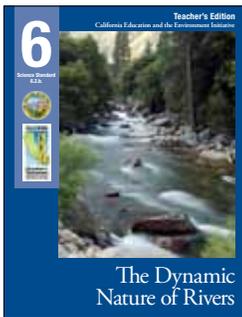




## TEACH COMMON CORE STANDARDS WITH THE EEI CURRICULUM

Created with your needs in mind, this document shows the correlation between the EEI Curriculum and the California Common Core State Standards. By teaching the EEI unit lessons in your classroom, you will be simultaneously addressing the Common Core standards depicted in this guide.

### 6.2.b.—The Dynamic Nature of Rivers



In this unit, students learn how rivers function. They are introduced to the principles of river system dynamics: how water moves, how water transports sediment, and how natural cycles of precipitation, flooding, and drought affect rivers and streams. They examine the process of sedimentation and analyze the natural resources and other benefits rivers provide humans. Students study a river’s natural course changes and how flooding of rivers and floodplains can affect human lives and communities. Then they compare a river system fed by annual rainfall with another fed by snowmelt. Students gain knowledge about various river habitats and the changes that occur when a man-made structure such as a dam or eddy affect the river’s natural habitats. They analyze the dilemma a community faces with the benefits and challenges posed by the changing course of its river, exploring possible solutions before learning what the community decided.

LESSONS

	RI.6.1 and RST.6–8.1	RI.6.2 and RST.6–8.2	RI.6.3 and RST.6–8.3	RI.6.4 and RST.6–8.4	RI.6.5 and RST.6–8.5	RI.6.6 and RST.6–8.6	RI.6.7 and RST.6–8.7	RI.6.9 and RST.6–8.9	RI.6.10 and RST.6–8.10	W.6.1 and WHST.6–8.1	W.6.2 and WHST.6–8.2	W.6.4 and WHST.6–8.4	SL.6.1	SL.6.2	SL.6.3	SL.6.4	L.6.3	L.6.4	L.6.5	L.6.6	
California Connections	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓										
1		✓		✓			✓		✓				✓						✓		
2		✓	✓	✓			✓	✓					✓	✓					✓		
3		✓		✓						✓	✓		✓		✓	✓			✓		✓
4				✓			✓			✓	✓		✓	✓					✓	✓	✓
5	✓			✓			✓	✓	✓		✓		✓	✓		✓			✓		
Traditional Assessment		✓									✓										
Alternative Assessment		✓									✓	✓			✓			✓			
Enhanced Alternative Assessment*					✓		✓			✓		✓			✓						

### COMMON CORE STANDARDS

\*The Enhanced Alternative Assessment described in this correlation also includes W.6.5, W.6.7, W.6.8, W.6.9, and W.6.10. It is an additional alternative that is not included in the Teacher’s Edition.

**Note:** For your reference, the list of California Common Core State Standards abbreviations is on the following page.

## Using the EEI-Common Core Correlation Matrix

The matrix on the front page identifies a number of Common Core standards that are supported by this EEI unit. However, the check marks in the matrix do not necessarily signify that the Common Core standards checked will be taught to mastery by using this EEI unit alone. Teachers are encouraged to select which Common Core standards they wish to emphasize, rather than teaching to every indicated standard. By spending more time on selected standards, students will move toward greater Common Core proficiency in comprehension, critical thinking and making reasoned arguments from evidence. Teaching this EEI unit will provide opportunities for teachers to implement the shift in instructional practice necessary for full Common Core implementation.

## California Common Core State Standards Abbreviations

- **CCSS:** California Common Core State Standards
- **L:** Language Standards
- **RI:** Reading Standards for Informational Text
- **RST:** Reading Standards for Literacy in Science and Technical Subjects
- **SL:** Speaking and Listening Standards
- **W:** Writing Standards
- **WHST:** Writing Standards for Literacy in History-Social Studies, Science, and Technical Subjects

**Note:** Since each Common Core standard includes a breadth of skills, in this correlation, the portion of the standard description that is featured in the Common Core standards applications is cited, using “...” to indicate omitted phrases. For a list of the complete standard descriptions, please see the Common Core Reference Pages located on pages 20–23 of this document.

**Note for Sixth Grade Units:** English Language Arts Standards and their corresponding Literacy Standards are combined in the matrix on page 1 and in each lesson table. The verbiage from the standard that most specifically matches the activity is used to represent both standards, since usually both differ only slightly. Where the standards have significant differences in how they apply to the lesson activity, they are listed separately.

## A Note about Common Core Speaking and Listening Standards

Throughout this unit, students participate in various learning structures and groups to analyze, discuss, and synthesize data, which supports the skill in Speaking and Listening Standard 1 “Participate effectively in a range of collaborative discussions (one-on-one, groups...) with diverse partners.” With prior instruction on collaborative discussions, these various groupings and the materials students examine lend themselves to prime discussion material for collaborative discussions. Learning structures with tasks for pairs and groups are in the following lessons:

- **Lesson 1:** Whole class
- **Lesson 2:** Whole class (optional partners)
- **Lesson 3:** Whole class (optional small groups)
- **Lesson 4:** Whole class (groups of 3)
- **Lesson 5:** 6 groups (groups can be changed for the 2<sup>nd</sup> activity or remain the same)

## National Geographic Resources

- **Natural Regions** wall map (Lesson 1)
- **View from Space** wall map (Lessons 2 and 5)
- **Water for Life** wall map (Lesson 5)

