

# California Education and the Environment Initiative

Increasing Environmental Literacy for K–12 Students...

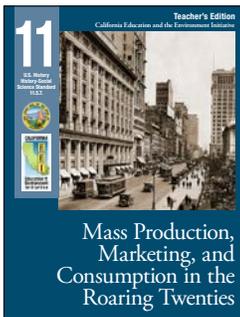
Because the Future is in Their Hands



## 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.

### 11.5.7.—Mass Production, Marketing, and Consumption in the Roaring Twenties



In this unit, students examine the long-term environmental effects of mass production, which began in the 1920s. They begin by studying how American automobile manufacturing contributed to the environmentally detrimental Tracy Tire Fire. Then they study other mass-produced inventions, focusing again on the automobile. Students examine advertisements and create charts to analyze the consequences of producing everyday items. Students come to understand, through reflection, discussion, and writing, how mass-production has affected and continues to affect the American Landscape.

		RH.11–12.1	RH.11–12.2	RH.11–12.3	RH.11–12.4	RH.11–12.7	RH.11–12.9	RH.11–12.10	WHST.11–12.1	WHST.11–12.2	WHST.11–12.4	WHST.11–12.5	WHST.11–12.7	WHST.11–12.9	WHST.11–12.10	SL.11–12.1	SL.11–12.4	SL.11–12.5
<b>LESSONS</b>	California Connections		✓	✓	✓	✓				✓	✓							
	1	✓	✓		✓		✓	✓	✓	✓	✓			✓		✓		
	2	✓		✓	✓	✓					✓					✓		✓
	3				✓		✓				✓				✓	✓	✓	
	4	✓		✓	✓	✓			✓	✓	✓		✓	✓		✓		
	5				✓					✓	✓		✓			✓		
	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
- **RH:** Reading Standards for Literacy in History/Social Studies
- **SL:** Speaking and Listening 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 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 18–19 of this document.

## 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, pairs
- **Lesson 2:** Whole class
- **Lesson 3:** Whole class, pairs, and 5 groups
- **Lesson 4:** Whole class
- **Lesson 5:** Whole class, pairs or small groups, pairs

## National Geographic Resources

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

## Unit Assessment Options

Assessments	Common Core Standards Applications
<b>Traditional Assessment</b>	
Students answer multiple-choice and short-answer questions.	<p><b>RH.11–12.2:</b> Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.</p> <p><b>WHST.11–12.2:</b> Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.</p> <p><b>WHST.11–12.4:</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>
<b>Alternative Assessment</b>	
Students select a technology or product from this unit and create a public service announcement (PSA).	<p><b>WHST.11–12.1:</b> Write arguments focused on <i>discipline-specific content</i>.</p> <p>a) Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.</p> <p>c) Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.</p> <p>e) Provide a concluding statement or section that follows from or supports the argument presented.</p> <p><b>WHST.11–12.4:</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>WHST.11–12.5:</b> Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p> <p><b>WHST.11–12.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>

## Lesson 1: New Inventions Bring New Challenges

Students read about and view photographs of the Tracy Tire Fire in **California Connections: California's Waste Tire Problem**. They identify natural resources used to make tires and discuss direct and indirect effects of tire production and consumption on natural systems.



## National Geographic Resources

- Political wall map

Use this correlation in conjunction with the **Procedures** located on pages 36–37 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

