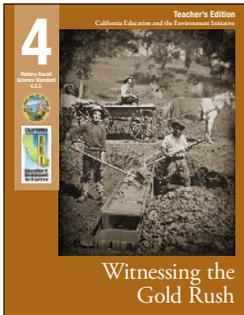




TEACH COMMON CORE STANDARDS WITH THE EEI CURRICULUM

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.

4.3.3.—Witnessing the Gold Rush



In this unit, students learn how the search for gold and the influx of settlers influenced the natural environment and placed great demands on California’s natural and human social systems. Students learn about various mining methods and their effects on natural systems. Then they learn how rapidly-expanding communities dealt with social, economic, political, and legal systems both locally and regionally. Students use primary and secondary sources to experience the Gold Rush. They participate in a gold panning activity and apply their experience to lessons that explore more advanced mining techniques. Students examine how political and economic decisions made during the Gold Rush influenced California in its transition to statehood.

		RI.4.1	RI.4.2	RI.4.3	RI.4.4	RI.4.7	RI.4.10	W.4.1	W.4.2	W.4.3	W.4.4	W.4.8	SL.4.1	SL.4.2	SL.4.3	L.4.3	L.4.4	
LESSONS	California Connections	✓				✓	✓							✓				
	1	✓				✓	✓			✓	✓		✓	✓			✓	
	2			✓	✓	✓				✓		✓	✓	✓	✓	✓	✓	
	3					✓		✓		✓			✓	✓			✓	
	4					✓			✓			✓	✓				✓	
	5	✓	✓			✓							✓	✓	✓	✓		✓
	6					✓		✓		✓				✓	✓	✓		✓
	Traditional Assessment			✓					✓							✓		
	Alternative Assessment			✓					✓							✓		

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
- **SL:** Speaking and Listening Standards
- **W:** Writing Standards

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 and 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 23–24 of this document.

A Note about Common Core Speaking and Listening Standards

Many of the EEI units provide various learning structures, materials, and groupings that lead toward students working in pairs or small groups to discuss concepts and ideas. This 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 in collaborative discussion techniques, students can be placed in pairs or small groups to discuss the lesson topics. To aid in teacher planning, the lessons are listed below along with their learning structures for whole class, pairs/partners, and/or small groups:

- **Lesson 1:** Whole class, independent
- **Lesson 2:** Whole class, pairs
- **Lesson 3:** Whole class
- **Lesson 4:** Whole class, groups of eight, groups of five
- **Lesson 5:** Whole class, 10 students read aloud/the rest listen, record and discuss
- **Lesson 6:** Whole class

National Geographic Resources

- **Human Geography** wall map (Lesson 1)
- **Political** wall map (Lesson 1)

Unit Assessment Options

Assessments	Common Core Standards and Applications
Traditional Assessment	
<p>Students answer multiple choice and short answer questions as well as write one short essay about a method of gold mining.</p>	<p>L.4.3: Use knowledge of language and its conventions when writing...</p> <p>RI.4.3: Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.</p> <p>W.4.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p> <p>b) Develop the topic with facts, definitions, concrete details... or other information and examples...</p>
Alternative Assessment	
<p>Using a graphic organizer, students create a postcard that describes a mining method. The post card explains how that method influenced or changed natural systems in the Gold Country and indicates some of the political, social, economic, and legal changes that resulted from the Gold Rush.</p>	<p>L.4.3: Use knowledge of language and its conventions when writing...</p> <p>RI.4.3: Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.</p> <p>W.4.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p> <p>b) Develop the topic with facts, definitions, concrete details... or other information and examples...</p>

Lesson 1: A Treasure Revealed

Students hear about the discovery of gold and review a map of Gold Country, noting population and vegetation distribution before the Gold Rush. They listen to John Sutter's account of gold's discovery and begin a Gold Rush Influences Chart.



National Geographic Resources

- **Human Geography** wall map (Lesson 1)
- **Political** wall map (Lesson 1)

Use this correlation in place of the **Procedures** on pages 36–37 of the Teacher’s Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
Use the Dictionary Workbook and the vocabulary Word Wall Cards to introduce new words to students as appropriate. Ask students to write their name in the space provided in the Dictionary Workbook . These documents are provided separately.	L.4.4: Determine...the meaning of unknown...words and phrases... a) Use context (e.g., definitions...) as a clue to the meaning of a word or phrase.
Step 1	
Distribute a Student Edition to each student. Tell students to turn to California Connections: The Journey of a Nugget (Student Edition, pages 2–4). Have students take turns reading the story aloud to the class. Ask students to predict what happened after James Marshall found the gold nugget. (<i>He sold it, he told others about it, the Gold Rush happened.</i>)	RI.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. RI.4.10: ...read and comprehend informational texts...
Step 2	
Tell students to turn to California Before the Gold Rush (Student Edition, page 5). Project California Before the Gold Rush (Visual Aid #1). Ask students, “Where did people live in California in 1848?” (<i>People lived along the coast near the Spanish missions and in the mountains. Farmers, trappers, explorers, and California Indians visited the inland mountains and deserts during certain seasons.</i>) Tell students that, after the discovery of gold in 1848, this area of California became known as “Gold Country.” Explain to students that most of the gold in this area was found in the forests west of the Sierra Nevada. Point out the Sacramento area and the location of Sutter’s Fort, as well as Sutter’s Mill, where Marshall found the gold in Coloma, along the American River. Tip: Download the digital copies of the Visual Aids before class and confirm the projection works smoothly. See http://www.californiaeei.org/curriculum/ to download visual aids.	RI.4.7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines...) and explain how the information contributes to an understanding of the text in which it appears. SL.4.2: Paraphrase portions of a text read aloud or information presented...visually...and orally.