## Unit Assessment Options

Assessments	Common Core Standards Applications
<b>Traditional Assessment</b>	
<p>Students fill in the blanks in a paragraph describing river processes, then explain the location on a river that would be best for building a farm. Using a river diagram, students select the area that would be best for a mining company to locate fine clay and explain the reasons why. After labeling a river meander diagram, students describe the benefits and dangers of living on a flood plain as well as three ways human actions might influence a river system.</p>	<p><b>RI.6.2</b> and <b>RST.6–8.2:</b> Determine the central ideas or conclusions of a text; provide an accurate summary of the text...</p> <p><b>W.6.2</b> and <b>WHST.6–8.2:</b> Write informative /explanatory texts...</p> <p>b) Develop the topic with relevant, well-chosen facts, definitions, concrete details...or other information and examples.</p> <p>d) Use precise language and domain-specific vocabulary to inform about or explain the topic.</p>
<b>Alternative Assessment</b>	
<p>In an assignment titled “<b>Writing a River’s Story</b>,” students use maps showing a river during four time periods to construct the history of the river, outline benefits it has offered people, describe threats it has posed, and outline changes to the river and their effects.</p> <p><i>Tip: For a Common Core enhancement, in addition to the criteria described in the <b>Alternative Unit Assessment</b>, give students a rubric outlining the criteria in <b>W.6.2</b> and/or <b>WHST.6–8.2</b> and <b>W.6.4</b> and/or <b>WHST.6–8.4</b> to help guide and evaluate their writing.</i></p>	<p><b>L.6.3:</b> Use knowledge of language and its conventions when writing...</p> <p><b>RI.6.2</b> and <b>RST.6–8.2:</b> Determine the central ideas or conclusions of a text; provide an accurate summary of the text...</p> <p><b>W.6.2</b> and <b>WHST.6–8.2:</b> Write informative/explanatory texts, including the narration of...scientific...processes.</p> <p>a) Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information...</p> <p>b) Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.</p> <p>c) Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.</p> <p>d) Use precise language and domain-specific vocabulary to inform about or explain the topic.</p> <p>e) Establish and maintain a formal style and objective tone.</p> <p>f) Provide a concluding statement or section that follows from and supports the information or explanation presented.</p> <p><b>W.6.4.</b> and <b>WHST.6–8.4:</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience.</p>
<b>Suggested Common Core Enhanced Alternative</b>	
<p>As a further writing assignment, students could research current decisions being discussed by government, business, and environmental entities regarding the Bay Delta and its water sources. Encourage students to look at the issues from different points of view: natural systems, residents near the delta, residents of southern California using the water from the delta, businesses depending on delta resources, agriculture in different regions of the state, environmental advocates, hydro-engineers, etc. Students could then take a stance on one of the issues and write an essay arguing their point of view using information from this unit as well as from their research.</p>	<p><b>RI.6.6</b> and <b>RST.6–8.6</b></p> <p><b>RI.6.8</b> and <b>RST.6–8.8</b></p> <p><b>SL.6.3</b></p> <p><b>W.6.1</b> and <b>WHST.6–8.1</b></p> <p><b>W.6.4</b> and <b>WHST.6–8.4</b></p> <p><b>W.6.5</b> and <b>WHST.6–8.5</b></p> <p><b>W.6.7</b> and <b>WHST.6–8.7</b></p> <p><b>W.6.8</b> and <b>WHST.6–8.8</b></p> <p><b>W.6.9</b> and <b>WHST.6–8.9</b></p> <p><b>W.6.10</b> and <b>WHST.6–8.10</b></p> <p><b>Note:</b> See descriptions above and at the end of this correlation.</p>

# Lesson 1: Introducing a River System

Students learn vocabulary related to rivers and read about the Sacramento-San Joaquin River Delta. They discuss how humans benefit from the dynamic nature of rivers and streams in ways that are essential to human life and to the functioning of our economies and cultures.



## National Geographic Resource

- **Natural Regions** wall map

Use this correlation in conjunction with the **Procedures** located on pages 34–35 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p><b>Vocabulary Development:</b> For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson. This lesson features a vocabulary development activity.</p>	<p><b>L.6.4c:</b> Consult reference materials... to...determine...[a word’s] meaning...</p> <p><b>RI.6.4 and RST.6–8.4:</b> Determine the meaning of...key terms, and other domain-specific words and phrases as they are used in a specific scientific... context...</p>
<p><b>Step 1:</b> Distribute a <b>Student Workbook</b> to each student. Tell them to turn to <b>River Words: Going With the Flow</b> (Student Workbook, page 2). Point to the vocabulary <b>Word Wall Cards</b> posted on the wall. Tell students to choose a word from the vocabulary <b>Word Wall Cards</b> and to match it with what they think is the correct definition in the right-hand column on <b>River Words: Going With the Flow</b>. Tell them to write their best “First Guess” on the line in the left-hand column. Give them 5–10 minutes to complete the process of matching all the words with the definitions.</p>	<p><b>RI.6.4 and RST.6–8.4:</b> Determine the meaning of...key terms, and other domain-specific words and phrases as they are used in a specific scientific... context...</p> <p><b>Suggestion:</b> Students could do this activity with partners to increase discussion.</p>
<p><b>Step 2:</b> Students now turn to the <b>Dictionaries</b> to determine the definition of each word and write any corrections on the <b>River Words</b> page.</p> <p><b>Note:</b> Alternatively, turn the cards over on the wall, and students can go around again, making any needed corrections.</p>	<p><b>L.6.4c:</b> Consult reference materials... to...determine...[a word’s] meaning...</p> <p><b>L.6.4d:</b> Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).</p> <p><b>RI.6.4 and RST.6–8.4:</b> Determine the meaning of...key terms, and other domain-specific words and phrases as they are used in a specific scientific... context...</p>

Student Tasks	Common Core Standards Applications
<p><b>Steps 3 and 4:</b> Refer students to the <b>Natural Regions</b> wall map, pointing out and describing the Sacramento-San Joaquin Delta area. Then project the <b>Sacramento-San Joaquin Bay Delta</b> (Visual Aid #1) and explain that they will read an article that describes the largest river system in California. While reading <b>California Connections: The Sacramento-San Joaquin River Delta</b> (Student Edition, pages 2–5), refer back to the map as locations are described.</p> <p>Ask students to use the visual information on the map together with the text in <b>California Connections</b> to deepen their understanding of this river system.</p> <p>As they read, ask students to notice the vocabulary they defined at the beginning of the lesson and note how the context further defines the terms with examples and extended definitions.</p> <p>While students read, note the structure and organization the author uses to convey the information to the reader.</p> <p>Refer to the <b>Reading California Connections Using a Common Core Reading and Writing Focus</b> on pages 15–19 to view specific suggestions for integrating Common Core standards while reading this selection not only for content, but for text structure as well.</p>	<p><b>RI.6.7</b> and <b>RST.6–8.7:</b> Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.</p> <p><b>RI.6.10</b> and <b>RST.6–8.10:</b> ...read and comprehend science/technical texts... independently and proficiently.</p> <p><b>RST.6–8.4:</b> Determine the meaning of... key terms, and other domain-specific words and phrases as they are used in a specific scientific...context...</p>
<p><b>Step 5:</b> In addition to discussing the questions in the <b>Procedures</b> for this step, have students summarize the main idea and supporting points of the text as you fill out the classroom <b>Notes on the Bay Delta</b> chart. They can turn to partners and share specific points, or do it as a whole class discussion.</p> <p>With prior training in collaborative discussions, students can use these questions as a springboard for connecting ideas with each other and posing and answering new questions related to rivers and people. Encourage students to make connections with what they have learned about the location of many ancient civilizations near water sources.</p> <p>Have students discuss how human societies balance the need for living in a place that provides water resources with the difficulties that these resources can cause.</p> <p><b>Suggested sentence frame:</b></p> <ul style="list-style-type: none"> <li>■ Although a river benefits (people, wildlife, land) by _____, it can also challenge them (by, when, etc.) _____.</li> </ul>	<p><b>RI.6.2</b> and <b>RST.6–8.2:</b> Determine the central ideas or conclusions of a text; provide an accurate summary of the text...</p> <p><b>SL.6.1:</b> Engage effectively in a range of collaborative discussions...with diverse partners..., building on others' ideas and expressing their own clearly.</p> <p>c) Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic...</p>

## Lesson 2: Holding Sediment in Suspension

Students view fast- and slow-moving streams and discuss how energy in moving water affects a stream’s physical properties. Students demonstrate the relationship between water’s energy and the size of particles it carries, and discuss related implications for human communities.



