- Lesson plans and close reading support for dozens of articles, essays, letters, poems & more
- Designed for Common Core and NGSS
- Ideal for ELA and science curricula
- Real-world projects
- Support for individual texts and entire units
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Introduction

Welcome

*American Earth* assembles writings and photographs that explore Americans’ profound relationship with the natural world, from the 19th Century to the present. The creators of these seminal works have asked: *How has nature influenced us? How have we affected our planet and the other species that share it? How can we coexist and why is it important that we do?*

Especially in recent years, Americans have acquired a growing appreciation for the impact our behavior has on the Earth, for ill and for good. We have begun to recognize that the power of humans to change the natural world has grown significantly. We have begun to understand that human beings have choices and that we bear a responsibility for our actions, to ourselves, to other forms of life on this planet, and to future generations.

Upper and Lower Yosemite Falls
We also have a growing appreciation of the effect the natural world has on our lives. Our physical and biological dependency on nature has long been recognized as essential, but science has increasingly been discovering new complexities and depths to this relationship. And the natural world has also profoundly driven human thinking, psychology, religion, arts, indeed the whole of human life on this planet.

Beginning with Henry David Thoreau, American writers have explored this relationship. As Americans, they have found themselves surrounded and inspired by a continent of limitless richness and beauty. Simply put, American writers could not disregard the natural world, and this recognition has inspired a tradition of fine writing that is unique to America. Moreover, these writers have given us some of the finest writing in the American canon.

**Organization of this Guide**

This accompaniment to *American Earth* for high school teachers and students is organized into five themed units:

1. Visionaries of the American Environmental Movement
2. Interconnected Earth
3. Wild America: From City to Country
4. Human Impact
5. Environmental Justice and Personal Responsibility

In its entirety, each unit is intended to take 2–3 weeks of classroom time. Combined, they could be used as a semester-long course. Other selections from *American Earth* could provide the subject matter for a second semester. Within each unit are activities aligned to Common Core and Next Generation Science Standards. These include close reading of particular texts, writing activities that draw on individual texts and comparison between texts, and culminating projects that involve synthesis of key ideas as well as connecting these historic writings to present-day issues in students’ own communities and their own lives.

Following the five themed units are two resources that provide standards alignment and Common Core English Language Arts performance tasks for each of the documents in the *American Earth*
anthology. Whether you are teaching English, Environmental Science, American History, Biology, or Earth Science, you will find writings in *American Earth* that will help you to inspire your students to think deeply about the world around them, its history, and the power of the written and spoken word.

**Introductory Activity**

**American Earth Timeline**

Before embarking on the writings in *American Earth*, it is an instructive introduction to the topic of environmental history to create a classroom exhibit using the Chronology that begins on page 977.

Each Chronology entry is preceded by the year in which the event occurred. Write each of these years on a separate small piece of paper and place the papers in a bag. (You may wish to limit the number of years to one or two per student in your class. If so, use the ones in the Chronology that represent the events you feel will be most interesting and/or relevant to your students. For example, if your focus is on the 20th Century, use only 20th Century events in the Chronology.) You also
may wish to assign specific events based on their length and accessibility to your students.

Once the papers, each with a year written on it, have all been placed in the bag, have each student reach in and select one or two cards. Provide each student with one or two sheets of 11" x 17" white paper and drawing or painting materials. Have students create a separate illustrated poster for each of the events they have selected. They should include within the poster a title as well as a caption that describes the significance of the event and that provides some indication of how they feel about it.

When the posters are completed, have students take turns posting them in chronological order. Before putting them up, students should briefly explain to the class the event his or her poster illustrates.

This activity will create a lasting exhibit that will provide context as your students read particular documents from American Earth. As you work through documents, you may wish to have students research local environmental issues to add key local events to the timeline exhibit. For example, you may wish to include the year a local park or protected area was created. As a follow-up activity, you also may wish to have students look across the events on their timeline in order to identify patterns and trends through these events. For example, challenge students to name a pattern and identify three or more events that support it, as well as any events that represent an exception.

Dust Clouds over Texas Panhandle (1936), by Arthur Rothstein
1 Visionaries of the American Environmental Movement

Introduction
From the beginning, American environmental thinking has been inspired and shaped by great writing. The texts in Unit 1 range over 150 years and address a variety of topics. Although the authors' points of view vary, they are all giants of American environmental writing and action. Each has helped bring the environment to the forefront as a social and political issue, and each writer's language has inspired countless other writers and activists. As students read these passages, encourage them to search for their own inspiration from these texts and authors.

Before embarking on the texts in this unit, you may wish to have a class discussion of the question, “What constitutes great writing?” Ask students what the term “great writing” means to them. Initiate a class discussion that results in a list of the elements that might be included in a definition. Such a list might include, but would not be limited to, the following: originality, beautiful language, thought-provoking, awe-inspiring, action-motivating. Once you have such a class list, focus the discussion on environmental writing. Do students feel the term “great environmental writing” suggests additions or subtractions to the class list you have made, or emphasis on particular components of the list that would differentiate great environmental writing from great writing in general? Keep these lists posted as you embark on the readings in American Earth. Refer to them in your discussions and analysis of particular texts, as a way of encouraging students to appreciate the quality of particular authors, texts, and the American Earth collection as a whole. Also suggest that students refer to these terms in the course of their own writing.
Objectives

1. Students will determine the themes and central ideas of photos and landmark texts of the environmental movement. They will analyze the authors’ points of view and how content and style contribute to the power and persuasiveness of writing.

2. Through discussion, writing, presentations, and art, students will demonstrate their understanding of the effect human culture has on the natural world, as well as of how human life and thought have been influenced by our changing relationship to nature. They will determine the meaning of particular words and phrases, cite evidence in the texts to support their evaluations of claims, arguments, and their own inferences about the environmental movement.

Core Passages and Images

Close Reading Passage: Speech at the Kyoto Climate Change Conference, by Al Gore (pages 856–859)

1. from Journals, Saturday March 19th 1842 entry, by Henry David Thoreau (pages 3–4)

2. from Journals, Tuesday Dec 30th entry, by Henry David Thoreau (pages 6–7)

3. from Walden, by Henry David Thoreau, “If I wished a boy . . . I should have known more about it.” (page 17)

4. from A Thousand-Mile Walk to the Gulf, by John Muir (pages 86–89)

5. from A Wind-Storm in the Forests, by John Muir (pages 93–95)

6. To Frank Michler Chapman, by Theodore Roosevelt (pages 130–131)


9. Image 12: Charles Leander Weed, Yosemite Valley from Mariposa Trail

10. Image 24: Theodore Roosevelt and John Muir

Artists’ Falls, North Conway (1854), by James Wallace Black
Standards

Common Core State Standards

**RL.9-10.2** Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

**RI.9-10.1** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

**RI.9-10.2** Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

**RI.9-10.4** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

**RI.9-10.8** Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.

**RI.11-12.1** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

**RI.11-12.6** Determine the author’s point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.

**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.

**W.9-10.2** Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

**W.9-10.6** Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

**W.9-10.8** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

**W.11-12.9** Draw evidence from literary or informational texts to support analysis, reflection, and research.

Next Generation Science Standards

**HS-ESS3-5** Analyze geosciences data and the results from climate change models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.
Motivate
Ask students to examine Images 12 and 24. Both of these photographs were taken in what is now Yosemite National Park. Invite students to discuss the photos in small groups and then share their ideas with the class. Ask students to consider the following questions:

- What information can you learn from the photo captions that helps explain the context of each photo?
- What is the central idea of each photo? How did you determine this?
- Based on the information in the captions and on the photos themselves, how are the points of view of the photographers and any people shown in the photos similar and different?
- In what ways do these photos express a vision of the American relationship between humans and nature?

Explore
Each activity in this section focuses on the work of an individual author. Activities in later sections involve comparing the works of more than one author. Activities marked with an asterisk (*) are more suited to strong readers.

1. Have students read the introduction to Henry David Thoreau on pages 1–2, the journal entry for Tuesday Dec 30th on pages 6–7, and the paragraph from *Walden* on page 17. The introduction explains that, early in his career, Thoreau was dismissed from one school for refusing to whip students and is credited with inventing the field trip at the school he opened with his brother. Have a discussion in which you ask students to relate these early experiences to the ideas presented in Thoreau’s journal and in *Walden*. Then have students write an explanatory essay in response to the following question: How are Thoreau’s refusal to whip students and his desire to bring students on field trips into nature reflected in the feelings expressed in his journal and the paragraph from *Walden*? (RI.9-10.1; RI.11-12.1; RH.11-12.9; W.9-10.2)

2. Have students read John Muir’s *A Wind-Storm in the Forests* from the start of the last paragraph on page 95 ("Toward midday . . .") to the end of the last full paragraph on page 95 (". . . as from fear"). Ask students to make a list as they read of the key descriptive words and emotions expressed in the passage.
When their reading and lists are complete, have students draw on their creativity to communicate Muir's experience through poetry, drawing, or painting. Emphasize that in their creative re-creations students should strive to include not only the physical aspects of the scene but its emotional content as well. (RI.9-10.4)

3. Have students read the introduction to Theodore Roosevelt and the letter to Frank Michler Chapman on pages 129–131. Like many early conservationists, Roosevelt was an avid hunter; specimens he collected are still on display in museums around the country. Have students consider whether Roosevelt's hunting is consistent or at odds with the ideas expressed in his letter. You may wish to hold a class debate in which student groups advocate for each point of view. (RI.9-10.1; RI.11-12.1; RH.11-12.9)

4. *Have students read aloud Wendell Berry's “Manifesto: The Mad Farmer Liberation Front.” Then, have students work in groups to analyze the text. Ask them to focus on the following questions in their analysis:

- What does Berry mean by the sentence, “So, friends, every day do something that won't compute.” How does this sentence relate to the larger themes of the poem?

- Why do you think the poem is called “Manifesto: The Mad Farmer Liberation Front”? Use specific examples in the text to support your conclusions.

- How is gender used in the poem? Do you think Berry would be likely to write the portions of the poem dealing with gender differently today than he did in 1973? (RI.9-10.4; RI.11-12.1)

*Trees and Cabin with Yosemite Falls in Background (1861), by Carleton Atkins
American Earth
Close Reading
Al Gore’s Speech at the Kyoto Climate Change Conference
Lexile®: measure = 1240L

Vocabulary
depletion, n, reduction in the number or quantity of something
temperate, adj, relating to a region or climate characterized by mild temperatures
boreal, adj, relating to or characteristic of the climatic zone south of the Arctic, especially the cold temperate region dominated by taiga and forests of birch, poplar, and conifers
wellspring, n, an original and bountiful source
humility, n, a modest or low view of one’s own importance; humbleness
emission, n, a discharge of something, especially gas or radiation
greenhouses gas, n, a gas that contributes to the greenhouse effect by absorbing infrared radiation, for example carbon dioxide and chlorofluorocarbons
implementation, n, the process of putting a decision or plan into effect
initiative, n, an act or strategy intended to resolve a difficulty or improve a situation; a fresh approach to something

Close Reading Comprehension Questions
Have students read the Close Reading Text, Al Gore’s Speech at the Kyoto Climate Change Conference, on their own. Direct students to reread, aloud in small groups, the part of the speech from the paragraph beginning, “But the most vulnerable . . .” on page 856 to the paragraph ending “And it is working” on page 857. Have them work in their groups to answer the following close reading questions (Note: The questions appear in reproducible form on page 12.):

1. What is Gore’s claim in the last two full paragraphs on page 856 (from “But the most vulnerable . . .” to “. . . the last 10,000 years”)? *Gases created by humans are trapping the sun’s radiation around Earth and causing Earth’s climate to change and become warmer.* What evidence does Gore present to support this claim? *The year of the speech, 1997, was the hottest on record. Nine out of ten of the last years have been among the ten hottest on record.* Explain whether Gore’s evidence is relevant and sufficient to support his claim, including why or why not. Possible answer: Gore’s evidence is relevant and sufficient. It relates directly to his claim that Earth's climate is becoming warmer. However, it does not directly address the
cause of this warming, so more evidence would be needed to support that part of the claim. (RI.9-10.8; HS-ESS3-5)

2. What additional consequences of climate change does Gore predict? He predicts worse floods, droughts, diseases, pests, crop failures, and famines; melting glaciers; stronger storms; and rising seas. Make inferences about how climate change could lead to these consequences. Possible answer: A changing or warmer climate could affect weather patterns, leading to more severe storms and more or less rain. As a consequence, crops could fail and pests and diseases could move to new areas. Warmer temperatures would melt glaciers, which are made of ice, and the water from this melting would cause the level of the sea to rise. (RI.9-10.1)

3. In the paragraphs on page 857 beginning “Our fundamental challenge . . .” and ending “And it is working,” what steps does Gore suggest to try to address the problem of climate change? Set and enforce limits on emission of gases that cause warming, and create markets for new technology and ideas to further cut emissions. (RI.9-10.1)

4. In these paragraphs, Gore invokes religious language and appeals to the various nations gathered in Kyoto. What is the effect of each kind of rhetoric on Gore’s speech? Possible answer: The religious language gives the cause a universal grandeur, as well as appealing to believers. The appeals to the representatives of all the nations attending the conference could make them feel included and responsible for participating in the changes Gore suggests. (RI.11-12.6)

5. Reread the last two paragraphs of Gore’s speech on page 859, beginning with “So let us press forward.” How do the content and tone of Gore’s conclusion add to the meaning and persuasiveness of the speech? Possible answer: Gore adds to the meaning and persuasiveness of the speech by once again stressing his central point about the human-Earth relationship in the conclusion. His hopeful tone, based mainly on the ideas of transcending differences and changing direction, also adds to the meaning and persuasiveness of the speech. (RI.11-12.6)
Close Reading Comprehension Questions

1. What is Gore’s claim in the last two full paragraphs on page 856 (from “But the most vulnerable . . .” to “. . . the last 10,000 years”)? What evidence does Gore present to support this claim? Explain whether Gore’s evidence is relevant and sufficient to support his claim, including why or why not.

2. What additional consequences of climate change does Gore predict? Make inferences about how climate change could lead to these consequences.

3. In the paragraphs on page 857 beginning “Our fundamental challenge . . .” and ending “And it is working,” what steps does Gore suggest to try to address the problem of climate change?

4. In these paragraphs, Gore invokes religious language and appeals to the various nations gathered in Kyoto. What is the effect of each kind of rhetoric on Gore’s speech?

5. Reread the last two paragraphs of Gore’s speech on page 859, beginning with “So let us press forward.” How do the content and tone of Gore’s conclusion add to the meaning and persuasiveness of the speech?
Comparing Texts
Find recordings of Woody Guthrie singing “This Land Is Your Land” and Kate Smith singing “God Bless America.” (Both recordings are easily located online.) Assign students to listen to both recordings as homework and/or play them in class. Then, have students write a paragraph comparing and contrasting the central idea of each song and the authors’ points of view. (RI.9-10.4; RI.11-12.6; W.9-10.2)

Making Connections to Today
Tell students that your class will stage a conference entitled “Visions of the American Environment.” Students will work in groups to create a multimedia presentation of their own view of the state of the environment today, followed by their vision of what it could look like in 50 years. Using many of the core texts in this unit as inspiration, students should think about both the state of the environment and how we relate to it: how changes in our closeness and connection to nature might have affected not only the physical environment but society, culture, and people’s lives and values. Students should select one core text from American Earth as their primary inspiration and use the language, vocabulary, style, topic, or other aspects of the original text as a starting point for their own presentation. They should also be encouraged to draw on other texts if they feel they are relevant.

As part of their research, encourage students to use a variety of sources of information, which may include newspapers, advocacy organizations, and interviews. It will be especially useful for students to interview members of their own community that represent a diversity of viewpoints, including parents, children, senior citizens, merchants, and politicians. They should also be sure to include ethnic and economic diversity within the pool of people they interview, and to note any differences or trends they discover that might be attributed to such factors.

You may wish to treat the event like a real academic conference, with each group writing an abstract that is gathered in a booklet. Have each group choose a college or university to represent and create name tags. Invite parents or other classes to attend the presentations. After each group’s presentation, have a brief class discussion. To spur discussion, ask questions such as the following.

- What aspects of the original text do you think inspired this presentation?
- How do you think the author of the original passage would react to the issues raised in this presentation?
- Is the presentation of the status of the environment today a positive or a negative one?
- Does the presentation suggest the environment will improve or worsen during the next 50 years? How?
What evidence does the presentation draw on to support its claims?

Does the presentation appeal to the audience's emotions? How?

Is the presentation convincing? Why or why not?

(W.9-10.6; W.9-10.8; W.11-12.9)

**Core Passages Assessment Questions**

Have students answer the questions below on their own. Questions are printed on pages 15–18 to be reproduced for students.

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<tr>
<th>Question #</th>
<th>Correct Answer(s)</th>
<th>Standard(s)</th>
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<tr>
<td>1</td>
<td>C, F</td>
<td>(RI.9-10.1)</td>
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<td>2</td>
<td>A</td>
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<td>8</td>
<td>C</td>
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Wendell Berry, by Guy Mendes
UNIT 1: Visionaries of the American Environmental Movement

Core Passages Assessment Questions

1. Reread the Saturday March 19th 1842 entry in Henry David Thoreau’s Journals (pages 3–4). In this entry, Thoreau suggests that nature can be understood from different points of view. Which two pieces of evidence from the text support this statement?

   A “I walk in the fields of Concord and meditate on . . . the unexhausted energies of this new country.”

   B “The earth is strewn with relics of a race which has vanished as completely as if trodden in with the earth.”

   C “I find it good to remember the eternity behind me as well as the eternity before.”

   D “Where ever I go I tread in the tracks of the Indian.”

   E “The crows flew over the edge of the woods, and wheeling over my head seem to rebuke.”

   F “If I consider its history it is old—if its destiny it is new—I may see a part of an object or the whole.”

2. Reread this phrase in the Saturday March 19th 1842 entry of Henry David Thoreau’s Journals (page 4): “Nature has her russet hues as well as green—.” What is the meaning of the word “hues” as used in this phrase?

   A colors

   B seasons

   C times of day

   D reddish browns
3. Reread the part of the excerpt of John Muir's *A Thousand-Mile Walk to the Gulf* beginning “The world, we are told . . .” through the end (pages 86–89). In this section, Muir argues against the claim that the world was made especially for man. Which evidence from the text is not relevant to this argument?

A “Whales are storehouses of oil for us, to help out the stars in lighting our dark way until the discovery of the Pennsylvania oil wells.”

B “Nature’s object in making animals and plants might possibly be first of all the happiness of each one of them.”

C “This star, our own good earth, made many a successful journey around the heavens ere man was made.”

D “Venomous beasts, thorny plants, and deadly diseases of certain parts of the earth prove that the whole world was not made for him.”

4. Reread the paragraphs from John Muir's *A Thousand-Mile Walk to the Gulf* beginning “But if we should ask . . .” and ending “. . . beyond our deceitful eyes and knowledge” (pages 87–88). In these paragraphs, Muir asks a number of questions. How do these questions contribute to the power of Muir’s argument?

A They draw the reader into the author’s quest for answers.

B They make the author seem approachable and inquisitive.

C They introduce new scientific ideas to promote further research.

D They challenge the belief that everything in the world was made for humans.
5. Reread Theodore Roosevelt’s letter To Frank Michler Chapman (pages 130–131). In which sentence from the text does Roosevelt use an analogy to communicate the idea of loss?

A “I would like to see all harmless wild things, but especially all birds protected in every way.”

B “Spring would not be spring without bird songs.”

C “A tanager or a cardinal makes a point of glowing beauty in the green woods.”

D “I feel just as if the works of some great writer had perished.”

6. Which of the following sentences best states an important theme found in Woody Guthrie’s song “This Land Is Your Land” (pages 258–259)?

A Nature in America speaks only to select individuals.

B The American landscape is intertwined with our existence as free citizens.

C Residents must constantly struggle against the American climate.

D Americans have manipulated the landscape to build farms and wheat fields.

7. Which of the following sentences objectively summarizes Wendell Berry’s poem “Manifesto: The Mad Farmer Liberation Front” (pages 505–506)?

A Berry’s suggestions for a return to nature are utopian, not practical.

B Berry balances his negative view of modern living with praise for traditional values.
C Berry’s describes a responsible vision of human interaction with the environment.

D Berry criticizes aspects of modern life and advocates alternate ways of living in relation to nature.

8. Reread this sentence from Al Gore’s Speech at the Kyoto Climate Change Conference (page 857): “To do so requires humility, because the spiritual roots of our crisis are pridefulness and a failure to understand and respect our connections to God’s Earth and to each other.” Which word or phrase from the sentence has a meaning that is the opposite of “humility”?