Procedures	Common Core Standards and Applications
Step 3	
<p>Project John Sutter and Sutter’s Fort (Visual Aid #2). While projecting John Sutter and Sutter’s Fort, read aloud the following facts about John Sutter:</p> <ul style="list-style-type: none"> ■ Sutter was born in Germany to Swiss parents and grew up in Switzerland; he came to California in 1839. ■ After getting permission from the Mexican government, Sutter built a fort in what is today Sacramento. ■ He grew grapes and wheat on farmland there, along with raising large herds of cattle and sheep. Sutter’s Fort became a place where the goods from his farm and ranch were stored and sold to other settlers. ■ Sutter and his business partner, James Marshall, decided to go into the lumber business. They wanted to build a water-powered sawmill on one of the rivers near Sacramento. At the sawmill, Marshall discovered gold in 1848. <p>Ask students, “What natural resources would Sutter have used on his farm?” (<i>Land, soil, water</i>) Ask, “What natural resources would Sutter have used to build his lumber business?” (<i>Water, wood</i>)</p>	<p>RI.4.7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines...) and explain how the information contributes to an understanding of the text in which it appears.</p> <p>SL.4.2: Paraphrase portions of a text read aloud or information presented...visually...and orally.</p>
Step 4	
<p>Tell students to turn to Sutter’s Account of Gold Discovery (Student Edition, pages 6–7). Explain that “...” means some words have been left out of Mr. Sutter’s excerpts. Tell students that they are about hear about what John Sutter saw and did when gold was discovered. Ask students to listen and follow along as you read Excerpt 1.</p> <p>Read Excerpt 1 to the class. Stop after every few sentences to check for student understanding. Explain terms that may be unfamiliar to students.</p> <p>When done, ask students, “Why was Marshall so nervous about showing Sutter the gold he discovered?” (<i>Gold is a valuable resource. Marshall may have thought that if people found out about it, they might stop working for Mr. Sutter and begin to seach for gold near the sawmill.</i>)</p> <p>Read Excerpt 2 to the class and stop often to clarify or answer student questions. After the reading, distribute a Student Workbook to each student. Tell students to turn to What Sutter Saw (Student Workbook, page 2). Tell students to complete the thought bubble with words that tell:</p> <ul style="list-style-type: none"> ■ what Sutter thought about the discovery by his partner, Marshall ■ what Sutter saw happen as the secret got out 	<p>RI.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>W.4.3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <p>b) Use dialogue and description to develop experiences and events or show the responses of characters to situations.</p> <p>W.4.4: Produce clear and coherent writing...in which the development and organization are appropriate to task, purpose, and audience...</p>

Procedures	Common Core Standards and Applications
Step 5	
<p>Ask students, “What changed at Sutter’s Fort after gold was discovered?” (<i>The Gold Rush caused people to leave their jobs at Sutter’s Fort and kept Sutter’s sawmill from being finished.</i>)</p> <p>Call students’ attention to the Gold Rush Influences Chart. Write their answers to this question about the changes at Sutter’s Fort on the chart. Explain to the class that they will add ideas to the chart as they learn more about the Gold Rush in California.</p>	<p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners on <i>grade 4 topics and texts</i>, building on others’ ideas and expressing their own clearly.</p>
Step 6	
<p>Gather Student Editions and keep the Gold Rush Influences Chart posted for use in Lesson 2.</p> <p>Collect Student Workbooks and use What Sutter Saw for assessment.</p>	n/a

Lesson 2: Mining Beds of Gold

Students observe illustrations of early mining methods. This activity conveys the environmental effects of panning as they consider the influences of early mining methods on riparian ecosystems and add to the Gold Rush Influences Chart.



Use this correlation in place of the **Procedures** on pages 50–51 of the Teacher’s Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
<p>Use the Dictionary Workbook and the vocabulary Word Wall Cards to introduce new words to students as appropriate.</p>	<p>L.4.4c: Consult reference materials (e.g., dictionaries...)...to... determine or clarify the precise meaning of key words...</p> <p>RI.4.4: Determine the meaning of general academic and domain-specific words...</p>
Step 1	
<p>Ask students to recall how gold was found by James Marshall, as told in California Connections: The Journey of a Nugget. (<i>He saw something shining in the channel of the sawmill he was building along the American River. He reached into the water, picked it up, and discovered it was gold.</i>) Ask students:</p> <ul style="list-style-type: none"> How did the gold get in the water? (<i>Erosion and weathering over time brought the gold out of the mountains and into the streambeds.</i>) Do you think a lot of gold was this easy to find? (<i>Answers will vary, but may include: at first, yes, but then it would run out. Then people would have to find other ways to get the gold that was still in the mountains.</i>) 	<p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners on <i>grade 4 topics and texts</i>, building on others’ ideas and expressing their own clearly.</p> <p>c) Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p>
Step 2	
<p>Project Early Mining Methods (Visual Aids #3–5). Explain to students that the images show prospectors trying to find gold in a river ecosystem.</p> <p>Point out and explain to the class each of the following methods on Early Mining Methods:</p> <ul style="list-style-type: none"> Panning: Using shallow metal pans, prospectors mixed river water with soil from the streambed or the side of the river. As they gently swirled the pan using a circular motion, the soil would stay mixed with the water and spill out of the top of the pan, leaving the heavier gold pieces (if there was any) on the bottom of the pan. 	<p>RI.4.7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines...) and explain how the information contributes to an understanding of the text in which it appears.</p>

