserts' Influence on Humans

None required for this lesson.

Lesson 4 Human Influences on the Distribution of Rainforests and Deserts

None required for this lesson.

Lesson 5 The Effects of Biome Distribution on Human Cultures

None required for this lesson.

Lesson 6 Science and Decision Making for California's Deserts

None required for this lesson.

Assessments

Rainforests and Deserts: Distribution, Uses, and Human Influences—
Traditional Unit Assessment Master 2

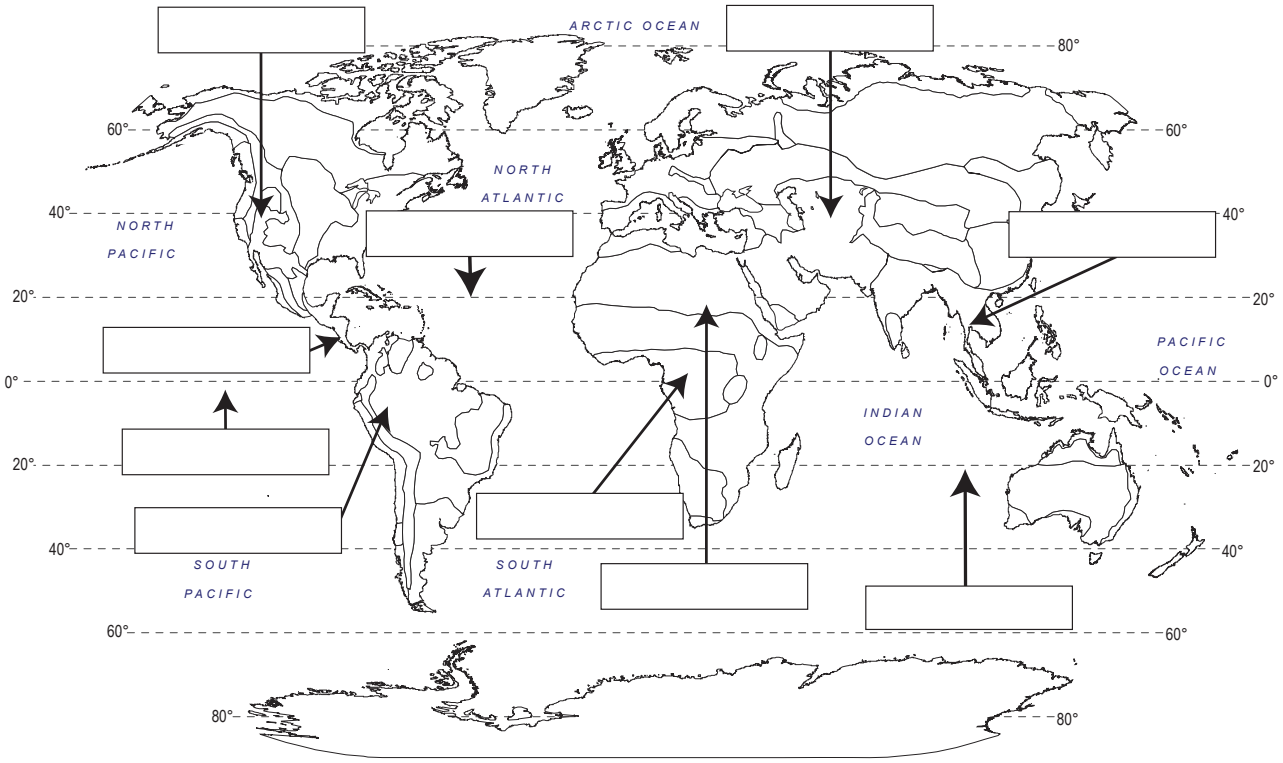
Uses and Human Influences on the Distribution of Rainforests—
Alternative Unit Assessment Master 6

Name: _____

Part 1

Instructions: Label each of the boxes on the map below.

1. Label the following: Tropic of Cancer, desert, Equator, tropical rainforest, and Tropic of Capricorn. (*Note: "Desert" and "tropical rainforest" will each appear several times.*) (1 point each)



Part 2

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

2. A physical property that defines a desert is _____.
   a. mild temperatures
   b. a specific longitude
   c. low amount of precipitation
   d. many cacti

3. Which best represents the definition of a biome, such as desert or rainforest?
   a. function of climate and geography
   b. function of human activity
   c. function of map companies
   d. function of legal system

Name: _____

4. Which of the following locations has a tropical rainforest?
   a. Costa Rica in Central America
   b. Sitka, Alaska
   c. Patagonia in South America
   d. Green Sahara

5. The one physical property that best defines a rainforest is _____.
   a. very low temperatures
   b. high amount of precipitation
   c. low biodiversity
   d. dominated by old growth vegetation

6. Land set aside because of its unique physical or cultural value, and regulated for human activities by assigned agencies is called a _____.
   a. national park
   b. wilderness area
   c. preserve
   d. All of the above.