## National Geographic Resource

- **View from Space** wall map

Use this correlation in conjunction with the **Procedures** located on pages 44–45 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p><b>Vocabulary Development:</b> For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p>	<p><b>L.6.4c:</b> Consult reference materials... to...determine...[a word’s] meaning...</p> <p><b>RI.6.4 and RST.6–8.4:</b> Determine the meaning of...key terms, and other domain-specific words and phrases as they are used in a specific scientific... context...</p>
<p><b>Steps 3–6:</b> Students use their listening skills for these steps. Throughout the presentation, have students summarize the main ideas and details, and how the ideas are related to each other, as well as how the visual and oral information contribute to understanding the concept. They can do this with partners, small groups, or with the whole class.</p> <p>For Steps 3–4, have students turn to partners and describe details they see in both photos of water (how the water is moving, how the water looks, what the surrounding area is like, how the bottom would feel), and list those words as either adjectives or adverbs. Then they can use compare/contrast sentence frames to describe them.</p> <p><b>Suggested sentence frames:</b></p> <ul style="list-style-type: none"> <li>■ The mountain stream _____, whereas the delta slough _____.</li> <li>■ The mountain stream _____; however, the delta slough _____.</li> <li>■ Unlike the mountain stream, which _____, the delta slough _____.</li> </ul>	<p><b>SL.6.1:</b> Engage effectively in a range of collaborative discussions...with diverse partners...</p> <p><b>SL.6.2:</b> Interpret information presented...(visually...orally) and explain how it contributes to a topic...</p>
<p><b>Step 7:</b> While referring to the <b>View From Space</b> wall map, use questioning techniques to guide students to understand that streams move quickly in the mountains and foothills when going downhill, and generally move slowly in valleys and areas that are relatively flat.</p>	<p><b>RI.6.7 and RST.6–8.7:</b> Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.</p>

Student Tasks	Common Core Standards Applications
<p><b>Steps 8–10:</b> After reading through the steps, have students explain to a partner what their task is on the workbook page. Be sure to review the questions on both sides of the page before the demonstration so students have a focus for their attention as they record the results of the demonstration. Ask students to summarize their findings by describing what happened in the demonstration in terms of the amount of energy in the water and the amount of “work” it accomplishes.</p> <p>After the demonstration, you may have students read a section of the classroom science textbook on this topic, and ask them to compare and contrast the information gained from each source. This can be done at this step, or after step 11 as noted below.</p>	<p><b>RI.6.2</b> and <b>RST.6–8.2:</b> Determine the central ideas...; provide an accurate summary...</p> <p><b>RI.6.3</b> and <b>RST.6–8.3:</b> Follow precisely a multistep procedure...</p> <p><b>RST.6–8.9:</b> Compare and contrast the information gained from experiments... with that gained from reading a text on the same topic.</p>
<p><b>Step 11:</b> Have students turn to <b>Sedimentation in a Stream</b> (Student Edition, page 6). Review the illustrations to show how particles are held in suspension and drop out of a stream, depending on how much energy the water in the stream has, and how large the particles are.</p> <p>After teaching the sedimentation process, have students interpret the diagram and explain the process of sedimentation to a partner.</p> <p>Have students compare and contrast the information they gleaned from the sedimentation diagram with that they gained from the sedimentation demonstration.</p> <p><b>Tip:</b> <i>At this point, students can turn to their classroom science textbook and read the text pages related to sedimentation in a stream. Afterwards, ask students to analyze how the information from the photos at the beginning of the lesson, the sedimentation demonstration in the bottles, the sedimentation diagram, the information presented orally, and the words and diagrams in the textbook work together to develop a coherent understanding of the process of sedimentation. Have students analyze the benefits of each type of information, and what conceptual understanding might be missed if one of them was not included. Ask them to consider all of these components when they write and/or present their next research report.</i></p>	<p><b>RI.6.7:</b> Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.</p> <p><b>RST.6–8.7:</b> Integrate...information expressed...in a text with a version of that information expressed visually...</p> <p><b>RST.6–8.9:</b> Compare and contrast the information gained from experiments... with that gained from reading a text...</p> <p><b>SL.6.2:</b> Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic... under study.</p>

## Lesson 3: Benefits Rivers Bring Us

Statements posted around the classroom summarize benefits that rivers provide for people. Students view photographs and match them to the benefits by standing under the appropriate statement. They explain how the benefits depicted in additional photographs help human communities.



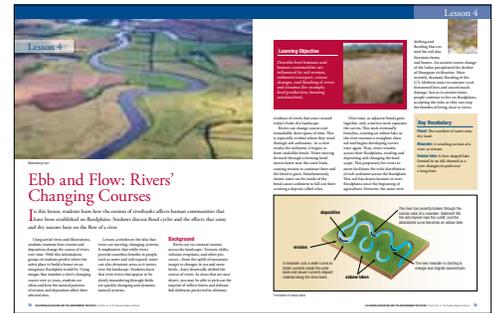
Use this correlation in conjunction with the **Procedures** located on pages 56–57 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p><b>Vocabulary Development:</b> For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p>	<p><b>L.6.4c:</b> Consult reference materials... to...determine...[a word’s] meaning...</p> <p><b>RI.6.4 and RST.6–8.4:</b> Determine the meaning of...key terms, and other domain-specific words and phrases as they are used in a specific scientific... context...</p>
<p><b>Step 1:</b> As students review the <b>Notes on the Bay Delta Chart</b>, have them summarize the central ideas with partners as well as with the whole class. If needed, have them turn back to the <b>California Connections</b> article to clarify ideas.</p>	<p><b>RI.6.2 and RST.6–8.2</b> Determine the central ideas or conclusions of a text...</p>
<p><b>Step 2:</b> While explaining in detail the benefits described on each card displayed in the classroom, have students periodically process the information by turning to partners (or groups of 4) to summarize what benefits are represented by each card’s statement. Tell students to be sure to include aspects related to the economy and culture of the region.</p> <p><i>Tip:</i> Students use their listening skills so they can apply the information they learn in this step to the activity in the next steps.</p>	<p>n/a</p>
<p><b>Steps 3 and 4:</b> In this activity, students stand under the card that they feel best matches the projected photo from <b>The Benefits of Rivers: Irrigation</b> (Visual Aid #4). Ask students which of the benefit statements it best represents and why. Probe students’ explanations so that they thoroughly support and justify their position. Encourage students to express reasons that other statements would match each visual aid, since many of them have more than one answer.</p> <p>Continue with the rest of the visual aid photos, probing students to go beyond the first and most obvious answer.</p> <p><i>Tip:</i> Although these standards will later lead to much longer contexts, students can use this activity to practice supporting and explaining their reasons for the stand they take. They can also paraphrase or delineate another student’s reason for selecting a statement, as well as look for more than one answer that can be justified.</p>	<p><b>SL.6.1d:</b> Review the key ideas expressed and demonstrate understanding of multiple perspectives...</p> <p><b>SL.6.3:</b> Delineate a speaker’s argument and specific claims...</p> <p><b>SL.6.4:</b> Present claims and findings...</p>

