

PEACHTREE
TEACHER'S GUIDE
Includes Common Core Standards Correlations

Countdown

2979 Days to the Moon

Written by Suzanne Slade
Illustrated by Thomas Gonzalez

HC: 978-1-68263-013-6

Ages 10+ | Middle Reader Non-fiction | Poetry
Lexile • F&P • GRL X; Gr 6



ABOUT THE BOOK

In 1961, President John F. Kennedy announced that the United States would try to land a man on the Moon by the end of the decade. During the two thousand nine hundred and seventy-nine days that followed his speech, eighteen astronauts climbed into spaceships; three of them died before even leaving the ground. Eight rockets soared into space. And four hundred thousand people—engineers, technicians, scientists, mathematicians, and machinists—joined Project Apollo in hopes of making the dream a reality.

THEMES

Persistence | Vision | Teamwork | Commitment
Space Race

BEFORE YOU READ

Consider the front cover of the book:

- Describe the images featured in this illustration.
- Explore the symbolism to the Moon's reflection on the astronaut's helmet.
- Describe the feeling the dark black background suggests.

- Most countdowns begin with the number 10 and then to 0. Determine the meaning of 2979 days in the subtitle.
- Predict what this book is going to be about.

AFTER YOU READ

Use the following quotes from the book as post-reading discussion questions.

Chapter 1: A Daring Dream

- The word *outrageous* means out of bounds, shocking, or beyond reasonable limits. How was President Kennedy's dream outrageous?
- A *visionary* is someone who thinks about the future in a creative and imaginative way, someone with a powerful plan for change. How was Kennedy a visionary?
- What role did Kennedy's dream play in the Space Race?
- Why didn't Kennedy's dream die, even after he was assassinated?

Chapter 2: The First Mission—Apollo 1

- Describe the enthusiasm surrounding the Apollo 1 mission.
- Explore the devastation that occurred after the failure of the mission.
- Why did NASA continue Project Apollo, even after the tragic deaths of the Apollo 1 astronauts?

Chapter 3: The Mission Continues

- How did NASA respond to the Apollo 1 tragedy? What steps did they take to understand what occurred?
- How did Gus Grissom's words affect the team's commitment to Project Apollo? What role did his death play in that decision?

Chapter 4: To the Sky—Apollo 4–6

- Why was the Apollo 4 liftoff suspenseful?
- Consider the risk presented in each rocket stage. Which do you think was the most dangerous?
- Describe the significance of the Apollo 5 mission.
- Examine the hope and heartbreak of the Apollo 6 mission.

Chapter 5: Risking It All—Apollo 7

- Is there a connection between the horrors of Apollo 1 and the anticipation of the Apollo 7 liftoff?
- What do you think the impact of the *Wally, Walt, and Donn Show* was? How do you think it felt for viewers to watch the astronauts in space?
- The word *mutiny* means disobey, resist, or defy. Why do you think the astronauts chose to resist Mission Control's instructions to wear helmets during landing? How was that a mutiny? List the risks they took by refusing to do so.

Chapter 6: Aiming for the Moon—Apollo 8

- Consider the time lapse between the splashdown of Apollo 7 and the launch of Apollo 8. Why do you think there was a rush to launch Apollo 8?
- Imagine the experience of floating into the darkness of space without the ability to view your intended target—the Moon. Discuss the teamwork required between the astronauts and Mission Control to make a mission such as this a success.
- How was the sound of Lovell's voice like a gift from Santa Claus?

Chapter 7: Spider in Space—Apollo 9

- Discuss the effect gravity has on a person's body.
- Why did the crew of Apollo 8 have very little time to celebrate after Schweickart tested the NASA space suit?
- When the Apollo 9 splashdown occurred, how close was President Kennedy's deadline?

Chapter 8: Dress Rehearsal—Apollo 10

- The word *tranquility* means silence, peace, or quietness. Why do you think the huge crater on the Moon was called the Sea of Tranquility?
- Examine how a small error in judgement resulted into an extremely dangerous situation.
- Explain why Apollo 10 was a successful "dress rehearsal" for Apollo 11.