A spiritual roots

B crisis

C pridefulness

D failure to understand
Introduction
As Bill McKibben writes in his introduction to Aldo Leopold, “Ecology was the great emergent science of the 20th century, and its central insight was that everything is connected.” Whichever words one chooses to use in service of this concept—*connectedness, interrelatedness, interdependence*—the notion that humans and other living organisms are fundamentally linked remains central to biology and environmental science courses. The texts in Unit 2 are meant to comprise a compelling historical complement and context to the science students will learn in such courses. These texts explore the connections between humans, other species, and Earth systems in contexts ranging from individual ecosystems to the entire globe. As students read these texts, encourage them to think about their own place in our interconnected Earth, and the impact of human behavior on its living systems.

Objectives
1. Students will analyze a variety of acclaimed nonfiction texts to augment their understanding of ecology and its historical context. They will determine what the texts say explicitly, draw inferences, identify points of view and rhetorical strategies, evaluate arguments, and summarize central ideas and conclusions.

2. Students will increase their understanding of how matter and energy flow through ecosystems; of complex interactions between organisms in an ecosystem; of the simultaneous coevolution of Earth’s systems and life on Earth. Students will use several different media to demonstrate their understanding of these connections and to explain them to others.
Core Passages and Images

Close Reading Passage: from *A Sand County Almanac*, by Aldo Leopold (pages 274–276, 278–279, 286–288)

1. from *Only One Earth*, by Friends of the Earth (pages 500–503)
3. from “A First American Views His Land,” by N. Scott Momaday (pages 570–575)
5. “Planet of Weeds: Tallying the Loss of Earth’s Animals and Plants,” by David Quammen (pages 876–877)
6. from *Ecology of a Cracker Childhood* by Janisse Ray (pages 900–903)
7. Image 2: George Catlin, *Buffalo Hunt, Approaching in a Ravine*
8. Image 14: *Buffalo Skulls at Michigan Carbon Works*

Ancient Ruins in the Cañon de Chelle, N.M. (1873), by Timothy H. O’Sullivan

Standards

Common Core State Standards

**RI.9-10.1** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

**RI.9-10.5** Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).

**RI.9-10.6** Determine an author’s point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose. **RI.9-10.8** Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.

**RI.11-12.3** Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.
RI.11-12.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).

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.

RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.

RST.9-10.5 Analyze the structure of the relationships among concepts in the text, including relationships among key terms (e.g., force, friction, reaction force, energy).

W.9-10.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

W.9-10.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

W.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

W.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.

Next Generation Science Standards

HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.

HS-LS2-4 Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.

HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

HS-ESS2-7 Construct an argument based on evidence about the simultaneous coevolution of Earth’s systems and life on Earth.
Motivate
Ask students to look at Image 2, George Catlin’s *Buffalo Hunt: Approaching a Ravine*, and Image 14, *Buffalo Skulls at Michigan Carbon Works*. The painting shows buffalo hunting in the 19th century, and the photo shows the effect of such hunts. Invite students to discuss these images in small groups and then share their ideas with the class. Ask students to consider these questions:

- How does the photo show the effects of the kind of hunt portrayed in the painting?
- Based on the photo and the painting, draw conclusions about the effects of buffalo hunting on the larger American landscape, including humans and other species.
- In what ways might the effects of buffalo hunting demonstrate the interconnectedness of humans and other life on Earth?
- Based on their previous knowledge, ask students to share thoughts on how buffalo hunts like those referenced in the two images related to the ways of life, livelihoods, and relationships between different peoples living in 19th century North America.

Explore
Each activity in this section focuses on the work of an individual author. Activities in later sections involve comparing the works of more than one author. Activities marked with an asterisk (*) are more suited to strong readers.

1. For homework or as an in-class activity, have students read and analyze *Only One Earth*, by Friends of the Earth. The text states that within the “web of life . . . the snapping of each thread makes the whole web shudder, and weakens it. Thus in the complex world of living things everything depends on everything else, all life is the same life, every effect is a cause, nothing can happen by itself.” Ask students to write an explanatory essay:
2. In *The World’s Biggest Membrane*, Lewis Thomas discusses the importance of Earth’s atmosphere in the development and evolution of life. Have students read and discuss the essay and then work in groups to create a multimedia presentation arguing that the development and evolution of life on Earth depended on atmospheric oxygen. Students should cite specific examples and evidence from the text in support of their arguments; you may also encourage them to do independent research. (RST.9-10.2; HS-ESS2-7; W.11-12.1; W.11-12.6)

3. *In Seasons of Want and Plenty*, William Cronon describes the tall tales and misconceptions that led many European settlers to be painfully surprised by the conditions they faced upon arrival in North America. Have students read the text and then stage a role-playing exercise in which you have students imagine they are living in the 17th century in a small European community that is considering relocating to New England. Assign equal numbers of students to the following groups: 1) community members considering relocation to New England, specifically the proposition: “Should we move our community to New England?”; 2) ship captains trying to sell passage on their ships to North America; 3) experienced returned settlers who have already made the move from Europe to New England, and decided to return. Give the students time to prepare their roles, arguments, and questions. Then, the ship captains should present to the community compelling reasons why they should move to New England. The returned
settlers should argue against the move. The community members should question both groups and then vote on the proposition. Tell students that their presentations and questions should reference examples from Cronon’s text, paying particular attention to the primary sources he quotes. In preparing their comments, students should discuss and prepare rhetoric that will make for a compelling argument. (RH.11-12.2; RI.9-10.6; RI.9-10.8)

4. *In Planet of Weeds, David Quammen explains the concept of mass extinction. He also describes the five major mass extinctions scientists believe have occurred in geological history, and argues that Earth is currently on the brink of a sixth mass extinction. Have students read the text and then work in pairs or small groups to create a poster-sized presentation explaining the concept of mass extinction, showing a timeline of the five major mass extinctions of the past, and the evidence suggesting a sixth is beginning. (HS-LS2-6; HS-ESS2-7)

5. In Ecology of a Cracker Childhood, Janisse Ray uses the gopher tortoise as an example in order to explain the concept of “keystone species.” Have students read the text independently and then write an explanatory essay explaining the concept using the gopher tortoise and one other species as exemplars. Other species commonly cited as keystone species include: African elephant, sea otter, prairie dog, beaver, and wolf. You may wish to assign students to a species or have them choose from this list. Students will need to research the second species; sufficient information is easily found online. Students should use evidence in Ray’s text to support the candidacy of the gopher tortoise as a keystone species as well as their inferences about the additional species they choose. (RI.9-10.1; W.11-12.2; W.11-12.7)
Close Reading

Aldo Leopold’s *A Sand County Almanac* (pages 274–276, 286–288)

**Lexile®: measure = 1120L**

**Vocabulary**

- **gleanings**, *pl n*, things, especially facts, that are gathered or collected from various sources rather than acquired as a whole
- **tyro**, *n*, a beginner or novice
- **mêlée**, *n*, a confused mass (of people or animals)
- **extirpate**, *v*, root out and destroy completely
- **desuetude**, *n*, a state of disuse
- **defoliated**, *v*, removed leaves from (a tree, plant, or area of land), for agricultural purposes or as a military tactic
- **biotic**, *adj*, of, relating to, or resulting from living things, especially in their ecological relations
- **flora**, *n*, the plants of a particular region, habitat, or geological period
- **fauna**, *n*, the animals of a particular region, habitat, or geological period
- **apex**, *n*, the top or highest part of something, especially one forming a point

**Close Reading Comprehension Questions**

Have students read the Close Reading Text, the passages *Thinking Like a Mountain* and *The Land Pyramid* from Aldo Leopold’s *A Sand County Almanac* (pages 274–276, 286–288), on their own. Then have the students work in groups to answer the following close reading questions:

1. In the section *Thinking Like a Mountain*, the author discusses how seeing a wolf die changes his views (page 275). What does Leopold learn from watching the wolf die? *He learns that the wolf is important to the mountain ecosystem, and that the death or extermination of the wolf has effects beyond those he can imagine or for which he can hope.* (9RI.11-12.3; HS-LS2-6)

2. How do the details in the section *Thinking Like a Mountain* (pages 274–276) support the idea that all life in an ecosystem is interconnected? *Possible answer: Details in this section describe how the mountain and the other animals react to the presence of wolves, such as the horse whinnying and the deer running away. Other details describe the devastation that deer cause to plant life in the absence of wolves to control their population. The author even suggests that the mountain itself misses the wolves.* (9RI.9-10.5; HS-LS2-6)
3. In the final paragraph of the section *Thinking Like a Mountain*, what does Leopold mean by the statement that, “too much safety seems to yield only danger in the long run” (page 276)? Possible answer: By trying to control dangers such as wolves, humans create new, worse dangers, such as depleted ecosystems. What actions do his statements in this paragraph suggest people should take? *These statements suggest that people should not only avoid destroying nature but should also take an active role in conserving wildlife.* (RI.9-10.1)

4. In the section *The Land Pyramid*, why does Leopold argue that a pyramid is the best representation of nature’s systems? *The layers of the pyramid accurately show similarities between species with comparable food sources. The pyramid structure also shows the proportion of different elements needed to support the ecosystem.* What does the pyramid structure suggest about the role of the land in an ecosystem? *Because the land is at the base of the pyramid, it supports all the other layers. This suggests that healthy soil and land are crucial elements for a healthy ecosystem.* (RI.9-10.1)

5. Reread the paragraph at the bottom of page 286 and the top of page 287 in the section *The Land Pyramid*. Based on this paragraph, what is a food chain? *A food chain is a line that shows the pattern of dependency for food and other services between Earth and various species.* Give your own example of a food chain. *Possible answer: Soil-grass-deer-wolf.* How does the idea of the food chain fit into the concept of the biotic pyramid? *The food chain demonstrates how energy flows through the different levels of the pyramid.* (RST.9-10.5; HS-LS2-4)
Close Reading Comprehension Questions

1. In the section *Thinking Like a Mountain*, the author discusses how seeing a wolf die changes his views (page 275). What does Leopold learn from watching the wolf die?

2. How do the details in the section *Thinking Like a Mountain* (pages 274–276) support the idea that all life in an ecosystem is interconnected?

3. In the final paragraph of the section *Thinking Like a Mountain*, what does Leopold mean by the statement that “too much safety seems to yield only danger in the long run” (page 276)\(^?\). What actions do his statements in this paragraph suggest people should take?

4. In the section *The Land Pyramid*, why does Leopold argue that a pyramid is the best representation of nature’s systems? What does the pyramid structure suggest about the role of the land in an ecosystem?

5. Reread the paragraph at the bottom of page 286 and the top of page 287 in the section *The Land Pyramid*. Based on this paragraph, what is a food chain? Give your own example of a food chain. How does the idea of the food chain fit into the concept of the biotic pyramid?
Comparing Texts
Have students write a short comparison of Aldo Leopold’s point of view on humans’ impact on ecosystems with those of one or two other core passage authors. Ask students to explain how, according to each author, people have affected specific ecosystems; the author’s opinion of this impact; and any suggestions the author offers to change or lessen humans’ impact on the environment. Ninth- and tenth-grade students may compare Leopold’s writing with one other core passage text. Eleventh- and twelfth-graders may compare it with two other texts. (RI.9-10.6)

Making Connections to Today
In A First American Views His Land, N. Scott Momaday suggests that at the core of the Native American worldview is the concept: “The Earth is our mother. The sky is our father.” This concept suggests an intimate relationship and interdependence between humans and the natural world. Have students work in small groups to research and prepare a presentation summarizing Momaday’s thesis, and comparing his explanation of the relationship between humans and nature to the way this relationship is viewed in a community to which the students belong. The community each group chooses may be your school, their families, your town or city, or the United States as a whole.

In their presentations, students should choose specific examples from Momaday’s text as well as from the community they have chosen. Such examples within their chosen community may include the way nature is featured in popular media and advertising, decisions that have been made about resource use and conservation, and the words and rhetorical approaches politicians representing various constituencies use in their comments on environmental issues. Within their presentations, students should also be sure to reference the interrelations and/or independence of particular species, and to cite specific ways that humans view biotic and abiotic aspects of their natural environment. (RH.11-12.2; RST.9-10.2; W.11-12.7)

Core Passages Assessment Questions
Have students answer these questions individually. Questions are printed on separate pages that can be reproduced for students.

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Interconnected Earth

Core Passages Assessment Questions

Answer these questions about the core passages individually.

1. On the first two pages of the section “The Community Concept” in Aldo Leopold’s *A Sand County Almanac* (page 278), what does Leopold’s term “land ethic” mean?

   A the declaration of love for and obligation to the land
   
   B the alteration, management, and use of plant and mineral resources
   
   C the individual’s struggle between conflict and competition in human society
   
   D the understanding of humans as part of a community of soil, water, plants, and animals

2. In the passage from *Friends of the Earth’s Only One Earth* (pages 500–503), the authors claim that life on Earth is so intertwined that changes to any life on Earth will affect all life on Earth. Which three pieces of evidence from the text support this claim?

   A “The mixing of dead atoms in some strange swamp or ocean made by chance a new kind of matter.”
   
   B “Patterns of atoms have come together to make cells, and cells to make tissues, and tissues to make organs, and organs to make redwoods and bees and sharks and hawks and men.”
   
   C “Life is never still, always trying to become something else, something more efficient and stable and strong.”
   
   D “All the matter and energy needed for life moves in great closed circles from which nothing escapes and to which only the driving force of the sun is added.”
E “Nearly everything is used by life, used and reused in thousands of complex ways, moved through vast chains of plants and animals and back to the beginning.”

F “The web of life has so many threads that a few can be broken without making it all unravel.”

G “In the complex world of living things everything depends on everything else, all life is the same life, every effect is a cause, nothing can happen by itself.”

H “For the first time in his short history, man is now facing the limits of the earth that he likes to call his.”

3. In the passage from Friends of the Earth’s Only One Earth, the section “Getting It in Proportion” (pages 502–503) considers Earth’s history as one week. How does this section help develop the authors’ ideas about life on Earth?

A It demonstrates that Earth has limited resources to sustain life.

B It shows that all forms of life depend on one another to survive.

C It highlights what a short time humans and human civilization have existed.

D It emphasizes the role of evolution in the development of plant and animal life.

4. According to Lewis Thomas’s The World’s Biggest Membrane (pages 550–553), which crucial step led to the continued development of life on Earth?

A Living things began to catch and hold energy.

B Water began to create a shield against ultraviolet radiation.
C Photosynthesis began to breathe oxygen into the atmosphere.

D A drop in carbon dioxide began to decrease the atmosphere’s ability to hold in solar heat.

5. In **Lewis Thomas’s The World’s Biggest Membrane** (pages 550–553), Thomas describes Earth’s atmosphere as having “perfection of function.” Which detail from the text supports this claim?

A Earth’s atmosphere destroys meteorites that would otherwise hit Earth.

B Earth’s atmosphere’s “breathing” would be damaged by a nuclear explosion.

C Earth’s atmosphere was first formed from gases that were released when Earth cooled.

D Earth’s atmosphere goes through cycles related to levels of oxygen and carbon dioxide.

6. Which best summarizes the European colonists’ and the Indians’ relationship to the New England environment as described in **William Cronon’s Seasons of Want and Plenty** (pages 635–637)?

A Colonists feared poor harvests, and Indians were confident that the land would provide for them.

B Colonists expected continual plenty, and Indians knew they had to adapt to the cycles of the seasons.

C Colonists viewed the land as more fertile than Europe, and Indians wanted to tame and cultivate the land.

D Colonists believed that the area would support farming, and Indians thought it was a better place for hunting.
7. What is the main issue that David Quammen identifies on page 877 of Planet of Weeds?

A. The collective impact of the Homo sapiens species is destroying the world.

B. Biologists believe that Earth is headed into a sixth period of mass extinction.

C. Humans are causing so much global wreckage that it will result in their own extinction.

D. Polluted air and water, acid rain, greenhouse gases, and toxic waste have caused irreversible contamination.

8. Which sentence from the passage from Janisse Ray’s Ecology of a Cracker Childhood (pages 900–903) best explains why the gopher tortoise is described as a “keystone”?

A. “The tortoise is central in holding the ecosystem together.”

B. “A gopher tortoise can live for up to fifty years, although they take a long time to mature.”

C. “The life of a gopher tortoise revolves around its burrow, although it can occupy more than one.”

D. “Their ancestors were one of at least twenty-three species of land tortoises that originated in North America some sixty million years ago.”
Introduction

Often when we think of nature, we think only of pristine wilderness. Yet at least since the time of Thoreau, American writers have recognized, appreciated, and advocated for nature in places as different from each other as the mountains and valleys of Yellowstone and the concrete canyons and urban parks of our largest cities. The work of these writers has contributed to the growth of perhaps the world’s greatest system of national parks and the reappearance of “wild nature” to even our most densely populated places, as evidenced by the presence of cougars in the San Francisco Bay Area and coyotes and peregrine falcons in New York City. The documents in Unit 3 highlight the role of nature in varied environments, and how humans and other organisms interact in settings ranging from the most urban to the most wild. These documents serve as a basis for considering what we mean by terms such as *natural*, *wilderness*, and *cities*. As students read these passages, encourage them to think about the place where they live, the role of nature, and its impact on their own lives.

Objectives

1. Students will explore how great environmental writers have portrayed the relationship between humans and nature, in places ranging from urban to wild, by analyzing what their texts say explicitly and implicitly, their choice of words and phrases. They will use evidence within the texts to determine and compare the authors’ points of view to other points of view.

2. Students will conduct research, synthesize multiple sources and their own observation, and use technology to create a presentation on nature in their own community.
Core Passages and Images

Close Reading Passage: from *Huckleberries*, by Henry David Thoreau (pages 31–32)

1. from *Humbugs of the World*, by P. T. Barnum (pages 81–83)
2. from *A Review of Recent Changes, and Changes which Have Been Projected, in the Plans of the Central Park*, by Frederick Law Olmsted (pages 121–122)
3. from *A Review of Recent Changes, and Changes which Have Been Projected, in the Plans of the Central Park*, by Frederick Law Olmsted (pages 124–125)
5. “Birds that Are New Yorkers,” by Donald Culross Peattie (pages 245–246)
6. from *The Life and Death of Great American Cities*, by Jane Jacobs (pages 359–361)
7. from the Wilderness Act of 1964, by Howard Zahniser (pages 392–394)
8. from * Refuge: An Unnatural History of Family and Place*, by Terry Tempest Williams (pages 739–742)
9. Image 44: Charles Pratt, *Woman and Flowering Tree, Hoboken, New Jersey*
10. Image 45: Phillip Hyde, *South Rim in Winter, Grand Canyon, Arizona*

Standards

Common Core State Standards

**RI.9-10.1** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

**RI.9-10.3** Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

**RI.9-10.4** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

**RI.9-10.5** Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).
RI.9-10.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.

RI.11-12.6 Determine the author’s point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.

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

RH.9-10.1 Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.

RH.9-10.6 Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

RH.11-12.6 Evaluate authors’ differing points of view on the same historical event or issue by assessing the authors’ claims, reasoning, and evidence.

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.

RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

W.9-10.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically.

W.9-10.7 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.

W.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.

Next Generation Science Standards

HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species’ chances to survive and reproduce.
Motivate
Ask students to look at Images 44 and 45. These photos show two very different environments. Invite students to discuss the photos in small groups and then share their ideas with the class. Ask students to consider these questions:
- How do the two photos represent different portraits of America?
- Is one of the two photos a more accurate portrait of America? Why or why not?
- What roles do these two types of environments play in American ideas about nature?

Explore
Each activity in this section focuses on the work of an individual author. Activities in later sections involve comparing the works of more than one author. Activities marked with an asterisk (*) are more suited to strong readers.