Procedures	Common Core Standards and Applications
Step 2 (Continued):	
<ul style="list-style-type: none"> ■ Dry washing: Prospectors would put dry soil from the side of the river on top of a spread-out wool blanket. Two prospectors would each hold an end of the blanket and gently bounce the soil up and down on the blanket. The wind would blow away the soil, leaving the heavier gold (if there were any) on the blanket. This method was used when water was not available. ■ Using a rocker (cradle): The rocker (cradle) was set on smooth, sloping ground. Riffles, or sections of wood, were built along the floor of the rocker (cradle) to catch gold nuggets. Usually operated by teams of prospectors, one or more people would carry wet dirt and water from the river to the top of the rocker (cradle), while another prospector rocked the cradle back and forth. The dirt and water would flow out one side of the rocker (cradle) while the riffles at the bottom caught the heavier gold (if there were any). 	<p>RI.4.7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines...) and explain how the information contributes to an understanding of the text in which it appears.</p>
Step 3	
<p>Explain to students that they will now hear what using these mining methods was really like 160 years ago. Tell them to listen carefully as you read aloud from the perspective of several Gold Rush prospectors. Read aloud the First Accounts of Gold Script provided on page 52. Explain to students that they, like the prospectors they will hear about, will then have the chance to pan for gold!</p>	<p>SL.4.2: Paraphrase portions of a text read aloud...</p> <p>SL.4.3: Identify...evidence a speaker...provides to support particular points.</p>
Step 4	
<p>Tell students that they are now going to try an early mining method—panning. Divide the class into pairs. Tell the pairs that they will “mine” their assigned streambed pools, looking for placer gold, which is represented by pennies. Project How to Pan for Gold 1 and How to Pan for Gold 2 (Visual Aids #6–7) and review the procedures with the class.</p> <ul style="list-style-type: none"> ■ Once all the pairs have their supplies and understand the directions, indicate when they should start panning. Give the pairs approximately 10 minutes to pan for gold. ■ As the teams finish or the time is up, have them walk to the Claims Office and bring you the pennies they found. Record each pair’s results on the Claims Office chart. Have students return to their desks. <p>Once all the gold has been turned in, report which pair of prospectors found the most gold in their pool.</p> <p>Ask students, “Why would some rivers or streams (in real life) have had more gold than others?” (<i>As rocks break apart, some have more gold in them than others. If a river had many rocks containing gold it would have more gold nuggets.</i>)</p>	<p>RI.4.3: Explain...procedures...in a...technical text...</p> <p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)</p> <p>SL.4.2: Paraphrase portions of a text read aloud or information presented...visually ...and orally.</p>

Procedures	Common Core Standards and Applications
Step 5	
<p>Redistribute the students' individual Student Workbooks. Tell them to turn to Panning for Gold Results (Student Workbook, page 3). Ask students to return to the streambed pools and use them as needed to complete the questions. Next, call students back to their seats (if necessary), and ask them to share their observations with the class about the condition of their streambed pool before and after the activity. (<i>Note: As students are answering the questions, record key words and phrases from their responses on the Gold Rush Influences Chart from Lesson 1. Use this chart as extra support material for ELL students.</i>) Use the following questions to guide the discussion:</p> <ul style="list-style-type: none"> ■ How did your streambed pool change because of the prospectors' mining? (<i>The sand, pebbles, plants, and eggs in the stream got all mixed up. Some of the sand, pebbles, and water that were in the pool came and covered some of the plants and eggs next to the pool.</i>) ■ What might happen to a real streambed pool if the water is taken out and not returned? (<i>It would slow down the flow of the stream, and there would also be less water for plants and animals.</i>) (<i>Note: Remind students that while all living things depend on water, for fish and plants and animals that live in the water, it is their home, and they cannot live if too much water is removed from the streambed.</i>) ■ What might happen to a real streambed pool if sediment and rocks are taken out and not returned, or piled up on the sides of the stream? (<i>The bottom of the streambed pool would get deeper; small animals and their eggs might be hurt; the plants and animals on the sides of the river would be covered in dirt and rocks.</i>) ■ How would this affect the river ecosystem? (<i>Many plants and animals would not be able to live in this part of the stream or on its banks. The pool would change in size and shape.</i>) ■ Do you think that prospectors thought about how their mining activities affected the river ecosystem? Explain. 	<p>L.4.3: Use knowledge of language and its conventions when writing, speaking, reading or listening.</p> <p>a) Choose words and phrases to convey ideas precisely.</p> <p>SL.4.1: 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 to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p> <p>W.4.8: Recall relevant information from experiences...</p>
Step 6	
<p>Call students' attention to the Gold Rush Influences Chart. Read the question in column two aloud. Write students' responses underneath, on the chart. (<i>Mining for gold makes the water in the river muddy, and disturbs plants and animals living in the river. Rocks, mud, plants, and animals are moved or taken out of the river, and this can mean less food and shelter for the living things still in the river.</i>)</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p>

Procedures	Common Core Standards and Applications
Step 7	
<p>Have students complete the questions on Panning for Gold Results while standing near their streambed pools. When students have finished, have the “prospector” partners assist with the cleanup of the streambed pools.</p> <p>Keep the Gold Rush Influences Chart posted for use in Lesson 3.</p> <p>Collect Student Workbooks and use Panning for Gold Results for assessment.</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...).</p> <p>W.4.3e: Provide a conclusion that follows from the narrated experiences or events.</p>

Lesson 3: The Secret's Out!