Chapter 9: Achieving the Dream—Apollo 11

- Consider the relief felt all over the world when Mission Control stated, "We're Go on that alarm." What sacrifices were made to make the Apollo 11 mission a reality? What would be lost if the mission was aborted?
- Interpret Armstrong's statement, "That's one small step for man, one giant leap for mankind."
- Discuss the significance of placing an Apollo 1 patch on the surface of the Moon. How does this act symbolize the commitment, dedication, and teamwork of the entire Apollo Project?

RESOURCES

NASA TV – live transmission of astronauts living and working on the International Space Station, and sometimes it shows a live, magnificent view of Earth from space.

www.nasa.gov/multimedia/nasatv/index.html#public

NASA Kids' Club – exciting activities for students, such as test driving a rover on Mars, building a fleet of rockets, discovering which astronauts are currently living on the space station, and more.

www.nasa.gov/kidsclub/index.html

NASA Image Galleries – thousands of photos including rocket launches, planets, Apollo Moon missions, and even Earth.

www.nasa.gov/multimedia/imagegallery/index.html

ACTIVITY SHEETS

- *Countdown: 2979 Days to the Moon* Vertical Word Puzzle
- *Countdown: 2979 Days to the Moon* Quotation Timeline
- *Countdown: 2979 Days to the Moon*—A Personal Connection

ABOUT THE AUTHOR

A mechanical engineer by degree, Suzanne Slade is the award-winning author of more than one hundred books, including *Dangerous Jane* and *Astronaut Annie*. Before beginning her writing career, Suzanne worked at McDonnell Douglas Space Systems in Huntington Beach, California, on Delta rockets, Titan rockets, and the Delta-Star spacecraft. While at MDSS, Suzanne worked with engineers who helped create the third stage of the Saturn V rocket, which launched the Apollo Moon missions. As part of her research for this book, Suzanne corresponded with Walter Cunningham (Apollo 7) and interviewed Alan Bean (Apollo 12), one of the twelve astronauts who walked on the Moon. She lives near Chicago.

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ABOUT THE ILLUSTRATOR

Thomas Gonzalez was born in Cuba and moved to the United States as a ten-year-old child. After attending the Atlanta College of Art (now called Savannah College of Art and Design) he freelanced for a year and landed a position at the Coca-Cola Company, where he intended to work for just five years. Twenty-plus years later, having worked with major global brands and held several creative positions, he left and became an illustrator, designer, and portrait artist. He has illustrated a number of children's books, including *Seven and a Half Tons of Steel*, *Toad Weather*, *The House on Dirty-third Street*, and *14 Cows for America*. He lives in Duluth, Georgia, with his wife Noni and daughter Nina, and three awesome dogs.

www.tomprints.com

REVIEWS

★ “Elegant and informative, this is sure to attract casual browsers and true space nerds alike.”

—*Booklist*

★ “Captivating free-verse narrative... vivid mixed-media illustrations that stun with photographic realism and varied perspectives... this well-researched title offers a stirring introduction to one of humankind’s most impressive undertakings.”

—*Publishers Weekly*

★ “Stunning... Slade’s carefully crafted, often alliterative text, written in free verse, is both succinct and readable, drawing this large topic down to the most necessary and interesting facts with enough detail to excite young teens as well as adults who may have lived through the missions.... Truly out of this world.

A must-buy for most poetry collections.”

—*School Library Journal*

“A grand—if, so many years later, nostalgic—tale about a magnificent effort. A handsomely packaged look back at an epochal achievement.”

—*Kirkus Reviews*

“[A] book that will captivate and entertain young readers while educating them about an amazing decade of U.S. space exploration... In the 21st century, space travel goals aim much further away than the moon, but *Countdown* drives home how truly incredible the Apollo missions are in the history of mankind.”

—*Shelf Awareness*

Teacher's Guide for

COUNTDOWN: 2979 DAYS TO THE MOON

prepared by Debbie Gonzales

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updated 1/31/19

Countdown: 2979 Days to the Moon

VERTICAL WORD PUZZLE CLUES

Use the clues below to solve the Vertical Word Puzzle.

