

A Common Core State Standards-
Aligned Discussion & Activity Guide for
Grades 4 - 7

A SONG FOR THE COSMOS: BLIND WILLIE JOHNSON AND VOYAGER'S GOLDEN RECORD

ISBN-13: 978-1-56846-362-9

Written by Jan Lower
Illustrated by Gary Kelley
Published by Creative Editions

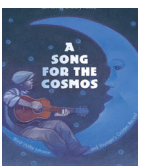
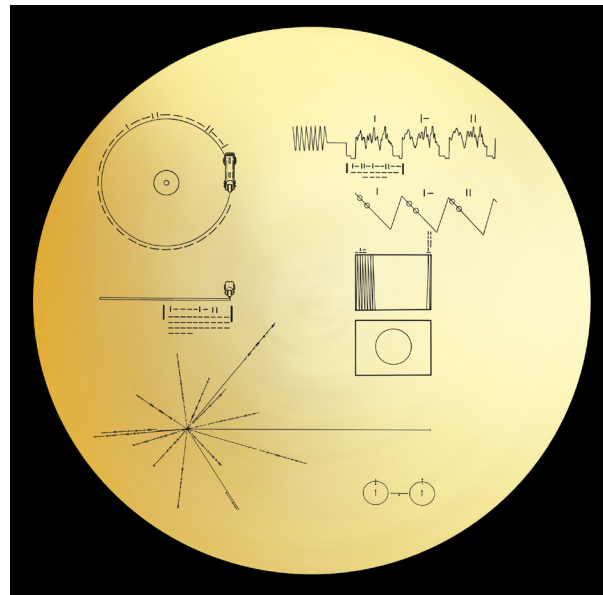
Blues guitarist Blind Willie Johnson led a hardscrabble life, but in 1977, NASA's Voyager spacecrafts were launched, each carrying a golden record to introduce planet Earth to the cosmos, and his song "Dark Was the Night, Cold Was the Ground" became the defining anthem. Weaving together elements of Johnson's biography with an account of how a team of astrophysicists, writers, and artists created the golden record for the Voyager mission, Jan Lower and Gary Kelley craft a tale that is itself A SONG FOR THE COSMOS.

Guide Created by
Debbie Gonzales, MFA



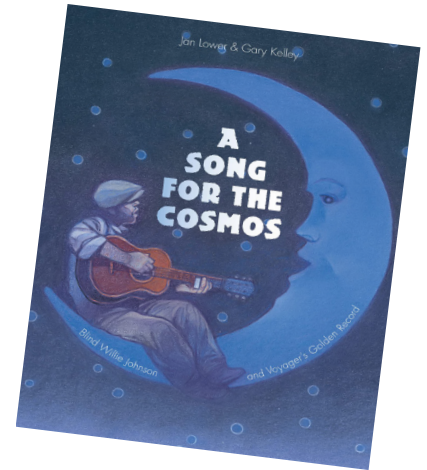
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Pre-Reading Discussion

Consider the cover illustration and the title of the book, A SONG FOR THE COSMOS: BLIND WILLIE JOHNSON AND VOYAGER'S GOLDEN RECORD.



- “Cosmos” is similar in meaning to “universe.” The universe is everything we know about, from atoms to all of interstellar space, time, matter, and energy. But when we think about the cosmos, we are considering the history of the universe, and whether it has some kind of beginning and end, and some kind of order that we have yet to discover or understand.
- Do you think that the people and animal life on Earth are alone in the cosmos? Do you believe there could be other beings somewhere? Explain your answer.
- Why would people on Earth want to send a song out into the cosmos? What message could a song communicate?
- What is a “record”? How do sounds come out of it? Why would a record be made coated with gold?
- Describe the mood of the cover illustration. How does the color palette and the arrangement of the images contribute to the mood?
- Predict what this non-fiction narrative is going to be about.

