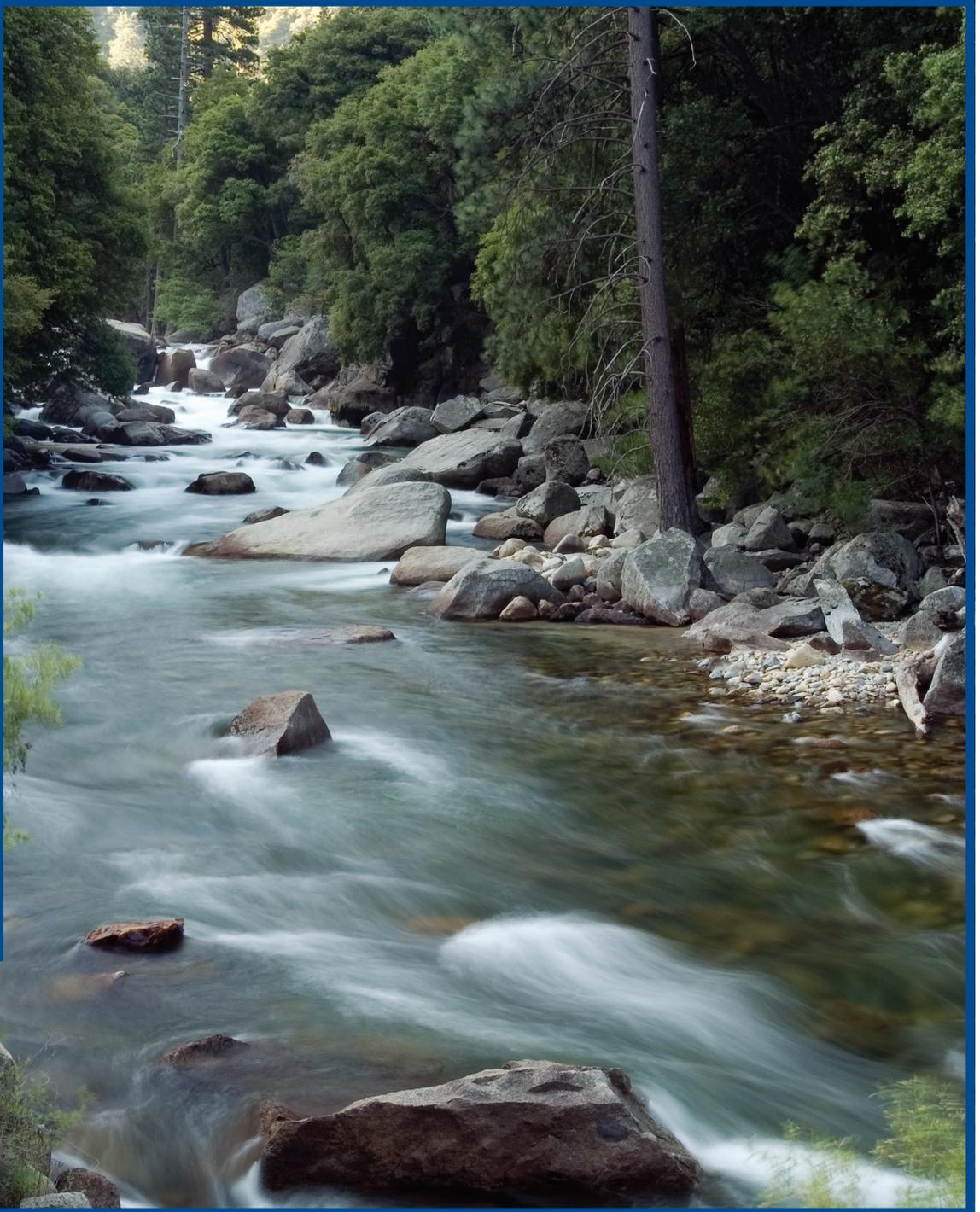


6

Science Standard  
6.2.b.



# The Dynamic Nature of Rivers

## 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:

Special thanks to **Heal the Bay**, sponsor of the EEI law, for their partnership and participation in reviewing portions of the EEI curriculum.

Valuable assistance with maps, photos, videos and design was provided by the **National Geographic Society** under a contract with the State of California.

### Office of Education and the Environment

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<http://www.calepa.ca.gov/Education/EEI/>

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## **LESSON 1**    **Introducing a River System**

None required for this lesson.

## **LESSON 2**    **Holding Sediment in Suspension**

None required for this lesson.

## **LESSON 3**    **Benefits Rivers Bring Us**

None required for this lesson.

## **LESSON 4**    **Ebb and Flow: Rivers' Changing Courses**

None required for this lesson.

## **LESSON 5**    **Flow and Flooding: River Control**

None required for this lesson.

