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Using Companion Texts to Widen Student Perspective Across the Curriculum

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ABSTRACT

This article is based on an unexpected experience between a grandfather (William Bintz, the first author) and his six-year-old granddaughter. This experience sparked a collaborative inquiry project that explored companion texts as a new way to develop paired texts. The purpose of this article is to share examples of companion texts and instructional strategies to use across the curriculum. We begin by describing four theoretical frameworks underpinning the notion of companion texts. These include the concept of paired text, the benefits of paired text, the process of intertextuality, and reader response theory. Next, we describe companion texts as a new way to pair texts and include a rationale for the development and use of companion texts across the curriculum. Then, we share samples of instructional strategies that teachers can use with companion texts to widen student perspectives and enrich knowledge across the curriculum. We end with concluding thoughts.

KEYWORDS

literature; paired text; companion texts; intertextuality

Teachers can be bearers of gifts . . . We have the privilege of introducing good literature to young, imaginative minds. (Cullum, 1967, p. 23)

his article introduces the notion of *companion texts* as a new way to develop paired texts and shares examples of instructional strategies teachers can use with these texts to widen student perspective and learning across the curriculum. We begin with a vignette between a granddaughter and grandfather (William) that sparked our interest in developing and using companion texts in the classroom. We situate companion texts within four major theoretical frameworks: (a) the concept of paired text, (b) the benefits of paired text, (c) the process of intertextuality, and (d) reader response theory. Next, we describe companion texts as one way to pair texts, include a rationale for the development and use of companion texts, and share examples of companion texts across the curriculum. Then, we share samples of instructional strategies teachers can use with companion texts to widen student perspectives across the curriculum. We end with concluding thoughts.

Vignette

One of us (William) has a six-year-old granddaughter who just finished kindergarten at the time. Since preschool, she and I have practiced a tradition of visiting a local bookstore to browse and

purchase picturebooks. Afterward, we went to an ice cream parlor to enjoy some ice cream while we read a few of the picturebooks we bought together.

Recently, she and I visited one bookstore, sat on the floor, and started browsing the picturebooks. At one point, my granddaughter showed me the front cover of a book and stated, "Grandpa, look at this one. I like it." The book was *The Hello, Goodbye Window* by Norton Juster. (Juster, 2005). Here is a precis:

This story describes and illustrates the loving relationship between Nanna, Poppy, and their granddaughter. When the granddaughter visits, she must pass a large kitchen window. The window is important to the little girl because this is how she first sees Nanna and Poppy when she visits them. Sometimes, they play peek-a-boo with her or make funny faces through the window. Once inside the house, other fun and games continue. The colorful illustrations of Nanna and Poppy suggest a multicultural family and interracial marriage and thus have much power and potential to address the topic of diversity.

I asked my granddaughter, "Why do you like that book?" She responded, "It has pretty colors, and a little girl like me is in the story." I asked, "How is she like you?" She started flipping through the pages of the book, stopped at one point, and stated:

See, here's the little girl, and here's her grandma and grandpa. They are playing with the little girl inside their house. I like it because it's like you, grandma, and me. You and grandma play with me when I come to your house. Let's buy it.

I bought it and we read the story while later sharing a delicious chocolate sundae.

Reflection

Afterward, I reflected on this experience as a grandfather and a literacy teacher educator. As a grandfather, reading this picturebook to my granddaughter at the ice cream parlor was an enjoyable experience. While eating her chocolate sundae, she stopped periodically and made many personal connections to the little girl and her grandparents. For example, she stated, "See, Grandpa, the little girl is playing with her grandma and grandpa, just like you and me when we play with my dolls."