Student Tasks	Common Core Standards Applications
<p><b>Steps 5 and 6:</b> As students complete <b>Rivers for Life</b> (Student Workbook, pages 5–7) while the visual aids are again projected, encourage them to write thorough explanations that explain their reasoning.</p> <p>Use this assignment to help students see the difference between writing in generalities versus using specific information. Students should express specific reasons in their explanations. Use the following as an example of general versus specific to clarify the types of answers expected.</p> <p>For example, with Visual Aid #4, students may write the statement, <i>“Rivers carry water that can irrigate crops.”</i> A “general” explanation could be that <i>“The water is good for plants.”</i> A more specific explanation would be, <i>“Rivers carry water from the mountains and across the land. The water that rivers carry can be used by farmers for irrigating their farmlands.”</i></p> <p>Brainstorm vocabulary terms to list on the board for students to include in their writing: economy, culture, fertile land, floodplains, crops, goods, resources, products, irrigation, species, food sources, recreation, health.</p>	<p><b>L.6.6:</b> Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases...</p> <p><b>W.6.1b</b> and <b>WHST.6–8.1b:</b> Support claim(s) with clear reasons and relevant evidence...</p> <p><b>W.6.2b</b> and <b>WHST.6–8.2b:</b> Develop the topic with relevant, well-chosen facts, definitions, concrete details...or other information and examples.</p> <p><b>W.6.2d</b> and <b>WHST.6–8.2d:</b> Use precise language and domain-specific vocabulary to inform about or explain the topic.</p>

## Lesson 4: Ebb and Flow: Rivers' Changing Courses

Students learn how erosion and deposition can create winding river courses on floodplains. Then students participate in a simulation showing houses on a floodplain, learning how, in addition to providing benefits to humans, rivers can endanger human lives and property.



Use this correlation in conjunction with the **Procedures** located on pages 78–80 of the Teacher's Edition. Only procedure steps with a Common Core correlation are included in the table below.

Student Tasks	Common Core Standards Applications
<p><b>Vocabulary Development:</b> For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p>	<p><b>L.6.4c:</b> Consult reference materials...to determine [a word's] meaning...</p> <p><b>RI.6.4</b> and <b>RST.6–8.4:</b> Determine the meaning of...key terms, and other domain-specific words and phrases as they are used in a specific scientific... context...</p>
<p><b>Steps 2–5:</b> While teaching and explaining the information in these steps, be sure to ask students to summarize the information with partners to increase comprehension.</p> <p>Review listening skills at the beginning of this lesson, since much of the information is presented orally and visually.</p> <p>In step 2, discuss and define how the concepts “how likely” and “how often” are different from each other. If students have studied statistics and data in math, encourage students to make mathematical connections with the concepts.</p> <p>After explaining the process illustrated in <b>Erosion and Deposition</b> (Visual Aid #12), have students explain the process to a partner, using key terms such as meanders, oxbow lakes, erosion, deposition, fertile sediment, water speed, and riverbank.</p> <p>Have students review the benefits and detrimental effects of living on a floodplain discussed in the previous lessons.</p>	<p><b>L.6.5:</b> Demonstrate understanding of...word relationships, and nuances in word meanings.</p> <p><b>L.6.6:</b> Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases...</p> <p><b>SL.6.1:</b> Engage...in a range of collaborative discussions...</p> <p><b>SL.6.2:</b> Interpret information presented...(orally) and explain how it contributes to a topic...</p> <p><b>RI.6.4</b> and <b>RST.6–8.4:</b> Determine the meaning of...key terms, and other domain-specific words and phrases as they are used in a specific scientific... context.</p>
<p><b>Tip:</b> Students could turn to the pages in their textbook that discuss the erosion process that creates oxbow lakes and compare how the different sources contribute to understanding the concept. They can be asked to notice any differences in the content or format of the information that is presented.</p>	<p><b>RI.6.7:</b> Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.</p>
<p><b>Steps 6–9:</b> As students work in groups of 3 to decide on a house along the river, encourage them to discuss with each other the reasoning behind their decision based upon what they have learned about river meanderings, erosion, and deposition. Excitement for this activity can be built up by explaining that students will receive a free house on river front real estate. Students could do a “finger drum roll” or another effect to introduce each slide as it is revealed showing the effect over that period of time. Prior to starting the activity, students could be given structured “sound effects” to use when a house goes into the water and those students sit down.</p> <p><b>Tip:</b> Student groups could write a statement supporting their choice.</p>	<p><b>SL.6.1:</b> Engage effectively in a range of collaborative discussions...</p>

Student Tasks	Common Core Standards Applications
<p><b>Step 10:</b> Before students complete <b>Ebb and Flow: A River’s Changing Course</b> (Student Workbook, pages 8–9), review expectations for questions #2 and #4, including:</p> <ul style="list-style-type: none"> <li>■ Students should use specific details in answering question #2.</li> <li>■ Review with students how to organize their argument for their answer to question #5 by clearly stating their position and giving specific reasons to support that position. Review linking words and phrases to connect their ideas. It may be useful for students to write their short essay on binder paper rather than the limited space on the workbook page.</li> </ul>	<p><b>W.6.1</b> and <b>WHST.6–8.1:</b> Write arguments to support claims with clear reasons and relevant evidence.</p> <ul style="list-style-type: none"> <li>a) Introduce claim(s) and organize the reasons and evidence clearly.</li> <li>b) Support claim(s) with clear reasons and relevant evidence...</li> <li>c) Use words, phrases, and clauses to clarify the relationships among... reasons.</li> </ul> <p><b>W.6.2b</b> and <b>WHST.6–8.2b:</b> Develop the topic with relevant facts, definitions, concrete details...or other information and examples.</p>

## Lesson 5: Flow and Flooding: River Control

Students examine seasonal cycles of two California rivers—one fed by rainfall and the other by snowmelt. Students examine flooding and human activities along the Smith and Merced rivers, which show the influence of flood control measures on riparian habitats.