Students compare the population of California in 1850 and 1848. Through the writings of Louise Clapp, they hear firsthand accounts of life in the mining camps and learn how mining methods changed. They add to the Gold Rush Influences Chart.



Use this correlation in place of the **Procedures** on pages 64–65 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
<p>Use the Dictionary Workbook and the vocabulary Word Wall Cards to introduce new words to students as appropriate.</p>	<p>L.4.4: Determine...the meaning of unknown...words and phrases...</p> <p>a) Use context (e.g., definitions...) as a clue to the meaning of a word or phrase.</p>
Step 1	
<p>Distribute a Student Edition to each student. Tell them to turn to California Before the Gold Rush (Student Edition, page 5). Project California Before the Gold Rush (Visual Aid #1) and ask students what the map shows. (<i>The location of the camps, cities, towns, and forts in "Gold Country" in California in 1848.</i>)</p> <p>Tell students to turn to California During the Gold Rush (Student Edition, page 8). Project California During the Gold Rush (Visual Aid #8) and tell students that this map shows the "Gold Country" in 1850. Ask the students the following questions about the map:</p> <ul style="list-style-type: none"> ■ What do you notice about where the people lived in 1850 versus 1848? (<i>Most people lived along the coast in 1848. In 1850, many people were living inland, near the mountains and the rivers and streams near the mountains. In addition, there were more people in Gold Country in 1850 than there were in 1848.</i>) ■ What do you notice about the vegetation (forest areas) in 1850 versus 1848? (<i>There are fewer forest areas in 1850 than in 1848, especially along the Sierra Nevada mountain range.</i>) <p>Project California's Changing Population (Visual Aid #9). Read over the data on the chart with the class. Ask students the following questions about the data:</p> <ul style="list-style-type: none"> ■ How many people were living in California in 1848? (<i>13,800</i>) ■ How many people were living in California by 1850? (<i>92,597</i>) (<i>Note: Mention that by 1860, California's population had grown to almost 380,000.</i>) ■ Why did so many people move to California? (<i>To try to find gold or start businesses serving goldminers.</i>) 	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>SL.4.1d: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p>

Procedures	Common Core Standards and Applications
Step 1 (Continued):	
<ul style="list-style-type: none"> How do you think this population boom affected natural resources in California? (<i>People used lots of wood to build buildings in the mining towns; there would be more demands on the rivers and lakes for humans, animals, and mining methods.</i>) 	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>SL.4.1d: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p>
Step 2	
<p>Project California During the Gold Rush again and tell students that as gold became more difficult to find in the streams, many “mining camps” sprang up along the Sierra Nevada Mountains. Explain that the people in these camps used the “timber” from the trees in the forests to build cabins to live in and to make mining tools that could dig into the mountains to find the gold still buried there.</p>	n/a
Step 3	
<p>Project Louise Clapp (Visual Aid #10) and read the following facts about her:</p> <ul style="list-style-type: none"> Louise Clapp was a woman from New England who came to California with her husband in 1850. In 1851–52, she and her husband lived in two mining camps in Gold Country—Rich Bar and Indian Bar. Between 1851 and 1852, Louise wrote 23 letters to her sister in Massachusetts. She chose another name, Shirley, to sign her letters with. This is called a pen name. She told her about what was happening in the two gold mining camps, giving her sister a picture of life in Gold Country at that time. <p>Tell students that they are going to read some of Louise’s letters to see how mining was changing how people lived and how it was changing the ecosystems in Gold Country.</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p>
Step 4	
<p>Tell students to turn to Clapp’s Account of Gold Mining Life and Methods (Student Edition, pages 9–10). Project Jamestown Mining Camp (Visual Aid #11) while reading aloud Excerpts 1 through 3 from Clapp’s Account of Gold Mining Life and Methods. Ask students to follow along as you read. Stop frequently to check for understanding.</p> <p>Ask students the following questions:</p> <ul style="list-style-type: none"> What were the mining camps like? (<i>They were small with lots of mining holes all around them.</i>) What were the living conditions like? (<i>They were poor. The mining camps could be dangerous with all of the empty mining holes; garbage piled up; food could be scarce at times.</i>) Do you think many women lived in the mining camps? (<i>No, the mining camps were mostly made up of men; there were few women and children.</i>) 	<p>SL.4.2: Paraphrase portions of a text read aloud...</p>