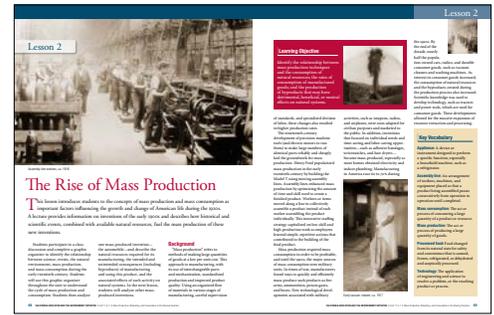
Student Tasks	Common Core Standards Applications
<p><b>Vocabulary Development:</b> For depth of understanding, vocabulary may be featured within the context of the unit instead of or in addition to the beginning of the lesson.</p> <p><b>Tip:</b> If Dictionary Workbooks need to be reused from year to year, students should not write in them.</p> <p><b>Tip:</b> If Student Workbooks need to be reused from year to year, students should not write in them. Some strategies teachers use to preserve the workbooks are:</p> <ul style="list-style-type: none"> <li>■ Have students use binder paper or other lined or unlined paper.</li> <li>■ Have students use a sheet protector over the page and write with a whiteboard marker.</li> <li>■ Do together as a class on a projector or chart paper.</li> <li>■ Project the digital fill-in version and do together as a class.</li> <li>■ Students use digital devices to fill in the digital version found on the website.</li> <li>■ Make student copies when necessary.</li> </ul>	<p><b>RH.11–12.4:</b> Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of the text...</p>
<p><b>Steps 1 and 2:</b> Project <b>Moving Californians</b> (Visual Aid #1). Using the <b>Key Unit Vocabulary</b>, review with students the term “consume.” Call students’ attention to the <b>List of Tire Ingredients</b> and explain to students that, initially, natural rubber, steel, chemicals such as sulfur, and energy to heat the rubber were used in the manufacturing process.</p> <p>Ask students, “Where do the resources needed to manufacture tires come from?” (<i>Earth, the environment</i>) Tell them that the term “natural system” encompasses both of these terms. Using the <b>Key Unit Vocabulary</b>, review with students the term “natural system.”</p>	<p><b>RH.11–12.4:</b> Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text...</p>
<p><b>Step 3:</b> Students read Part 1 of <b>California Connections: California's Waste Tire Problem</b> while keeping in mind the question, “What indirect effects of manufacturing and using tires are presented in the article?”</p>	<p><b>RH.11–12.2:</b> Determine the central ideas or information of a...secondary source...</p> <p><b>RH.11–12.10:</b> ...read and comprehend history/social studies texts... independently and proficiently.</p>

Student Tasks	Common Core Standards Applications
<p><b>Step 4:</b> When students have finished reading Part 1 of <b>California Connections: California’s Waste Tire Problem</b>, project <b>Used Car Tire Dump</b> and <b>Tracy Tire Fire</b> (Visual Aids #2–3), one at a time. Record student responses to the question posed previously, “What indirect effects of manufacturing and using tires are presented in the article?”</p> <p><b>Tip:</b> Download Visual Aids from <a href="http://californiaeei.org">http://californiaeei.org</a> for easy access during the lesson.</p>	<p><b>RH.11–12.9:</b> Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event...</p>
<p><b>Step 5:</b> Project <b>After the Tracy Tire Fire</b> (Visual Aid #4). Ask students the following questions: What are some of the concerns about tire disposal and burning raised in the article? Why are these concerns?</p> <p><b>Suggestion:</b> Have students cite textual evidence to support their answers in the discussion.</p> <p>Ask students to discuss with a partner the question at the end of Part 1 of <b>California Connections: California’s Waste Tire Problem</b>, “What should we do with all of these old tires?” Have volunteers share their ideas with the class.</p>	<p><b>RH.11–12.1:</b> Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.</p> <p><b>SL.11–12.1:</b> Initiate and participate effectively in a range of collaborative discussions, ...building on others’ ideas and expressing their own clearly and persuasively.</p> <p>a) Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>c) Propel conversations by posing and responding to questions that probe reasoning and evidence...</p>
<p><b>Step 7:</b> Using the <b>Key Unit Vocabulary</b>, review the terms “incentive” and “innovation” with students. Draw students’ attention to the discussion questions written on the board and read aloud the questions to the class: What are the direct and indirect effects of the manufacture and use of automobile tires on natural systems?</p> <p>Instruct students to read Part 2 of <b>California Connections: California’s Waste Tire Problem</b>, keeping in mind the two questions as they read.</p>	<p><b>RH.11–12.2:</b> Determine the central ideas or information of a...secondary source...</p> <p><b>RH.11–12.4:</b> Determine the meaning of words and phrases as they are used in a text...</p> <p><b>RH.11–12.10:</b> ...read and comprehend history/social studies texts... independently and proficiently.</p>
<p><b>Step 8:</b> After they complete the reading, tell students to turn to <b>Direct and Indirect Effects of New Technologies</b> (Student Workbook, page 4). Read the instructions and give them time to complete the task.</p> <p><b>Suggestion:</b> Have students use sticky notes or mark the text as they read so they can use textual evidence in their response.</p>	<p><b>WHST.11–12.1:</b> Write arguments focused on discipline-specific content.</p>