1. Rocket vibrations, ship shaking uncontrollably
2. Commander of Apollo 1
3. Illness shared by the crew of Apollo 7
4. Rocket flight path
5. President who dared to dream of placing a man on the Moon
6. Commander of Apollo 7
7. Senior pilot of Apollo 1
8. Pilot of Apollo 1
9. Competition with the Soviet Union to the Moon
10. Overall objective for Project Apollo
11. Command module pilot for Apollo 8
12. Launch during which NASA placed a man on the Moon
13. Center or facility that manages space flights

Countdown: 2979 Days to the Moon
VERTICAL WORD PUZZLE

Name: _____ Date: _____

1. P _ _ _
2. _ R _ _ _ _
3. _ O _ _
4. _ _ _ J _ _ _ _
5. _ _ _ _ E _ _
6. _ C _ _ _ _
7. _ _ _ T _
8. _ _ A _ _ _
9. _ P _ _ _ _ _
10. _ O _ _
11. L _ _ _ _
12. _ _ _ L _ _ 11
13. _ _ _ _ O _ _ _ _

*Countdown: 2979 Days to the Moon***VERTICAL WORD PUZZLE
ANSWER KEY**

1. **P** O G O
2. G **R** I S S O M
3. C **O** L D
4. T R A **J** E C T O R Y
5. K E N N **E** D Y
6. S **C** H I R R A
7. W H I **T** E
8. C H **A** F F E E
9. S **P** A C E R A C E
10. M **O** O N
11. **L** O V E L L
12. A P O **L** L O **11**
13. M I S S I **O** N C O N T R O L

Countdown: 2979 Days to the Moon

QUOTATION TIMELINE

Objective: To understand the concepts of time and chronology through the creation and interpretation of a timeline.

Materials:

- *Countdown: 2979 Days to the Moon*, the book
- *Countdown: 2979 Days to the Moon* Timeline Quotation Cards (below)
- *Countdown: 2979 Days to the Moon* Timeline Template (pg. 8)
- *Countdown: 2979 Days to the Moon* Timeline Template Answers (pg. 9)
- Scissors
- Tape

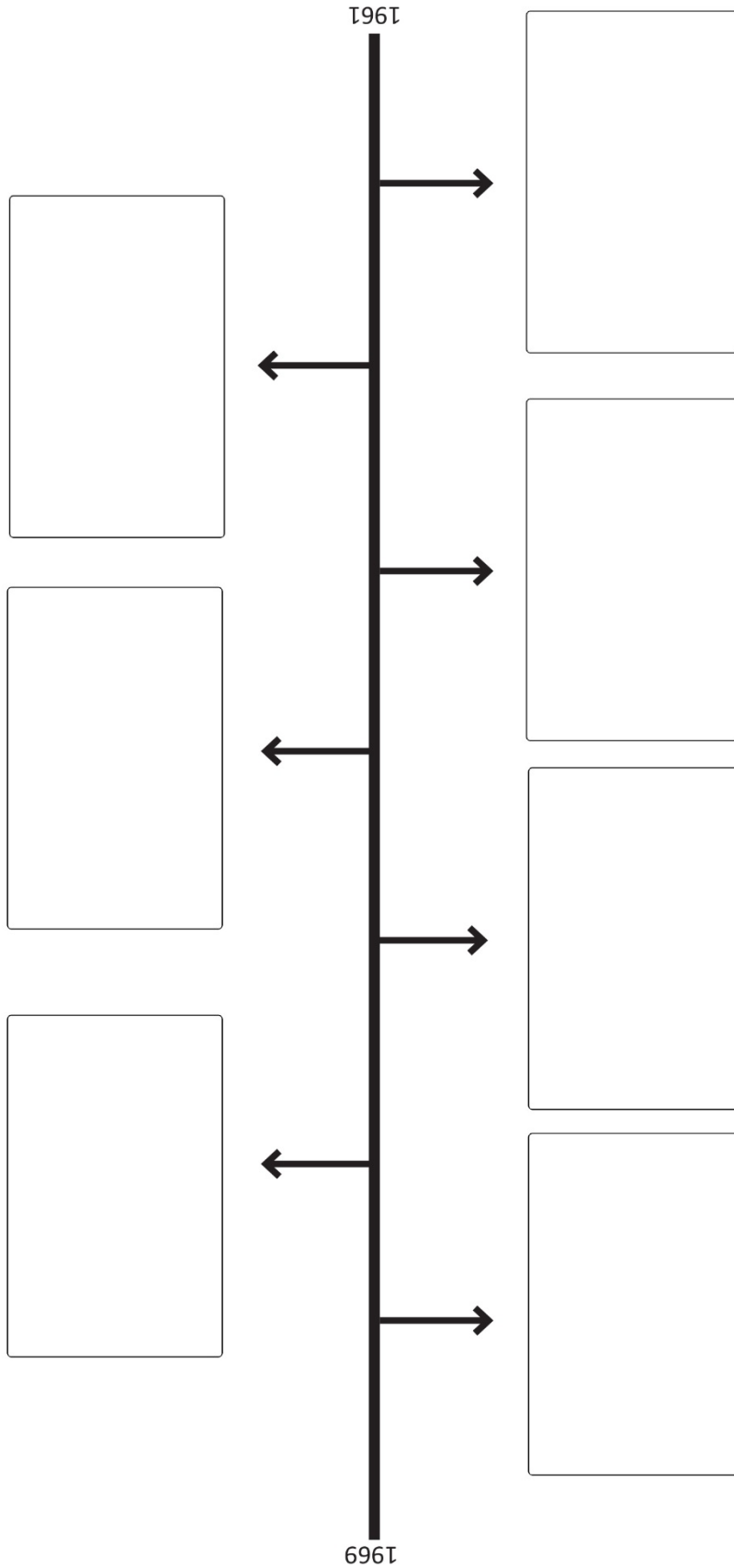
Procedure:

- Print Timeline Quotation Cards. Use scissors to trim around the borders of the cards.
- Using *Countdown: 2979 Days to the Moon* as reference, place quotations cards in chronological order in the spaces designated on the Countdown Timeline Template. Use tape to secure them into place.
- Use the *Countdown* Timeline Template Answer guide to check students' work.
- Discuss the progress of the Apollo Project and the individuals involved in it.

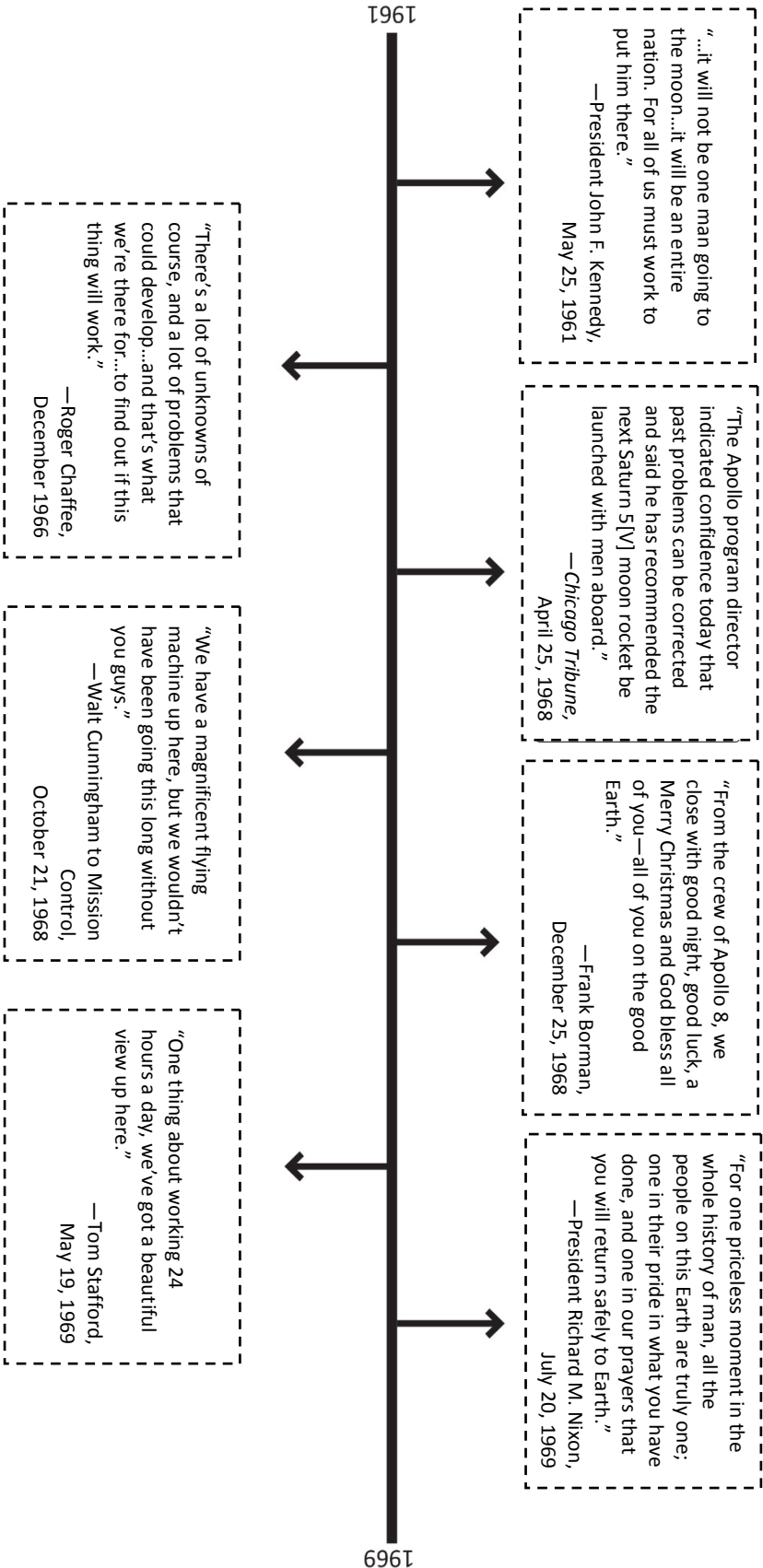
Timeline Quotation Cards

<p>"We have a magnificent flying machine up here, but we wouldn't have been going this long without you guys."</p> <p style="text-align: right;">—Walt Cunningham to Mission Control, October 21, 1968</p>	<p>"...it will not be one man going to the moon...it will be an entire nation. For all of us must work to put him there."</p> <p style="text-align: right;">—President John F. Kennedy, May 25, 1961</p>	<p>"The Apollo program director indicated confidence today that past problems can be corrected and said he has recommended the next Saturn 5[V] moon rocket be launched with men aboard."</p> <p style="text-align: right;">—<i>Chicago Tribune</i>, April 25, 1968</p>