## **Assessments**

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Writing a River's Story—Alternative Unit Assessment . . . . .	5

## The Dynamic Nature of Rivers

Traditional Unit Assessment | page 1 of 3

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Name: \_\_\_\_\_

### Part 1

**Instructions:** Use the words in the word bank to fill in the paragraph written below. (1 point each)

#### Word Bank

delta	deposition	erosion	floodplain
headwaters	meanders	riparian	sediment
tributaries	watershed		

1. Many rivers begin their flow toward the ocean in the high mountains. This area at the top of a river is called the \_\_\_\_\_. As it flows, smaller streams called \_\_\_\_\_ flow into the river, contributing water and causing the river to increase in size. Along the edges, you might find \_\_\_\_\_ woodlands, where animals and plants that depend on the river live. As the river flows, it picks up rocks and soil. This process is called \_\_\_\_\_. The \_\_\_\_\_ carried by the water drops to the river bottom where the water slows down, a process called \_\_\_\_\_. The river forms bends called \_\_\_\_\_ as it goes across a flat \_\_\_\_\_. Where it empties into the ocean, a river might deposit more sediment and form a triangular \_\_\_\_\_. The entire area drained by the river as it goes toward the sea is called its \_\_\_\_\_.

### Part 2

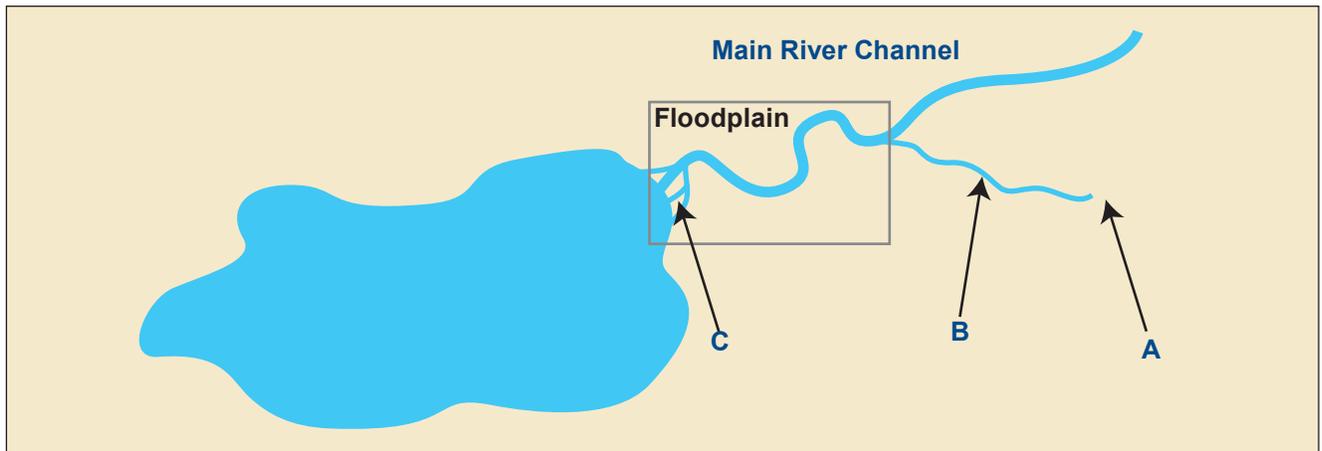
**Instructions:** Read and answer each question. (5 points each)

2. You are told you can have 10 acres of land along a river to start a farm. Is it better to build your farm near fast-moving water or slow-moving water? Why?

## The Dynamic Nature of Rivers

Name: \_\_\_\_\_

3. You work for a mining company that is looking for very fine clay in the area mapped below. Which area is best to mine: A, B, or C? Explain your answer.



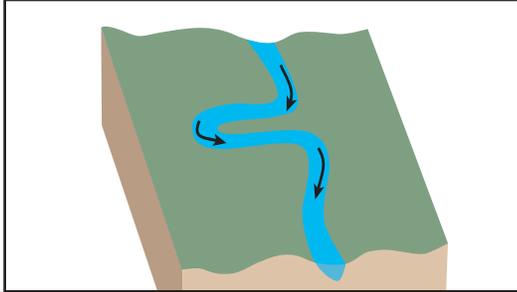
4. What are five benefits people get from rivers?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_

## The Dynamic Nature of Rivers

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5. Label the following on the illustration below showing a river on a floodplain.



- a. An area where a home or land might be threatened by erosion along the river.
- b. An area where fertile soil is being formed by deposition.

6. What is one benefit and one danger of living on a floodplain?

7. What are three ways human actions might influence a river system?

- a.
- b.
- c.

## Writing a River's Story

Alternative Unit Assessment | page 1 of 3

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Name: \_\_\_\_\_

**Instructions:** In this unit, you have learned how rivers move water and sediment through watersheds, and how this movement affects humans and their communities. Now, you will use your knowledge to write a story about the Frontier River.

Your story should be four paragraphs long. You will receive 40 points for content (10 points for each complete paragraph) and 10 points for neatness and correct grammar (a total of 50 points). Refer to the **Maps of the Frontier River** to answer the following questions before writing your draft of the story.

Where does the river start? Where does it flow? How does this flow move material from one part of the river to another?

What is one benefit people received from the river in each time period shown on the maps?

## Writing a River's Story

Alternative Unit Assessment | page 2 of 3

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Name: \_\_\_\_\_

Look at the map of the Frontier River in 1860. How have people changed the river up to this point?

Look at the map of Frontier River in 2000. What are two ways that people have changed the river since 1860? How would these changes have affected animals and plants living along the river?

## Writing a River's Story

Alternative Unit Assessment | *page 3 of 3*

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Name: \_\_\_\_\_

## The Story of the Frontier River







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