Meet Author Jan Lower

Jan Lower is the author of the non-fiction picture books *A SONG FOR THE COSMOS: BLIND WILLIE JOHNSON AND VOYAGER'S GOLDEN RECORD*, and *THE BRILLIANT CALCULATOR: HOW MATHEMATICIAN EDITH CLARKE HELPED ELECTRIFY AMERICA*. After working as a lawyer for several years helping towns and cooperative communities across the country, Jan received her MFA in Writing for Children and Young Adults from the Vermont College of Fine Arts. Born and raised near Philadelphia, Jan now lives just outside Washington, D.C. You can visit her online at janlower.com.

Meet Illustrator Gary Kelley

Gary Kelley received his degree in art from the University of Northern Iowa. He began his career as a graphic designer and art director before becoming an illustrator in the mid-1970s. His awards have included 28 gold and silver medals from the Society of Illustrators in New York, also Best-In-Show recognition in New York and Los Angeles Illustrators' Exhibitions. In addition to his professional work, Gary has lectured widely, including the Smithsonian Institution, Society of Illustrators, Disney Animation, San Francisco Academy of Art, Art Institute of Chicago, Ringling School of Art, and Syracuse University, to name just a few.



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Post-Reading Discussion

Not long ago, the Voyager space exploration mission launched with a roar into the dark, dark night, carrying a message for beings beyond the stars from the people of Earth, etched on a golden record.

- Consider the images on the preceding pages. Identify any familiar individuals, and tell all you know about them.
- Examine the illustration on Page 6 featuring Voyager in the upper part of the page and a Black man in the lower right. Why did the illustrator choose to feature these two images together in the drawing?
- Voyager 1 is the first human-made spacecraft to journey through the heliosphere (the magnetic bubble that shields our solar system from cosmic radiation) into interstellar space. Consider the efforts required to gather representations of the human experience to be included on Voyager. Why was it important to create the golden record as part of the two spacecrafts' launch?
- Examine the cover of the golden record as shown on page 31. Describe the markings on the cover. What do you think they mean? Can you guess their purpose?

They say that one day when Willie was about seven, his father argued with his new wife. Angry, she threw a pan of water, harsh with lye soap, that splashed into Willie's face. It blinded him.

- Examine the illustration on page 9 depicting Willie as a child in the lower left. What visual clues communicate Willie's emotional connection with the homemade guitar he is holding in the illustration?
- Willie was approximately seven years old when he was blinded. What impact do you think being suddenly unable to see had on Willie?
- Consider how being blind might have created a need in Willie to express himself through music.

He made songs of blessings and pain, motherless children, comfort and tears and rain. One of Willie's songs was different.

- “Dark Was the Night, Cold Was the Ground” is considered to be a gospel-blues masterpiece, even without words. Why do you think the song resonates on such a deep, emotional level with listeners of all walks of life—even to this day?
- Consider how “Dark Was the Night, Cold Was the Ground” demonstrates the universal power of music.



Willie Johnson died. His grave soon disappeared among scrub trees and Texas grass. But he was never forgotten.

- Explain why Willie Johnson remained poor, despite the popularity of his records.
- His wife Angeline said that doctors would not treat Willie Johnson because he was blind. Could there be other reasons he was refused treatment in a Texas hospital in 1945? Explain your answer.

What did these humans hear? A long-ago cry that could be understood by every heart on Earth. “Dark Was the Night, Cold Was the Ground” spoke the message of Voyager, a longing to connect in the huge vastness of space. When the last notes ended, the team knew it was a song for the golden record.

- Explain how Blind Willie Johnson’s life represents a “longing to connect with the huge vastness” of humanity. Determine how existing on the outside of society prepared him to create a piece of music that connected with listeners on such a deep, soulful level.
- The quality of the original 1927 recording featured on the golden record is scratchy and raw. Discuss how the poor condition of the selection adds to its emotional resonance.
- How do you feel when you listen to the song?

[If a space-faring] civilization intercepts Voyager and can understand these recorded contents, here is our message: This is a present from a small, distant world, a token of our sounds, our science, our images, our music, our thoughts and our feelings. We are attempting to survive our time so we may live into yours. We hope someday, having solved the problems we face, to join a community of galactic civilizations. This record represents our hope and our determination, and our good will in a vast and awesome universe.