## National Geographic Resources

- **View from Space** wall map
- **Water for Life** wall map

Use this correlation in conjunction with the **Procedures** located on pages 100–103 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

**Note:** To allow time for students to prepare and give their habitat presentations, it may be useful to teach this lesson in two sessions.

Student Tasks	Common Core Standards Applications
<p><b>Vocabulary Development:</b> For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p>	<p><b>L.6.4c:</b> Consult reference materials... to...determine [...a word’s] meaning...</p> <p><b>RI.6.4</b> and <b>RST.6–8.4:</b> Determine the meaning of...key terms, and other domain-specific words and phrases as they are used in a specific scientific... context...</p>
<p><b>Steps 2 and 3:</b> As students view the map and the two graphs, <b>Flow in Two California Rivers</b> (Visual Aids #21–22), have them work with partners to make observations of the patterns the graphs portray, including any correlations they see. Students can then compare the two graphs as they determine which is fed by seasonal rains, and which is fed by snow melt.</p> <p>Assist students in interpreting the graphs and what they represent.</p> <p>After having students figure out what each graph is representing, have students pair/share to explain and interpret each graph in their own words.</p>	<p><b>RI.6.7</b> and <b>RST.6–8.7:</b> Integrate quantitative...information expressed in words...with a version of that information expressed visually (... graph...).</p> <p><b>SL.6.2:</b> Interpret information presented in diverse media...(...quantitatively...) and explain how it contributes to a topic...under study.</p>

Student Tasks	Common Core Standards Applications
<p><b>Steps 4 and 5:</b> Organized into 6 groups, students prepare and present information about specific <b>Riparian Habitats</b> (Information Cards #8–13).</p> <p>Before starting this activity, review standard <b>SL.6.1b</b> expectations for working together to prepare their presentations as well as the presentation itself.</p> <p>Although this standard refers to full presentations, student groups can use this activity as a mini-presentation to practice presentation skills. Give groups enough time to prepare how they will present the information from their <b>Information Card</b> without reading it word-for-word but still maintaining all the information. Students need to decide who is presenting which piece of information from the card, and organize themselves to present seamlessly. Review the standard expectations for eye contact, etc., before they present their information.</p> <p>To increase comprehension as students present, as well as prepare them for the next activity, ask the listeners to pay attention to the water conditions that are necessary for each habitat, with the presenters writing these conditions on the board at the end of their presentation.</p> <p>Ask presenters to hold up their <b>Information Card</b>, or alternatively, project each <b>Information Card</b> during the presentations.</p>	<p><b>RI.6.10</b> and <b>RST.6–8.10:</b> ...read and comprehend science/technical texts... independently and proficiently.</p> <p><b>SL.6.1:</b> Engage effectively in a range of collaborative discussions...with diverse partners...</p> <p>b) Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.</p> <p><b>SL.6.4:</b> Present claims and findings (<b>...informative...presentations</b>), sequencing ideas logically and using pertinent...facts, and details...; use appropriate eye contact, adequate volume, and clear pronunciation. <b>CA</b></p>
<p><b>Step 6:</b> The discussion regarding each man-made structure and its effects could occur in the student groups, with time to share out their findings before discussing the next structure. Or the first one (dam) could be discussed as a whole class to model an example discussion, with the groups then discussing the other two.</p> <p>Students should first address why people build a dam, aqueduct, or jetty, then discuss how each structure affects each habitat.</p> <p>Depending on prior knowledge, students may need to learn about the uses of aqueducts and jetties.</p>	<p><b>SL.6.1:</b> Engage effectively in a range of collaborative discussions...with diverse partners...building on others' ideas and expressing their own clearly.</p>
<p><b>Common Core Enhancement:</b> Follow with a discussion regarding the need to strive for a balance between human resource needs and the need to maintain natural systems. Encourage students to look at the issue from multiple perspectives.</p>	<p><b>SL.6.1d:</b> Review the key ideas expressed and demonstrate understanding of multiple perspectives...</p>
<p><b>Steps 8 and 9:</b> Emphasizing that the scenario presented in this lesson is real increases the “simulation” aspect of the lesson. As students come up with solutions to the <b>Los Angeles River Riddle</b> (Student Edition, page 8), ask them to support their choices by citing evidence and explaining specific reasons related to what they have learned in this unit or in other sources, including the <b>California Connections</b> article. They could also state the drawbacks of their solution relating to humans or natural habitats, and come up with ways to mitigate those drawbacks.</p> <p><b>Tip:</b> <i>To further enhance the simulation aspect of this lesson, students could be told they are part of a Los Angeles Planning Commission Committee directed to address the issues related to the Los Angeles River and find solutions.</i></p> <p><b>Note:</b> <i>Be sure groups take time to plan and organize their presentation of their group's solution.</i></p>	<p><b>RI.6.1:</b> Cite...evidence...</p> <p><b>SL.6.1:</b> Engage effectively in a range of collaborative discussions...with diverse partners...building on others' ideas and expressing their own clearly.</p> <p><b>SL.6.4:</b> Present claims and findings (<b>...informative...presentations</b>), sequencing ideas logically and using pertinent...facts, and details...; use appropriate eye contact, adequate volume, and clear pronunciation. <b>CA</b></p>