As a literacy teacher educator, I was not surprised but intrigued by the personal connections she made to the text. I read the picturebook again by myself, and, like her, also made several personal connections to the text. For example, the picturebooks reminded me of the fun times I had when I visited my own grandparents as a child. It also reminded me of two friends who, like the grandma and grandpa in the story, enjoy a happy, interracial marriage. At the same time, I also made professional connections between the picturebook, *The Hello, Goodbye Window* and another one of my favorite picturebooks, *The Case for Loving: The Fight for Interracial Marriage* by Selina Alko. Here's a precis:

The Case for Loving: The Fight for Interracial Marriage (Alko, 2015) tells the story of a remarkable but little-known family consisting of Mildred Loving, her husband Richard Perry Loving, and their three children. Mildred and Richard fell in love and were married in Washington, D.C. It was an interracial marriage. When they relocated back to their hometown in Virginia, they were arrested because of a state law that prohibited interracial marriage. Mildred and Richard were determined not to allow their children or themselves to consider their marriage was wrong. For years, they fought the unfair law, eventually bringing their case before the highest

court in the land. In 1967, the Supreme Court issued its decision in Loving vs. Virginia, in favor of Mildred and Richard Loving.

I shared this whole experience with a colleague who is also a literacy teacher educator (Author 2). At one level, we saw these two picturebooks as a traditional paired text that shares a variety of intertextual connections. For example, both picturebooks address the topic of cultural diversity and interracial marriage. Both involve happy families, one with married grandparents from different cultures and a granddaughter, and the other with married parents from different races and three children. Both include illustrations that beautifully complement the text.

At another level, we saw important differences between this paired text. These differences included genre, narration, tone, time, and purpose. *The Hello, Goodbye Window* is realistic fiction, whereas The Case for Loving: The Fight for Interracial Marriage is nonfiction and includes an author's note, bibliographic references, and suggestions for further reading. *The Hello, Goodbye Window* is told through first-person narration by the little girl, whereas *The Case for Loving: The Fight for Interracial Marriage* is told through third-person narration. The tone of *The Hello, Goodbye Window* is evocative. It indirectly suggests, rather than directly states, through illustrations that Nana and Poppy are in an interracial marriage. The tone of *The Case for Loving: The Fight for Interracial Marriage* is not suggestive, but direct and factual. *The Hello, Goodbye Window* is told as a contemporary story, one that is occurring in present time, whereas *The Case for Loving: The Fight for Interracial Marriage* is a historical story, one that occurred in 1958. Lastly the purpose of *The Hello, Goodbye Window* is to entertain, whereas the purpose of *The Case for Loving: The Fight for Interracial Marriage* is to inform.

In the end, we continue to see these two picturebooks as a traditional paired text. At the same time, we see this pair of picturebooks as a different way to conceptualize and a new way to develop paired text. Specifically, we view these picturebooks as companion texts.

Companion Texts

The word companion is defined as "one of a pair of things intended to complement or match each other" (Google Dictionary, n.d.). Typically, this definition of "things" often refers to two people, be they companions, friends, colleagues, significant others, married couples, etc. While a pair, companions are also independent people who live their own lives in their own ways. At the same time, companions enjoy each other's company and spend much time together. In the process, they enrich their own life as well as the life of their companion.

Here, we refer to two texts, not as human companions, but as companion texts. They are a paired text on a particular topic in which each text complements and enriches the other in unique ways. Here, we focus on one way; namely, companion texts complement each other by working together to widen student perspective and enrich knowledge across the curriculum.

We believe that widening student perspective is essential. For some time now, Carolyn Burke (1995), an internationally recognized reading and curriculum theorist, has stated that a significant goal of curriculum and curriculum development is to widen student perspective. One way to widen student perspective is to provide multiple and different perspectives on a particular topic or theme. Companion texts do just that.

For example, reading *The Hello, Goodbye Window* first provides not only a heartwarming and entertaining story but also an excellent introduction to the notion of cultural diversity and interracial marriage. Among other things, this introduction can provide some initial background knowledge for students unfamiliar with interracial marriage, as well as extend existing background knowledge for students who are already familiar with interracial marriage.

The Case for Loving: The Fight for Interracial Marriage is a companion text because it widens the perspective on and enriches the knowledge of cultural diversity and interracial marriage. This picturebook provides an important historical perspective on cultural diversity and interracial marriage, a perspective missing in The Hello, Goodbye Window. For instance, Nanna and Poppy are depicted as happy, loving, and healthy grandparents in The Hello, Goodbye Window. However, there is no information included, in text or illustration, that directly states or indirectly suggests, that Nanna and Poppy may have experienced challenges before, during, or after their interracial marriage.