Student Tasks	Common Core Standards Applications
<p><b>Step 8 (Continued):</b></p>	<p><b>WHST.11–12.2:</b> Write informative/explanatory texts...</p> <ul style="list-style-type: none"> <li>a) Introduce a topic and organize...so that each new element builds on that which precedes it to create a unified whole...</li> <li>b) Develop the topic thoroughly by selecting the most significant and relevant facts...</li> <li>d) Use precise language, domain-specific vocabulary...</li> <li>e) Provide a concluding statement or section that...supports the information or explanation provided...</li> </ul> <p><b>WHST.11–12.4:</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>WHST.11–12.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>

## Lesson 2: The Rise of Mass Production

Students learn about inventions, mass production, and mass consumption, and then summarize basic ideas in a graphic organizer. Using cars as an example, they begin a chart that analyzes the intended and unintended consequences and environmental effects of mass-produced consumer goods.



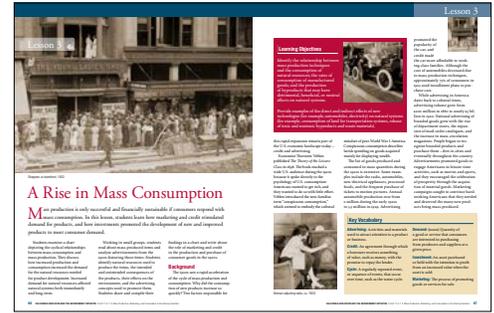
Use this correlation in conjunction with the **Procedures** located on page 52–53 of the Teacher’s Edition. Only procedure steps with a Common Core correlation are included in the table below.

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>RH.11–12.4:</b> Determine the meaning of words and phrases as they are used in a text...</p>
<p><b>Steps 1–3:</b> Students orally review previous lessons and review <b>Key Unit Vocabulary</b> and <b>Inventions Timeline</b>, discussing which inventions impact their lives today.</p>	<p><b>RH.11–12.7:</b> Integrate and evaluate multiple sources of information presented in diverse formats...(e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.</p> <p><b>SL.11–12.1:</b> ...participate effectively in a range of collaborative discussions,... building on others’ ideas and expressing their own clearly and persuasively.</p> <p>a) Come to discussions prepared, having read and researched material under study...</p>
<p><b>Step 5:</b> Tell students to turn to <b>Rise of Mass Production and Mass Consumption</b> (Student Workbook, pages 5–6). Read the instructions and complete the flowchart as a class, using the information from the lecture.</p>	<p><b>WHST.11–12.4:</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>
<p><b>Step 6:</b> Students will now focus on one new invention of the 1920s, the mass-produced automobile. Assemble students into collaborative groups to answer each of the questions below. Encourage students to use digital resources to answer the questions, and to evaluate the validity of the resources used. Give students an opportunity to share their information with each other so that all students understand the development of the automobile.</p>	<p><b>RH.11–12.1:</b> Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.</p> <p><b>RH.11–12.3:</b> Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.</p>