- President Jimmy Carter

- Consider how Blind Willie Johnson’s “Dark Was the Night, Cold Was the Ground” can deepen a sense of community through the expression of loneliness and pain.
- Tell how the contents—pictures, sounds, music, science, greetings—on Voyager’s golden record contribute to President Carter’s message of hope, determination, good will, and love for all humanity.
- Do you think it was important for a golden record explaining human existence to be sent into interstellar space, to travel away from Earth for millions of years? Why or why not? How does knowing about the golden record make you feel?



Compare & Contrast Composers: A Research Project

Objective: To determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

Materials:


- A SONG FOR THE COSMOS: BLIND WILLIE JOHNSON AND VOYAGER'S GOLDEN RECORD
- A List of Artists & Musical Selections (Guide, pg. 7)
- Compare & Contrast Golden Record Composers Research Overview (Guide, pg. 8)
- Compare & Contrast Golden Record Composers Research Template (Guide, pg. 9)
- Research Materials
- Internet

Procedure:


- Using the **A List of Artists & Musical Selections** as reference, discuss the artists featured on the template. Ask the students to identify those they are familiar with. Consider the images of the musicians. Examine the similarities and differences between them all.
- Have students listen to each of the musical selections linked to the page. Discuss the varied types of instrumentation, vocals, tempos, and emotional resonance for each piece.
- Instruct students to choose one artist to compare and contrast with Blind Willie Jackson and “Dark Was the Night, Cold Was the Ground” using the **Compare & Contrast Composers Research** template as a guide. Detailed topic summaries are available in the **Compare & Contrast Composers Research Overview**.
- Instruct students to write an informative essay exploring the similarities and differences of the artists and their music. Share research and essays with the class.

A List of Artists & Musical Selections


All selections are available on www.goldenrecord.org




Blind Willie Johnson:
Dark Was the Night, Cold Was the Ground




Chuck Berry:
Johney B. Goode




Igor Fyodorovich Stravinsky:
The Rite of Spring




Mozart:
The Magic Flute



Beethoven:
Symphony No. 5
String Quartet No. 13



Bach:
The Well-Tempered Clavier



Louis Armstrong:
Melancholy Blues

Compare & Contrast Composers Research Template

Blind Willie Johnson

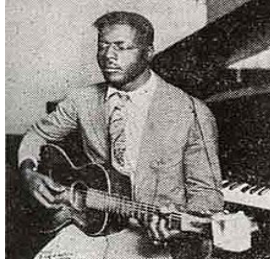
Birthplace	↔	Birthplace
Life Span	↔	Life Span
Monumental Life Moments	↔	Monumental Life Moments
Musical Genre	↔	Musical Genre
Artistic Contribution to Society	↔	Artistic Contribution to Society

Analysis:



A List of Artists & Musical Selections

All selections are available on www.goldenrecord.org

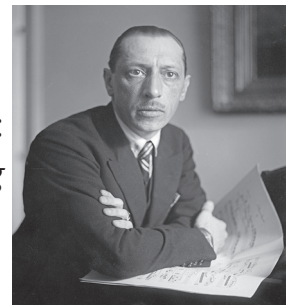


Blind Willie Johnson:
Dark Was the Night, Cold Was the Ground



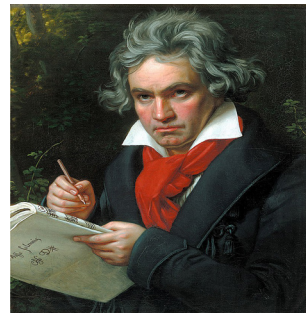
Chuck Berry:
Johnny B. Goode

Igor Fyodorovich Stravinsky:
The Rite of Spring



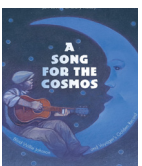
Mozart:
The Magic Flute

Beethoven:
Symphony No. 5
String Quartet No. 13



Bach:
The Well-Tempered Clavier

Louis Armstrong:
Melancholy Blues



Compare & Contrast Composers Research Overview

Blind Willie Johnson

Student Choice

Birthplace	↔	Birthplace
<i>Identify where musician was born</i>		<i>Identify where musician was born</i>
Life Span	↔	Life Span
<i>Date and year of birth and death</i>		<i>Date and year of birth and death</i>
Monumental Life Moments	↔	Monumental Life Moments
<i>Describe events or experiences that influenced his artistic expression</i>		<i>Describe events or experiences that influenced his artistic expression</i>
Musical Genre	↔	Musical Genre
<i>Identify the type of music the artist is known for</i>		<i>Identify the type of music the artist is known for</i>
Artistic Contribution to Society	↔	Artistic Contribution to Society
<i>Explain why their music has had a lasting impact on history.</i>		<i>Explain why their music has had a lasting impact on history.</i>

Analysis:

Use research to analyze the similarities and differences between the musicians. State reasons why their pieces were featured as selections on the Voyager Golden Record.



Compare & Contrast Composers Research Template

Blind Willie Johnson

Birthplace	↔	Birthplace
Life Span	↔	Life Span
Monumental Life Moments	↔	Monumental Life Moments
Musical Genre	↔	Musical Genre
Artistic Contribution to Society	↔	Artistic Contribution to Society

Analysis:



The Voyager Golden Record Updated

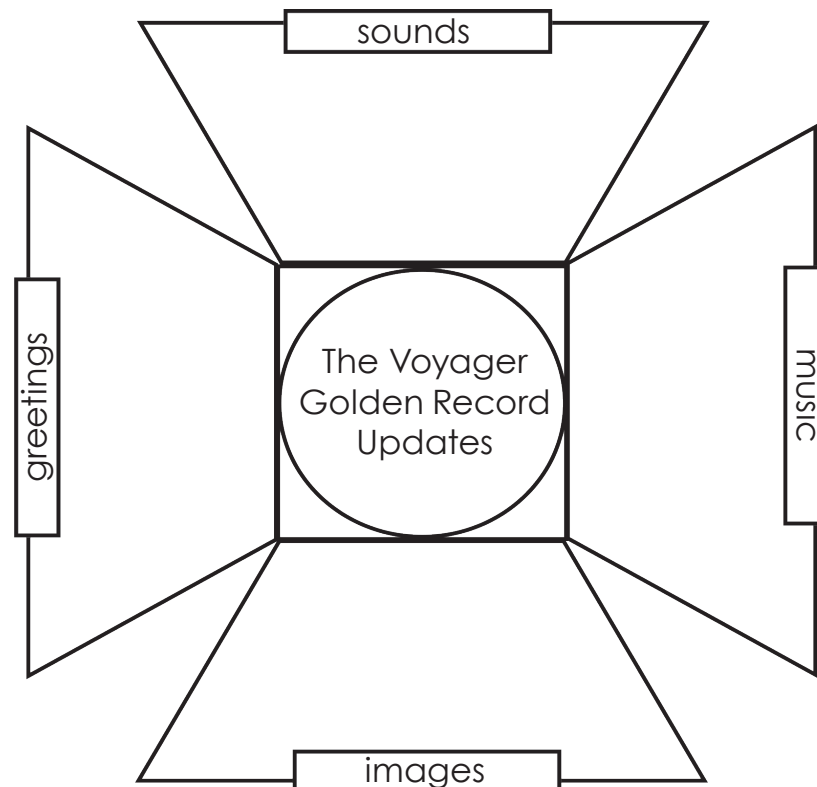
Objective: To write an informative/explanatory essay describing information clearly and accurately through analysis of content.