Moreover, *The Case for Loving: The Fight for Interracial Marriage* widens the historical perspective on interracial marriage. Unlike Nanna and Poppy, it describes the many significant challenges Richard Loving and Mildred Jeter faced before, during, and after their interracial marriage in 1958. One challenge was that they lived and wished to marry in Virginia; however, Virginia, and many other states at the time, was a segregated state. Therefore, mixing of races was strictly prohibited.

Another challenge was the fact that interracial marriage was illegal at the time. Laws at the time, existed to prosecute and punish people who married interracially. Nevertheless, Richard and Mildred married. Soon after, however, they were arrested, charged with "Unlawful Cohabitation", and imprisoned in jail. Several days later, were given an ultimatum by law enforcement: leave Virginia or stay in jail. Reluctantly, they moved to Washington, D.C. After six years, however, they moved back to Virginia in 1966, vowing to overturn the law. Ultimately, they did just that. They won their case in the Supreme Court. Unfortunately, they also continued to encounter and overcome many challenges that continued in the state.

Since then, of course, increasing numbers of people have engaged in interracial marriages in Virginia, across the United States, and around the world. Fortunately, many of these marriages did not have to face challenges like segregation and the threat of incarceration. However, Richard Loving and Mildred Jeter did face both and, although it wasn't documented in this picturebook, continued to face other challenges and threats, even though they won their case in court.

Ultimately, we see this paired text as an example of a *companion text*. Individually, each addresses cultural diversity and interracial marriage in different ways. Together, they both introduce and widen student perspective on cultural diversity and interracial marriage. In the next section, we describe the theoretical framework underpinning the notion of companion texts.

Theoretical Framework

Paired Text. Paired text is not a new concept. Much research has been conducted and much professional literature has been published on the development and implementation of paired text (Ciecierski et al., 2016, 2017; Lupo et al., 2019). Historically, paired text have been defined conceptually as two texts that are related in some way, e.g. genre, theme, topic, etc. (Short et al., 1988). It is primarily a curricular resource that is based on a multiple-text mentality. This mentality posits that multiple, interrelated texts help students read broadly and deeply, make intertextual connections between texts, and learn new information from, about, and through books. Instructionally, paired text is grounded in a theory that posits learning is a matter of creating patterns that connect (Bateson, 2000). In other words, students learn something new when they can make connections to something they already know.

Benefits of Paired Text. Benefits of Paired Text. When thinking about the benefits of paired text, we find it helpful to remember the words of Plotinus (The Six Enneads, n.d.), who stated, "It is a wise man who can learn about one thing from another." From this perspective, we

believe that paired text has several benefits. Among others, these include: 1) they enable students to learn about one book from the other and reading and sharing understandings of paired text can contribute to learning across all subjects (Neufeld, 2005, p. 302), 2) they enable students to share and extend understandings of each text differently than if only one text had been read and discussed (Short et al., 1996, p. 537), 3) they enable students to read one text and in the process build background knowledge for reading a second, related text (Soalt, 2005, p. 680), 4) they provide experiences with multiple genres and content areas, 5) they demonstrate how different genres provide students with different lenses for interpreting text (Murray, 1985, p. 122) and therefore different ways of knowing about texts (Paretti, 1999), 6) they increase vocabulary by seeing exact words in different contexts, and 7) they increase motivation to explore topics students are not initially interested in (Soalt, 2005, p. 681).

Intertextuality. Intertextuality is a term first coined in the 1960s by Julia Kristeva (Allen, 2000) and essentially means "to weave together" (King-Shaver, 2005, p. 1). Since then, much professional literature continues to focus on the concept of intertextuality. Today, it is commonly referred to as making connections between texts (Harvey & Goudvis, 2017).

Intertextuality refers to the "personal connections students make between the books they are currently reading and their past experiences" (Short et al., 1988, p. 358). Paired text is based on the notion of intertextuality. Reading paired text invites and supports the making of intertextual connections across texts. In the process, students develop both an expectation for connections and strategies for searching for connections more productive and wide-ranging (Short et al., 1996, p. 537).