Student Tasks	Common Core Standards Applications
<p><b>Step 6 (Continued):</b></p> <p><b>Suggestion:</b> Create 5 groups and assign each group one of the questions below. As the groups present their answers, have them provide the textual evidence to support their answer. For individual accountability, require students to write a one-paragraph summary of the answers using the evidence to support their position.</p> <ul style="list-style-type: none"> <li>■ Cars may have been available and affordable to many in the 1920s, but they still cost a lot of money. Why did so many Americans respond to advertisements like this one and purchase automobiles?</li> <li>■ People have continued to buy more cars since the 1920s. How has the automobile affected the lives of Americans since the 1920s?</li> <li>■ What were some of the intended consequences of car ownership?</li> <li>■ What were some unintended consequences?</li> <li>■ Besides the problems with tires, what other unintended consequences of the automobile have affected natural systems?</li> </ul>	<p><b>RH.11–12.7:</b> Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.</p> <p><b>SL.11–12.1:</b> ...participate effectively in a range of collaborative discussions...</p> <p><b>SL.11–12.5:</b> Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.</p>
<p><b>Step 7:</b> Tell students to turn to <b>Mass-produced Inventions Chart</b> and complete the first row as a class.</p>	<p><b>SL.11–12.1:</b> Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led), building on others' ideas and expressing their own clearly and persuasively.</p> <p><b>WHST.11–12.4:</b> Produce clear and coherent writing...appropriate to task, purpose, and audience.</p>

## Lesson 3: A Rise in Mass Consumption

Students use a chart to explore the rise of mass production and mass consumption. In small groups, they discuss and analyze ads from the 1920s and compile information about several products. They then write about the influence of marketing on consumer decisions.



Use this correlation in conjunction with the **Procedures** located on pages 70–72 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>RH.11–12.4:</b> Determine the meaning of words and phrases as they are used in a text...</p>
<p><b>Steps 1 and 2:</b> Review information from the previous lesson by asking a series of provided questions. Project <b>Mass Production and Consumption Cycle</b> and have students explain with a partner, and then the whole class.</p>	<p><b>SL.11–12.1:</b> ...participate effectively in a range of collaborative discussions...</p>
<p><b>Steps 5 and 6:</b> Tell students to turn to <b>Mass-produced Inventions Chart</b>. Review the chart headings and the row with the example of the automobile. Organize the class into five groups, each with a specific advertisement to analyze and discuss according to <b>Advertising Guiding Questions</b> (Visual Aid #9).</p> <p>Have each group complete the row that corresponds to their advertisement on their copy of <b>Mass-produced Inventions Chart</b>. Have each group share their findings and complete the rest of the chart as a class.</p>	<p><b>RH.11–12.9:</b> Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.</p> <p><b>SL.11–12.1:</b> ...participate effectively in a range of collaborative discussions (... in groups...) with diverse partners..., building on others’ ideas and expressing their own clearly and persuasively.</p> <p><b>WHST.11–12.4:</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>WHST.11–12.10:</b> Write routinely over... shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>
<p><b>Steps 7 and 8:</b> Facilitate a discussion about the information accumulated and presented on the chart, asking students, “What were the effects on natural systems?”</p> <p>Then, project <b>Car Advertisement</b> (Visual Aid #7) and facilitate a whole class discussion based on the provided questions.</p>	<p><b>SL.11–12.1:</b> ...participate effectively in a range of collaborative discussions...</p> <p><b>SL.11–12.4:</b> Present information, findings, and supporting evidence..., conveying a clear and distinct perspective and a <b>logical argument...CA</b></p>

## Lesson 4: Changing the American Landscape

Students analyze and discuss scenes depicting American landscapes in the 1920s, learn about lifestyle changes based on mass-production and consumption, and complete a graphic organizer about the relationships between the cycle of production and consumption and natural systems.