1. Have students read John Burroughs’s “Nature near Home” on pages 168–171, as well as the introduction to all the Burroughs texts on page 145. Have them analyze the following sentence on page 169: “Familiarity with things about one should not dull the edge of curiosity or interest.” Ask students to explain in their own words what Burroughs is saying in this sentence and to identify how this idea is developed and refined in later parts of the text. Ask students to also explain whether the idea expressed in this sentence is true in terms of their own experience of nature in the place where they live. (RI.9-10.5)

2. *In Jane Jacobs’s The Death and Life of American Cities have students read the paragraph at the bottom of page 359 and the top of page 360 and the paragraphs at the bottom of page 360 and the top of page 361. In these paragraphs, Jacobs warns of the possible ill effects of “sentimentalizing” nature. In small groups or as a full class, have students clarify what Jacobs means by sentimentalizing nature, including suggesting examples. Then ask students to evaluate the author’s claims about the effects of such sentimentalizing. (RI.9-10.4; RI 9-10.8)

3. Have students read pages 739–742 in the passage from Terry Tempest Williams’s Refuge: An Unnatural History of Family and Place. Have students create a graph of the data provided on
how the level of the lake has changed over time. You may also wish to have them create a diagram of Great Salt Lake based on the information in the text about the shape and depth of the lake. Allow students to do additional research to locate relevant information beyond what is provided in the text. (RST 9-10.7)

Close Reading

Henry David Thoreau’s *Huckleberries* (pages 31–32)

Lexile®: measure = 1360L

Vocabulary

detriment, *n*, the state of being harmed or damaged

corporation, *n*, a group of people elected to govern a city, town, or borough

adorned, *v*, made more beautiful or attractive

utilitarian, *adj*, designed to be useful or practical rather than attractive

monopolize, *v*, obtain exclusive possession or control of

Close Reading Comprehension Questions

Have students read the Close Reading Text, the passage from *Henry David Thoreau’s Huckleberries*, on their own. Direct students to reread the part of the passage from the top of page 31 to the paragraph ending “after ten years more” in the middle of page 32. Have them answer the following close reading questions:
1. What elements does Thoreau value in a town? natural features such as rivers with waterfalls, meadows, lakes, hills, cliffs, rocks, forests, and ancient trees Why does Thoreau value these features? because they are both beautiful and educational How does Thoreau suggest towns and cities should go about preserving their natural features? Each town should have a committee devoted to preserving these features, and particularly rare or valuable natural features should be treated as belonging to the public. (RI.9-10.1; HS-LS2-7)

2. Based on this passage, make an inference about how Thoreau views city living. Possible answer: as a necessary evil, or as inferior to living in the country. What evidence from the text supports this inference? This sentence suggests that Thoreau sees country living as better than city living: “Let us try to keep the new world new, and while we make a wary use of the city, preserve as far as possible the advantages of living in the country.” (RI.9-10.1)

3. Compare and contrast the way the town has used the river and the way Thoreau believes the town should use the river. The town has used the river only for water traffic and occasional bridge crossings. Thoreau suggests that the town should also focus on allowing residents to enjoy the river’s beauty by making the banks public spaces that feature walkways and trees. (RI.9-10.1; HS-LS2-7)

4. What is Thoreau’s purpose in this passage? Possible answer: to increase readers’ awareness of the importance of natural features and to convince readers to appreciate, preserve, and enhance natural areas, especially in towns. How does Thoreau’s language contribute to the power and persuasiveness of his text? Possible answer: Thoreau’s text is a mixture of the personal and the general. His own passion for the subject and for certain features of the natural landscape shine through in his writing. At the same time, he addresses more general questions about natural features and landscapes in a practical way with which more readers may identify. (RI.11-12.6)
Close Reading Comprehension Questions

1. What elements does Thoreau value in a town? Why does Thoreau value these features? How does Thoreau suggest towns and cities should go about preserving their natural features?

2. Based on this passage, make an inference about how Thoreau views city living. What evidence from the text supports this inference?

3. Compare and contrast the way the town has used the river and the way Thoreau believes the town should use the river.

4. What is Thoreau’s purpose in this passage? How does Thoreau’s language contribute to the power and persuasiveness of his text?
Comparing Texts

1. Have students write a short explanatory essay answering this question: Based on the views he expresses in *Huckleberries*, what would Henry David Thoreau think of the *Wilderness Act of 1964*? Responses should detail the purpose and provisions of the act and explain Thoreau’s potential response to each. (RH.11-12.6; HS-LS2-7)

2. *Have students write a short explanatory essay comparing P. T. Barnum and Frederick Law Olmsted’s views of the role of New York City’s Central Park. Ask students to explain which elements of the park each writer considers essential and why. Then ask students to use the information from the two texts to draw conclusions about American views of nature and cities in the late 19th century. (RH.9-10.6; RH.11-12.9)

3. Have students make a Venn diagram to compare and contrast John Burroughs and Donald Culross Peattie’s observations and descriptions of local birds. Then invite students to discuss what these descriptions reveal about each author’s view of nature and about the place where each author lives. (RI.11-12.7)

Making Connections to Today

In “*Nature near Home,*” John Burroughs writes about experiencing nature where you live. Many of the other authors in this unit have done just that. Have students apply Burroughs’s advice to become observers of their own area and to use a variety of media to document and communicate their findings. Encourage students to use reference books or Web sites to identify plants and animals they observe. The media produced by students could include:

- A photo-essay identifying things they define as “wild” in their community
- A journal, in which students visit a natural place a number of times and write and sketch their observations: the sights, sounds, and emotions they experience in that place
- A nature guide for visitors to a nearby natural place, suggesting particular walks and identifying highlights of what a visitor should look for and might see

Whatever their chosen media, using the core texts as inspiration students should explain what the terms *natural* and *wilderness* mean in the context of where they live.

Have students present their projects and then have a discussion about their findings and ideas. To help spur discussion, ask questions such as the following:

- Were any of the natural features you or a classmate observed a surprise to you? Which ones, and why? Are there differences of opinion in the class about what is natural and what is not?
How are your observations similar to and different from those of the authors of texts we have read in this unit?

What public or private measures would help enhance people’s experiences of nature in our area? How are these measures related to those proposed by authors such as Henry David Thoreau?

How might people benefit from better experiences of nature in this area? Does the information in these projects succeed in furthering this goal?

(Core Passages Assessment Questions)

Have students answer these questions individually. Questions are printed on separate pages that can be reproduced for students.

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UNIT 3

Wild America: From City to Country

Core Passages Assessment Questions

1. Reread the passage from P. T. Barnum’s *The Humbugs of the World* (pages 81–83). Based on this passage, when does Barnum—himself known for using striking advertisements—object to advertising?

   A when it uses religion to sell a product
   B when it advertizes quack medicines or rum
   C when it uses large letters and obtrusive colors
   D when it is in the middle of a natural landscape

2. Reread the passage from P. T. Barnum’s *The Humbugs of the World* (pages 81–83). In this passage, what is the effect of Barnum comparing a natural landscape to a beautiful wife or daughter?

   A It recognizes that nature is incomplete without humans.
   B It suggests that readers’ family life can be a part of living in harmony with nature.
   C It emphasizes the reader’s connection to and responsibility to protect the landscape.
   D It highlights the idea of natural human beauty by comparing it to an untouched wilderness.

3. Reread from the top of page 121 through the top of page 122 in the passage from *A Review of Recent Changes, and Changes which Have Been Projected, in the Plans of the Central Park*, by Frederick Law Olmsted. According to the text, why does Olmsted believe that it is important that Central Park be so large?
A It will be in an area that is not suitable for other uses.
B It will not be overwhelmed by surrounding buildings and traffic.
C It will be easy to reach from any place on the island of Manhattan.
D It will be able to accommodate New York’s many millions of residents.

4. Reread Donald Culross Peattie’s “Birds that Are New Yorkers” (pages 245–246). Which phrase from the text refers to one necessary characteristic for both birds and people that live in the city?

A “the spirit of discovery, true scientific discovery”
B “Mendelian strains, bred, interbred, and bred out again to the normal”
C “the ability to survive constant association with human beings”
D “experiences as social denizens of the vast human rookery we call a city”

5. Reread Donald Culross Peattie’s “Birds that Are New Yorkers” (pages 245–246). According to the author, birds living in the city face more disadvantages than advantages. Which three of the following are advantages for a bird living in the city?

A shelter in winter
B bright lighting at night
C a jumble of valleys and canyons
D strong updrafts from tall buildings
E little competition from other species
F refuse piles available for scavenging
G the supply of insects and grain for food
H the presence of other animals such as cats and rats

6. Reread the paragraph at the bottom of page 359 and the top of page 360 in the passage from Jane Jacobs's *The Death and Life of American Cities*. In this paragraph, what does Jacobs's analogy between human cities and prairie dog colonies and oyster beds suggest?
   A that human cities are unique in nature
   B that humans and their cities are part of nature
   C that humans have better building abilities than other species
   D that only humans, and not other species, can survive in human cities

7. Reread the passage from the *Wilderness Act of 1964*, by Howard Zahniser (pages 392–394). According to the act, which area would be considered wilderness?
   A a 6,000-acre forest
   B a 1,200-acre nature park
   C a 7,500-acre stretch of farmland
   D a 5,000-acre suburban tract with strict zoning restrictions
8. Reread pages 739–742 in the passage from Terry Tempest Williams’s *Refuge: An Unnatural History of Family and Place*. Based on the text, what is significant about the lake level of 4206’?

A  It is the lake’s historic lowest level.

B  It is the lake’s historic highest level.

C  It is the level at which the bird refuge would flood.

D  It is the level at which the airport would be under water.
Introduction
The texts in Unit 4 provide a window on some of the root causes of human impact on the environment, from air and water pollution to hunting, human population growth, natural resource consumption, and habitat destruction. The authors of these texts use different ways of approaching these subjects as writers: through essays, book chapters, song lyrics, and a valedictory address. The authors’ points of view are also varied, ranging from very personal experiences to a global overview. As students read these passages, encourage them to identify examples of human environmental impact in the place where they live, and to try out different ways of communicating ideas and information as well as different means of conveying and eliciting emotions.

Objectives
1. Students will read and analyze in order to explore how authors use different types of writing to convey information, ideas, and emotions related to human impact on the environment.
2. Students will engage in a variety of different types of writing—from essay to poetry to multimedia presentation—to evaluate, explain, and provide their own points of view on current impacts on the environment, locally and globally.

Core Passages and Images
Close Reading Passage: from Silent Spring, by Rachel Carson (pages 366–367, 374–376)
2. from *The Population Bomb*, by Paul R. Ehrlich (pages 434–437)

3. from *The Tragedy of the Commons*, by Garrett Hardin (pages 438–439)

4. from *The Tragedy of the Commons*, by Garrett Hardin (pages 440–441)

5. Mills College Valedictory Address, by Stephanie Mills (pages 469–472)


7. from *Encounters with the Archdruid*, by John McPhee (pages 493–494)

8. from *The End of Nature*, by Bill McKibben (pages 718–719)

9. from *The Ninemile Wolves*, by Rick Bass (pages 760–762)

10. Image 39: Donora, Pennsylvania, on November 3, 1948

11. Image 40: Insecticidal fogging machine

12. Image 41: Cleveland firemen battle a blaze

13. Image 54: Dead bird covered in oil


15. Image 75: Robert Glenn Ketchum, *The Chainsaws of Summer*

16. Image 82: Mitch Epstein, *Amos Coal Power Plant, Raymond, West Virginia*

**Standards**

Common Core State Standards

**RI.9-10.1** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

**RI.9-10.2** Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

**RI.9-10.3** Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

**RI.9-10.4** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

**RI.9-10.5** Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).
RI.9-10.6 Determine an author’s point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

RI.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

RI.11-12.2 Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.

RI.11-12.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).

RH.9-10.3 Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

RH.9-10.6 Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

RH.9-10.9 Compare and contrast treatments of the same topic in several primary and secondary sources.
Ask students to examine Images 39, 40, 41, 54, 57, 75, and 82 and to read the caption for each photo. Each photo shows a different way human activity has had a detrimental impact on the environment. Invite students to discuss the photos in small groups and then to share their ideas with the class. Ask students to consider these questions:

- How are the environmental impacts shown in the photos similar? How are they different?
- Based on their preexisting knowledge, do students think the examples of human impact in these photos have occurred often in American history, or are they unusual incidents? Are they still occurring today?
- What are some other ways humans have an impact on the environment? If students were assigned to add to this collection by photographing scenes in their local environment, what sorts of pictures would they take?
Explore

Each activity in this section focuses on the work of an individual author. Activities in later sections involve comparing the works of more than one author. Activities marked with an asterisk (*) are more suited to strong readers.

1. Have students read the part of Gene Stratton-Porter’s *The Last Passenger Pigeon* beginning with “One of the things . . .” on page 196 and ending with “. . . after she had been mounted” on page 199. Then ask them to write a summary of how the author’s family upbringing influenced her ideas about the passenger pigeon and her reaction to its extinction. (RI.9-10.6; RI.11-12.2; W.9-10.2)

2. *After they have completed their close reading of the passage from Rachel Carson’s *Silent Spring* (pages 366–367, 374–376), have students reread the introduction to the passage (page 365) and research the actions and responses *Silent Spring* has inspired. Have students write a short essay explaining some of the main effects of *Silent Spring* on the American environmental movement. Ask students to detail the influence of specific elements from the passage they read on these responses and effects. (RH.11-12.9; W.9-10.2)

3. Have students read the section “The Many People” on pages 435–437 of the passage from Paul R. Ehrlich’s *The Population Bomb*. In this section, Ehrlich discusses the “doubling time” for the global population. Have students work individually to use Ehrlich’s data to create a graph or chart showing the changes in the doubling rate over time. Then have a class discussion about the meaning and possible future implications of this trend. (RST 9-10.7; HS-ESS3-6)
4. *Have students read pages 493–494 in the passage from John McPhee’s *Encounters with the Archdruid*. Lake Powell, which McPhee describes in the midst of its creation, is different from the human impacts described in other texts in this unit. The lake was created purposely, whereas many of the other impacts are accidental by-products of other human activities. Ask students to consider how this difference affects their views of the lake, as well as the views of the author and those he presents on behalf of Domin and Brower. As a class, discuss the benefits and costs of building the lake. Encourage students to extend their ideas beyond the benefits and costs explicitly mentioned in the text. (RI.11-12.3)

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**Close Reading**

**Rachel Carson’s *Silent Spring*** (pages 366–367, 374–376)

*Lexile®: measure = 1290L*

**Vocabulary**

- **blight**, *n*, a thing that spoils or damages
- **maladies**, *pl n*, diseases or ailments
- **moribund**, *adj*, at the point of death
- **granular**, *adj*, resembling or consisting of small grains or particles
- **specter**, *n*, a ghost; something widely feared as a possible unpleasant or dangerous occurrence
- **DDT** (abbreviation) dichlorodiphenyltrichloroethane, *n*, a synthetic organic compound introduced in the 1940s and used as an insecticide
- **Parathion**, *n*, a highly toxic synthetic compound containing phosphorus and sulfur, used as an agricultural insecticide
- **foliage**, *n*, plant leaves
- **bludgeon**, *n*, a thick stick with a heavy end, used as a weapon
- **authoritarian**, *n*, a person favoring or enforcing strict obedience to authority, especially that of the government, at the expense of personal freedom
Close Reading Comprehension Questions

Have students read the Close Reading Text, the passage from Rachel Carson's *Silent Spring*, on their own. Direct students to reread the section of the passage called “A Fable for Tomorrow” on pages 366 and 367 and the part from “England is by no means . . .” on page 374 through the end of the passage on page 376. Have them work in their groups to answer the following close reading questions:

1. Based on the excerpts you have read, summarize the central idea of *Silent Spring*. Then explain how these parts of the text support this idea. *Humans are causing destruction to the environment and the creatures that live there. “A Fable for Tomorrow” discusses a world that loses its wildlife. The part of the text that discusses pesticides demonstrates actual, specific effects of real human actions on wildlife.* (RI.9-10.2)

2. Why did Rachel Carson write the section “A Fable for Tomorrow” in the form of a fable within the larger context of the book *Silent Spring*? Did the use of a fable within the larger text advance her purpose or point of view? Why or why not? *Possible answer: The section “A Fable for Tomorrow” shows what can happen if the warnings and information in the rest of the book are not taken seriously. As a simple fable or story, it introduces the book’s larger issues and concerns in a way that is clear and easy to understand.* (RI.9-10.5; RI.9-10.6)
3. According to pages 374 and 375, what are two ways pesticides can harm birds? *Birds are killed as a side effect of the use of DDT intended to kill insects in rice fields. Birds are specifically targeted by other pesticides, which may also have other unintended victims.* (RI.9-10.1)

4. In the part of the passage on pages 374–376, what steps does Carson follow to build her argument about the harmfulness of pesticides? *She begins with the accidental poisoning of birds, then works up to the purposeful poisoning of birds, and finally explores the human decision-making and values that led to those outcomes.* How does the final paragraph of the passage engage the reader? *It makes it seem as if the reader is a victim who is being harmed by decisions about pesticide use that the reader had no part in making.* (RI.9-10.3)
Close Reading Comprehension Questions

1. Based on the excerpts you have read, summarize the central idea of *Silent Spring*. Then explain how these parts of the text support this idea.

2. Why did Rachel Carson write the section “A Fable for Tomorrow” in the form of a fable within the larger context of the book *Silent Spring*? Did the use of a fable within the larger text advance her purpose or point of view? Why or why not?

3. According to pages 374 and 375, what are two ways pesticides can harm birds?

4. In the part of the passage on pages 374–376, what steps does Carson follow to build her argument about the harmfulness of pesticides? How does the final paragraph of the passage engage the reader?
Comparing Texts

1. *Have students read the passage from Paul R. Ehrlich’s *The Population Bomb* (pages 434–437) and Stephanie Mills’s *Mills College Valedictory Address* (pages 469–472). The introduction to Mills’s speech suggests a link between her ideas and Ehrlich’s. Have students write a short explanatory essay to compare and contrast the two texts. Encourage students to explore the ways Ehrlich’s ideas may have influenced Mills, as well as the ways in which the details they emphasize or include differentiate their ideas. (RH.9-10.6; W.9-10.9; W.11-12.2)

2. After students read the song lyrics (pages 490–492), find recordings of Joni Mitchell singing “Big Yellow Taxi” and Marvin Gaye singing “Mercy Mercy Me (The Ecology).” (Both recordings are easily located online.) Assign students to listen to both recordings as homework and/or play them in class. Then, have students write a paragraph comparing and contrasting the style, content, and emphasis of the two songs, as well as how the experience of listening to them sung is different than simply reading the text. (RL.9-10.7; W.9-10.2; W.9-10.9)

3. Have students write a short explanatory essay comparing Rick Bass’s description of the fate of wolves in the American West in the passage from *The Ninemile Wolves* (pages 760–762) to Rachel Carson’s warnings in the passage from *Silent Spring* (pages 366–367, 374–376). Ask students to cite ways in which Bass’s work provides additional evidence for Carson’s ideas. (RH.9-10.9; W.9-10.2)

Making Connections to Today

Hold a class discussion in which you encourage students to brainstorm ways of adopting the perspective or even the identity of another person or life form. As a class, generate a list of questions or suggestions that would be helpful to the process of adopting a different or even alien point of view. Such questions or suggestions might include:

- What are the things you see/hear/feel in your new identity?
- What are your needs in your new identity?
- What makes you happy/sad in your new identity?
- What are you afraid or proud of?
- Who, if anybody or anything, do you rely upon?

Then, ask students to imagine that they are a person or an animal experiencing a human impact on the environment that is occurring today. Have each student write a narrative from the point of view of the chosen person or animal. Each narrative should use well-chosen details and imagined sequences of events to convey information and emotions to the reader.
Amos Coal Power Plant, Raymond, W.V.

You may wish to offer students the option of writing in the form of a song or valedictory address, using Joni Mitchell, Marvin Gaye, or Stephanie Mills as inspiration.

Have students share their work with each other and provide comments, and have writers revise their work accordingly. Then, stage a reading to which you invite parents and/or other special guests. (W.11-12.3)

**Core Passages Assessment Questions**

Have students answer these questions individually. Questions are printed on separate pages that can be reproduced for students.

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UNIT 4

Human Impact

Core Passages Assessment Questions

1. Reread the excerpt from Gene Stratton-Porter’s *The Last Passenger Pigeon* (pages 196–199). Based on this text, which event contributed to the pigeon’s extinction?

A  People preferred the taste of pigeons to the taste of doves.

B  Hunters used guns to hunt pigeons, rather than poles and bags.

C  People counted their wealth by the number of pigeons they had.

D  Hunters filled bags with pigeons and caused the birds needless suffering.

2. Reread the excerpt from Gene Stratton-Porter’s *The Last Passenger Pigeon* (pages 196–199). Based on this text, what is the irony of the last passenger pigeon being stuffed and “preserved for future generations” at the Smithsonian?

A  The Smithsonian had contributed to the extinction of the pigeons.

B  Future generations were unlikely to care about passenger pigeons.

C  People had failed to preserve the species itself for future generations.

D  Stuffing and mounting the pigeon was not an effective way to preserve its body.
3. In the section “The Problem” in the passage from Paul R. Ehrlich’s *The Population Bomb* (pages 434–435), what is the effect of the author’s repetition of the word “people”?

   A. It expresses the author’s feeling that the planet is becoming too crowded.
   
   B. It expresses the author’s uncertainty that overpopulation is a serious issue.
   
   C. It expresses the author’s fear of his audience failing to pay attention to his warning.
   
   D. It expresses the author’s idea that controlling population is everyone’s responsibility.

4. Reread from page 438 to “. . . brings ruin to all” on page 439 of the passage from Garrett Hardin’s *The Tragedy of the Commons*. Based on this passage, what does Hardin’s term “tragedy of the commons” mean?