Materials:

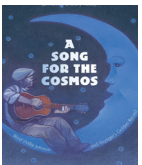
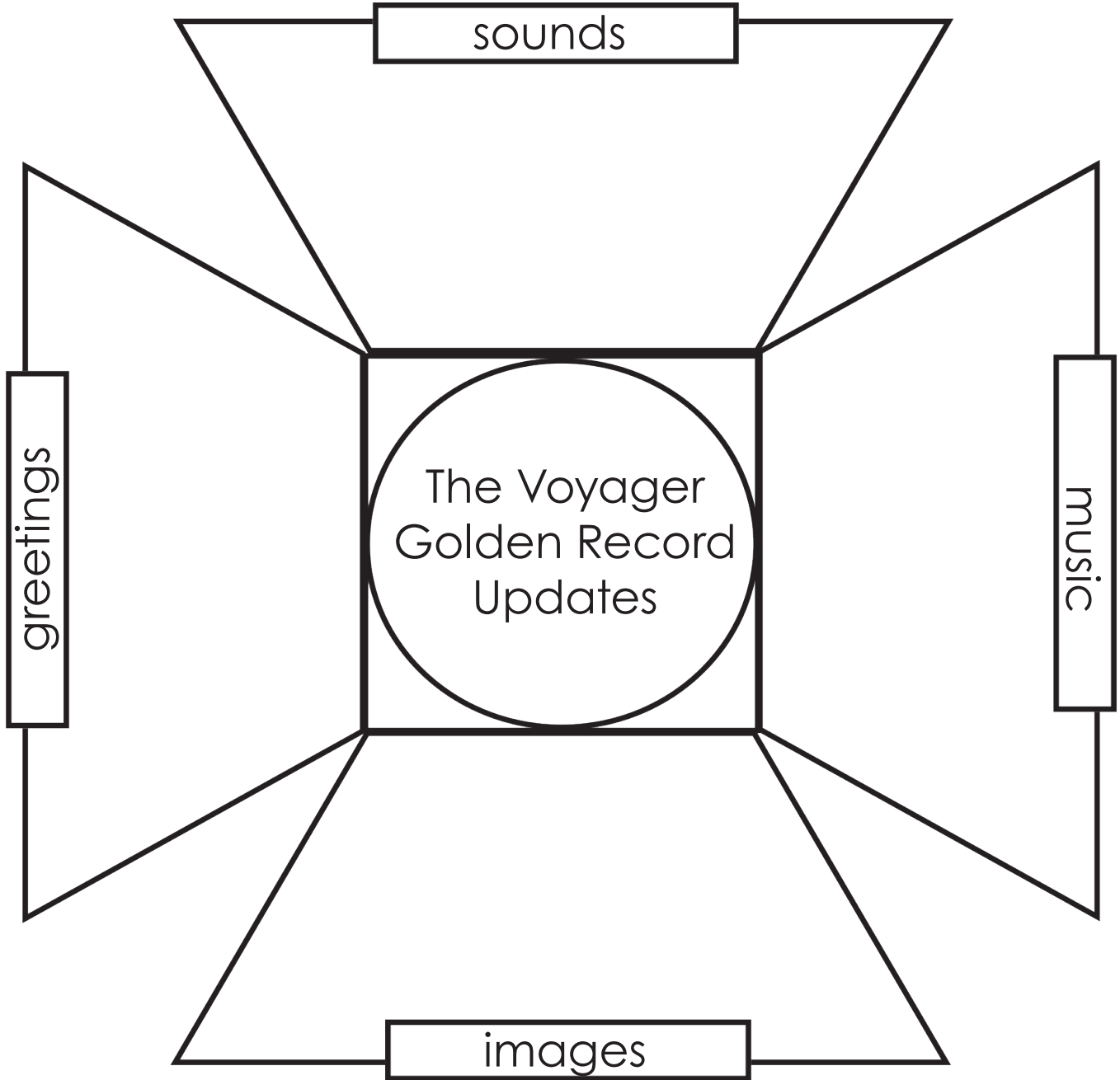
- A SONG FOR THE COSMOS: BLIND WILLIE JOHNSON AND VOYAGER'S GOLDEN RECORD (the book)
- The Voyager Golden Record Updated: A Pinwheel Perspective (Guide, pg. 11)
- Research materials

Procedure:

- Examine and discuss the selections – the specific sounds of nature, human sounds, varied cultural musical selections, and spoken greetings in 55 languages of the world – featured in the Voyager Golden Record. Considering that the contents of the Voyager Golden Record were compiled in 1977, ask students to discover content that they feel would better reflect the current contemporary culture.
- Using the **Voyager Golden Record Updated: A Pinwheel Perspective** template as a guide, instruct students to identify examples of sounds, images, music, and greetings that reflect their worldview. Instruct them to justify their reasoning for their updates.
- Have students write an informative/explanatory essay summarizing their selections and justifications for each. Have them list reasons why their suggestions would contribute to a better understanding of -the human experience on earth.