Procedures	Common Core Standards and Applications
Step 5	
<p>Project Advanced Mining Methods—Water Wheels and Advanced Mining Methods—Sluice (Visual Aids #12–13) while reading aloud Excerpts 4 through 6 from Clapp’s Account of Gold Mining Life and Methods.</p> <p>After reading the excerpts, point out on the transparencies each of the mining tools mentioned. Tell students these facts:</p> <ul style="list-style-type: none"> ■ Water Wheels: These wheels were made of wood and placed so that the moving water in a river or stream would make them turn. They were used to run machinery and mills necessary for gold mining. ■ Sluice: This big wooden box had two parts. As stream water flowed through the top of the sluice box, the heavier gold (if there was any) would drop to the bottom of the box while the dirt and water washed away from a slot in the top. ■ Flumes: These were large wooden troughs that brought river water to the long toms and the sluice boxes. The miners also used ditches to bring in river water because they were cheaper to make than flumes. Ditches and flumes were not just built to bring the water to where it was needed; prospectors also used them to change the course of entire rivers and streams. Then the miners could walk right in to where the river used to be and start mining for gold! <p>Ask students, “What were the new tools made of?” (<i>Wood, some metal</i>) Ask, “Where did the timber come from?” (<i>Trees</i>) Tell students that miners cut down the forests around the mining camps.</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>Suggestion: <i>Fish tank gravel painted gold makes more authentic looking gold nuggets.</i></p>
Step 6	
<p>Ask students: “How were the prospectors’ use of new mining tools and the way of life in the mining camps changing the ecosystems in Gold Country?” Add their thoughts to the Gold Rush Influences Chart. (<i>Miners changed the flow of the rivers. This affected the fish and other wildlife that lived in the rivers and used the rivers to find food and drinking water. Prospectors searching for gold dug many holes. Miners cut down trees from the forests to make mining tools and the buildings that they lived in.</i>)</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners...building on others’ ideas and expressing their own clearly.</p>

Procedures	Common Core Standards and Applications
Step 7	
<p>Redistribute the students' individual Student Workbooks. Tell them to turn to What Clapp Saw (Student Workbook, page 4). Tell students to imagine that each of them is Louise Clapp. They will use the pronoun "I" to complete the thought bubble with statements about:</p> <ul style="list-style-type: none"> ■ what Clapp thought about life in the mining camps ■ how the camps, the miners' lives in the camps, and the new mining methods they used were changing the ecosystems <p>Gather Student Editions and keep the Gold Rush Influences Chart posted for use in Lesson 5.</p> <p>Collect Student Workbooks and use What Clapp Saw for assessment.</p>	<p>W.4.1d: Provide a concluding statement or section related to the opinion presented.</p> <p>W.4.3b: Use dialogue and description to develop experiences and events or show the responses of characters to situations.</p>

Lesson 4: From Treasure Hunt to Industry

Students compare images of early gold mining and later large-scale, industrial mining operations. They read about mercury use in mining and the effects of mercury and hydraulic mining on California’s natural systems.



Use this correlation in place of the **Procedures** on pages 82–83 of the Teacher’s Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
<p>Use the Dictionary Workbook and the vocabulary Word Wall Cards to introduce new words to students as appropriate.</p>	<p>L.4.4: Determine...the meaning of unknown...words and phrases...</p> <p>a) Use context (e.g., definitions...) as a clue to the meaning of a word or phrase.</p>
Step 1	
<p>Once again, project Early Mining Methods (Visual Aids #3–5). Ask students, “What do you think happened to the population in California after gold was discovered?” (<i>It grew as many people came to California in search of gold.</i>) Explain that gold soon became hard to find using the tools and methods early prospectors had used. Ask, “Where else could prospectors find gold? (<i>In the mountains, deeper in the water and forests.</i>)”</p> <p>Explain to students that big mining companies started to come to California to find gold. Ask students, “Do you think big mining companies would use the same methods as the early individual miners used? Why or why not?” (<i>Maybe, but they probably wanted to get more gold more quickly than you get working with one or two people.</i>)</p> <p>Once again, project Advanced Mining Methods (Visual Aids #12–13). Tell students that the large mining companies had new tools to get at the gold. Tell students that the large mining companies employed hundreds of miners and built huge sluices and flumes in the forests and river areas of Gold Country.</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>SL.4.1d: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p>
Step 2	
<p>Project Hydraulic Mining Operation (Visual Aid #14). Tell students that they are going to look at other photographs of these big mining operations and read about how they reached the gold. Explain that the large mining companies used “hydraulic” (water) technology and “mercury” to help get the gold out of the soil, and that these techniques made great piles of “tailings.”</p> <p>Divide the class into eight groups and distribute one set of Hydraulic Mining Process (Information Cards #1–8) to each group. Redistribute the students’ individual Student Workbooks. Tell them to turn to Mining Comparisons (Student Workbook, pages 5–6).</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners...building on others’ ideas and expressing their own clearly.</p> <p>W.4.8: ...gather...information from print and digital sources...paraphrase, and categorize information...</p>

