The Dynamic Nature of Rivers
The Education and the Environment Initiative Curriculum is a cooperative endeavor of the following entities:

California Environmental Protection Agency
California Natural Resources Agency
California State Board of Education
California Department of Education
Department of Resources Recycling and Recovery (CalRecycle)

Key Partners:

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Part 1

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

Word Bank

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<tr>
<th>delta</th>
<th>deposition</th>
<th>erosion</th>
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<td>headwaters</td>
<td>meanders</td>
<td>riparian</td>
<td>sediment</td>
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<td>tributaries</td>
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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?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
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. __________________________
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. ____________________________________________
   ____________________________________________
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?
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?

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________________________________________________________________________
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________________________________________________________________________
The Story of the Frontier River

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