Voyager Golden Record Updates: A Pinwheel Perspective



The Voyager: A Vertical Puzzle

Use the clues featured below to solve this word puzzle.

1. _____ **T** _____
 2. _____ **H** _____
 3. _____ **E** _____
 4. _____ **V** _____
 5. _____ **O** _____
 6. _____ **Y** - _____
 7. _____ **A** _____
 8. _____ **G** _____
 9. _____ **E** _____
 10. _____ - _____ **-R** _____

1. In 1977, two Voyager _____ were launched
2. The magnetic bubble that shields our solar system from cosmic radiation
3. Science writer, journalist, and member of the golden record team
4. Composer of the String Quartet No. 3, as featured on the Voyager golden record
5. Blind Willie Johnson combined _____ music with blues instrumentation and expression
6. The number of languages represented as greetings on the golden record
7. The Voyager's mission was to conduct close up studies of Jupiter and _____
8. Member of the Voyager golden record team from Cornell University
9. Region between our Sun's heliosphere and the atmosphere of other stars
10. Type of music played by Chuck Berry as featured on the Voyager golden record



The Voyager: A Vertical Puzzle Answers

1. S P A C E C R A F **T** S

2. H E L I O S P **H** E R E

3. F **E** R R I S

4. B E E T H O **V** E N

5. G **O** S P E L

6. F I F T **Y** - F I V E

7. S **A** T U R N

8. S A **G** A N

9. I N T **E** R S T E L L A R

10. R O C K - A N D - **R** O L L

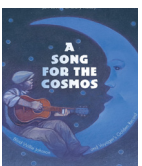
1. In 1977, two Voyager _____ were launched
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10. Type of music played by Chuck Berry as featured on the Voyager golden record



Common Core State Standards Alignment

		Discussion	Compare & Contrast	Golden Record Redux	Vertical Puzzle
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.4.7	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.4.10	By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.	✓	✓	✓	✓
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.5.2	Determine two or more main ideas of a text and explain how they are supported by key details; summarize 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.	✓	✓	✓	✓
CCSS.ELA-LITERACY.RI.6.2	Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.	✓	✓	✓	✓
CCSS.ELA-LITERACY.RI.6.3	Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text.	✓	✓	✓	✓
CCSS.ELA-LITERACY.RI.7.1	Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	✓	✓	✓	✓
CCSS.ELA-LITERACY.RI.7.2	Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.	✓	✓	✓	✓
English Language Arts Standards » Writing					
CCSS.ELA-LITERACY.W.4.1	Write opinion pieces on topics or texts, supporting a point of view with reasons and information.		✓	✓	
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.5.1	Write opinion pieces on topics or texts, supporting a point of view with reasons and information.		✓	✓	

		Discussion	Compare & Contrast	Golden Record Redux	Vertical Puzzle
English Language Arts Standards » Writing					
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.5.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.		✓	✓	
CCSS.ELA-LITERACY.W.6.1	Write arguments to support claims with clear reasons and relevant evidence.		✓	✓	
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.6.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.		✓	✓	
CCSS.ELA-LITERACY.W.7.1	Write arguments to support claims with clear reasons and relevant evidence.		✓	✓	
CCSS.ELA-LITERACY.W.7.2	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.7.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.		✓	✓	
CCSS.ELA-LITERACY.W.7.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.		✓	✓	
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.5.4	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.6.4	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 » Speaking & Listening		Discussion	Compare & Contrast	Golden Record Redux	Vertical Puzzle
CCSS.ELA-LITERACY.SL.7.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.	✓	✓	✓	✓
CCSS.ELA-LITERACY.SL.7.4	Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.		✓	✓	