Use this correlation in conjunction with the **Procedures** located on pages 88–89 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>RH.11–12.4:</b> Determine the meaning of words and phrases as they are used in a text...</p>
<p><b>Step 1:</b> Using the <b>Key Unit Vocabulary</b>, review provided terms. Tell students they will first look at changes to the physical landscape of the United States during the 1920s. They will then consider how U.S. culture and human social systems changed during this same time period.</p>	<p><b>RH.11–12.4:</b> Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text...</p>
<p><b>Steps 2 and 3:</b> Distribute a <b>Student Edition</b> to each student. Tell them to turn to <b>A Clear Day, 1903</b> (Student Edition, page 10). Ask students, “What do you see in this landscape?” Have students decide whether their responses fall under “Natural Systems” or “Human Social Systems” and record.</p> <p>Repeat the process using <b>Orange County Landscape, 2009</b>.</p> <p>Ask students, “What would artists today depict as ‘the American landscape?’” and “Would there be more concentration on human social systems or on natural systems?”</p>	<p><b>RH.11–12.1:</b> Cite specific textual evidence to support analysis of primary...sources, connecting insights gained from specific details to an understanding of the text as a whole.</p> <p><b>RH.11–12.3:</b> Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.</p> <p><b>RST.11–12.7:</b> Integrate and evaluate multiple sources of information presented in diverse formats...in order to address a question or solve a problem.</p> <p><b>SL.11–12.1:</b> ...participate effectively in a range of collaborative discussions..., building on others’ ideas and expressing their own clearly and persuasively.</p>

Student Tasks	Common Core Standards Applications
<p><b>Step 6:</b> Instruct students to use the information in their notes to complete Part 2 of <b>Mass Production, Marketing, and Consumption in the Roaring Twenties</b> for homework.</p>	<p><b>WHST.11–12.1:</b> Write arguments focused on discipline-specific content.</p> <p><b>WHST.11–12.2:</b> Write informative/explanatory texts, including the narration of historical events...</p> <ul style="list-style-type: none"> <li>a) Introduce a topic...</li> <li>b) Develop the topic thoroughly by selecting the most significant and relevant facts...</li> <li>c) Use varied transitions and sentence structures to link the major sections of the text...</li> <li>d) Use precise language, domain-specific vocabulary...</li> <li>e) Provide a concluding statement...</li> </ul> <p><b>WHST.11–12.4:</b> Produce clear and coherent writing...</p> <p><b>WHST.11–12.7:</b> Conduct short as well as more sustained research projects to answer a question..., demonstrating understanding of the subject under investigation.</p> <p><b>WHST.11–12.9:</b> Draw evidence from informational texts to support analysis, reflection, and research.</p>

# Lesson 5: Consequences of Consumption

Students review *California Connections: California's Waste Tire Problem* and brainstorm mass produced goods in use today. After completing a chart applying the cycle of mass production and consumption to plastic bags, they discuss and write about the effects of plastic bags on natural systems.



Use this correlation in conjunction with the **Procedures** located on pages 108–109 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>RH.11–12.4:</b> Determine the meaning of words and phrases as they are used in a text...</p>
<p><b>Steps 2–4:</b> Orally review Lesson 1, asking provided questions. Have students brainstorm in small groups to come up with a list of commonly used mass-produced items. Ask students to share what they know about plastic bags.</p>	<p><b>SL.11–12.1:</b> ...participate effectively in a range of collaborative discussions...</p>
<p><b>Step 7:</b> Organize students into pairs and have them discuss the questions in Part 2 of <b>Mass Production, Marketing, and Consumption of Plastic Bags</b>. Instruct students to individually write their answers on <b>Mass Production, Marketing, and Consumption of Plastic Bags</b>. When students have finished answering the questions, if time permits, have them share their responses.</p>	<p><b>SL.11–12.1:</b> ...participate effectively in a range of collaborative discussions...</p> <p><b>WHST.11–12.2:</b> Write informative/explanatory texts...</p> <p><b>WHST.11–12.4:</b> Produce clear and coherent writing...</p> <p><b>WHST.11–12.7:</b> Conduct short as well as more sustained research projects to answer a question...</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