7. Which of the following practice(s) can change the local distribution (presence) of rainforests?
   a. mining
   b. logging
   c. agriculture
   d. All of the above.

8. The California Desert Protection Act of 1994 _____.
   a. was passed immediately and unanimously
   b. established new national parks, wilderness areas, and preserves
   c. was not opposed by off-road vehicle groups
   d. is no longer needed as a law

9. Human practices significantly damage rainforest ecosystems in which of the following ways?
   a. urban development
   b. erosion from mining
   c. flooding by building dams to provide power
   d. All of the above.

Name: _____

10. Scientific knowledge provides _____ for policy and management decisions.
    a. long-term monitoring data
    b. special interest group opinion
    c. legal status
    d. a biased approach

11. An example of an ecosystem service is _____.
    a. timber
    b. food
    c. decomposition of waste
    d. pharmaceuticals

Part 3

Instructions: Complete the following tasks in the spaces provided. (5 points each)

12. Identify two physical properties that define a tropical rainforest.

_____

_____

_____

13. Identify two physical properties that define a desert.

_____

_____

_____

_____

14. Describe two human practices that contribute to destruction of rainforests.

_____

_____

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_____

_____

Name: _____

15. Define "desertification" and name two causes of desertification.

_____

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16. Explain why the tropics experience high levels of annual rainfall.

_____

_____

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_____

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_____

17. What evidence is there that the Sahara Desert once had lakes, forests, and ancient human cultures?

_____

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_____

_____

Name: _____

Instructions: Read the bulleted items in the writing prompt. Write a 1–2 page essay (400 words) that answers each item in order. Use the entire class period.

Writing prompt:

- Describe the location and properties of tropical rainforests.
- Explain the importance of rainforests to human lives and communities.
- Identify factors that affect the geographic distribution of rainforests on Earth and provide examples of the human practices that can affect the local distribution (presence) of rainforests.
- Explain how changes to the geographic distribution of rainforests can influence humans and human communities, economies, and cultures.
- Describe the role of scientific knowledge in making policy and management decisions about human activity related to rainforest ecosystems.

Use the scoring tool on the next two pages to guide your writing.

Name: _____

Uses and Human Influences on the Distribution of Rainforests Scoring Tool

Component	4 points	3 points	2 points	1 point
Identifies the location and properties of tropical rainforests	Uses latitude to accurately locate tropical rainforests and describes four properties.	Accurately locates tropical rainforests and describes three properties.	Locates tropical rainforests and describes two properties.	Locates tropical rainforests or describes one property.
Explains the importance of tropical rainforests to human lives and communities	Identifies and describes two ecosystem goods and two ecosystem services important to human lives and communities.	Identifies and describes one ecosystem good and one ecosystem service important to human lives and communities.	Identifies and describes one ecosystem good or one ecosystem service important to human lives and communities.	Identifies one ecosystem good or one ecosystem service important to human lives and communities.
Identifies factors that affect geographic distribution of rainforests and provides examples of the human practices that can affect the local distribution of tropical rainforests	Identifies and describes four factors that affect geographic distribution and provides at least two examples of human practices that can affect the local distribution.	Identifies and describes three factors that affect geographic distribution and provides one example of human practices that can affect the local distribution.	Identifies and describes two factors that affect geographic distribution or provides one example of human practices that can affect the local distribution.	Identifies two factors that affect geographic distribution.

Name: _____

Uses and Human Influences on the Distribution of Rainforests Scoring Tool (continued)

Component	4 points	3 points	2 points	1 point
Explains how changes to the geographic distribution of tropical rainforests can influence humans and human communities and cultures	Identifies climate change as a factor that can influence human communities and cultures and describes two cultures that may have been affected by climate change.	Identifies climate change as a factor that can influence human communities and cultures and describes one culture that may have been affected by climate change.	Identifies climate change as a factor that can influence human communities and cultures or describes two cultures that may have been affected by climate change.	Identifies climate change as a factor that can influence human communities and cultures.
Describes the role of scientific knowledge in making policy and management decisions about human activity in tropical rainforests	Uses three examples to describe role of scientific knowledge in making policy and management decisions about human activity.	Uses two examples to describe role of scientific knowledge in making policy and management decisions about human activity.	Describes scientific knowledge as important in making policy and management decisions about human activity.	States that scientific knowledge is important in making land use decisions.

Name: _____

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