   A. individuals’ overuse of shared resources
   
   B. the community’s failure to help individuals in need
   
   C. the community’s inability to police shared resources
   
   D. individuals’ inability to contribute to each other’s needs

5. Reread the section “Pollution” in the passage from Garrett Hardin’s *The Tragedy of the Commons* (pages 440–441). According to the author, why does having private property fail to solve the problem of pollution?

   A. Property owners do not care if their property becomes polluted.
B The costs to property holders are not yet high enough to discourage pollution.

C The effects of pollution on air and water reach far beyond a polluter’s personal property.

D Dividing property among individual owners does not address the tragedy of the commons.

6. Reread Stephanie Mills’s Mills College valedictory address (pages 469–472). What does Mills predict will be a consequence of the rising human population?

A famine and death
B increased productivity
C changing family structures
D a lower value on human life

7. Reread pages 718–719 in the passage from Bill McKibben’s The End of Nature. In the passage, what does “the sound of the saw” represent?

A natural forces at work
B the noises of the forest
C human impact on nature
D changes in temperature and rainfall

8. Reread pages 718–719 in the passage from Bill McKibben’s The End of Nature. Which definition best expresses the way McKibben uses the term “nature”?

A timeless forces in the world that can never be changed
B any forces that help shape human experience of the world
C forces in the world that humans can influence without realizing it

D wild forces that shape human experience but are beyond human control

9. Reread pages 760–762 in the passage from Rick Bass’s *The Ninemile Wolves*. According to this passage, what was a consequence of humans’ decimation of the buffalo?

A Wolves became extinct.

B Wolves began to kill cattle.

C Wolves started to attack humans.

D American wolves moved to Canada.
Introduction
The documents in this unit cover a wide historical spectrum and include very different types of writing, from poetry to a Supreme Court dissent. Yet they all explore the ethics of environmental protection and how the use and abuse of the environment relate to social justice. The texts in this unit emphasize the ideas that environmental harm and environmental protection have different impacts on different groups of people, and that people of every demographic have the right, the opportunity, and—some would argue—the responsibility to participate in environmental action. As students read these passages, encourage them to think about how different groups of people in their community are impacted differently by the environment and harm to it, how they can participate in environmental action, as well as whether and how they should urge others to become involved.

Objectives
1. Students will analyze how authors of key texts explore the ethics of environmental protection, and how the use and abuse of the environment relate to social justice. They will discuss the reasoning, rhetoric, and evidence in texts that encourage environmental activism.

2. Based on their reading of texts in this unit, students will choose an environmental issue, conduct research, synthesize information from a diversity of sources, write a persuasive essay, and perform it as a speech that presents a compelling and persuasive case for activism.
Core Passages and Images


3. from *Love Canal: My Story*, by Lois Marie Gibbs (pages 609–611)
4. from *Love Canal: My Story*, by Lois Marie Gibbs (pages 614–616)
5. Wrath of Grapes Boycott Speech, by César Chávez (pages 693–695)
6. from *Dumping in Dixie*, by Robert D. Bullard (pages 725–727)
7. from *Dumping in Dixie*, by Robert D. Bullard (pages 729–731)
9. Epilogue from *Refuge: An Unnatural History of Family and Place*, by Terry Tempest Williams (pages 752–759)
10. from *The Legacy of Luna*, by Julia Butterfly Hill (912–916)
11. from *Blessed Unrest*, by Paul Hawken (pages 962–965)
12. from *Blessed Unrest*, by Paul Hawken (pages 968–970)
15. Image 48: Stanley Mouse/Mouse Studios, poster for Sierra Club Wilderness Conference
16. Image 63: Lois Gibbs at Love Canal
17. Image 68: Julia Butterfly Hill
18. Image 73: Kim Stringfellow, *Pumping Out Flood Water, Salston Sea Beach, California*
19. Image 78: Demonstration against salvage logging, Siskiyou National Forest, Oregon
20. Image 79: Anti-pollution protestors, San Francisco, California

**Standards**

**Common Core State Standards**

**RI.9-10.1** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

**RI.9-10.2** Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

**RI.9-10.5** Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).

**RI.9-10.6** Determine an author’s point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

**RI.9-10.8** Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.

**RI.11-12.3** Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.

**RI.11-12.6** Determine the author’s point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.

**RH.9-10.3** Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

**RH.9-10.4** Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.

**RH.9-10.6** Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.
RH.9-10.9 Compare and contrast treatments of the same topic in several primary and secondary sources.

RL.11-12.5 Analyze how an author’s choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.

W.9-10.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

W.9-10.7 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.

W.9-10.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

W.9-10.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

W.11-12.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

W.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.

W.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Next Generation Science Standard

HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
Motivate
Ask students to look at Images 68, 78, and 79 and to read the caption for each photo. Each photo shows a different way people are taking action on an environmental issue or problem. Invite students to discuss the photos in small groups and then share their ideas with the class. Ask students to consider these questions:

- What environmental problem are the people in each photo protesting? What result do they likely hope to achieve?
- How are the people shown in the photos taking action against the problem?
- How are people in your community taking action on environmental issues? What issues are they addressing and which types of action are they taking?
- What are some other ways people can take action to combat environmental problems?

Explore
Each activity in this section focuses on the work of an individual author. Activities in later sections involve comparing the works of more than one author. Activities marked with an asterisk (*) are more suited to strong readers.

1. *At the end of his dissent in *Sierra Club v. Morton* (page 358), William O. Douglas quotes Aldo Leopold’s “land ethic.” As a class, discuss the relevance of this quotation and how it contributes to Douglas’s argument. Then, again as a class, conduct a close reading of Douglas’s text, having students identify and discuss instances in which they think the reasoning is sound and evidence relevant and sufficient, and instances where it is not. Make sure students understand that as Douglas’s text was a dissent, the majority of the Supreme Court did NOT agree with him. Ask students to consider and share their thoughts on the effectiveness of a dissent like this as a form of environmental action. (RI.9-10.8)

2. Have students read from page 725 to “. . . allocation of community amenities” on page 727 in the passage from *Robert D. Bullard’s Dumping in Dixie*. Then ask them to consider the following assertion in Bullard’s writing with respect to their own community: “An abundance of documentation shows blacks, lower-income groups, and working-class persons are subjected to a disproportionately large amount of pollution and other environmental stressors in their neighborhoods as well as their workplaces.” Does this statement hold true in terms of what they see around them in the place where they live? Have students write a persuasive essay in which they craft a precise thesis and cite specific evidence from their own community. Students’ essays should use valid reasoning and reference words in Bullard’s writing. (RH.9-10.4; RI.9-10.8; W.9-10.1)
3. On page 759 of the epilogue of *Terry Tempest Williams’s Refuge: An Unnatural History of Family and Place*, the author refers to trespassing on military lands as “an act of civil disobedience.” Have students conduct a short research project exploring the concept of civil disobedience. Instruct them to make sure they find and synthesize at least three relevant sources to define and provide examples of civil disobedience, and to explain when in their view it is warranted. When they are finished, have students share their definitions and the examples they chose. Later in her text, Terry Tempest Williams calls her pen and paper “weapons.” Ask students if, in their view, writing should be considered a form of civil disobedience and what they feel is the role of the written word in the fight for environmental justice. (RI.9-10.2; W.9-10.7; W.11-12.7)

4. In the section of the passage from *Paul Hawken’s Blessed Unrest* on pages 969–970, Hawken compares the environmental movement to an immune system. Have students analyze the content of this text and write a paragraph analyzing this comparison, explaining what similarities it is based on, and evaluating whether or not the comparison is valid. (RI.9-10.5)

*Logging in the Cascade Mountains, near Seattle (c. 1906), by Darius Kinsey*
Close Reading

Alice Walker’s “Everything Is a Human Being” (pages 659–662, 662–665, 667)

Vocabulary

**conifers**, *pl n*, trees that bear cones and evergreen needlelike or scalelike leaves

**profusion**, *n*, an abundance or large quantity

**rheumatoid**, *adj*, resembling or reflecting rheumatism, any disease marked by inflammation and pain in the joints, muscles, or fibrous tissue, especially rheumatoid arthritis

**discourse**, *n*, written or spoken communication or debate

**psyche**, *n*, the human soul, mind, or spirit

**puritanism**, *n*, a system of moral beliefs that is regarded as excessively strict and disapproving, especially with respect to pleasure and sex

**enthusiasts**, *pl n*, people who are highly interested in a particular subject or activity

Close Reading Comprehension Questions

Have students read the Close Reading Text, *Alice Walker’s Everything Is a Human Being*, on their own. Direct students to re-read from the beginning of the passage on page 659 to the break at the top of page 662; from the top of page 662 to the break in the middle of page 665; and the first full paragraph on page 667. Have them work individually or in groups to answer the following close reading questions:

1. In the section from the beginning of the passage, on page 659, to the break at the top of page 662, what does Walker notice about the trees when she is lying on their roots? *The trees are sickly, probably because something in their environment is doing damage to them.* (RI.9-10.1)

2. What impact do you think Walker intends to have on her readers by imagining a dialogue with the trees and referring to their “feet” and “faces”? *By suggesting that the trees are similar to humans, she can help readers identify with and see the value of the trees.* (RI.11-12.6)

3. Why do the trees in Walker’s dialogue not accept her protestations that she is innocent of harming them? *She is part of the human species and shares collective responsibility for human actions toward trees in general.* According to Walker, who is ultimately responsible for taking care of the Earth
and preventing crimes from being committed against it? *All people are responsible; it is a collective or shared responsibility.* (RI.9-10.1)

4. Reread the section from the top of page 662 to the break in the middle of page 665. What is the impact of Walker’s use of the word “murder” and her reference to the story of Adam and Eve in regard to the snake? *Both emphasize Walker’s feeling that killing the snake was not just wrong but actually a crime or a sin.* (RI.11-12.6)

5. Why is Walker so bothered by the killing of the snake? *It was a harmless animal that was simply going about its business and making its home in the garden.* To what does she attribute both the “murder” of the snake and other human slaugthers of nature? *unreasonable fear* (RI.9-10.1)

6. What parallels does Walker draw between the way she treated the snake, and humans treat nature more generally, and the way white settlers treated Native Americans? *Walker killed the snake for trying to return to its home, humans destroy the natural order in places where plants and animals should exist, and white settlers drove Native Americans from their homes and killed them when they tried to return.* To what does she attribute both the “murder” of the snake and other human slaugthers of nature? *unreasonable fear* (RI.9-10.1)

7. Reread the first full paragraph on page 667. What problems does Walker identify in this paragraph? How does she use language to show the seriousness of these problems? *Walker identifies the problems as the rape and plunder of the Earth. She uses strong language associated with crimes and greed to show that these problems should be taken seriously.* (RI.11-12.6)

8. How does she suggest addressing or solving these problems? *She suggests that solving these problems demands an awareness of and respect for all beings as equal and valuable, simply by the fact of their existence.* (RI.9-10.1)
Close Reading Comprehension Questions

1. In the section from the beginning of the passage on page 659 to the break at the top of page 662, what does Walker notice about the trees when she is lying on their roots?

2. What impact do you think Walker intends to have on her readers by imagining a dialogue with the trees and referring to their “feet” and “faces”?

3. Why do the trees in Walker’s dialogue not accept her protestations that she is innocent of harming them? According to Walker, who is ultimately responsible for taking care of the Earth and preventing crimes from being committed against it?

4. Reread the section from the top of page 662 to the break in the middle of page 665. What is the impact of Walker’s use of the word “murder” and her reference to the story of Adam and Eve in regard to the snake?

5. Why is Walker so bothered by the killing of the snake? To what does she attribute both the “murder” of the snake and other human slaughters of nature?

6. What parallels does Walker draw between the way she treated the snake, and humans treat nature more generally, and the way white settlers treated Native Americans? What does Walker see as Native Americans’ role in America? How does Walker suggest that other Americans should relate to this role?

7. Reread the first full paragraph on page 667. What problems does Walker identify in this paragraph? How does she use language to show the seriousness of these problems?

8. How does she suggest addressing or solving these problems?
Comparing Texts

1. Have students read William O. Douglas’s dissent in *Sierra Club v. Morton* (pages 355–358) and the paragraph beginning “Our thoughts must . . .” in Alice Walker’s *Everything Is a Human Being* (page 667). Have them analyze both texts and write a short essay comparing and contrasting Douglas’s and Walker’s views of nature, nature’s rights, and how we should and can protect those rights. (RH.9-10.6, W.9-10.1)

2. Have students write short essay comparing and contrasting how the following authors suggest people can or should take action on behalf of the environment: Lois Marie Gibbs, in the passage from *Love Canal: My Story* (pages 609–611, 614–616); César Chávez, in his Wrath of Grapes Boycott Speech (693–695); and Julia Butterfly Hill, in the passage from *The Legacy of Luna* (912–916). (RH.9-10.9; W.9-10.9)

3. The passage from Lois Marie Gibbs’s *Love Canal: My Story* (pages 609–611, 614–616) and the epilogue of Terry Tempest Williams’s *Refuge: An Unnatural History of Family and Place* (pages 752–759) both take the form of personal narratives. Have students write a short essay comparing the authors’ personal experiences, including details about the issues that inspired them to take action, the damage caused by those issues, and how the authors responded to those issues and damage. Encourage students to refer to the introductions to each text for more information about the authors’ actions and experiences. (RH.9-10.6; W.9-10.9)

4. One of the founding documents of the environmental justice movement is “Principles of Environmental Justice,” drafted and adopted at the First National People of Color Environmental Leadership Summit in 1991. This document can easily be found on the Internet. Have students read Principles of Environmental Justice and the Wrath of Grapes Boycott Speech by César Chávez. Ask them to consider, as they read, which principles are most evident in Chávez’s speech. To that end, direct them to create a grid or rubric that aligns specific phrases and sentences in the speech with particular principles in the “Principles of Environmental Justice.” Hold a class discussion in which students present and explain alignments they have identified between the two documents. (RH.9-10.4; RH.9-10.6; RH.9-10.9)

Making Connections to Today

Have students work in pairs and ask each pair to select an environmental issue that is important to them. Give students time to conduct research on their issue. They should find out:

1. The history of the issue, most importantly why it has come about

2. At least two groups of people on whom it has an impact, and how they are impacted differently
3. At least one nonhuman species on which it has an impact
4. Who, if anybody, is working to improve the situation
5. What they (the students) and others can do to participate in addressing the issue

Tell students to make sure to identify and synthesize information from multiple relevant authoritative sources, including the following:
- At least two relevant news articles
- At least two relevant video news reports
- At least one organization involved in the issue
- Interviews the students conduct with at least two people whose views on the issue are relevant

When their research is done, have students work in groups or as a class to carefully examine the argument and rhetoric in César Chávez’s Wrath of Grapes Boycott Speech (pages 693–695). What techniques make his speech effective? Are there ways in which the speech could have been more effective? Have students use their research to write a speech on the issues they chose. Before writing, they should identify a specific audience the speech is intended to persuade and encourage to take action regarding the chosen issue. Also, share the questions below, which will be discussed at the conclusion of each speech. You may wish to have the students work collaboratively in their research pairs. Have students present their speeches to the rest of the class and/or an invited audience. As students listen to each other’s speeches, ask them to take notes on each speech in order to discuss the following questions at the conclusion:
- What was the main idea of the speech? Was it clear?
- What evidence supported the main idea?
- Did the speaker speak clearly and emphasize important points?
- How persuasive was the speech? Would it inspire you to take the action the speaker recommends?
- Which, if any, of Chávez’s persuasive techniques did the speech use? Did they help make the speech convincing? How?
- What other techniques or information helped make the speech convincing or not convincing?

(HS-LS2-7; W.9-10.1; W.9-10.7; W.9-10.8; W.9-10.9; W.11-12.1; W.11-12.7; W.11-12.8)
Core Passages Assessment Questions

Have students answer these questions individually. Questions are printed on separate pages that can be reproduced for students.

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César Chávez
Core Passages Assessment Questions

1. In William O. Douglas’s dissent in *Sierra Club v. Morton* (pages 355–358), what does the word “standing” mean as it is used in the text?

   A the status of protected regions
   
   B the legal right to bring a case to court
   
   C the role of community in nature conservation
   
   D the formal responsibility to care for wilderness areas

2. Which piece of evidence from William O. Douglas’s dissent in *Sierra Club v. Morton* (pages 355–358) best supports his claim that nature has a right to be represented in court?

   A “‘Public interest’ has so many different shades of meaning as to be quite meaningless on the environmental front.”
   
   B “Groves of trees, swampland, or even air . . . feel . . . the destructive pressures of modern technology and modern life.”
   
   C “Inanimate objects are sometimes parties in litigation. A ship has a legal personality, a fiction found useful for maritime purposes.”
   
   D “Federal agencies . . . are not venal or corrupt. But they are notoriously under the control of powerful interests who manipulate them.”
3. According to pages 609–611 in the passage from Lois Marie Gibbs’s *Love Canal: My Story*, why did Gibbs and her neighbors leave their neighborhood?

A. Toxic chemicals that caused illnesses, miscarriages, and birth defects were buried under a nearby field.

B. After their children were grown, they no longer needed to be so close to a school and a playground.

C. The government forced them to move so that the Hooker Chemical Corporation could develop Love Canal.

D. Many of the houses in the area had unkempt, overgrown gardens and lawns and were surrounded by chain link fences.

4. What is César Chávez’s intent in pages 693-695 of his *Wrath of Grapes Boycott Speech*?

A. to persuade listeners to petition the courts to hear cases related to pesticide use

B. to persuade listeners to support lawmakers and politicians who favor banning pesticides

C. to persuade listeners to provide help to children and workers injured or killed by pesticides

D. to persuade listeners to give money and boycott grapes to protest the use of harmful pesticides

5. In pages 693–695 of César Chávez’s *Wrath of Grapes Boycott Speech*, what is one way Chávez uses rhetoric to help persuade listeners to support his cause?

A. He appeals to powerful political figures for aid.

B. He uses flattering language to try to appease growers.
C He refers to the protesters against pesticides as a family.

D He warns that listeners themselves may be harmed by pesticides if they do not act.

6. Read from “The problem of polluted black communities . . .” on page 729 to “. . . have common roots” on page 731 in the passage from Robert D. Bullard's *Dumping in Dixie*. Which answer best represents the reason that the social justice and environmental movements became intertwined?

A Civil rights leaders became active in the early environmental movement.

B Desegregation opened environmental organizations to new black participants.

C LULUs began to have an increased impact on middle-class environmental activists.

D Poor black communities were disproportionately used to dispose of unwanted toxins.

7. In Mary Oliver's poem “This Summer Day” (pages 737–738), what do Oliver's questions at the beginning of the poem and her description of the grasshopper suggest?

A that people are responsible for maintaining natural systems

B that people are responsible for protecting wildlife in nature

C that people are responsible for appreciating even the smallest parts of nature

D that people are responsible for following religions that are compatible with nature
8. In the epilogue of Terry Tempest Williams’s *Refuge: An Unnatural History of Family and Place* (pages 752–759), what does the author believe is responsible for the pervasiveness of cancer in her family?

A  bad genetics
B  fallout from nuclear tests
C  visits to contaminated towns
D  insomnia from recurring nightmares

9. In the section of the passage from Paul Hawken’s *Blessed Unrest* from “The third report . . .” on page 962 to the break on 965, according to Hawken what is the main issue in the Coca-Cola case?

A  the profitability of Coke versus Pepsi
B  community rights versus corporate rights
C  large nonprofit organizations versus small NGOs
D  E.U. water standards versus Indian water standards

10. In the section of the passage from Paul Hawken’s *Blessed Unrest* on pages 969–970, what does the author consider the most effective way to stop a corporation from violating a community’s right to resources such as clean water?

A  encourage members of the community to file lawsuits
B  pass legislation banning corporations from using natural resources
C  have motivated individuals and small groups work together to take action
D  increase lobbying by large, well-established organizations such as the Audubon Society
from *Journals*, pages 1–8
Henry David Thoreau

**Standard: RI.9-10.6** [Reading Informational Texts, Grades 9–10]
Determine an author’s point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Based on this excerpt from Henry David Thoreau’s *Journals*, students determine Thoreau’s purpose for writing *Journals* and analyze how his use of rhetoric, including how the author portrays himself and the level of formality of his tone, advances his purpose.

from *Walden; or, Life in the Woods*, pages 9–25
Henry David Thoreau

**Standard: RI.11-12.2** [Reading Informational Texts, Grades 11–12]
Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

Students provide an objective summary of this excerpt from Henry David Thoreau’s *Walden*, wherein they analyze how the author articulates the central ideas of living simply and being self-reliant and how those ideas interact and build on one another. (E.g., “According to Thoreau, how specifically does moving toward complexity in one’s life undermine self-reliance?”)

from *Huckleberries*, pages 26–36
Henry David Thoreau

**Standard: RH.11-12.2** [Literacy in History/Social Studies, Grades 11–12]
Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among key details and ideas.