Student Tasks	Common Core Standards Applications
<p><b>Step 10:</b> After comparing the artist’s depiction of <b>The Los Angeles River Before and After</b> (Visual Aid #24) on the <b>Before and After Chart</b>, students can turn to partners and form comparison/contrast sentences.</p> <p>Alternatively, half the student groups could describe the river before the flood control measures, and half the groups describe it afterwards.</p> <p><b>Suggested sentence frames:</b></p> <ul style="list-style-type: none"> <li>■ Before the flood control measures, the Los Angeles River _____, but afterwards, it _____.</li> <li>■ After the flood control measures, the Los Angeles River _____, whereas before it _____.</li> <li>■ The flood control measures helped the city by _____; however, it changed the riparian habitat by _____. This probably caused _____.</li> </ul> <p>Use other comparison words such as however and differ, etc. Discuss the punctuation needed for each type of sentence structure.</p>	<p><b>SL.6.1:</b> Engage effectively in a range of collaborative discussions...</p>
<p><b>Common Core Enhancement:</b> This lesson lends itself to a comparison/contrast essay, developing the use of comparison transitions and phrases that clarify the similarities and differences.</p>	<p><b>W.6.2:</b> Write informative/explanatory texts to examine a topic and convey ideas...</p> <p>a) Introduce a topic...; organize ideas... using strategies such as...comparison/contrast...</p> <p><b>WHST.6–8.2:</b> Write informative/explanatory texts...</p> <p>b) Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.</p> <p>c) Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.</p>
<p><b>Step 11:</b> As students begin working on <b>Los Angeles River Before and After</b> (Student Workbook, page 10), remind them to use precise details and not just vague generalities as they write.</p> <p>Before ending the unit, review with the students the different activities they completed throughout the unit, and have them compare and contrast how each type of information led to an understanding of the topic.</p>	<p><b>RST.6–8.9:</b> Compare and contrast the information gained from experiments, simulations...with that gained from reading a text on the same topic.</p> <p><b>W.6.2b and WHST.6–8.2b:</b> Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.</p>

## Unit Assessment

Refer to the introduction pages at the front of this document for information regarding the Traditional and Alternative Assessments for this unit and their Common Core correlations.

### Reading *California Connections* using a Common Core Reading and Writing Focus

#### Reading

Science teachers can further enhance the teaching of Common Core Reading Literacy Standards by noting the suggestions below and in the following pages while reading the **California Connections** selection for content. Explicitly teach students to pay attention to the structure of the text by noting the following:

- Note how the author cites evidence to support main points and analysis. **(RST.6–8.1)**
- Note how the author sets up the central ideas or conclusions; provide an accurate summary of the text distinct from prior knowledge or opinions. **(RST.6–8.2)**
- Analyze how the author describes a scientific process or a multi-step procedure. **(RST.6–8.3)**
- Note how the author explains the meaning of key terms, symbols, domain specific words, and phrases. **(RST.6–8.4)**
- Analyze the structure the author uses to organize the text, including how the major sections contribute to the whole and to an understanding of the topic. **(RST.6–8.5)**
- Analyze the author’s purpose in providing an explanation or describing a procedure. **(RST.6–8.6)**
- Note how the information in the California Connections text integrates with information provided visually throughout the unit in diverse formats, including tables, charts, graphs, diagrams, maps, and quantitative data. **(RST.6–8.7)**
- Distinguish among facts, reasoned judgment based on research findings, and speculation in a text, noting the reasoning and evidence used to support the author’s claim. **(RST.6–8.8)**
- When other documents or media sources are included, compare and contrast the information presented in the various formats and resources with that from the text, noting how the information contributes to a coherent understanding. **(RST.6–8.9)**
- Note comprehension strategies for understanding the text. **(RST.6–8.10)**

**Note:** Standard descriptions from the Reading Standards for Literacy in Science and Technical subjects are paraphrased and combined, using terminology that applies to reading a **California Connections** selection.

#### Writing

Many **California Connections** selections can be used as a model for future student writing tasks applying the Writing Literacy Standards by noting how the author structures the text, organizes the ideas, and provides well-chosen relevant and sufficient facts, extended definitions, concrete details, quotations, or other information and examples.

#### Using the *California Connections* Selection

The following pages note specific places where the **California Connections** selection provides examples for specific Writing Literacy Standards for Science and Technical subjects, using this selection as a writing model. They also provide suggestions for teaching students to analyze text structure using the Reading Literacy Standards for Science and Technical subjects. Teachers can incorporate more suggestions from the list above. In addition, for teachers of self-contained classrooms, ELA standards are included.

**RI.6.1 and RST.6–8.1:** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

**Suggestion:** Throughout the selection, have students cite evidence that supports what it says explicitly as well as explaining inferences that can be drawn. Have students explain the details that work together to create inferences.

**RI.6.7 and RST.6–8.7:** Integrate information presented in different media or formats...to develop a coherent understanding of the topic...

**Suggestion:** Ask students, "Would looking at a map that shows these rivers help to understand the content of this paragraph?" Display a wall map showing the area, or use the **View from Space** wall map provided in the unit, and point out the locations described in this paragraph.

**RI.6.3:** Analyze in detail how a key...idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

**Suggestion:** Have students observe how the selection develops the concept of the Bay Delta and why it is so important.

**RI.6.2 and RST.6–8.2:** Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments...

**Suggestion:** After reading each subheading section, ask students to summarize the central idea and note how it is conveyed.

**RI.6.4 and RI.6–8.4:** Determine the meaning of words and phrases as they are used in a text...

**Suggestion:** While reading, students should look for the terms included in the River Words activity, noting how understanding of the terms is increased through context, photos, and referring to a map.

- Channel
- Delta
- Deposition
- Erode
- Flood cycle
- Floodplain
- Headwaters
- Sediment
- Watershed

California Connections: The Sacramento-San Joaquin River Delta  
Lesson 1 | page 1 of 4

## The Sacramento-San Joaquin River Delta



Near Mount Shasta in Northern California, the headwaters of the Sacramento River begin their journey southward. The San Joaquin River begins high on the western slope of the Sierras, where it runs west and then north. In the Great Central Valley, these great rivers meet. On the way, they collect water from other streams and rivers.

The Pit and McCloud rivers, near Mount Shasta, and the Feather, American, and Yuba rivers all flow into the Sacramento River. The San Joaquin River gathers water from the Merced, Tuolumne, Stanislaus, Mokelumne, and Cosumnes rivers. The two great rivers come together before entering Honker Bay near the city of Antioch. Then they continue as one waterway, eventually emptying into San Francisco Bay and the Pacific Ocean.

**An Ancient Landform**  
A fertile triangle of land formed thousands of years ago where the Sacramento and San Joaquin rivers spread out before entering the San Francisco Bay. This 1,100-square-mile landform is



Mount Shasta, California

2 CALIFORNIA EDUCATION AND THE ENVIRONMENT INITIATIVE | Unit 6.2.b | The Dynamic Nature of Rivers | Student Edition

**RI.6.5:** ...analyze the use of text features... CA

**Suggestion:** Throughout the article, note the subheadings and how they contribute to the organization of the text.

**RI.6.4 and RST.6–8.4:** Determine the meaning of words and phrases as they are used in a text...

**Suggestion:**

- Lead students to notice that the definition of “delta” begins in the paragraph before this one.
- Lead students to notice that the meaning of “inverted” in this context continues into the next paragraph.
- Have students seek out the details in the paragraph that help define “geological constraint.”
- Note how “estuaries” is defined. Further description is on page 5.

What is the author’s purpose for including this information?

**W.6.2c and WHST.6–8.2c:**

Use appropriate transitions to clarify the relationships among ideas and concepts.