Procedures	Common Core Standards and Applications
Step 2 (Continued):	
<p>Project each of the Early Mining Methods visual aids once again. Tell each group to carefully observe the photographs on the Hydraulic Mining Process information cards, and compare them to the early mining methods they saw on the visual aids. Have them record the differences they see between the early mining methods and the hydraulic mining on Part 1 of their individual copies of Mining Comparisons.</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners...building on others' ideas and expressing their own clearly.</p> <p>W.4.8: ...gather...information from print and digital sources... paraphrase, and categorize information...</p>
Step 3	
<p>Distribute a Student Edition to each student. Once all of the students have completed Part 1 of Mining Comparisons, direct the groups to turn to Hydraulic Mining Process Pieces (Student Edition, pages 11–12). Tell the groups to divide the five readings among themselves, and have group members read aloud their pieces to the rest of the group, starting with Piece 1 and ending with Piece 5. After reading each piece, group members should work together to answer the questions about it on Mining Comparisons.</p> <p>Give the groups 20 minutes to complete this task.</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners...building on others' ideas and expressing their own clearly.</p> <p>W.4.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p>
Step 4	
<p>When the groups finish the reading and questions, discuss their answers as a class.</p> <ul style="list-style-type: none"> ■ Were there differences in the number of men it took to mine in the new way? (<i>Yes, one man could do panning, but the large mining operations needed whole teams of men.</i>) ■ How was the land changed when people used the new mining methods? Compare that to how the land was changed when people used the older methods. How was it the same? How was it different? (<i>Panning disturbed the streams, but hydraulic mining knocked down whole mountainsides. The new operations created large piles of stones, sand, and soil.</i>) ■ Were there differences in the amount of timber that people needed to make the tools used in mining the new way? (<i>Yes, panning itself did not require timber, but the flumes and sluices that were constructed by the large mining operations needed lots of timber. Forests were cut down to construct the flumes and sluices and to make bonfires so the miners could work at night.</i>) ■ Why did miners use mercury? (<i>Miners used mercury to bond to the gold and make it easier to extract from dirt and rock particles.</i>) ■ Why was using mercury a problem? (<i>The mercury went into lakes and rivers. It entered the food chain through the water and can still poison animals and humans.</i>) 	<p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners...building on others' ideas and expressing their own clearly.</p> <p>a) Come to discussions prepared, having read or studied required material; explicitly draw on that preparation...to explore ideas under discussion.</p>

Procedures	Common Core Standards and Applications
Step 5	
<p>Tell the students that at the time of the Gold Rush, people did not understand that mercury was so dangerous. It was used in many things—paint, metal dishes and cups, jewelry, and thermometers. (It is still used in some thermometers today.) Explain that once mercury gets into the soil or water, it harms the environment. Once it enters the body of an animal or a person, it does not come out.</p> <p>Project Mercury in the Food Web (Visual Aid #15). Tell students to look at the food web and observe that the mercury passes from one level of the food web to the next.</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...).</p>
Step 6	
<p>Project Mercury in California’s Water (Visual Aid #16). Have students observe where the gold mines were located in relation to the water bodies with dangerous levels of mercury today. Ask students, “What does this map tell you about the influence of the Gold Rush?” (<i>The influence continues even today. The mercury used in mining during the Gold Rush entered California’s rivers and streams, eventually traveling to the lakes and bays. Many of these lakes and bays still have mercury in them.</i>) Tell students that more than 150 years later, the mercury that the miners used in their search for gold continues to require careful monitoring, guiding, and cleaning up when possible.</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...).</p> <p>SL.4.1d: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p>
Step 7	
<p>Gather Student Editions and Hydraulic Mining Process information cards.</p> <p>Collect Student Workbooks and use Mining Comparisons for assessment.</p>	<p>n/a</p>

Lesson 5: Flattening Mountains, Filling Valleys

Students participate in a simulated court case in which they learn how hydraulic mining affected communities and businesses near Gold Country and how an 1884 court order ended hydraulic mining in California. They add to the **Gold Rush Influences Chart**.



Use this correlation in place of the **Procedures** on pages 100–101 of the Teacher’s Edition.

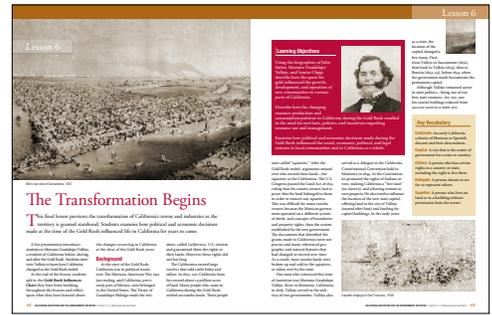
Procedures	Common Core Standards and Applications
Vocabulary Development	
<p>Use the Dictionary Workbook and the vocabulary Word Wall Cards to introduce new words to students as appropriate.</p>	<p>L.4.4: Determine...the meaning of unknown...words and phrases...</p> <p>a) Use context (e.g., definitions...) as a clue to the meaning of a word or phrase.</p>
Step 1	
<p>Project Hydraulic Mining Operation (Visual Aid #14). Ask students, “What were some of the effects of hydraulic mining?” (<i>Large amounts of tailings filled the rivers, mountainsides were washed away, forests were cut down to build the flumes and sluices that were needed, mercury entered rivers and lakes.</i>)</p> <p>Tell the class that after a few years, the use of hydraulic mining caused anger and disagreements between the miners and farmers, merchants, and townspeople who lived along the rivers downstream from the large mining operations. Ask students, “Why might hydraulic mining have caused conflict?” (<i>Hydraulic mining used many resources and damaged the land. It often redirected the water from where the farmers had gotten it. They probably fought over who owned the land and who was going to clean it up.</i>)</p>	<p>RI.4.7: Interpret information presented visually, orally or quantitatively (e.g., in charts, graphs...)...</p> <p>SL.4.1d: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.</p>
Step 2	
<p>Tell the class that today they are going to act out a court case about hydraulic mining. Explain to students that 10 of them will be “witnesses” in the case. The rest of them will act as the “jury” and decide what to do, so they must listen carefully to what the witnesses have to say.</p> <p>Select 10 witnesses for the case. Have the witnesses sit in the 10 chairs at the side (or front) of the room. Distribute one of the Viewpoints of Witnesses (Information Cards #9–18) to each witness. Explain to the witnesses that they will be reading their statements aloud to the “court.” Allow time for witnesses to silently read over their statements.</p>	<p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners...building on others’ ideas and expressing their own clearly.</p>