The Common Core State Standards (CCSS, 2010) does not explicitly use the term intertextuality. However, the CCSS does provide a rationale for developing and using paired text in the classroom. One standard states that students will "Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take" (CCSS, 2010). Operationally, paired text is a curricular resource that helps teachers at all grade levels and all content areas to put intertextuality into action and address this CCSS standard in the classroom at the same time.

Reader Response Theory. Historically, reader response theory, also known as the transactional theory of literature, gained international attention based on the work of Louise Rosenblatt (1994). Fundamentally, this theory posits that a literary text picturebook, short story, novel, poem, etc.) does not inherently possess a fixed, correct, or final meaning. In fact, it posits that a literary text has multiple meanings, what Van Leeuwen (2015; see also, Halliday, 1978) characterizes as meaning potentials, depending on the reader, the context, the purpose for reading, etc. The meaning(s) of a literary text is the result of "the two-way transactional relationship between the reader and the text" (Rosenblatt, 1978, p. 21). Simply stated, reader response theory posits that a literary text does not have a predetermined meaning and the role of the reader is to discover that single meaning; rather, a literary text has meaning potentials, and the role of the reader is to create personal meanings depending on personal interest, background knowledge, purpose and context for reading, opportunities for discussion, etc.

Finally, this theory posits that reader response of personal meanings can be viewed along a continuum ranging from aesthetic at one end and efferent at the other end (Rosenblatt, 1995; see also, Rosenblatt, 1994; 2005). Aesthetic refers to a personal response and is commonly referred to as making connections to self and others. Efferent refers to a response that is information and commonly referred to as making connections to similar books, topics, and themes. Making aesthetic or efferent, or both, depends on the reader's stance and the purpose of the reading.

Example of Reader Response Theory. The vignette described earlier is an example of reader response theory at work. For example, my granddaughter and I responded very differently to *The Hello, Goodbye Window*. Essentially, and of course, without knowing it (she's five years old), my granddaughter took an aesthetic stance to *The Hello, Goodbye Window*. During and after reading aloud the picturebook to her, she made personal responses and connections to the text. For example, she made connections to herself and the girl in the story. She made connections to her grandparents. Like the girl, she has two grandparents. She made connections to her parents. Like the girl, her parents drop her off at her grandparents' house so they can spend time together. She made connections to games. Like the girl, her grandparents play games with her in their house. Lastly, like the girl, she finds it hard to say goodbye but knows she will visit her grandparents again soon.

I, too, took an aesthetic stance to *The Hello, Goodbye Window*. During and after reading it aloud to my granddaughter, I made personal connections to the text. For example, I made connections to the times I visited with my own grandparents, and I also played games with them in their house. I also made connections to friends of mine who are involved in interracial marriages.

Afterward, however, I reread the picturebook. I did so because I wanted to take an efferent stance on the text. Specifically, I wanted to read the text from the perspective of a teacher and reading educator to explore how I might be able to use it in my graduate courses. In other words, I wanted to make professional, not just personal, connections to the text.

One efferent connection was that I saw this paired text as an opportunity to illustrate the power and potential of taking a contemporary and historical perspective on an important historical event, in this case, interracial marriage. Another connection was that I saw this paired text as a different way to pair text. I already knew that there are a variety of ways to pair text. One way is to pair contradictory texts, e.g., two texts tell the same story but in contradictory, and corresponding texts, e.g., two texts address the same theme but in different ways. I saw this paired text as another way to pair companion texts.

Examples of Companion Texts Across the Curriculum

In this section, we share examples of companion texts across the curriculum, specifically in English Language Arts, Social Studies, Science, and Math.

English Language Arts

Cycling: Lance Armstrong's Impossible Ride (Sandler, 2006) and Cycling: Lance Armstrong's Impossible Ride (Sandler, 2006) are companion texts on the topic of famous and little-known professional cyclists.

Cycling: Lance Armstrong's Impossible Ride (Sandler, 2006). This picturebook is an inspirational and illustrated biography of cyclist and cancer survivor Lance Armstrong. He is regarded as one of the greatest cyclists in sports history at both the amateur and professional levels. In 1991 he was the National Amateur Cycling Champion. He went on to win six consecutive Tour de France races. Afterward, he was diagnosed with cancer and courageously survived. Lance Armstrong's accomplishments in the sport of cycling are unparalleled in the 20th century.