**W.6.2b and WHST.6–8.2b:**

Develop the topic with relevant...examples.

- Most
- A good example
- Another example

**W.6.2a and WHST.6–8.2a:** ...organize ideas, concepts, and information, using strategies such as...comparison/contrast...

**Suggestion:** These two paragraphs are comparing the shape of most river deltas with the unique shape of the Sacramento/San Joaquin river delta, using the word “unlike” for organization.

California Connections: The Sacramento-San Joaquin River Delta  
Lesson 1 | page 2 of 4

called the Sacramento-San Joaquin River Delta (Bay Delta).  
A delta is created where a river deposits sediment at the location where it flows into an ocean, a lake, a desert, or a valley. Herodotus, the Greek Historian, named this formation “delta” because it frequently looks like the Greek letter delta, which is the shape of a triangle (Δ).  
The Bay Delta is an inverted river delta. Most river deltas are narrow where the river enters the plain, and then “fan out” as the water moves toward the ocean, lake, or bay. A good example of this is the delta that the Mississippi River forms as it flows out to the ocean, near the city of New Orleans in Louisiana.  
Another example, far away, is the Nile Delta in Egypt. Before reaching the Mediterranean Sea, the Nile Delta spreads like a fan in a triangle shape. Unlike the Nile, the Sacramento and San Joaquin rivers fan out and then rejoin, passing through a narrow gap in the coastal range mountains before flowing into the San Francisco Bay. This gap is called the Carquinez Strait. It connects

Suisun Bay with San Pablo Bay (the northern part of San Francisco Bay). This geological constraint gives the Sacramento-San Joaquin Delta a shape that makes it unique among most of the world’s deltas.

**California’s Largest Bay**  
Twenty thousand years ago, there was no San Francisco Bay. Most of Earth’s water was frozen in glaciers. This made the sea level 400 feet lower than it is today. The California coastline lay 20 miles west of its current location. San Francisco Bay

was just a flat plain, and water from the rivers flowed across it to the sea. As the glaciers melted, the sea level rose. The coastline moved east, and the ocean finally found its way through the Carquinez Strait. Water began to fill the San Francisco Bay.  
San Francisco Bay is part of a series of bays that receive water from the Sacramento and San Joaquin rivers. The bay is a partly closed body of water that includes several estuaries. Salt water from the sea and fresh water from rivers and streams combine in



Carquinez Strait, California

CALIFORNIA EDUCATION AND THE ENVIRONMENT INITIATIVE | Unit 6.2.B | The Dynamic Nature of Rivers I Student Edition | 3

**RI.6.5 and RST.6–8.5:**

Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

**Suggestion:** Lead students to notice that this section goes back in time to describe how the delta was formed, using a combined chronological and cause/effect organization.

**RI.6.7 and RST.6–8.7:** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

**Suggestion:** Note how this photo further defines the “geological constraint” definition. Have students imagine what it looks like on the near side of the photo, then point to its location on a map. Display **The Sacramento-San Joaquin River Delta** (Visual Aid #1) while looking at this photo and the one on the next page. Point out the geographic features on the map and where they are in the photo, discussing how each resource enhances understanding of the bay delta.

**RI.6.7 and RST.6–8.7:** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

**Suggestion:** See notes on the previous page connecting the photos to the text and to the visual aid used in this lesson.

**RI.6.6 and RST.6–8.6:** Determine an author’s point of view or purpose in a text and explain how it is conveyed in the text.

**Suggestion:** Ask students why the author includes this statement. Ask students to look for other statements that reveal the author’s point of view and the related message embedded in this factual text.

California Connections: The Sacramento-San Joaquin River Delta  
Lesson 1 | page 3 of 4



San Francisco Bay, California

estuaries. These waterways provide rich habitats for life of all kinds. Estuary ecosystems can contain more life per square inch than the richest Midwest farmland.

**Rivers, Islands, and Farms**

When the Sacramento and San Joaquin rivers join and move through the low-lying Central Valley, the rivers deposit rock fragments and mud (sediment) that they have carried from the Sierra Nevada and Coast Ranges. This sediment has built up over time, creating a floodplain and other features, such as islands that divide the waterway into many smaller streams. The streams continue to shift, eroding the floodplain, creating new channels and islands, and leaving behind abandoned channels called sloughs (slews). Today, the Bay Delta is a network of many islands connected by 700 miles of waterways.

Dense wetland vegetation grows on the islands. When it dies, the partially decayed plant matter builds up, forming peat soil. As a result, the islands of the Bay Delta are used for agriculture. The Bay Delta contains some of the richest peat soil in the region, the best type of soil for growing crops. In the past, the channels, islands, and natural levees of the delta would change form during the winter flood cycle. Natural levees formed on either side of a stream and developed as a result of the accumulation of sediment deposited naturally during winter flooding. The light peat soil would erode during high flows, channels would widen, and natural levees would be overtopped. Agricultural land would instantly disappear and become a vast inland “lake” that would not dry out until early summer. Then the delta became a vast swamp.

4 CALIFORNIA EDUCATION AND THE ENVIRONMENT INITIATIVE | Unit 6.2.b | The Dynamic Nature of Rivers | Student Edition

**RI.6.5 and RST.6–8.5:** Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

**W.6.2c and WHST.6–8.2c:** Use appropriate transitions to clarify the relationships among ideas and concepts.

**Suggestion:** This page describes the process of creating the Bay Delta, using a combination of chronological and cause effect organization. Have students note words that help clarify the process and the relationships between ideas.

- When the
- Over time
- Creating
- Continue to shift
- Today
- When it dies...
- As a result
- In the past

Ask, “Are there other ways the author helps the reader understand the process of creating the Bay Delta?”

**RI.6.2 and RST.6–8.2:** Determine a central idea of a text and how it is conveyed through particular details...

**Suggestion:** This paragraph actually has two related main ideas: the Bay Delta as a rich habitat, and threats to this habitat. Have students locate the place where the focus changes, and suggest why the author chose to keep it as one paragraph. Ask if they agree or disagree with the decision and why.

**RI.6.5 and RST.6–8.5:** Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

**Suggestion:** These two paragraphs use mostly a cause effect structure. Have students note the words that clarify the causes and effects:

- When it rains...
- Because seawater...
- This provides...
- If the flow...

California Connections: The Sacramento-San Joaquin River Delta  
Lesson 1 Activity Master | page 4 of 4



Flooding in the Sacramento-San Joaquin River Delta, 1980

**It's Not Just the Water**  
In the mountains, when it rains or snows, water swells the streams and drains into rivers. Most of the water finds its way through the series of sloughs and bays where it mixes with salt water from the ocean. Because seawater is heavier than fresh water, it sinks to the bottom. The churning salt water pushes up the fresh water, which rises to the top.