Procedures	Common Core Standards and Applications
Step 3	
<p>Have the jury stay in their seats. Tell the jury that today they will be hearing a case involving hydraulic mining. They will hear testimony from the witnesses: farmers, merchants, townspeople, and miners. Some of the witnesses are “for” hydraulic mining and some of the witnesses are “against” hydraulic mining. Project The Debris Debate (Visual Aid #17). Explain that as each witness testifies, the class will take notes about the information the witness gives to the court. (<i>Optional: Ask jury members to simply listen to the witnesses while you take notes on the visual aid for the class.</i>)</p>	<p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners...building on others’ ideas and expressing their own clearly.</p>
Step 4	
<p>Redistribute the students’ individual Student Workbooks. Tell them to turn to The Debris Debate (Student Workbook, page 7) and take notes on the information the witnesses present. (<i>Note: Sample summaries of the witnesses’ testimonies are provided on The Debris Debate on page 110.</i>) In order from 1 to 10, have the witnesses stand and read their statements to the court.</p> <p>When all the witnesses have testified, ask jury members to share some of their notes. Record their observations on The Debris Debate. Next ask the jury whether they think hydraulic mining should be allowed to continue. Instruct them to discuss the testimony among themselves and to vote by secret ballot. Explain that the verdict will be based on the majority vote. Have each student cast their vote on a separate piece of paper. Have two students tally the votes and share the results with the class.</p> <p>Thank the jury for their decision and ask the witnesses to “step down” and return to their desks. Collect the Viewpoints of Witnesses information cards as they do so.</p>	<p>SL.4.1: Engage effectively in a range of collaborative discussions...with diverse partners...building on others’ ideas and expressing their own clearly.</p> <p>SL.4.2: Paraphrase portions of a text read aloud or information presented in diverse media and formats...</p> <p>SL.4.3: Identify the reasons and evidence a speaker...provides to support particular points.</p> <p>W.4.8: Recall relevant information from experiences...take notes, paraphrase and categorize information...</p>
Step 5	
<p>Share the following facts with the class regarding what really happened with hydraulic mining:</p> <ul style="list-style-type: none"> ■ In 1878, angry farmers, ranchers, townspeople, and outside interests, such as real estate developers, joined to form the Anti-Debris Association and pressed for court action to close down the hydraulic mining industry. ■ In 1884, the Ninth U.S. Circuit Court in San Francisco issued an injunction on the mining industry, ruling that dumping debris violated the law because it interfered with other businesses downstream. ■ This injunction ended the practice of hydraulic mining in California. <p>Ask students for their thoughts about this decision. Ask them how California might be different today if this decision had not been made.</p>	<p>SL.4.2: Paraphrase portions of a text read aloud or information presented in diverse media and formats...</p> <p>SL.4.3: Identify the reasons and evidence a speaker...provides to support particular points.</p>

Procedures	Common Core Standards and Applications
Step 6	
<p>Call students' attention to the Gold Rush Influences Chart. Read aloud the question in the fourth column, "How did new mining methods change California?" and write students' answers underneath it on the chart. (<i>Forests were cut down to supply timber for the mining operations; rivers and streams were changed, which affected the plants and animals living in them; and the tailings from mining left huge piles of stones, sand, and soil on the land and in the water. This affected the farmers and people wanting to travel by boat on the rivers. The debris had a lot of mercury in it. The mercury entered the food chain, where it is still found today. The court made hydraulic mining illegal in California.</i>)</p>	<p>SL.4.2: Paraphrase portions of a text read aloud or information presented in diverse media and formats...</p> <p>SL.4.3: Identify the reasons and evidence a speaker...provides to support particular points.</p>
Step 7	
<p>Tell students to turn to Reaching a Decision (Student Workbook, page 8). Have them begin their work in class and complete Reaching a Decision for homework.</p> <p>Keep the Gold Rush Influences Chart posted for use in Lesson 6.</p> <p>Collect Student Workbooks and use Reaching a Decision for assessment.</p>	<p>RI.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>RI.4.2: Determine the main idea of a text and...summarize the text.</p> <p>RI.4.7: Interpret information presented visually, orally or quantitatively...</p>

Lesson 6: The Transformation Begins

Students meet Mariano Guadalupe Vallejo through a historical reenactment and ask him questions about his experiences during and after the Gold Rush in California. They learn about some of the social and political changes he witnessed. They reflect upon the Gold Rush Influences Chart.