Students provide an accurate summary of the passage from Henry David Thoreau’s *Huckleberries*, in which they make clear the relationships between Thoreau’s central ideas about nature, land ownership, and land development, as well as between these ideas and key details from the passage.
from *Letters and Notes on the Manners, Customs, and Condition of the North American Indians*, pages 37–45

**George Catlin**

**Standard: RI.11-12.7** [Reading Informational Texts, Grades 11–12]
Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

Students address the question of how George Catlin perceived the relationship between American Indians and the buffalo by integrating and evaluating information from the passage from his *Letters and Notes on the Manners, Customs, and Condition of the North American Indians* and his painting *Buffalo Hunt: Approaching in a Ravine*.

“Fallen Forests,” pages 46–47

**Lydia Huntley Sigourney**

**Standard: RL.9-10.1** [Reading Literary Texts, Grades 9–10]
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Students cite strong and thorough textual evidence to support their analysis of what the poem says explicitly about what people have done to trees as well as what can be inferred from evidence in the poem. Based on their close reading of the text, students draw inferences about whether and how the author would suggest addressing the issue she raises.

from *Rural Hours*, pages 48–58

**Susan Fenimore Cooper**

**Standard: RI.9-10.3** [Reading Informational Texts, Grades 9–10]
Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Students analyze how, in the passage from Susan Fenimore Cooper’s *Rural Hours*, the author introduces, develops, and makes connections between the ideas of weeds and change.

from *Table Rock Album*, pages 59–61

**Various**

**Standard: RH.9-10.6** [Literacy in History/Social Studies, Grades 9–10]
Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

Students compare the points of view of the visitors who wrote in the *Table Rock Album* in their reactions to Niagara Falls, including which details the visitors include and emphasize in their respective album entries.
from *Leaves of Grass*, pages 62–70

**Walt Whitman**

**Standard: RL.11-12.2** [Reading Literary Texts, Grades 11–12]
Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.

Students analyze the themes of the greatness of nature and the development of America in the excerpt from Walt Whitman's *Leaves of Grass*, including how these themes interact, build on one another, and add to the complexity of the poem. Based on their analysis of these themes, students provide an objective summary of the poem excerpt.

from *Man and Nature*, pages 71–80

**George Perkins Marsh**

**Standard: RI.9-10.4** [Reading Informational Texts, Grades 9–10]
Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

Students analyze the use, connotations, and effect of the words “destruction,” “destructive,” “destructiveness,” “organic,” and “civilization” in the passage from George Perkins Marsh's *Man and Nature*, including the cumulative impact of these word choices on the passage’s meaning and tone.

from *Man and Nature*, pages 71–80

**George Perkins Marsh**

**Standard: RI.9-10.8** [Reading Informational Texts, Grades 9–10]
Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.

Students delineate and evaluate the argument and specific claims about man's impact on nature in the passage from George Perkins Marsh's *Man and Nature*, assessing whether the reasoning is valid, whether the evidence is relevant and sufficient, and whether the argument includes false statements or fallacious reasoning.

from *The Humbugs of the World*, pages 81–83

**P.T. Barnum**

**Standard: RH.9-10.8** [Literacy in History/Social Studies, Grades 9–10]
Assess the extent to which the reasoning and evidence in the text support the author's claims.
Students assess the extent to which the reasoning and evidence in the passage from P.T. Barnum's *The Humbugs of the World* support Barnum's claims about the placement of billboards.

from *A Thousand-Mile Walk to the Gulf*, pages 85–89

**John Muir**

**Standard: RI.11-12.4** [Reading Informational Texts, Grades 11–12]

Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).

Students analyze how, over the course of a passage from John Muir's *A Thousand-Mile Walk to the Gulf*, Muir uses and refines the key terms “creation” and “Creator” to support his claims about the relationship between man and nature.

from *A Thousand-Mile Walk to the Gulf*, pages 85–89

**John Muir**

**Standard: RH.9-10.5** [Literacy in History/Social Studies, Grades 9–10]

Analyze how a text uses structure to emphasize key points of advance an explanation or analysis.

Students analyze the structure of the passage from John Muir's *A Thousand-Mile Walk to the Gulf*, including how the anecdote at the beginning of the passage, the discussion of alligators, and the long digression, emphasize and advance Muir's argument about the relationship between man and nature.

“A Wind-Storm in the Forests,” pages 89–97

**John Muir**

**Standard: RST.9-10.6** [Literacy in Science/Technical Texts, Grades 9–10]

Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

Students analyze the author's purpose in including an explanation in John Muir's “A Wind-Storm in the Forests” of which trees are most and least likely to be blown down in a storm. Define the question that Muir seeks to address through this explanation.

from *My First Summer in the Sierra*, pages 98–104

**John Muir**

**Standard: RI.9-10.2** [Reading Informational Texts, Grades 9–10]
Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text. Students analyze the development of the author's reaction to nature over the course of the passage from John Muir’s *My First Summer in the Sierra*, including how it emerges and is shaped and refined by specific details, including the use of figurative language.

“Hetch Hetchy Valley,” pages 104–112
John Muir

**Standard: RI.11-12.6** [Reading Informational Texts, Grades 11–12]
Determine the author’s point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.

Students analyze how the language, style, structure, and content of John Muir’s “Hetch Hetchy Valley” contribute to the power, persuasiveness, and beauty of Muir’s argument about the valley’s future.

from *Adventures in the Wilderness*, pages 113–119
W. H. H. Murray

**Standard: RH.9-10.1** [Literacy in History/Social Studies, Grades 9–10]
Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.

Students analyze the passage from W. H. H. Murray’s *Adventures in the Wilderness*, citing specific textual evidence related to the 1869 date of the passage and to the origin of the information in Murray’s experience and advocacy related to the Adirondacks.

from *A Review of Recent Changes, and Changes Which Have Been Projected, in the Plans of the Central Park*, pages 120–125
Frederick Law Olmsted

**Standard: RI.11-12.1** [Reading Informational Texts, Grades 11–12]
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

Students cite strong and thorough textual evidence to support analysis of the passage from Frederick Law Olmsted’s *A Review of Recent Changes, and Changes Which Have Been Projected, in the Plans of the Central Park*, inferences drawn from the text about the park’s purpose, and matters the text leaves uncertain.
“About Trees,” pages 126–128

J. Sterling Morton

Standard: RI.9-10.5 [Reading Informational Texts, Grades 9–10]
Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).

Students analyze in detail how the author's claims about the importance of trees and the need to preserve them are developed and refined in each paragraph of J. Sterling Morgan's “About Trees.”

To Frank Michler Chapman, pages 129–131

Theodore Roosevelt

Standard: RH.11-12.1 [Literacy in History/Social Studies, Grades 11–12]
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.

Students cite specific textual evidence to support their analysis of Theodore Roosevelt's letter to Frank Michler Chapman, connecting insights gained from details about specific kinds of birds to an understanding of the author's feelings about birds in the text as a whole.

To John Borroughs, page 131

Theodore Roosevelt

Standard: RH.9-10.10 [Literacy in History/Social Studies, Grades 9–10]
By the end of Grade 10, read and comprehend history/social studies texts in the grades 9–10 complexity band independently and proficiently.

Students read and comprehend Theodore Roosevelt's letter to John Borroughs independently and proficiently. Students restate information from the letter about bears in Yellowstone in their own words to demonstrate comprehension.

Speech at Grand Canyon, Arizona, May 6, 1903, pages 132–133

Theodore Roosevelt

Standard: RH.9-10.4 [Literacy in History/Social Studies, Grades 9–10]
Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.

Students determine the meanings of the words “irrigation” and “preserve” as they are used in relation to land development in Theodore Roosevelt's Speech at Grand Canyon, Arizona, May 6, 1903.
“The Scavengers,” pages 134–139

**Mary Austin**

**Standard: RST.9-10.2** [Literacy in Science/Technical Texts, Grades 9–10]

Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

Students trace the explanation of the role and importance of buzzards and other scavengers in the desert ecosystem in Mary Austin’s “The Scavengers” and provide an accurate summary of the text.

from *Man and Earth*, pages 140–144

**Nathaniel Southgate Shaler**

**Standard: RST.9-10.8** [Literacy in Science/Technical Texts, Grades 9–10]

Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem.

Students assess the extent to which the reasoning and evidence in the passage from Nathaniel Southgate Shaler's *Man and Earth* support the author's claims about human use of mineral resources and his recommendations regarding other energy sources.

“The Art of Seeing Things,” pages 145–159

**John Burroughs**

**Standard: RH.11-12.2** [Literacy in History/Social Studies, Grades 11–12]

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.

Students provide an accurate summary of John Burroughs’s “The Art of Seeing Things,” in which they make clear the relationships among the author's central ideas about observing nature and other key details and ideas in the text.


**John Burroughs**

**Standard: RST.11-12.2** [Literacy in Science/Technical Texts, Grades 11–12]

Determine the central idea or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

Students summarize John Burroughs’s “The Grist of the Gods” by paraphrasing in simpler but still accurate terms the process of soil formation and the other information about soil presented in the text.
“Nature Near Home,” pages 168–171

**John Burroughs**

**Standard:** RST.9-10.1 [Literacy in Science/Technical Texts, Grades 9–10]

Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

Students cite specific textual evidence to support analysis of John Burroughs’s “Nature Near Home,” attending to the precise details of his descriptions of the variations among the winter birds he observes.

“Prosperity,” pages 172–180

**Gifford Pinchot**

**Standard:** RST.9-10.5 [Literacy in Science/Technical Texts, Grades 9–10]

Analyze the structure of the relationships among concepts in the text, including relationships among key terms (e.g., force, friction, reaction force, energy).

Students analyze the structure of the relationships among concepts in Gifford Pinchot’s “Prosperity,” including the concepts of prosperity, conservation, and civilization.

“The Bird Tragedy on Laysan Island,” pages 181–185

**William T. Hornaday**

**Standard:** RI.11-12.5 [Reading Informational Texts, Grades 11–12]

Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.

Students analyze and evaluate the effectiveness of the structure William T. Hornaday uses in “The Bird Tragedy on Laysan Island,” including whether the structure makes points about the decimation of the island’s bird life clear, convincing, and engaging.

“A Certain Oil Refinery,” pages 186–191

**Theodore Dreiser**

**Standard:** RH.11-12.5 [Literacy in History/Social Studies, Grades 11–12]

Analyze in detail how a complex primary source is structured, including how key sentences and paragraphs, and larger portions of the text contribute to the whole.

Students analyze in detail how Theodore Dreiser’s “A Certain Oil Refinery” is structured, including how Dreiser uses key sentences and paragraphs to contribute to and build the whole impression of oil refinery workers’ lives.
“The Last Passenger Pigeon,” pages 192–204
**Gene Stratton-Porter**

**Standard: RH.11-12.8** [Literacy in History/Social Studies, Grades 11–12]
Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.

Students evaluate the premises, claims, and evidence about the disappearance of the American passenger pigeon in Gene Stratton-Porter's “The Last Passenger Pigeon” by corroborating them or challenging them with information from other research sources about the extinction of the passenger pigeon.

“Orion Rises on the Dunes,” pages 205–208
**Henry Beston**

**Standard: RI.11-12.3** [Reading Informational Texts, Grades 11–12]
Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.

Students analyze Henry Beston's “Orion Rises on the Dunes” and explain how the author's ideas about nature and humans' perceptions of nature interact over the course of the text.

“The Indigenous and the Metropolitan,” pages 209–223
**Benton McKaye**

**Standard: RH.11-12.4** [Literacy in History/Social Studies, Grades 11–12]
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).

Students determine the meanings of “primeval,” “rural,” “urban,” and “metropolitan” as they are used in Benton McKaye's “The Indigenous and the Metropolitan,” including how McKay uses these meanings to further refine the meaning of “metropolitan” over the course of the text.

“What a Few More Seasons Will Do to the Ducks,” page 224
**J. N. “Ding” Darling**

and

“The Last Passenger Pigeon,” pages 192–204
**Gene Stratton-Porter**

**Standard: RH.11-12.7** [Literacy in History/Social Studies, Grades 11–12]
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.

Students integrate and evaluate the information about the effects of hunting wild birds in J. N. “Ding” Darling’s cartoon “What a Few More Seasons Will Do to the Ducks” with the information about the same topic in Gene Stratton-Porter’s essay “The Last Passenger Pigeon” in order to address the questions of how humans have caused species to become extinct and to what extent people in the early 20th century were aware of this issue.

from Wintertrip into a New Country, pages 225–234
Robert Marshall

Standard: RI.9-10.10 [Reading Informational Texts, Grades 9–10]
By the end of grade 9, read and comprehend literary nonfiction in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.

By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9–10 text complexity band independently and proficiently.

Students read the passage from Robert Marshall’s Wintertrip into a New Country. To demonstrate comprehension, students create a presentation tracking Marshall’s journey, its highlights, and its difficulties.

“what the ants are saying,” pages 235–238
Don Marquis

Standard: RL.11-12.6 [Reading Literary Texts, Grades 11–12]
Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).

Students analyze the insects’ point of view in Don Marquis’s “what the ants are saying,” including distinguishing what is directly stated in the text about the impact of human actions on nature from what is really meant about these effects.

“Letter from the Dust Bowl,” pages 239–244
Caroline Henderson

Standard: RH.9-10.2 [Literacy in History/Social Studies, Grades 9–10]
Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.

Students determine the central ideas and information in Caroline Henderson’s “Letter from the Dust Bowl” and provide an accurate
summary of how information about the past, present, and possible future effects of the drought develops over the course of the letter.

“Birds that Are New Yorkers,” pages 245–250

**Donald Culross Peattie**

**Standard: RI.11-12.10** [Reading Informational Texts, Grades 11–12]

By the end of grade 11, read and comprehend literary nonfiction in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.

By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11-CCR text complexity band independently and proficiently.

Students read Donald Culross Peattie’s “Birds that Are New Yorkers” and demonstrate comprehension by paraphrasing in their own words the traits that make birds successful in New York and identifying several birds that have these qualities.

“The Answer,” pages 251–252

**Robinson Jeffers**

**Standard: RL.9-10.2** [Reading Literary Texts, Grades 9–10]

Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

Students provide an objective summary of Robinson Jeffers’s “The Answer,” including a detailed analysis of the theme of beauty or integrity, how the theme emerges, and how it is refined by specific details in the poem.

“Carmel Point,” pages 252–253

**Robinson Jeffers**

**Standard: RL.11-12.10** [Reading Literary Texts, Grades 11–12]

By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.

By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11-CCR text complexity band independently and proficiently.

Students read Robinson Jeffers’s “Carmel Point” and demonstrate comprehension by restating in prose the poet’s ideas about nature and humans.
from *The Grapes of Wrath*, pages 254–257  
**John Steinbeck**  
**Standard: RL.11-12.3** [Reading Literary Texts, Grades 11–12]  
Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).  
Students analyze the impact on this passage from John Steinbeck's *The Grapes of Wrath* of the author's choices to include an extended descriptive passage and to refer to the men, women, and children as groups, rather than to particular individual characters.

“This Land Is Your Land,” pages 258–259  
**Woody Guthrie**  
**Standard: RL.11-12.1** [Reading Literary Texts, Grades 11–12]  
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.  
Students cite strong and thorough textual evidence from Woody Guthrie's “This Land Is Your Land” to support their analysis of what the song says explicitly about the American landscape, as well as what can be inferred from evidence in the song. Based on their close reading, students draw inferences from the text regarding its description of the connection between land and freedom.

from *The Everglades: River of Grass*, pages 260–264  
**Marjory Stoneman Douglas**  
**Standard: RST.9-10.4** [Literacy in Science/Technical Texts, Grades 9–10]  
Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.  
Students determine the meanings of words and phrases from the passage from Marjory Stoneman Douglas's *The Everglades: River of Grass* specific to the domain of the Everglades ecosystem, such as “saw grass” and “muck.”

from *A Sand County Almanac*, pages 265–294  
**Aldo Leopold**  
**Standard: RST.11-12.6** [Literacy in Science/Technical Texts, Grades 11–12]  
Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.
Students analyze the author’s purpose in describing the relationship between humans, animals, and the land and in explaining his idea of ethics toward the land in this passage from Aldo Leopold’s *A Sand County Almanac*, and they identify any important issues that these descriptions and explanations leave unresolved.

“The Fog,” pages 295–312
**Berton Roueché**

**Standard: RST.11-12.1** [Literacy in Science/Technical Texts, Grades 11–12]
Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

Students cite specific textual evidence from Berton Roueché’s “The Fog” to support analysis of the causes and effects of the toxic Donora fog, attending to distinctions between various people’s reaction to the fog and any gaps or inconsistencies in their understanding of the fog.

“The Longest Day,” pages 313–317
**Edwin Way Teale**

**Standard: RI.9-10.2** [Reading Informational Texts, Grades 9–10]
Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

Students provide an objective summary of Edwin Way Teale’s “The Longest Day,” in which they analyze the development of the idea of experiencing the spring, including how this idea emerges and is shaped and refined by specific details in the text.

from *Living the Good Life*, pages 318–322
**Helen and Scott Nearing**

**Standard: RH.9-10.1** [Literacy in History/Social Studies, Grades 9–10]
Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.

Students cite specific textual evidence to support analysis of the passage from Helen and Scott Nearing’s *Living the Good Life*, attending to such features as how the Great Depression influenced the Nearings’ decisions about their subsistence farming way of life.
“Northern Lights,” pages 323–326

Sigurd F. Olson

Standard: RI.9-10.7 [Reading Informational Texts, Grades 9–10]
Analyze various accounts of a subject told in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized in each account.

Students analyze Sigurd F. Olson’s connection to the natural world as told in the passage from *Northern Lights* and as shown in the photo of Olson stocking Minnesota’s Crooked Lake with smallmouth bass fingerlings, including which details are emphasized in each source.

“Sootfall and Fallout,” pages 327–336

E. B. White

Standard: RH.11-12.3 [Literacy in History/Social Studies, Grades 11–12]
Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.

Students evaluate the explanation of nuclear paralysis in E. B. White’s “Sootfall and Fallout,” determining how well his explanation accords with the evidence in the text and other sources, as well as acknowledging where the text leaves matters uncertain.

“How Flowers Changed the World,” pages 337–347

Loren Eiseley

Standard: RST.9-10.9 [Literacy in Science/Technical Texts, Grades 9–10]
Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.

Students compare and contrast findings about the co-evolution of flowers and human life in Loren Eiseley’s “How Flowers Changed the World” to findings about human evolution in other sources, noting when the findings in any source support or contradict previous explanations or accounts.

from *My Wilderness: The Pacific West*, pages 348–355

William O. Douglas

Standard: RI.9-10.1 [Reading Informational Texts, Grades 9–10]
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Students cite strong and thorough evidence to support analysis of what the passage from William O. Douglas’s *My Wilderness: The Pacific West* says explicitly about the landscape of Glacier Peak, as well as inferences about Douglas's view of nature drawn from the text.
Dissent in *Sierra Club v. Morton*, pages 355–358

**William O. Douglas**

**Standard: RH.9-10.2** [Literacy in History/Social Studies, Grades 9–10]
Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.

Students determine the central ideas of William O. Douglas’s dissent in *Sierra Club v. Morton* and provide an accurate summary of how legal ideas about natural objects develop over the course of the text.

from *The Death and Life of Great American Cities*, pages 359–364

**Jane Jacobs**

**Standard: RH.9-10.3** [Literacy in History/Social Studies, Grades 9–10]
Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

Students analyze in detail the series of events and ideas related to and proceeding from the suburbanization of America as described in the passage from Jane Jacobs’s *The Death and Life of Great American Cities* and determine whether suburbanization caused or simply preceded the development of these ideas and attitudes, or whether these ideas and attitudes caused or simply preceded suburbanization.

from *Silent Spring*, pages 365–376

**Rachel Carson**

**Standard: RST.11-12.8** [Literacy in Science/Technical Texts, Grades 11–12]
Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

Students evaluate the hypotheses, data, analysis, and conclusions about the actual and potential effects of DDT and other pesticides, including corroborating or challenging conclusions with other sources of information.

“The Great Paver,” pages 377–379

**Russell Baker**

**Standard: RH.11-12.1** [Literacy in History/Social Studies, Grades 11–12]
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.

Students cite strong and thorough evidence to support analysis of what Russell Baker’s “The Great Paver” says explicitly about paving and urban development, as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
“The Great Paver,” pages 377–379
Russell Baker
and
“Polemic: Industrial Tourism and the National Parks,” pages 413–433
Edward Abbey

Standard: RH.9-10.9 [Literacy in History/Social Studies, Grades 9–10]
Compare and contrast treatments of the same topic in several primary and secondary source.