History 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; note any gaps or inconsistencies; note the date and origin of the source and whether it is primary or secondary. **(RH.11–12.1)**
- Note how the author sets up the central ideas or information; trace the relationship among key details and ideas; summarize how key events or ideas develop over the course of the text. **(RH.11–12.2)**
- Analyze a series of events described in the text; evaluate various explanations for actions or events; determine which explanation best accords with textual evidence; determine whether earlier events caused later ones or simply preceded them; acknowledge where matters are left uncertain. **(RH.11–12.3)**
- Note how the author explains and refines the meaning of key terms, symbols, domain-specific words, and phrases. **(RH.11–12.4)**
- Analyze how the structure is used to emphasize key points or advance an explanation or analysis and how key sentences, paragraphs, and larger portions of the text contribute to the whole. **(RH.11–12.5)**
- Compare and evaluate the point of view of the author(s); note which details are included and emphasized; assess the author's claims, reasoning, and evidence; compare the text with other authors on the same topic. **(RH.11–12.6)**
- Note how the information in the *California Connections* text integrates with information provided throughout the unit in diverse visual, quantitative, and qualitative formats, including tables, charts, research data, and maps, in print or digital texts. **(RH.11–12.7)**
- Assess whether the author's extent of reasoning and evidence in a text support the author's claim; evaluate the author's premises, claims, and evidence. **(RH.11–12.8)**
- When other documents are included, compare and contrast findings presented in this text to those in other sources, noting when the findings support or contradict previous explanations, and identify any discrepancies. **(RH.11–12.9)**
- Note comprehension strategies for understanding text. **(RH.11–12.10)**

**Note:** Standard descriptions from the Reading Standards for Literacy in History/Social Studies 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, using this selection as a writing model. They also provide suggestions for teaching students to analyze text structure using the Reading Literacy Standards. Teachers can incorporate more suggestions from the list above.

California Connections: California's Waste Tire Problem  
Lesson 1 | page 1 of 4

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## California's Waste Tire Problem

### Part I



In August 1998, more than seven million used tires caught fire in an illegal dump outside of Tracy, California. Dense black smoke plumed to heights of 6,500 feet, carrying with it particulate matter, carbon monoxide, nitrogen oxides, heavy metals, and other toxic substances. The piles had reached as high as 50 feet and spread out over 52 acres among used oil filters, abandoned vehicles, and other refuse.

The fire started when the tire dump's owner was mowing nearby grassland. When sparks from his tractor engine ignited the grassland, flames leaped to the piles of tires. Emergency response teams decided not to extinguish the fire. They feared that water used to dampen the flames would create hazardous runoff, which could threaten groundwater. The Tracy Tire Fire burned for more than two years before firefighters finally extinguished it in December 2000. It took over five years to remove partially burned tires, debris, and more than 50,000 cubic yards of contaminated waste. Clean-up costs totaled \$12 million.



**An Environmental Disaster**  
The Tracy Tire Fire was an environmental disaster resulting from the millions of used tires accumulating in California

Burning tires

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**WHST.11–12.2:** Write informative/explanatory texts...

- a) Introduce a topic...; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

**Suggestion:** Use the introduction to discuss how it serves to catch the reader's attention and is formatted to aid understanding.

Ask students why graphics are also included with text. Ask students if the graphics in this instance enhance or detract from the text.

**WHST.11–12.2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures...

- b) Develop the topic thoroughly by selecting the most significant and relevant facts...

**Suggestion:** Identify the compelling facts are included that are relevant to the students' location and time period.

**RH.11–12.3:** Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.

**Suggestion:** As students read this selection, have them identify causes and effects. For example:

- Cause: An illegal dump with seven million used tires was located outside Tracy, CA.
- Effect: A toxic fire that burned for more than two years.