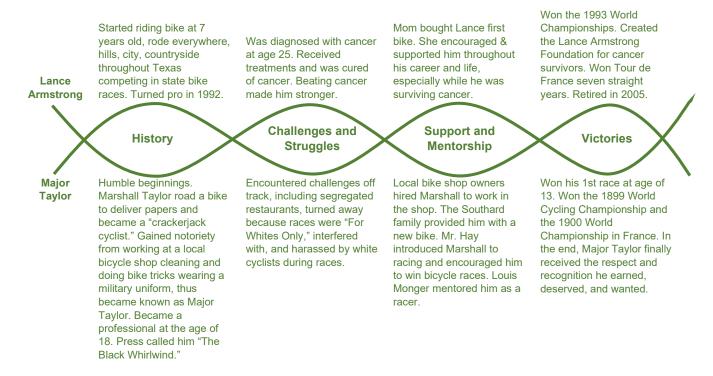
Major Taylor: Champion Cyclist (Cline-Ransome, 2004) is a companion text because it widens the perspective not only on the life of Lance Armstrong and the sport of international cycling but also on important but little-known accomplished cyclists who preceded him. This picturebook tells the remarkable story of Marshall Taylor, an internationally recognized and accomplished cyclist who preceded Lance Armstrong by almost a century. Taylor grew up in

Indiana, and by 1891, people in his community were amazed at this thirteen-year-old black boy who could perform amazing stunts on his bicycle. Over the years, people began to call this teenager Major Taylor because of the red military uniform he wore while riding his bicycle. At the age of eighteen, he became a professional cyclist. Later, Major Taylor became an American hero by winning the world cycling title at the age of twenty-one, while also encountering and battling racism all along the way.

This companion text can broaden the perspective on the history of international cycling. One text can be used to introduce Lance Armstrong as a famous international cyclist. It can also extend understanding for students already familiar with Lance Armstrong. At the same time, this companion text can introduce Major Taylor as an accomplished but little-known international cyclist, as well as spark student curiosity about other little-known sports figures who have not received their well-deserved recognition.

Figure 1 illustrates an instructional strategy in the form of a graphic organizer that students can use to record and discuss intertextual connections between a companion text. We used it with companion texts on Lance Armstrong and Major Taylor. In addition, Table 1 illustrates other companion texts on the topic of sports and sports figures.

Figure 1: Interwoven Companion Texts



Social Studies

A Picture Book of Lewis and Clark (Adler, 2003) and My Name is York (Steenwyk, 1997) are companion texts based on the topic of the Lewis and Clark expedition.

A Picture Book of Lewis and Clark (Adler, 2003) provides an informative and colorful introduction to Meriwether Lewis and William Clark and their famous journey into unknown territory. It provides a historical account of the "Corps of Discovery" led by Lewis and Clark, as they set out in 1804 on a journey for American expansion. The explorers overcame many

difficulties along the way, such as bitter cold winters, dangerous snakes, troublesome mosquitoes, grizzly bears, and endless rain and snowstorms. Ultimately, Lewis and Clark were triumphant, reaching the Pacific Ocean in November 1805.

While informative and enjoyable, this picturebook focuses the narrative almost exclusively on Lewis and Clark. For example, the "Corps of Discovery" consisted of a total of thirty American explorers, but little, if any, information was provided on any of the other explorers. One of the explorers, however, was a man named York. He was Captain Clark's enslaved person and accompanied Clark on this journey westward in hopes of becoming a free man.

My Name is York (Steenwyk, 1997) is a companion text to A Picture Book of Lewis and Clark (Adler, 2003) because it provides a broader perspective to this historical event and the people involved in it. Unlike A Picture Book of Lewis and Clark, which is told in 3rd person narration, My Name is York is told by York in first person narration. Throughout the story, York invites readers into his world and in the end reveals his secret. Unlike Captain Clark, York seeks freedom, not the "Western Waterway." He also reveals pride when Captain Clark carved the names of all "Corps of Discovery" members on a pine tree after reaching the Pacific Ocean, including the name of York.