Students compare and contrast the treatments of the topic of road-building in Russell Baker’s “The Great Paver” and Edward Abbey’s “Polemic: Industrial Tourism and the National Parks.”

“The Living Canyon,” pages 380–391
Eliot Porter

Standard: RI.9-10.7 [Reading Informational Texts, Grades 9–10]
Analyze various accounts of a subject told in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized in each account.

Students analyze the description of the geology and plant and animal life in the Lake Powell area as described in Eliot Porter’s “The Living Canyon” and his photograph “Arch and Box Elder Tree, Davis Gulch, Escalante River, Lake Powell, Utah, May 12, 1965,” determining which details are emphasized in each source.

from the Wilderness Act of 1964, pages 392–394
Howard Zahniser

Standard: RI.11-12.8 [Reading Informational Texts, Grades 11–12]
Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses).

Students delineate and evaluate the reasoning in and actions required by the passage from the Wilderness Act of 1964, written by Howard Zahniser, including the act’s premises about and purposes related to wilderness and its conservation.

Lyndon B. Johnson

Standard: RI.9-10.9 [Reading Informational Texts, Grades 9–10]
Analyze seminal U.S. documents of historical and literary significance (e.g., Washington’s Farewell Address, the Gettysburg Address, Roosevelt’s Four Freedoms speech, King’s “Letter from Birmingham Jail”), including how they address related themes and concepts.
Students analyze the themes of American greatness and of preserving nature in Lyndon B. Johnson’s remarks at the signing of the Highway Beautification Act of 1965, including how these themes and concepts are related to those in other seminal U.S. documents.

**from The Economics of the Coming Spaceship Earth, pages 399–404**

**Kenneth E. Boulding**

**Standard: RST.11-12.4** [Literacy in Science/Technical Texts, Grades 11–12]
Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Students determine the meanings of the terms “cowboy economy,” “spaceman economy,” “throughput,” and “GNP” as they are used in the passage from Kenneth E. Boulding’s *The Economics of the Coming Spaceship Earth*.

**from The Historical Roots of Our Ecological Crisis, pages 405–412**

**Lynn White Jr.**

**Standard: RH.11-12.6** [Literacy in History/Social Studies, Grades 11–12]
Evaluate authors’ differing points of view on the same historical event or issue by assessing the authors’ claims, reasoning, and evidence.

Students evaluate the author’s point of view on the reasons for Americans’ particular relationship to nature in the passage from Lynn White Jr.’s *The Historical Roots of Our Ecological Crisis*, comparing and contrasting White’s point of view with that of other authors such as Jane Jacobs by assessing the authors’ claims, reasoning, and evidence.

“Polemic: Industrial Tourism and the National Parks,” pages 413–433

**Edward Abbey**

**Standard: RI.11-12.5** [Reading Informational Texts, Grades 11–12]
Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.

Students analyze and evaluate the effectiveness of the structure Edward Abbey uses in his argument in “Polemic: Industrial Tourism and the National Parks,” including whether the structure makes points about excluding motor traffic from the national parks clear, convincing, and engaging.

**from The Population Bomb, pages 434–437**

**Paul R. Ehrlich**

**Standard: RST.9-10.7** [Literacy in Science/Technical Texts, Grades 9–10]
Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

Students translate the quantitative information about the rate of human population growth in the passage from Paul R. Ehrlich’s *The Population Bomb* into a graph, table, or other visual format.

from *The Tragedy of the Commons*, pages 438–450
Garrett Hardin

**Standard: RH.9-10.4** [Literacy in History/Social Studies, Grades 9–10]
Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.

Students determine the meanings of the word “commons” and the phrase “the tragedy of the commons” as used in the passage from Garrett Hardin’s *The Tragedy of the Commons*.

from *Do Androids Dream of Electric Sheep?*, pages 451–453
Philip K. Dick

**Standard: RL.9-10.5** [Reading Literary Texts, Grades 9–10]
Analyze how an author’s choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.

Students analyze how the author’s choices about how to structure the text, including the narrator’s actions in the present and private thoughts about key background information, create mystery, tension, or surprise in the passage from Philip K. Dick’s *Do Androids Dream of Electric Sheep*?

“A Sample Day in the Kitchen,” pages 454–463
Colin Fletcher

**Standard: RL.9-10.3** [Reading Informational Texts, Grades 9–10]
Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Students analyze how the series of the day’s wilderness meals unfolds in Colin Fletcher’s “A Sample Day in the Kitchen,” including the order in which they occur and the way the author draws and develops connections between various parts of his wilderness routine as the day proceeds.
“Spaceship Earth,” pages 464–468

**R. Buckminster Fuller**

**Standard: RST.11-12.5** [Literacy in Science/Technical Texts, Grades 11–12]

Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.

Students analyze how R. Buckminster Fuller's “Spaceship Earth” structures information into categories such as energy, Earth's ecosystem, and humans doing science, demonstrating understanding of how these categories are both distinct and related.

Mills College Valedictory Address, pages 469–472

**Stephanie Mills**

**Standard: RI.9-10.5** [Reading Informational Texts, Grades 9–10]

Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).

Students analyze in detail how the author's claims and ideas about overpopulation in Stephanie Mills's valedictory address are developed and refined by particular sentences and paragraphs in the address.

“Smokey the Bear Sutra,” pages 473–477

**Gary Snyder**

**Standard: RL.9-10.4** [Reading Literary Texts, Grades 9–10]

Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).

Students determine the meaning of the terms “sutra,” “Buddha,” and “Dharma” as used in Gary Snyder's “Smokey the Bear Sutra” and analyze the cumulative impact of these word choices on the meaning and tone of the poem.

“Covers the Ground,” pages 477–479

**Gary Snyder**

**Standard: RL.9-10.10** [Reading Literary Texts, Grades 9–10]

By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.

By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9–10 text complexity band independently and proficiently.
Students read Gary Snyder’s poem “Covers the Ground” and demonstrate comprehension by paraphrasing in prose the main contrast highlighted in the poem.

“The Beginning,” pages 480–483

**Denis Hayes**

**Standard: RL.11-12.2** [Reading Informational Texts, Grades 11–12]
Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

Students provide an objective summary of Denis Hayes’s “The Beginning,” including an analysis of how the themes of environmental irresponsibility and the U.S. government’s priorities develop, interact, and build on one another.

“Millions Join Earth Day Observances across the Nation,” pages 484–488

**Joseph Lelyveld**

and

“The Beginning,” pages 480–483

**Denis Hayes**

**Standard: RH.9-10.9** [Literacy in History/Social Studies, Grades 9–10]
Compare and contrast treatments of the same topic in several primary and secondary sources.

Students compare and contrast treatment of Earth Day in Joseph Lelyveld’s article “Millions Join Earth Day Observances across the Nation,” in Denis Hayes’s “The Beginning,” in Robert Rauschenberg’s Earth Day poster, and in the photograph of Earth Day in New York City.

“Big Yellow Taxi,” pages 489–490

**Joni Mitchell**

**Standard: RL.9-10.2** [Reading Literary Texts, Grades 9–10]
Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

Students analyze in detail the theme of human destructiveness of natural beauty in Joni Mitchell’s “Big Yellow Taxi,” including how the theme emerges and is shaped and refined by specific details in the song.

“Mercy Mercy Me (The Ecology),” pages 491–492

**Marvin Gaye**

**Standard: RL.11-12.1** [Reading Literary Texts, Grades 11–12]
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

Students cite strong and thorough textual evidence to support analysis of what Marvin Gaye’s “Mercy Mercy Me (The Ecology)” says explicitly about the effects of human activities on the environment, as well as inferences drawn from the song, including determining where the lyrics leave matters uncertain.

from *Encounters with the Archdruid*, pages 493–499
**John McPhee**

**Standard: RI.9-10.8** [Reading Informational Texts, Grades 9–10]
Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.

Students delineate and evaluate Dominy’s and Brower’s arguments and specific claims about the creation of Lake Powell and its effects in the passage from John McPhee’s *Encounters with the Archdruid*, assessing whether the reasoning is valid and the evidence is relevant and sufficient for each argument, and identifying any false statements or fallacious reasoning.

from *Encounters with the Archdruid*, pages 493–499
**John McPhee** and
“The Living Canyon,” pages 380–391
**Eliot Porter**

**Standard: RH.11-12.9** [Literacy in History/Social Studies, Grades 11–12]
Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.

Students integrate information from the passage from John McPhee’s *Encounters with the Archdruid* and from Eliot Porter’s “The Living Canyon” into a coherent discussion of the ongoing controversy surrounding the creation of Lake Powell, noting any discrepancies among the sources.

from *Only One Earth*, pages 500–503
**Friends of the Earth**

**Standard: RST.9-10.6** [Literacy in Science/Technical Texts, Grades 9–10]
Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.
Students analyze the authors’ purpose in providing an explanation of the development of Earth and life on Earth in the passage from Friends of the Earth’s *Only One Earth*, defining the question the authors seek to address.

“Manifesto: The Mad Farmer Liberation Front,” pages 504–506

**Wendell Berry**

**Standard:** RL.11-12.5 [Reading Literary Texts, Grades 11–12]

Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.

Students analyze how Wendell Berry's choice to structure “Manifesto: The Mad Farmer Liberation Front” as a series of imperatives contributes to the poem's overall meaning as well as its aesthetic impact.

“The Making of a Marginal Farm,” pages 507–516

**Wendell Berry**

**Standard:** RI.9-10.4 [Reading Informational Texts, Grades 9–10]

Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

Students determine the meanings of the words “marginal” and “subsistence” as they are used in Wendell Berry's “The Making of a Marginal Farm” and analyze the impact of these word choices on the meaning and tone of the essay.

“Preserving Wilderness,” pages 516–530

**Wendell Berry**

**Standard:** RI.11-12.3 [Reading Informational Texts, Grades 11–12]

Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.

Students analyze the set of ideas about wilderness and human beings in Wendell Berry's “Preserving Wilderness” and explain how the author's ideas about wilderness and humans interact and develop over the course of the essay.
“Fecundity,” pages 531–549
Annie Dillard

**Standard: RST.9-10.2** [Literacy in Science/Technical Texts, Grades 9–10]
Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

Students provide an accurate summary of Annie Dillard’s “Fecundity” by tracing the essay’s description of the immensity and cycles of life on Earth.

“The World's Biggest Membrane,” pages 550–553
Lewis Thomas

**Standard: RST.9-10.1** [Literacy in Science/Technical Texts, Grades 9–10]
Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

Students cite specific textual evidence to support analysis of Lewis Thomas’s “The World’s Biggest Membrane,” attending to the precise details of the ways in which Earth’s atmosphere is like a membrane.

“The Third Planet: Operating Instructions,” pages 554–558
David R. Brower

**Standard: RI.11-12.6** [Reading Informational Texts, Grades 11–12]
Determine the author’s point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.

Students determine the author’s point of view in David R. Brower’s “The Third Planet: Operating Instructions” and analyze how the choice of an instruction manual style and the content contribute to the power of the text.

from *Energy Strategy: The Road Not Taken*, pages 559–569
Amory B. Lovins

**Standard: RST.11-12.7** [Literacy in Science/Technical Texts, Grades 11–12]
Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Students integrate and evaluate the graph for an alternative illustrative future for U.S. gross primary energy use and the information in the text in the passage from Amory B. Lovins’s *Energy Strategy:*
The Road Not Taken in order to address the issue of 1970s and future potential U.S. energy use.

“A First American Views His Land,” pages 570–581
N. Scott Momaday

Standard: RL.11-12.5 [Reading Literary Texts, Grades 11–12]
Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.

Students analyze how the author's choice to intersperse poetry into N. Scott Momaday's “A First American Views His Land,” a nonfiction essay on Native Americans, contributes to the overall structure, meaning, and aesthetic impact of the text.

from Ceremony, pages 582–589
Leslie Marmon Silko

Standard: RL.9-10.3 [Reading Literary Texts, Grades 9–10]
Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.

Students analyze how the character of Tayo develops over the course of the passage from Leslie Marmon Silko's Ceremony and advances the theme of ownership versus theft.

“A Short History of America,” pages 590–594
R. Crumb

Standard: RH.11-12.7 [Literacy in History/Social Studies, Grades 11–12]
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.

Students integrate and evaluate information from R. Crumb's comic “A Short History of America” and from textual accounts of the development of urban America in order to address the question of what changes that development included.

“Outside the Solar Village: One Utopian Farm,” pages 595–608
Wes Jackson

Standard: RL.9-10.1 [Reading Literary Texts, Grades 9–10]
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Students cite strong and thorough textual evidence to support analysis of what Wes Jackson's “Outside the Solar Village: One Utopian
Farm” says explicitly about the author’s vision of farming in the future as well as inferences about problems that existed at the time the text was written.

from *Love Canal: My Story*, pages 609–621
**Lois Marie Gibbs**

**Standard: RI.9-10.6** [Reading Informational Texts, Grades 9–10]
Determine an author’s point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Students determine the author's purpose for writing about her experience in the contaminated Love Canal area in the passage from Lois Marie Gibbs's *Love Canal: My Story* and analyze how Gibbs uses rhetoric to advance her purpose.

from *The Fate of the Earth*, pages 622–631
**Jonathan Schell**

**Standard: RST.9-10.8** [Literacy in Science/Technical Texts, Grades 9–10]
Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.

Students assess the extent to which the reasoning and evidence in the passage from Jonathan Schell’s *The Fate of the Earth* support the author’s claims about the possibility and effects of the extinction of humanity through nuclear weapons.

“Seasons of Want and Plenty,” pages 632–658
**William Cronon**

**Standard: RH.9-10.8** [Literacy in History/Social Studies, Grades 9–10]
Assess the extent to which the reasoning and evidence in the text support the author’s claims.

Students assess the extent to which the reasoning and evidence in William Cronon’s “Seasons of Want and Plenty” support the author’s claims about the lifestyles of Northern New England Indians, Southern New England Indians, and English colonists in the 17th century.

“Everything Is a Human Being,” pages 659–670
**Alice Walker**

**Standard: RI.9-10.6** [Reading Informational Texts, Grades 9–10]
Determine an author’s point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.
Students determine the author’s point of view about the natural world in Alice Walker’s “Everything Is a Human Being” and analyze how Walker uses rhetoric to advance her point of view.

“Bernhardsdorp,” pages 671–689
E. O. Wilson

**Standard: RST.11-12.2** [Literacy in Science/Technical Texts, Grades 11–12]
Determine the central idea or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

Students summarize the information about the huge diversity of species presented in E. O. Wilson’s “Bernhardsdorp” by paraphrasing it in simpler but still accurate terms.

Wrath of Grapes Boycott Speech, pages 690–695
César Chávez

**Standard: RI.11-12.6** [Reading Informational Texts, Grades 11–12]
Determine the author’s point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.

Students determine César Chávez’s point of view on the use of pesticides in his Wrath of Grapes Boycott speech, analyzing how the style and content of the speech contribute to the power and persuasiveness of the text.

“A Presentation of Whales,” pages 696–715
Barry Lopez

**Standard: RH.9-10.3** [Literacy in History/Social Studies, Grades 9–10]
Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

Students analyze in detail the series of events following the beaching of the sperm whales in the central Oregon coast as described in Barry Lopez’s “A Presentation of Whales,” including describing cause and effect relationships between earlier and later events.

“Place,” pages 716–717
W. S. Merwin

**Standard: RL.11-12.4** [Reading Literary Texts, Grades 11–12]
Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful.
Students determine the metaphorical and connotative meanings of “tree” in W. S. Merwin’s poem “Place” and analyze the impact of the author's repeated choice of tree-related words on the poem’s meaning and tone.

from *The End of Nature*, pages 718–724
**Bill McKibben**

**Standard: RI.9-10.1** [Reading Informational Texts, Grades 9–10]
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Students cite strong and thorough textual evidence to support analysis of what the passage from Bill McKibben’s *The End of Nature* says explicitly about the changing relationship between human beings and key elements of the natural world as well as inferences drawn from the text.

from *Dumping in Dixie*, pages 725–736
**Robert D. Bullard**

**Standard: RH.9-10.8** [Literacy in History/Social Studies, Grades 9–10]
Assess the extent to which the reasoning and evidence in the text support the author's claims.

Students assess the extent to which the reasoning and evidence in the passage from Robert D. Bullard’s *Dumping in Dixie* support the author’s claims about the concentration of pollutants and waste in particular communities and residents’ responses to the situation.

“The Summer Day,” pages 737–738
**Mary Oliver**

**Standard: RL.9-10.4** [Reading Literary Texts, Grades 9–10]
Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).

Students analyze Mary Oliver’s “The Summer Day” to uncover the poem’s analogies. They analyze the impact of specific word choices by Oliver, such as “prayer” and “wild,” and determine how they contribute to the overall meaning and tone of the poem.

from *Refuge: An Unnatural History of Family and Place*,
pages 739–759
**Terry Tempest Williams**

**Standard: RI.11-12.2** [Reading Informational Texts, Grades 11–12]
Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

Students provide an objective summary of the passage from Terry Tempest Williams's *Refuge: An Unnatural History of Family and Place*, including the development of the themes of habitat destruction and family illness, how they interact, and how they build on each other.

from *The Ninemile Wolves*, pages 760–769

**Rick Bass**

**Standard: RH.11-12.8** [Literacy in History/Social Studies, Grades 11–12]

Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.

Students evaluate the premises, claims, and evidence about the past and contemporary role of wolves in the United States in the passage from Rick Bass’s *The Ninemile Wolves* by corroborating them or challenging them with information from other sources on U.S. wolf reintroduction programs.

“The Dubious Rewards of Consumption,” pages 770–780

**Alan During**

**Standard: RST.9-10.7** [Literacy in Science/Technical Texts, Grades 9–10]

Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

Students translate quantitative and technical information about happiness and consumption from Alan During’s “The Dubious Rewards of Consumption” into visual form, such as a table or chart.

“After the Flood,” pages 781–789

**Scott Russell Sanders**

**Standard: RI.11-12.1** [Reading Informational Texts, Grades 11–12]

Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

Students cite strong and thorough textual evidence to support analysis of what Scott Russell Sanders's “After the Flood” says explicitly about the changes to the area where he grew up, as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
from *The Last Panda*, pages 790–792
George B. Schaller

**Standard: RI.9-10.3** [Reading Informational Texts, Grades 9–10]
Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Students analyze how events unfold in the author's observation of a panda in the passage from George B. Schaller's *The Last Panda*, including how the events are introduced and developed, and the connections that are drawn between them.

“The Flora and Fauna of Las Vegas,” pages 793–808
Ellen Meloy

**Standard: RI.9-10.2** [Reading Informational Texts, Grades 9–10]
Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

Students analyze the theme of water use in Las Vegas, including the means of providing water to the city, in Ellen Meloy's “The Flora and Fauna of Las Vegas,” including how the theme emerges and is shaped and refined by specific details. Based on their analysis, students provide an objective summary of the text.

“Dwellings,” pages 809–814
Linda Hogan

**Standard: RI.11-12.3** [Reading Informational Texts, Grades 11–12]
Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.

Students analyze the ideas about human and animal homes in Linda Hogan's “Dwellings” and explain how the various examples and ideas interact and develop over the course of the text.

David Abram

**Standard: RI.11-12.4** [Reading Informational Texts, Grades 11–12]
Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).

Students determine the meanings of the words “magic,” “supernatural,” and “spirits” as used in the passage from David Abram's *The*
Ecology of Magic: “A Personal Introduction to the Inquiry” and analyze how the author uses and refines the meaning of these terms over the course of the passage.

“The Song of the White Pelican,” pages 835–848
Jack Turner
Standard: RI.9-10.5 [Reading Informational Texts, Grades 9–10]
Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).

Students analyze in detail how the author’s ideas about the white pelican are developed and refined by particular sentences or paragraphs in Jack Turner’s “The Song of the White Pelican.”

“A Multicultural Approach to Ecopsychology,” pages 849–854
Carl Anthony and Renée Soule
Standard: RI.9-10.8 [Reading Informational Texts, Grades 9–10]
Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.

Students delineate and evaluate the argument about race, environmentalism, and psychology in Carl Anthony and Renée Soule’s “A Multicultural Approach to Ecopsychology,” assessing whether the reasoning is valid and the evidence is relevant and sufficient and identifying any false statements or fallacious reasoning.

Speech at the Kyoto Climate Change Conference, pages 855–859
Al Gore
Standard: RST.9–10.1 [Literacy in Science and Technical Subjects, Grades 9-10]
Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

Students cite specific textual evidence from Al Gore’s “Speech at the Kyoto Climate Change Conference” to support their analysis of the importance of global action on climate change. Students include in their analysis precise details from the text (such as Gore’s assertion that nine of the ten hottest years on record had come in the previous decade) to buttress their explanation.

from Heart and Blood: Living with Deer in America, pages 860–873
Richard Nelson
Standard: RST.9–10.10 [Literacy in Science and Technical Subjects, Grades 9–10]
By the end of grade 10, read and comprehend science and technical texts in the grades 9–10 text complexity band independently and proficiently.