The flow of the rivers and tides and the mixing of salt water and fresh water keep the sediment, plankton, and nutrients suspended in the water. This provides a nutritious food source for animals and plants that live both on land and in the water. If the flow of fresh water changes, as in times of drought or flood, this diverse food web can shrink or even disappear. Many species of mammals, birds, and fish depend on the healthy food source to survive.

The area of the Sacramento-San Joaquin Delta is home to more than 750 species of plants and animals, including some found nowhere else on Earth. The rivers provide a favorite habitat for migratory birds, and are spawning grounds for more than a hundred species of fish. Water has always been the magnet drawing living things to the Bay-Delta. Once a vast floodplain, today the delta is one of the most productive regions in the world, and government officials are working on many efforts to protect it. For example, earthquakes could threaten the Bay Delta's levee system. Fish populations like the Delta smelt, Chinook salmon, and longfin smelt are dropping. Plants that are not native to the delta are also invading this estuary region. More homes and buildings are being built closer to the delta floodplains, which can interfere with the delta's natural way of dealing with seasonal flooding.

Protecting the Bay Delta for the future is very important for many reasons. It is also the single-largest, most important source of water for California. Though the delta is located in the north part of the state between Sacramento and San Francisco, approximately 26 million people from as far away as Los Angeles and San Diego rely on the Bay Delta, at least in part, for their water.

CALIFORNIA EDUCATION AND THE ENVIRONMENT INITIATIVE | Unit 6.2.b | The Dynamic Nature of Rivers | Student Edition | 5

**Suggestion:** Ask students why each of these threats may cause problems for the delta habitat.

**RI.6.1 and RST.6–8.1:** Cite specific textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

**W.6.1b and WHST.6–8.1b:** Support claims with clear reasons and relevant evidence...

**Suggestion:** The author makes a claim here. What textual evidence throughout the article supports this claim? What is inferred? Is it well-supported?

**RI.6.3 and RST.6–8.3:** Analyze in detail how a key...idea is introduced, illustrated, and elaborated in a text...

**RI.6.5 and RST.6–8.5:** Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas...

**Suggestion:** Students can re-read the text, focusing on its organization and how it develops understanding of the Bay Delta. Below is a possible structure analysis, but use student input to develop one together as a class.

- |   |  |   |
|---|--|---|
| 1) Define rivers that flow into the delta                                   | 4) Describe estuary  | 7) Describe food source and habitat               |
| 2) Define what a delta is and describe how the Bay Delta is uniquely shaped | 5) Explain how sediment formed the islands and other features of the delta | 8) Give examples of threats to the delta          |
| 3) Give background for how the Bay Delta developed over time                | 6) Discuss peat soil, agriculture, natural levees, and flooding            | 9) Explain source of water for much of California |

**W.6.2f and WHST.6–8.2f:** Provide a concluding statement or section that follows from the information or explanation presented.

**Suggestion:** Note that this article does not end with a concluding paragraph. Ask students to critique how this feels to them as a reader. This could be followed by developing a concluding paragraph either as a whole class, or as individuals.

### California Common Core State Standards Descriptions

#### Language Standards

- **L.6.3:** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.6.4:** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 6 reading and content*, choosing flexibly from a range of strategies.
  - c) Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
  - d) Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
- **L.6.5:** Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- **L.6.6:** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

#### Reading Standards for Informational Text

- **RI.6.1:** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- **RI.6.2:** Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- **RI.6.3:** Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
- **RI.6.4:** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings. **(See grade 6 Language standards 4–6 for additional expectations.) CA**
- **RI.6.5:** Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas. **Analyze the use of text features (e.g., graphics, headers, captions) in popular media. CA**
- **RI.6.6:** Determine an author’s point of view or purpose in a text and explain how it is conveyed in the text.
- **RI.6.7:** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- **RI.6.9:** Compare and contrast one author’s presentation of events with that of another (e.g., a memoir written by and a biography on the same person).
- **RI.6.10:** By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

### Reading Standards for Literacy in Science and Technical Subjects

- **RST.6–8.1:** Cite specific textual evidence to support analysis of science and technical texts.
- **RST.6–8.2:** Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
- **RST.6–8.3:** Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
- **RST.6–8.4:** Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.
- **RST.6–8.5:** Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.
- **RST.6–8.6:** Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.
- **RST.6–8.7:** Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
- **RST.6–8.9:** Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.
- **RST.6–8.10:** By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently.

### Speaking and Listening Standards

- **SL.6.1:** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 6 topics, texts, and issues*, building on others’ ideas and expressing their own clearly.
  - b) Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
  - c) Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
  - d) Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.
- **SL.6.2:** Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
- **SL.6.3:** Delineate a speaker’s argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.
- **SL.6.4:** Present claims and findings (**e.g., argument, narrative, informative, response to literature presentations**), sequencing ideas logically and using pertinent descriptions, facts, and details **and nonverbal elements** to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation. **CA**

### Writing Standards

- **W.6.1:** Write arguments to support claims with clear reasons and relevant evidence.
  - a) Introduce claim(s) and organize the reasons and evidence clearly.
  - b) Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.
  - c) Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.
- **W.6.2:** Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
  - a) Introduce a topic **or thesis statement**; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. **CA**
  - b) Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
  - c) Use appropriate transitions to clarify the relationships among ideas and concepts.
  - d) Use precise language and domain-specific vocabulary to inform about or explain the topic.
  - e) Establish and maintain a formal style.
  - f) Provide a concluding statement or section that follows from the information or explanation presented.
- **W.6.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
- **W.6.6:** Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.
- **W.6.7:** Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
- **W.6.8:** Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
- **W.6.9:** Draw evidence from literary or informational texts to support analysis, reflection, and research.
  - a) Apply *grade 6 Reading standards* to literature (e.g., “Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics”).
  - b) Apply *grade 6 Reading standards* to literary nonfiction (e.g., “Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not”).
- **W.6.10:** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

### Writing Standards for Literacy in History-Social Studies, Science, and Technical Subjects

- **WHST.6–8.1:** Write arguments focused on *discipline-specific content*.
  - a) Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
  - b) Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources.
  - c) Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
  - d) Establish and maintain a formal style.
  - e) Provide a concluding statement or section that follows from and supports the argument presented.
- **WHST.6–8.2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
  - a) Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
  - b) Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
  - c) Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
  - d) Use precise language and domain-specific vocabulary to inform about or explain the topic.
  - e) Establish and maintain a formal style and objective tone.
  - f) Provide a concluding statement or section that follows from and supports the information or explanation presented.
- **WHST.6–8.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.