**RH.11–12.4:** Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text...

**Suggestion:** For example, consider these terms:

- Oxygen (as it pertains to fire)
- Pyrolytic oil
- Leach
- Municipal

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since the 1920s. Tires are not classified as hazardous waste, however, once ignited, they create dense clouds of hazardous pollutants. Because tire fires are so difficult to extinguish, pollutants can be released into the air for months or years. Because of their hollow shape, about 75 percent of a tire is empty space. This space holds a large oxygen supply and even tunnels air drafts throughout tire piles which "fan" a fire. Tire fires burn at very high temperatures, which forces pyrolytic oil, a tar-like substance, out of the rubber. The rubber in a tire contains approximately two gallons of oil, which, if released, can contaminate soil and water. Hazardous waste from a tire fire can also contaminate surrounding areas with arsenic, lead, and numerous other toxic compounds. This toxic waste must be contained so that it does not leach into groundwater or nearby surface water. In many cases, the contaminated soil must be removed and transported to a hazardous waste landfill.

California has more registered vehicles than any other state. A byproduct of this "car culture" is the use of a staggering number of tires. Californians generate 40.8 million used tires annually, some of which could



Discarded tires

be reused. Another 1.5 million old tires are held in illegal stockpiles where they provide a habitat for rodents and other pests, such as mosquitoes, that breed in rainwater that collects in the used tires. Tires, unless processed, may not be disposed of in municipal landfills, where they can rise to the top of the waste pile because of their relatively light weight. Whether in landfills or illegal stockpiles, used tires create a fire hazard. Illegal dumping of waste tires is a problem in many parts of the country, and California is no exception.

**A Mounting Problem**  
People often travel to impoverished areas, such as inner-city alleyways and rural areas, to dump used tires. Some people dump their old tires because they simply do not know about the hazards they create. Others dump the old tires because they do not care, as long as the tires are gone from their backyards. Major environmental disasters like the Tracy Tire Fire, remind us of just how dangerous it is to stockpile used tires.

Californians will consume approximately 200 million tires

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**RH.11–12.3:** Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.

**Suggestion:** Have students discuss the reasons for an increase in the tire waste problem.

**RH.11–12.7:** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

**Suggestion:** Point out that the question is clearly presented before multiple answers are given. Have students underline or place sticky notes next to the answers they find in the text.

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over the next five years. This means we will have 200 million additional waste tires to manage. As our population grows and more people drive on highways every year, an important question remains, What should we do with all of these old tires?

**Part 2**

The California Integrated Waste Management Board (CIWMB) is one of six agencies under the umbrella of the California Environmental Protection Agency (Cal/EPA). The CIWMB is responsible for the collection, transportation, processing, recycling, or disposal of waste materials in California. Managing waste tires is one of CIWMB's jobs. This State entity has an active role in reducing landfill waste and stockpiling, in recycling material from used tires, and in protecting public health and the environment.

Each year, the CIWMB successfully diverts more than 30 million used tires from stockpiles or landfills. The CIWMB provides money to local governments to recover waste tires from the public. It also pays for the development of public education materials to raise public awareness about the problem of waste tires in California.

Once waste tires are collected, they can be reused, retreaded, or recycled. If tires still have a legal tread depth, they can be reused. Each year about two million used tires are sold and reused. Tires can be retreaded if they are too worn down for reuse. California has more than 50 retread plants, which sell millions of retreaded tires each year.

One of the main ways the CIWMB keeps tire waste out of landfills is by developing markets for recycled tire materials. It funds research projects to find new uses for tire products,

as well as provides economic incentives to local governments and businesses to use and manufacture recycled-tire products. One such product is crumb rubber, which can be used for playground turf, speed bumps, carpet tiles, mats, sound barriers, and molded rubber products. Rubberized asphalt can be used to repave roads. It is more durable and smoother than conventional asphalt and helps reduce traffic noise. Tire shreds have been used to build highway retaining walls as well as dampen the sound in light-rail



Crumb rubber

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**RH.11–12.2:** Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.