<p>"For one priceless moment in the whole history of man, all the people on this Earth are truly one; one in their pride in what you have done, and one in our prayers that you will return safely to Earth."</p> <p style="text-align: right;">—President Richard M. Nixon, July 20, 1969</p>	<p>"One thing about working 24 hours a day, we've got a beautiful view up here."</p> <p style="text-align: right;">—Tom Stafford, May 19, 1969</p>	<p>"There's a lot of unknowns of course, and a lot of problems that could develop...and that's what we're there for...to find out if this thing will work."</p> <p style="text-align: right;">—Roger Chaffee, December 1966</p>
	<p>"From the crew of Apollo 8, we close with good night, good luck, a Merry Christmas and God bless all of you—all of you on the good Earth."</p> <p style="text-align: right;">—Frank Borman, December 25, 1968</p>	

Countdown: 2979 Days to the Moon Quotation Timeline



Countdown: 2979 Days to the Moon Quotation Timeline



Countdown: 2979 Days to the Moon – A Personal Connection

Objective: To write an informative essay expressing understanding of the influences and contributions of individuals and groups over a particular period of time.

Materials:

- *Countdown: 2979 Days to the Moon*, the book
- *Countdown: 2979 Days to the Moon* Timeline Quotation Cards (pg. 7)
- *Countdown: 2979 Days to the Moon – A Personal Connection* Graphic Organizer (pg. 11)

Procedure:

- Instruct students to discuss the *Countdown* Timeline Quotation Cards as they relate to the development of Project Apollo. Explore the emotional impact of each quote. Encourage students to choose one quote that they feel best represents the spirit of Project Apollo.
- Using the *Countdown: 2979 Days to the Moon – A Personal Connection* Graphic Organizer as a guide, instruct students to explore the historical and emotional aspects of a dramatic time in history.
- Instruct students to place their chosen quotation card in the space provided. Tell students to use *Countdown: 2979 Days to the Moon* and any other reference materials they might need to complete the phrases listed on the graphic organizer.
 - Clarify interest in subject: Students are directed to state reasons why this phase of Project Apollo intrigues them.
 - List key individuals involved in the event: Review the chapter to discover the individuals who played important roles in the events that took place during this phase of Project Apollo.
 - Describe where and when the event took place: Review and restate the information stated in the chapter.
 - Problem: Identify the struggles occurring during this phase of Project Apollo.
 - Attempts to solve problem: Describe the struggle experienced during this phase of Project Apollo.
 - Resolution: Tell how the key individuals solved the problem, if they were able to. If not, describe the issues that were left to be solved by others later.
 - Personal reflection: Encourage students to express how the events that occurred affect them on an emotional level.
- Instruct students to use the information gathered on the graphic organizer to write an informative essay with a personal slant. Encourage them to share their work with the class.

Countdown: 2979 Days to the Moon — A Personal Connection Graphic Organizer

Name: _____ Date: _____

<div data-bbox="212 388 644 661"><p><i>Place chosen quote card here</i></p></div>	<p>Clarify interest in subject:</p>	
<p>List of key individuals involved in event:</p>	<p>Describe where and when the event took place:</p>	
<p>Problem:</p>	<p>Attempts to solve problem:</p>	<p>Resolution:</p>
<p>Personal reflection:</p>		

Common Core State Standards Alignment

		Discussion Questions	Word Puzzle	Timeline	Personal Connection
English Language Arts Standards » Reading: Informational Text					
CCSS.ELA-Literacy.RI.4.1	Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	✓	✓	✓	✓
CCSS.ELA-Literacy.RI.4.2	Determine the main idea of a text and explain how it is supported by key details; summarize the text.	✓		✓	✓
CCSS.ELA-Literacy.RI.4.3	Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.	✓		✓	✓
CCSS.ELA-Literacy.RI.4.5	Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.	✓		✓	✓
CCSS.ELA-Literacy.RI.4.7	Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.	✓	✓	✓	✓
CCSS.ELA-Literacy.RI.5.1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.	✓		✓	✓
CCSS.ELA-Literacy.RI.5.3	Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.	✓		✓	
CCSS.ELA-Literacy.RI.6.1	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	✓		✓	✓
English Language Arts Standards » Writing					
CCSS.ELA-Literacy.W.4.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.				✓
CCSS.ELA-Literacy.W.4.4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.				✓
CCSS.ELA-Literacy.W.4.7	Conduct short research projects that build knowledge through investigation of different aspects of a topic.				✓
CCSS.ELA-Literacy.W.4.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.				✓
CCSS.ELA-Literacy.W.5.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.				✓
CCSS.ELA-Literacy.W.5.4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.				✓
CCSS.ELA-Literacy.W.5.7	Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.				✓
CCSS.ELA-Literacy.W.5.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.				✓
CCSS.ELA-Literacy.W.6.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.				✓
CCSS.ELA-Literacy.W.6.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.				✓
CCSS.ELA-Literacy.W.6.7	Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.				✓

Common Core State Standards Alignment

		Discussion Questions	Word Puzzle	Timeline	Personal Connection
English Language Arts Standards » Speaking & Listening					
CCSS.ELA-Literacy.SL.4.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 4 topics and texts</i> , building on others' ideas and expressing their own clearly.	✓		✓	✓
CCSS.ELA-Literacy.SL.4.4	Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.				✓
CCSS.ELA-Literacy.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 5 topics and texts</i> , building on others' ideas and expressing their own clearly.	✓	✓	✓	✓
CCSS.ELA-Literacy.SL.5.2	Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally	✓		✓	✓
CCSS.ELA-Literacy.SL.5.4	Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.				✓
CCSS.ELA-Literacy.SL.6.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 6 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly.	✓	✓	✓	✓
CCSS.ELA-Literacy.SL.6.2	Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.	✓		✓	✓
CCSS.ELA-Literacy.SL.6.4	Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.	✓		✓	✓
English Language Arts Standards » History/Social Studies					
CCSS.ELA-Literacy.RH.6-8.1	Cite specific textual evidence to support analysis of primary and secondary sources.	✓		✓	✓
CCSS.ELA-Literacy.RH.6-8.2	Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.	✓		✓	✓
CCSS.ELA-Literacy.RH.6-8.4	Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.		✓		
CCSS.ELA-Literacy.RH.6-8.7	Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.			✓	✓