Students read the passage from Richard Nelson’s *Heart and Blood: Living with Deer in America* and demonstrate comprehension by describing in their own words the birth process and the behavior of the mother deer.

“Planet of Weeds: Tallying the Losses of Earth’s Animals and Plants,” pages 874–897

**David Quammen**

**Standard: RST.11-12.1** [Literacy in Science/Technical Texts, Grades 11–12]

Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

Students cite specific textual evidence to support analysis of David Quammen’s “Planet of Weeds: Tallying the Losses of Earth’s Animals and Plants,” including the author’s claim that we are in the midst of a mass extinction, attending to any important distinctions the author makes and to any gaps or inconsistencies in the account.

from *Ecology of a Cracker Childhood*, pages 898–906

**Janisse Ray**

**Standard: RST.9-10.1** [Literacy in Science/Technical Texts, Grades 9–10]

Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

Students cite specific textual evidence to support analysis of the passage from Janisse Ray’s *Ecology of a Cracker Childhood*, attending to the precise details of her explanation of the ecological role of the gopher tortoise and her description of the objects and wildlife in the junkyard.

from *The Legacy of Luna*, pages 907–918

**Julia Butterfly Hill**

**Standard: RI.9-10.6** [Reading Informational Texts, Grades 9–10]

Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Students determine the author's point of view in the passage from Julia Butterfly Hill’s *The Legacy of Luna* and analyze how Hill uses rhetoric in the description of her experience to advance her point of view.
from *Inspirations for Sustaining Life on Earth*: “Greeting Friends in Their Andean Gardens,” pages 919–928

**Calvin DeWitt**

and

“The Making of a Marginal Farm,” pages 507–516

**Wendell Berry**

**Standard: RH.9-10.6** [Literacy in History/Social Studies, Grades 9–10]

Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

Students compare the points of view on humans’ relationship with the Earth in Wendell Berry’s “The Making of a Marginal Farm” and the passage from Calvin DeWitt's *Inspirations for Sustaining Life on Earth*: “Greeting Friends in Their Andean Garden,” including which details they include and emphasize in their respective accounts.

from *Inspirations for Sustaining Life on Earth*: “Greeting Friends in Their Andean Gardens,” pages 919–928

**Calvin DeWitt**

**Standard: RH.9-10.1** [Literacy in History/Social Studies, Grades 9–10]

Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.

Students cite specific textual evidence to support analysis of the passage from Calvin DeWitt's *Inspirations for Sustaining Life on Earth*: “Greeting Friends in Their Andean Gardens,” attending to the origin of the information in a speech by an Evangelical Christian.

from *Having Faith*, pages 929–938

**Sandra Steingraber**

**Standard: RST.9-10.2** [Literacy in Science/Technical Texts, Grades 9–10]

Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

Students provide an accurate summary of the passage from Sandra Steingraber's *Having Faith* by tracing the text's explanation of the effects of chemicals in the food chain.

“Knowing Our Place,” pages 939–947

**Barbara Kingsolver**

**Standard: RI.11-12.5** [Reading Informational Texts, Grades 11–12]

Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.
Students analyze and evaluate the effectiveness of the structure Barbara Kingsolver uses in “Knowing Our Place,” including whether the structure makes the author’s connection to nature in different geographical locations clear and engaging.

from *The Omnivore’s Dilemma*, pages 948–960
Michael Pollan

**Standard: RI.11-12.6** [Reading Informational Texts, Grades 11–12]
Determine the author’s point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.

Students determine Michael Pollan’s purpose in the passage from *The Omnivore’s Dilemma*, analyzing how style and content contribute to the power and persuasiveness of his description of the feedlot.

from *Blessed Unrest*, pages 961–970
Paul Hawken

**Standard: RI.11-12.7** [Reading Informational Texts, Grades 11–12]
Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

Students integrate and evaluate information from the passage from Paul Hawken’s *Blessed Unrest* and from the websites of the Audubon Society, Friends of the Earth, and India Resource Center in order to address the question of how organizations can be effective environmental advocates.

“The Thoreau Problem,” pages 971–974
Rebecca Solnit

**Standard: RI.9-10.4** [Reading Informational Texts, Grades 9–10]
Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

Students determine the figurative and connotative meanings of the words “jail,” “berries,” and “paradise” as they are used in Rebecca Solnit’s “The Thoreau Problem” and analyze the cumulative effect of these word choices on the meaning and tone of the text.
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<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
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<td>HS-ETS1-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</td>
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<td>HS-LS2-1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</td>
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<td>HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
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<td>&quot;Fallen Forests&quot;</td>
<td>Sigourney, Lydia Huntley</td>
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<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<td>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</td>
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<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
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<td>CCSS.ELA-Literacy.RL.11-12.2 Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.</td>
<td>HS-LS2-1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</td>
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**Framework for K-12 Science Education: CORE IDEAS**

- **ESS3.A:** Natural Resources
- **ETS1.B:** Developing Possible Solutions
- **ETS1.C:** Developing Possible Solutions
- **LS2.C:** Ecosystem Dynamics, Functioning, and Resilience
- **LS2.C:** Ecosystem Dynamics, Functioning, and Resilience
- **ESS3.C:** Human Impacts on Earth Systems
- **ESS3.C:** Human Impacts on Earth Systems
- **ESS3.C:** Human Impacts on Earth Systems
- **Systems and Technology:** Influence of Science, Engineering, and Technology on the Natural World
- **ETS1.B:** Developing Possible Solutions
- **Scale, Proportion, and Quantity**
- **Cause and Effect**
- **Stability and Change**
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<td><strong>HS-LS2.1</strong>: Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. <strong>HS-LS2.2</strong>: Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. <strong>HS-LS2.8</strong>: Evaluate the evidence for the role of group behavior on individual and species’ chances to survive and reproduce.</td>
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<td>Marsh, George Perkins</td>
<td>CCSS.ELA-Literacy.RI.9-10.8</td>
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<td>from The Humbugs of the World</td>
<td>Barnum, P.T.</td>
<td>CCSS.ELA-Literacy.RH.9-10.8</td>
<td><strong>HS-ESS3.3</strong>: Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. <strong>HS-ESS3.4</strong>: Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
</tr>
<tr>
<td>from A Thousand-Mile Walk to the Gulf</td>
<td>Muir, John</td>
<td>CCSS.ELA-Literacy.RI.11-12.4</td>
<td><strong>HS-LS2.4</strong>: Use mathematical representations to support and revise explanations based on evidence about factors that affect carrying capacity of ecosystems at different scales. <strong>HS-LS2.6</strong>: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. <strong>HS-LS2.7</strong>: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
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<tr>
<td>from A Thousand-Mile Walk to the Gulf</td>
<td>Muir, John</td>
<td>CCSS.ELA-Literacy.RH.9-10.5</td>
<td><strong>HS-LS2.4</strong>: Use mathematical representations to support and revise explanations based on evidence about factors that affect carrying capacity of ecosystems at different scales. <strong>HS-LS2.6</strong>: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. <strong>HS-LS2.7</strong>: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
</tr>
<tr>
<td>&quot;A Wind-Storm in the Forests&quot;</td>
<td>Muir, John</td>
<td>CCSS.ELA-Literacy.RST.9-10.6</td>
<td><strong>HS-LS2.4</strong>: Use mathematical representations to support and revise explanations based on evidence about factors that affect carrying capacity of ecosystems at different scales. <strong>HS-LS2.6</strong>: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. <strong>HS-LS2.7</strong>: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
</tr>
<tr>
<td>from My First Summer in the Sierra</td>
<td>Muir, John</td>
<td>CCSS.ELA-Literacy.RI.9-10.2</td>
<td><strong>HS-LS2.4</strong>: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. <strong>HS-LS2.7</strong>: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
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</tbody>
</table>

**Core Ideas**

- **Cause and Effect**
- **Change**
- **Interdependent Relationships in Ecosystems**
- **Social Interactions and Group Behavior**
- **Stability and Change**
- **Systems**
- **Technology and Engineering**
- **Human Impact on Earth Systems**
<table>
<thead>
<tr>
<th>SELECTION</th>
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<th>NEXT GENERATION SCIENCE STANDARDS</th>
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<tbody>
<tr>
<td>&quot;Hetch Hetchy Valley&quot;</td>
<td>Muir, John</td>
<td>CCSS.ELA-Literacy.RI.11-12.6 Determine the author’s point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.</td>
<td>HS-ESS2-1 Develop a model to illustrate how Earth’s internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features. HS-ESS2-2 Analyze geoscience data to make the claim that one change to Earth’s surface can create feedbacks that cause changes to other Earth systems.</td>
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<tr>
<td>from Adventures in the Wilderness</td>
<td>Murray, W. H.</td>
<td>CCSS.ELA-Literacy.RH.9-10.1 Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.</td>
<td>HS-ESS3-1 Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.</td>
</tr>
<tr>
<td>from A Review of Recent Changes, and Changes Which Have Been Projected, in the Plans of the Central Park</td>
<td>Olmsted, Frederick Law</td>
<td>CCSS.ELA-Literacy.RI.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.</td>
<td>HS-ETS1-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants. HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.</td>
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<tr>
<td>&quot;About Trees&quot;</td>
<td>Morton, J. Sterling</td>
<td>CCSS.ELA-Literacy.RH.9-10.5 Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).</td>
<td>LS1.C: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. HS-LS1-5 Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.</td>
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<tr>
<td>To Frank Michler Chapman</td>
<td>Roosevelt, Theodore</td>
<td>CCSS.ELA-Literacy.RH.9-10.1 By the end of Grade 10, read and comprehend history/social studies texts in the grades 9–10 complexity band independently and proficiently.</td>
<td>LS2.C: Ecosystem Dynamics, Functioning, and Resilience</td>
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<tr>
<td>To John Borroughs</td>
<td>Roosevelt, Theodore</td>
<td>CCSS.ELA-Literacy.RH.9-10.10 Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.</td>
<td>LS2.C: Ecosystem Dynamics, Functioning, and Resilience</td>
</tr>
<tr>
<td>Speech at Grand Canyon, Arizona, May 6, 1903</td>
<td>Roosevelt, Theodore</td>
<td>CCSS.ELA-Literacy.RH.9-10.4 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.</td>
<td>HS-ESS2-1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. HS-LS2-2 Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</td>
</tr>
<tr>
<td>&quot;The Scavengers&quot;</td>
<td>Austin, Mary</td>
<td>CCSS.ELA-Literacy.RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.</td>
<td>LS2.A: Interdependent Relationships in Ecosystems</td>
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<td>Influence of Science, Engineering, and Technology on the Natural World</td>
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<td>Science Is a Human Endeavor</td>
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<tr>
<td>from Man and Earth</td>
<td>Shaler, Nathaniel Southgate</td>
<td>CCSS.ELA-Literacy.RST.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
</tr>
<tr>
<td>“The Art of Seeing Things”</td>
<td>Burroughs, John</td>
<td>CCSS.ELA-Literacy.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 key details and ideas.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
</tr>
<tr>
<td>“The Grist of the Gods”</td>
<td>Burroughs, John</td>
<td>CCSS.ELA-Literacy.RST.11-12.2 Determine the central idea or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.</td>
<td>HS-ESS2-1 Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features. HS-ESS2-2 Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.</td>
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<tr>
<td>“Nature Near Home”</td>
<td>Burroughs, John</td>
<td>CCSS.ELA-Literacy.RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</td>
<td>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</td>
</tr>
<tr>
<td>“Prosperity”</td>
<td>Pinchot, Gifford</td>
<td>CCSS.ELA-Literacy.RST.9-10.5 Analyze the structure of the relationships among concepts in the text, including relationships among key terms (e.g., force, friction, reaction force, energy).</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<tr>
<td>“The Bird Tragedy on Layson Island”</td>
<td>Hornaday, William T.</td>
<td>CCSS.ELA-Literacy.RH.11-12.5 Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.</td>
<td>HS-L5-2 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. HS-L2-8 Evaluate the evidence for the role of group behavior on individual and species' chance to survive and reproduce.</td>
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<tr>
<td>“A Certain Oil Refinery”</td>
<td>Dreiser, Theodore</td>
<td>CCSS.ELA-Literacy.RH.11-12.5 Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<tr>
<td>“The Last Passenger Pigeon”</td>
<td>Stratton-Porter, Gene</td>
<td>CCSS.ELA-Literacy.RH.11-12.8 Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.</td>
<td>HS-L5-2 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. HS-L2-8 Evaluate the evidence for the role of group behavior on individual and species' chance to survive and reproduce.</td>
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<tr>
<td>“The Last Passenger Pigeon”</td>
<td>Stratton-Porter, Gene</td>
<td>CCSS.ELA-Literacy.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.</td>
<td>HS-L5-2 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. HS-L2-8 Evaluate the evidence for the role of group behavior on individual and species' chance to survive and reproduce.</td>
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<tr>
<td>“Orion Rises on the Dunes”</td>
<td>Boston, Henry</td>
<td><strong>CCSS.ELA-Literacy.RL.11-12.3</strong> Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.</td>
<td><strong>HS-ESS1-2</strong> Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe. <strong>HS-ESS1-3</strong> Communicate scientific ideas about the way stars, over their life cycle, produce elements.</td>
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<tr>
<td>“The Indigenous and the Metropolitan”</td>
<td>McKay, Benton</td>
<td><strong>CCSS.ELA-Literacy.RH.11-12.4</strong> 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).</td>
<td><strong>HS-ESS3-2</strong> Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost–benefit ratios. <strong>HS-ESS3-3</strong> Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<tr>
<td>“What a Few More Seasons Will Do to the Ducks”</td>
<td>Darling, J. N. “Ding”</td>
<td><strong>CCSS.ELA-Literacy.RL.11-12.7</strong> 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.</td>
<td><strong>HS-LS2-7</strong> Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. <strong>HS-L2-8</strong> Evaluate the evidence for the role of group behavior on individual and species’ chance to survive and reproduce.</td>
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<tr>
<td>from Wintertrip into a New Country</td>
<td>Marshall, Robert</td>
<td><strong>CCSS.ELA-Literacy.RL.9-10.10</strong> By the end of grade 9, read and comprehend literary nonfiction in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9-10 text complexity band independently and proficiently.</td>
<td><strong>HS-ESS2-1</strong> Develop a model to illustrate how Earth’s internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features. <strong>HS-ESS2-5</strong> Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.</td>
</tr>
<tr>
<td>“what the ants are saying”</td>
<td>Marquis, Don</td>
<td><strong>CCSS.ELA-Literacy.RL.11-12.6</strong> Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).</td>
<td><strong>HS-ESS2-2</strong> Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost–benefit ratios. <strong>HS-ESS2-7</strong> Construct an argument based on evidence about the simultaneous coevolution of Earth’s systems and life on Earth.</td>
</tr>
<tr>
<td>“Letter from the Dust Bowl”</td>
<td>Henderson, Caroline</td>
<td><strong>CCSS.ELA-Literacy.RH.9-10.2</strong> Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.</td>
<td><strong>HS-ESS3-1</strong> Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity. <strong>HS-ESS3-3</strong> Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. <strong>HS-ESS3-5</strong> Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.</td>
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<tr>
<td>“Birds that Are New Yorkers”</td>
<td>Peattie, Donald Culross</td>
<td><strong>CCSS.ELA-Literacy.RL.11-12.10</strong> By the end of grade 11, read and comprehend literary nonfiction in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11-CCR text complexity band independently and proficiently.</td>
<td><strong>HS-LS3-2</strong> Make and defend a claim based on evidence that inheritable generic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. <strong>HS-L3-3</strong> Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</td>
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<tr>
<td>“The Answer”</td>
<td>Jeffers, Robinson</td>
<td>CCSS.ELA-Literacy.RL.9-10.2</td>
<td>Determine a theme or central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.</td>
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<td>HS-ESS3-2: Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
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<td>ESS3.C: Human Impacts on Earth Systems</td>
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<td>Science Addresses Questions About the Natural and Material World</td>
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<tr>
<td>“Carmel Point”</td>
<td>Jeffers, Robinson</td>
<td>CCSS.ELA-Literacy.RL.11-12.10</td>
<td>By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11-CCR text complexity band independently and proficiently.</td>
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<td>HS-ESS3-2: Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
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<td>Science Addresses Questions About the Natural and Material World</td>
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<tr>
<td>from The Grapes of Wrath</td>
<td>Steinbeck, John</td>
<td>CCSS.ELA-Literacy.RL.11-12.3</td>
<td>Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).</td>
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<td>HS-ESS3-1: Construct an explanation based on evidence for how the availability on natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.</td>
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<td>ESS3.B: Natural Hazards</td>
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<td>Cause and Effect</td>
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<tr>
<td>“This Land is Your Land”</td>
<td>Guthrie, Woody</td>
<td>CCSS.ELA-Literacy.RL.11-12.1</td>
<td>Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.</td>
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<td>HS-ESS2-5: Plan and conduct an investigation of the properties of water and its effects of Earth materials and processes.</td>
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<td>ESS2.E: Biogeology</td>
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<td>Structure and Function</td>
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<tr>
<td>from The Everglades: River of Grass</td>
<td>Douglas, Marjory Stoneman</td>
<td>CCSS.ELA-Literacy.RST.9-10.4</td>
<td>Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.</td>
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<tr>
<td>from A Sand County Almanac</td>
<td>Leopold, Aldo</td>
<td>CCSS.ELA-Literacy.RST.11-12.6</td>
<td>Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.</td>
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<td>HS-ESS2-7: Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.</td>
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<td>Stability and Change</td>
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<tr>
<td>“The Fog”</td>
<td>Roueché, Barton</td>
<td>CCSS.ELA-Literacy.RST.11-12.1</td>
<td>Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.</td>
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<td>HS-ESS2-4: Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.</td>
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<td>ESS2.D: Weather and Climate</td>
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<td>Cause and Effect</td>
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<tr>
<td>“The Longest Day”</td>
<td>Teale, Edwin Way</td>
<td>CCSS.ELA-Literacy.RL.9-10.2</td>
<td>Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details, provide an objective summary of the text.</td>
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<td>HS-LS2-6: Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.</td>
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<td>Stability and Change</td>
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<tr>
<td>from “Living the Good Life”</td>
<td>Nearing, Helen and Scott</td>
<td>CCSS.ELA-Literacy.RH.9-10.1</td>
<td>Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.</td>
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<td>HS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
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<td>ETS1.B: Developing Possible Solutions</td>
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<tr>
<td>&quot;Northern Lights&quot;</td>
<td>Olson, Sigurd F.</td>
<td>CCSS.ELA-Literacy.RH.9-10.7 Analyze various accounts of a subject told in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized in each account.</td>
<td>HS-ESS1-2 Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe. HS-ESS1-3 Communicate scientific ideas about the way stars, over their life cycle, produce elements.</td>
</tr>
<tr>
<td>&quot;Sootfall and Fallout&quot;</td>
<td>White, E.B.</td>
<td>CCSS.ELA-Literacy.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.</td>
<td>HS-PS1-6 Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium. HS-PS1-8 Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.</td>
</tr>
<tr>
<td>&quot;How Flowers Changed the World&quot;</td>
<td>Eiseley, Loren</td>
<td>CCSS.ELA-Literacy.RST.9-10.9 Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</td>
<td>HS-LS2-1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. HS-LS2-2 Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. HS-LS2-4 Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.</td>
</tr>
<tr>
<td>from My Wilderness: The Pacific West</td>
<td>Douglas, William O.</td>
<td>CCSS.ELA-Literacy.RH.9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</td>
<td>HS-ESS1-6 Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth’s formation and early history.</td>
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<tr>
<td>Dissent in Sierra Club v. Morton</td>
<td>Douglas, William O.</td>
<td>CCSS.ELA-Literacy.RH.9-10.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
</tr>
<tr>
<td>from The Death and Life of Great American Cities</td>
<td>Jacobs, Jane</td>
<td>CCSS.ELA-Literacy.RH.9-10.3 Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among the management of natural resources, the stability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
</tr>
<tr>
<td>from Silent Spring</td>
<td>Carson, Rachel</td>
<td>CCSS.ELA-Literacy.RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</td>
<td>HS-LS2-4 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
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<td>&quot;The Great Paver&quot;</td>
<td>Baker, Russell</td>
<td>CCSS.ELA-Literacy.RI.11-12.1</td>
<td>Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.</td>
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<tr>
<td>&quot;The Great Paver&quot;</td>
<td>Baker, Russell</td>
<td>CCSS.ELA-Literacy.RI.11-12.1</td>
<td>Compare and contrast treatments of the same topic in several primary and secondary sources.</td>
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<td>&quot;The Living Canyon&quot;</td>
<td>Porter, Eliot</td>
<td>CCSS.ELA-Literacy.RI.9-10.7</td>
<td>Analyze various accounts of a subject told in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized in each account.</td>
</tr>
<tr>
<td>from the Wilderness Act of 1964</td>
<td>Zahniser, Howard</td>
<td>CCSS.ELA-Literacy.RI.11-12.8</td>
<td>Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissent).</td>
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<td>Remarks at the Signing of the Highway Beautification Act of 1965</td>
<td>Johnson, Lyndon B.</td>
<td>CCSS.ELA-Literacy.RI.9-10.9</td>
<td>Analyze seminal U.S. documents of historical and literary significance (e.g., Washington’s Farewell Address, the Gettysburg Address, Roosevelt’s Four Freedoms speech, King’s “Letter from Birmingham Jail”), including how they address related themes and concepts.</td>
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<tr>
<td>from The Economies of the Coming Spaceship Earth</td>
<td>Boulding, Kenneth E.</td>
<td>CCSS.ELA-Literacy.RST.11-12.4</td>
<td>Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.</td>
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<tr>
<td>from The Historical Roots of Our Ecological Crisis</td>
<td>White, Lynn Jr.</td>
<td>CCSS.ELA-Literacy.RH.11-12.6</td>
<td>Evaluate authors’ differing points of view on the same historical event or issue by assessing the authors’ claims, reasoning, and evidence.</td>
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<tr>
<td>&quot;Polemic: Industrial Tourism and the National Parks&quot;</td>
<td>Abbey, Edward</td>
<td>CCSS.ELA-Literacy.RI.11-12.5</td>
<td>Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.</td>
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<tr>
<td>SELECTION</td>
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<td>ENGLISH LANGUAGE ARTS STANDARDS</td>
<td>NEXT GENERATION SCIENCE STANDARDS</td>
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<tr>
<td>&quot;Poemic: Industrial Tourism and the National Parks&quot;</td>
<td>Abbey, Edward</td>
<td>CCSS.ELA-Literacy.RH.9-10.9 Compare and contrast treatments of the same topic in several primary and secondary sources.</td>
<td>HS-ETS1-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants. HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria.</td>
</tr>
<tr>
<td>from The Population Bomb</td>
<td>Ehrlich, Paul R.</td>
<td>CCSS.ELA-Literacy.RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</td>
<td>HS-LS2-1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. HS-LS2-2 Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</td>
</tr>
<tr>
<td>from The Tragedy of the Commons</td>
<td>Hardin, Garrett</td>
<td>CCSS.ELA-Literacy.RH.9-10.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
</tr>
<tr>
<td>from Do Androids Dream of Electric Sheep?</td>
<td>Dick, Philip K.</td>
<td>CCSS.ELA-Literacy.RL.9-10.5 Analyze how an author’s choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashback) create such effects as mystery, tension, or surprise.</td>
<td>HS-LS2-4 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
</tr>
<tr>
<td>&quot;A Sample Day in the Kitchen&quot;</td>
<td>Fletcher, Colin</td>
<td>CCSS.ELA-Literacy.RL.9-10.3 Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.</td>
<td>HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved by engineering.</td>
</tr>
<tr>
<td>&quot;Spaceship Earth&quot;</td>
<td>Fuller, R Buckminster</td>
<td>CCSS.ELA-Literacy.RST.11-12.5 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.</td>
<td>HS-ESS1-2 Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe. HS-ESS1-4 Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.</td>
</tr>
<tr>
<td>Mills College Valedictory Address</td>
<td>Mills, Stephanie</td>
<td>CCSS.ELA-Literacy.RH.9-10.5 Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).</td>
<td>HS-LS2-1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. HS-LS2-2 Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species’ chance to survive and reproduce.</td>
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<tr>
<td>&quot;Sinnoke the Bear Sutra&quot;</td>
<td>Snyder, Gary</td>
<td>CCSS.ELA-Literacy.RL.9-10.4 Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).</td>
<td>HS-ESS2-1 Develop a model to illustrate how Earth’s internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features. HS-ESS2-2 Analyze geoscience data to make the claim that one change to Earth’s surface can create feedbacks that cause changes to other Earth systems.</td>
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<tr>
<td>&quot;Covers the Ground&quot;</td>
<td>Snyder, Gary</td>
<td>CCSS.ELA-Literacy.RL.9-10.10 By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9–10 text complexity band independently and proficiently.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
</tr>
<tr>
<td>&quot;The Beginning&quot;</td>
<td>Hayes, Denis</td>
<td>CCSS.ELA-Literacy.RL.11-12.2 Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.</td>
<td>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
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<tr>
<td>&quot;The Beginning&quot;</td>
<td>Hayes, Denis</td>
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<tr>
<td>&quot;Millions Join Earth Day Observances across the Nation&quot;</td>
<td>Lelyveld, Joseph</td>
<td>CCSS.ELA-Literacy.RH.9-10.9 Compare and contrast treatments of the same topic in several primary and secondary sources.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
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<tr>
<td>&quot;Big Yellow Taxi&quot;</td>
<td>Mitchell, Joni</td>
<td>CCSS.ELA-Literacy.RL.9-10.2 Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<tr>
<td>&quot;Mercy Mercy Me (The Ecology)&quot;</td>
<td>Gaye, Martin</td>
<td>CCSS.ELA-Literacy.RL.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
</tr>
<tr>
<td>from Encounters with the Archdruid</td>
<td>McPhee, John</td>
<td>CCSS.ELA-Literacy.RL.9-10.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<tr>
<td>SELECTION</td>
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<td>NEXT GENERATION SCIENCE STANDARDS</td>
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<tr>
<td><strong>from Encounters with the Archdruid</strong></td>
<td>McPhee, John</td>
<td>CCCS.ELA-Literacy.RH.11-12.9</td>
<td>Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.</td>
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<td>HS-ESS3-2: Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
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<td>HS-ESS3-3: Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<td>ES3.C: Human Impacts on Earth Systems</td>
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<td>Influence of Science, Engineering, and Technology on the Natural World</td>
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<tr>
<td><strong>from Only One Earth</strong></td>
<td>Friends of the Earth</td>
<td>CCCS.ELA-Literacy.RST.9-10.6</td>
<td>Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.</td>
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<td>HS-ESS1-6: Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth’s formation and early history.</td>
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<td>ES1.C: The History of Planet Earth</td>
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<td>Stability and Change</td>
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<tr>
<td><strong>Manifesto: The Mad Farmer Liberation Front</strong></td>
<td>Berry, Wendell</td>
<td>CCCS.ELA-Literacy.RL.11-12.5</td>
<td>Analyze how an author’s choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.</td>
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<td>HS-ESS3-2: Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
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<td>HS-ESS3-3: Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<td>Science Addresses Questions About the Natural and Material World</td>
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<tr>
<td><strong>The Making of a Marginal Farm</strong></td>
<td>Berry, Wendell</td>
<td>CCCS.ELA-Literacy.RL.9-10.4</td>
<td>Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).</td>
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<td>HS-ESS3-1: Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity. HS-ESS3-4: Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
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<td>ES3.A: Natural Resources</td>
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<td>Stability and Change</td>
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<tr>
<td><strong>The Making of a Marginal Farm</strong></td>
<td>Berry, Wendell</td>
<td>CCCS.ELA-Literacy.RL.9-10.6</td>
<td>Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.</td>
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<td>HS-ESS3-1: Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity. HS-ESS3-4: Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
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<td>ES3.A: Natural Resources</td>
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<td>Stability and Change</td>
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<tr>
<td><strong>Preserving Wilderness</strong></td>
<td>Berry, Wendell</td>
<td>CCCS.ELA-Literacy.RL.11-12.3</td>
<td>Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.</td>
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<td>HS-ESS3-3: Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4: Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
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<td>Influence of Science, Engineering, and Technology on the Natural World</td>
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<tr>
<td><strong>Fecundity</strong></td>
<td>Dillard, Annie</td>
<td>CCCS.ELA-Literacy.RST.9-10.2</td>
<td>Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.</td>
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<td>HS-LS3-2: Make and defend a claim based on evidence that inheritable generic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. HS-LS3-3: Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</td>
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<td>LS3.B: Variation of Traits</td>
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<td>Scale, Proportion, and Quantity</td>
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<tr>
<td><strong>The World’s Biggest Membrane</strong></td>
<td>Thomas, Lewis</td>
<td>CCCS.ELA-Literacy.RST.9-10.1</td>
<td>Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</td>
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<td>HS-ESS1-5: Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks. HS-ESS1-6: Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth’s formation and early history.</td>
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<td>ES5.C: The History of Planet Earth</td>
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<td>Stability and Change</td>
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</table>