**Suggestion:** Have students discuss why the author describes the purpose of the California Integrated Waste Management Board (CIWMB) in detail.

**RH.11–12.4:** Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text...

**Suggestion:** For example, consider these terms:

- Waste tires
- Retread
- Recycled
- Reused

**WHST.11–12.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**Suggestion:** Note that this is appropriately written for high school students, in a style suited for the classroom setting.

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systems. Tires are also burned for fuel, most of which is used in the cement manufacturing industry. The public can support such new uses of old tires by buying tire-derived products, such as playground equipment, roof shingles, and new tires made from recycled rubber.

The CIWMB also plays a major role in the cleanup and remediation of tire dumps, as well as in the tracking and law enforcement actions needed to prevent such dumps. The CIWMB began remediating old tire piles in 1994, and it has removed over 771,128 tons of illegal waste tires and contaminated trash from 60 sites. Cleanup involves stabilizing tire piles, removing

and transporting tires to a facility where they can be recycled, and removing any leftover toxic wastes. The total cost of site remediation has been \$40 million. Most of this money was spent on major tire fires, such as the one in Tracy.

The CIWMB works with local law enforcement and highway patrol agencies to stop illegal tire dumping, which is concentrated in U.S. border regions. Some of the tools they use to monitor illegal tire dumping include satellite technology and motion-activated surveillance. The Waste and Used Tire Hauler and Manifest Program requires waste haulers to register and record each tire transaction. This

tracking system helps to monitor the flow of waste in the state.

When Cal/EPA, local governments, law enforcement agencies, private businesses, and an educated public work together, tires can be reused, retreaded, or recycled to make many useful products. Used tires are not just a waste product to be discarded. Instead, when handled properly, they can become a valuable resource.

*Note: As of January 1, 2010, the California Integrated Waste Management Board became the Department of Resources Recovery and Recycling, under the California Natural Resources Agency.*



Illegally dumped tires

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**WHST.11–12.2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures..., or technical processes.

e) Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).

**RH.11–12.2:** Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.

**Suggestion:** Have students determine the connections between Part 1 and Part 2 of the reading selection. Students should be able to identify a cause and effect between environmental disasters and the development of regulatory agencies.

### California Common Core State Standards Descriptions

#### Reading Standards for Literacy in History/Social Studies

- **RH.11–12.1:** Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- **RH.11–12.2:** Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- **RH.11–12.3:** Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
- **RH.11–12.4:** Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).
- **RH.11–12.7:** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
- **RH.11–12.9:** Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
- **RH.11–12.10:** By the end of grade 12, read and comprehend history/social studies texts in the grades 11–12 text complexity band independently and proficiently.

#### Speaking and Listening Standards

- **SL.11–12.1:** Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 11–12 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.
  - a) Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
  - c) Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.
- **SL.11–12.4:** Present information, findings, and supporting evidence (**e.g., reflective, historical investigation, response to literature presentations**), conveying a clear and distinct perspective **and a logical argument**, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. **Use appropriate eye contact, adequate volume, and clear pronunciation. CA**
- **SL.11–12.5:** Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

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

- **WHST.11–12.1:** Write arguments focused on *discipline-specific content*.
  - a) Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.
  - c) Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
  - e) Provide a concluding statement or section that follows from or supports the argument presented.

## Common Core Reference Pages

- **WHST.11–12.2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
  - a) Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
  - b) Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience’s knowledge of the topic.
  - c) Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
  - d) Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
  - e) Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).
- **WHST.11–12.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- **WHST.11–12.5:** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
- **WHST.11–12.7:** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
- **WHST.11–12.9:** Draw evidence from informational texts to support analysis, reflection, and research.
- **WHST.11–12.10:** Write routinely over extended time frames (time for 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.