Use this correlation in place of the **Procedures** on page 116 of the Teacher’s Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
Use the Dictionary Workbook and the vocabulary Word Wall Cards to introduce new words to students as appropriate.	L.4.4: Determine...the meaning of unknown...words and phrases... a) Use context (e.g., definitions...) as a clue to the meaning of a word or phrase.
Step 1	
Announce to the class that today they will have an important visitor, a person who lived in California before and during the Gold Rush. Tell students that they will find out about how California was changing because of the Gold Rush by asking this visitor some questions about his life. Tell students that the visitor to their class today is a “Californio” who was a “citizen” of Mexico and then of the United States. Explain that he served as a general in the army of both countries and became a “delegate” to the California Constitutional Convention of 1849. He also saw his land taken away by “squatters.”	n/a
Step 2	
Redistribute the students’ individual Student Workbooks . Tell them to turn to Student Questions for General Vallejo (Student Workbook, pages 9–10). As the students read over the questions quietly, bring the class visitor inside the classroom. Using Vallejo’s Account of the Golden State (Information Cards #19–26), have “General Mariano Guadalupe Vallejo” introduce himself to the class by reading aloud the Introduction on the first of the Vallejo’s Account of the Golden State information cards. As “General Vallejo” reads the introduction, point out to students where Monterey and Sonoma are located on the Political wall map. Tell students to take notes on what General Vallejo says on the their copies of Student Questions for General Vallejo .	RI.4.7: Interpret information presented...orally... SL.4.2: Paraphrase portions of a text read aloud or information presented in diverse media and formats... SL.4.3: Identify the reasons and evidence a speaker...provides to support particular points.

Procedures	Common Core Standards and Applications
Step 3	
<p>Tell students that they may now ask General Vallejo questions. Choose a student to ask Question 1 on Student Questions for General Vallejo. (General Vallejo should respond to the student’s question using information from Vallejo’s Account of the Golden State.)</p> <p>Continue to call on students to ask General Vallejo questions from Student Questions for General Vallejo, and let him respond to the questions using Vallejo’s Account of the Golden State. Tell students to take notes on what General Vallejo’s says on the their copies of Student Questions for General Vallejo.</p> <p>As General Vallejo mentions the names of other towns and places in California, point them out to students on the Human Geography wall map.</p> <p>When all the scripted questions have been asked and answered, thank General Vallejo for coming to visit. Gather Vallejo’s Account of the Golden State information cards from General Vallejo.</p>	<p>RI.4.7: Interpret information presented...orally...</p> <p>SL.4.1c: Pose...specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p> <p>SL.4.2: Paraphrase portions of a text read aloud or information presented in diverse media and formats...</p> <p>SL.4.3: Identify the reasons and evidence a speaker...provides to support particular points.</p>
Step 4	
<p>After General Vallejo leaves, have students turn to What Vallejo Saw (Student Workbook, page 11). Direct them to complete the thought bubble describing what General Vallejo thought about the discovery of gold. Also, have the students write what they think about how General Vallejo saw the Gold Rush change California.</p>	<p>W.4.1d: Provide a concluding statement or section related to the opinion presented.</p> <p>W.4.3b: Use dialogue and description to develop experiences and events or show the responses of characters to situations.</p>
Step 5	
<p>Call students’ attention to the Gold Rush Influences Chart. Ask them to read over what changed in California because of the Gold Rush and describe some other things that changed in the state, based on what they learned from listening to General Vallejo. (<i>The state capital moved from San Jose to Vallejo, and finally to Sacramento; land from ranchos was given to squatters; cattle ranching changed to wheat farming; California Indians lost their rights.</i>)</p> <p>Collect Student Workbooks and use What Vallejo Saw for assessment.</p>	<p>RI.4.7: Interpret information presented visually, orally, or quantitatively...and explain how the information contributes to an understanding of the text in which it appears.</p> <p>SL.4.1c: Pose...specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p> <p>SL.4.2: Paraphrase portions of a text read aloud or information presented in diverse media and formats...</p> <p>SL.4.3: Identify the reasons and evidence a speaker...provides to support particular points.</p>

California Common Core State Standards Descriptions

Language Standards

- **L.4.3:** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - a) Choose words and phrases to convey ideas precisely.
- **L.4.4:** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 4 reading and content*, choosing flexibly from a range of strategies.
 - a) Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.
 - c) Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases **and to identify alternate word choices in all content areas. CA**

Reading Standards for Informational Text

- **RI.4.1:** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RI.4.2:** Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- **RI.4.3:** Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- **RI.4.4:** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*. **(See grade 4 Language standards 4–6 for additional expectations.) CA**
- **RI.4.7:** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **RI.4.10:** By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Speaking and Listening Standards

- **SL.4.1:** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.
 - a) Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
 - c) Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
 - d) Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.
- **SL.4.2:** Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- **SL.4.3:** Identify the reasons and evidence a speaker **or media source** provides to support particular points. **CA**

Writing Standards

- **W.4.1:** Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
 - d) Provide a concluding statement or section related to the opinion presented.
- **W.4.2:** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
 - b) Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
- **W.4.3:** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
 - b) Use dialogue and description to develop experiences and events or show the responses of characters to situations.
 - e) Provide a conclusion that follows from the narrated experiences or events.
- **W.4.4:** Produce clear and coherent writing (**including multiple-paragraph texts**) in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.) **CA**
- **W.4.8:** Recall relevant information from experiences or gather relevant information from print and digital sources; take notes, paraphrase, and categorize information, and provide a list of sources.