**Correlation Chart**

**American Earth**

132 133
<table>
<thead>
<tr>
<th>SELECTION</th>
<th>AUTHOR</th>
<th>ENGLISH LANGUAGE ARTS STANDARDS</th>
<th>NEXT GENERATION SCIENCE STANDARDS</th>
<th>FRAMEWORK FOR K-12 SCIENCE EDUCATION: CORE IDEAS</th>
<th>FRAMEWORK FOR K-12 SCIENCE EDUCATION: CROSSCUTTING CONCEPTS</th>
</tr>
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<tbody>
<tr>
<td>“The Third Planet: Operating Instructions”</td>
<td>Brower, David R.</td>
<td>CCSS.ELA-Literacy.RL.11-12.6 Determine the author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems. HS-ESS3-5 Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.</td>
<td>ESS3.C: Human Impacts on Earth Systems</td>
<td>Stability and Change</td>
</tr>
<tr>
<td>from Energy Strategy: The Road Not Taken</td>
<td>Lovins, Amory B.</td>
<td>CCSS.ELA-Literacy.RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</td>
<td>HS-PS3-3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.</td>
<td>ETS1.A: Defining and Delimiting an Engineering Problem</td>
<td>Influence of Science, Engineering, and Technology on the Natural World</td>
</tr>
<tr>
<td>“A First American Views His Land”</td>
<td>Momaday, N. Scott</td>
<td>CCSS.ELA-Literacy.RL.11-12.5 Analyze how an author’s choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
<td>ESS3.C: Human Impacts on Earth Systems</td>
<td>Stability and Change</td>
</tr>
<tr>
<td>from Ceremony</td>
<td>Silko, Leslie Marmon</td>
<td>CCSS.ELA-Literacy.RL.9-10.3 Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
<td>ESS3.C: Human Impacts on Earth Systems</td>
<td>Influence of Science, Engineering, and Technology on the Natural World</td>
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<tr>
<td>“A Short History of America”</td>
<td>Crumb, R.</td>
<td>CCSS.ELA-Literacy.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.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
<td>ESS3.C: Human Impacts on Earth Systems</td>
<td>Influence of Science, Engineering, and Technology on the Natural World</td>
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<tr>
<td>“Outside the Solar Village: One Utopian Farm”</td>
<td>Jackson, Wes</td>
<td>CCSS.ELA-Literacy.RL.9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</td>
<td>HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>ETS1.B: Developing Possible Solutions</td>
<td>Energy and Matter</td>
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<tr>
<td>from Love Canal: My Story</td>
<td>Gibbs, Lois Marie</td>
<td>CCSS.ELA-Literacy.RL.9-10.6 Determine an author’s point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
<td>ESS3.C: Human Impacts on Earth Systems</td>
<td>Influence of Science, Engineering, and Technology on the Natural World</td>
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<tr>
<td>from The Fate of the Earth</td>
<td>Schell, Jonathan</td>
<td>CCSS.ELA-Literacy.RST.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem.</td>
<td>HS-LS2-4 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>LS4.D: Biodiversity and Humans</td>
<td>Stability and Change</td>
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<tr>
<td>&quot;Seasons of Want and Plenty&quot;</td>
<td>Cronon, William</td>
<td>CCSS.ELA-Literacy.RH.9-10.8</td>
<td>HS-ESS3-1: Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.</td>
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<tr>
<td>&quot;Everything Is a Human Being&quot;</td>
<td>Walker, Alice</td>
<td>CCSS.ELA-Literacy.RI.9-10.6</td>
<td>HS-LS2-2: Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. HS-LS2-6: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</td>
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<tr>
<td>&quot;A Presentation of Whales&quot;</td>
<td>Lopez, Bary</td>
<td>CCSS.ELA-Literacy.RH.9-10.3</td>
<td>HS-ESS3-3: Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4: Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
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<tr>
<td>from The End of Nature</td>
<td>McKibben, Bill</td>
<td>CCSS.ELA-Literacy.RH.9-10.1</td>
<td>HS-ESS2-2: Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS2-4: Use a model to describe how variations in the flow of energy into and out of Earth’s systems result in changes in climate. HS-ESS2-6: Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.</td>
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<tr>
<td>&quot;The Summer Day&quot;</td>
<td>Oliver, Mary</td>
<td>CCSS.ELA-Literacy.RL.9-10.4</td>
<td>Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).</td>
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<tr>
<td>from Refuge: An Unnatural History of Family and Place</td>
<td>Williams, Terry Tempest</td>
<td>CCSS.ELA-Literacy.RI.11-12.2</td>
<td>Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.</td>
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<tr>
<td>&quot;The Dubious Rewards of Consumption&quot;</td>
<td>During, Alan</td>
<td>CCSS.ELA-Literacy.RST.9-10.7</td>
<td>Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</td>
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<tr>
<td>&quot;After the Flood&quot;</td>
<td>Sanders, Scott Russell</td>
<td>CCSS.ELA-Literacy.RL.11-12.1</td>
<td>Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.</td>
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<tr>
<td>from The Last Panda</td>
<td>Schaller, George B.</td>
<td>CCSS.ELA-Literacy.RL.9-10.3</td>
<td>Analyze the author's premises, claims, and evidence by corroborating or challenging them with other information.</td>
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<tr>
<td>&quot;The Flora and Fauna of Las Vegas&quot;</td>
<td>Meloy, Ellen</td>
<td>CCSS.ELA-Literacy.RL.9-10.2</td>
<td>Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.</td>
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<td>“Dwellings”</td>
<td>Hogan, Linda</td>
<td>CCSS.ELA-Literacy.RI.11-12.3</td>
<td>Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact over the course of the text.</td>
<td>LS-LS2-1: Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</td>
<td>LS2.A: Interdependent Relationships in Ecosystems Cause and Effect</td>
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<td>LS-LS2-2: Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</td>
<td>LS2.A: Interdependent Relationships in Ecosystems Cause and Effect</td>
</tr>
<tr>
<td>from The Ecology of Magic: “A Personal Introduction to the Inquiry”</td>
<td>Abram, David</td>
<td>CCSS.ELA-Literacy. RI.11-12.4</td>
<td>Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).</td>
<td>LS-LS2-1: Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</td>
<td>LS2.A: Interdependent Relationships in Ecosystems Cause and Effect</td>
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<td>LS-LS2-2: Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</td>
<td>LS2.A: Interdependent Relationships in Ecosystems Cause and Effect</td>
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<tr>
<td>“The Song of the White Pelican”</td>
<td>Turner, Jack</td>
<td>CCSS.ELA-Literacy.RI.9-10.5</td>
<td>Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of the text (e.g., a section or chapter).</td>
<td>LS-LS2-1: Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</td>
<td>LS2.D: Biodiversity and Humans Scale, Proportion, and Quantity</td>
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<td>LS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>LS2.D: Biodiversity and Humans Scale, Proportion, and Quantity</td>
</tr>
<tr>
<td>“A Multicultural Approach to Ecopsychology”</td>
<td>Anthony, Carl, and Renée Soule</td>
<td>CCSS.ELA-Literacy.RI.9-10.8</td>
<td>Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient.</td>
<td>LS-LS2-1: Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</td>
<td>LS2.D: Biodiversity and Humans Scale, Proportion, and Quantity</td>
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<td>LS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>LS2.D: Biodiversity and Humans Scale, Proportion, and Quantity</td>
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<tr>
<td>Speech at the Kyoto Climate Change Conference</td>
<td>Gore, Al</td>
<td>CCSS.ELA-Literacy.RST.9-10.1</td>
<td>Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</td>
<td>HS-E5S3-2: Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
<td>E5S3.D: Climate Change Science Addresses Questions About the Natural and Material World</td>
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<td>HS-E5S3-6: Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.</td>
<td>E5S3.D: Climate Change Science Addresses Questions About the Natural and Material World</td>
</tr>
<tr>
<td>from Heart and Blood: Living with Deer in America</td>
<td>Nelson, Richard</td>
<td>CCSS.ELA-Literacy.RST.9-10.10</td>
<td>By the end of grade 10, read and comprehend science and technical texts in the grades 9–10 text complexity band independently and proficiently.</td>
<td>HS-LS2-1: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>LS4.D: Cause and Effect Causes and Effect</td>
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<td>HS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>LS4.D: Cause and Effect Causes and Effect</td>
</tr>
<tr>
<td>“Planet of Weeds: Tallying the Losses of Earth’s Animals and Plants”</td>
<td>Quammen, David</td>
<td>CCSS.ELA-Literacy.RST.11-12.1</td>
<td>Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.</td>
<td>HS-LS2-1: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>LS4.D: Cause and Effect Causes and Effect</td>
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<td>HS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>LS4.D: Cause and Effect Causes and Effect</td>
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**CROSSCUTTING CONCEPTS**

1. **K–12 Science Education: Framework for K–12 Science Education**
2. **Interdependent Relationships in Ecosystems**
3. **Cause and Effect**
4. **Scale, Proportion, and Quantity**
5. **Science**
6. **Engineering, and Technology on the Natural World**
7. **Influence of Science, Engineering, and Technology on the Natural and Material World**
8. **Questions About the Natural and Material World**
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<tr>
<th>SELECTION</th>
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<th>NEXT GENERATION SCIENCE STANDARDS</th>
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<th>Framework for K-12 Science Education: CROSSCUTTING CONCEPTS</th>
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<tr>
<td>from Ecology of a Cracker Childhood</td>
<td>Ray, Janisse</td>
<td>CCSS.ELA-Literacy.RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</td>
<td>HS-LS2.2 Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. HS-LS2.6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. HS-LS2.7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</td>
<td>LS2.C: Ecosystem Dynamics, Functioning, and Resilience</td>
<td>Stability and Change</td>
</tr>
<tr>
<td>from The Legacy of Luna</td>
<td>Hill, Julia Butterfly</td>
<td>CCSS.ELA-Literacy.RI.9-10.6 Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
<td>ETS1.B: Developing Possible Solutions</td>
<td>Science Addresses Questions About the Natural and Material World</td>
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<tr>
<td>from Inspirations for Sustaining Life on Earth: &quot;Greeting Friends in Their Andean Gardens&quot;</td>
<td>DeWitt, Calvin</td>
<td>CCSS.ELA-Literacy.RH.9-10.6 Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
<td>ETS1.B: Developing Possible Solutions</td>
<td>Science Addresses Questions About the Natural and Material World</td>
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<tr>
<td>from Inspirations for Sustaining Life on Earth: &quot;Greeting Friends in Their Andean Gardens&quot;</td>
<td>DeWitt, Calvin</td>
<td>CCSS.ELA-Literacy.RH.9-10.1 Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
<td>ETS1.B: Developing Possible Solutions</td>
<td>Science Addresses Questions About the Natural and Material World</td>
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<tr>
<td>from Having Faith</td>
<td>Steingraber, Sandra</td>
<td>CCSS.ELA-Literacy.RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems. HS-ESS3-5 Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.</td>
<td>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</td>
<td>Energy and Matter</td>
</tr>
<tr>
<td>&quot;Knowing Our Place&quot;</td>
<td>Kingsolver, Barbara</td>
<td>CCSS.ELA-Literacy.RI.11-12.5 Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</td>
<td>ES3.C: Human Impacts on Earth Systems</td>
<td>Influence of Science, Engineering, and Technology on the Natural World</td>
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<tr>
<td>from The Omnivore's Dilemma</td>
<td>Pollan, Michael</td>
<td>CCSS.ELA-Literacy.RI.11-12.6 Determine the author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how the style and content contribute to the power, persuasiveness, or beauty of the text.</td>
<td>HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems. HS-LS2-4 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. L52.B: Cycles of Matter and Energy Transfer in Ecosystems Cause and Effect</td>
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<td>from Blessed Unrest</td>
<td>Hawken, Paul</td>
<td>CCSS.ELA-Literacy.RI.11-12.7 Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems. ETS1.B: Developing Possible Solutions Science Addresses Questions About the Natural and Material World</td>
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<td>“The Thoreau Problem”</td>
<td>Solnit, Rebecca</td>
<td>CCSS.ELA-Literacy.RI.9-10.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).</td>
<td>HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios. HS-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems. ETS1.B: Developing Possible Solutions Influence of Science, Engineering, and Technology on the Natural World</td>
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