This companion text can broaden the perspective on the famous Lewis and Clark expedition. A Picture Book of Lewis and Clark can be used to introduce students to Lewis and Clark and the adventure of Western Expansion. It can also be used to extend understanding of students who already possess some understanding about the expedition. My Name is York widens the perspective by introducing and acknowledging York, a famous but little known African American historical character who was a valuable member of the expedition.

Figure 2 illustrates an instructional strategy in the form of a graphic organizer that students can use to record and discuss intertextual connections between a companion text. Here, we use it with the companion texts A Picture Book of Lewis and Clark and My Name is York.

Figure 2: Complimentary Companion Texts

York

• Both texts identify York as the lifelong enslaved person of Captain William Clark and accompanied Clark on the journey westward.

Sacagawea

 Both texts identify Sacagawea as a North American Indian woman and wife of Canadian interpreter Toussaint Charbonneau, also a member of the Corps of Discovery and describe her importance to the expedition by helping Lewis & Clark befriend potential hostile Indians.

Dangers & Discoveries

 Both texts identify dangers on the journey including snakes, mosquitoes, large gnats, grizzly bears, freezing weather, water rapids, as well as discoveries including immense herds of feeding buffalo, unknown species of plants & flowers, native forests & high mountain ranges.

Triumphs

 Both texts identify and describe the ultimate triumph of the Lewis & Clark expedition, namely, they successfully found a Northwest Passage and in the process journeyed back and forth acrossthe vast American continent.

Corps of Discovery

• Both texts refer to the Corps of Discovery as a group of more than 30 American explorers who accompanied Lewis & Clark on a journey west of the Mississippi River.

Dreams

 Both texts describe personal dreams. Lewis & Clark dreamed of finding the Northwest Passage to the Pacific Ocean. York dreamed about the passage, but also dreamed about finding freedom.

Table 2 presents companion texts on the Lewis and Clark expedition, while Table 3 features additional companion texts covering various Social Studies topics.

Science

Star Stuff: Carl Sagan and the Mysteries of the Cosmos (Sisson, 2014) and Look Up! Henrietta Leavitt, Pioneering Woman Astronomer (Burleigh, 2013) are companion texts on the topic of astronomers and astronomy.

Star Stuff: Carl Sagan and the Mysteries of the Cosmos is a biography of the famous astronomer. As a boy, Carl Sagan was an imaginative child, curious about everything. The 1939 World's Fair fascinated him. There, he saw a mechanical man and a time capsule filled with messages to the future. Carl Sagan, however, was fascinated by stars; he spent many hours at the library reading books about stars and astronomers who studied planets. Over time, he became Dr. Carl Sagan and, with other scientists, used mechanical explorers to study planets. These explorers collected and sent data back to Earth. Based on these data, he and his team prepared to launch Voyager 1 and Voyager 2, carrying greetings from Earth to space.

Look Up! Henrietta Leavitt, Pioneering Woman Astronomer, tells the story of Henrietta Leavitt, a pioneering astronomer who was amazed by the brilliance of stars and the vastness of the sky. How high is the sky? is the question she asked as a young girl. She used the position of stars to help her answer the question. Later, as an astronomy student, she was fascinated with vast distances and the notion of light years. After graduation, she worked at an observatory, peering through a magnifying glass to measure tiny star dots on photographs of the night sky. Day after day, she studied new photographs of the stars. One day, she saw a pattern in the blinking of stars. This pattern allowed her to determine how far the star is from the Earth. Her discovery allowed other astronomers to make new discoveries about the Milky Way and the existence and distance of other galaxies.

This companion text can broaden the perspective on the history of astronomers and astronomy, as well as understanding famous and little-known pioneers of space. Star Stuff: Carl Sagan and the Mysteries of the Cosmos can introduce or extend understanding of the valuable contributions made to science and astronomy by the famous scientist Carl Sagan. It reminds readers of the valuable contributions he made during his life, as well as the significant influence he has had on astronomers today and in the future. Look Up! Henrietta Leavitt, a Pioneering Woman Astronomer, can introduce and extend understanding of the famous but little-known female astronomer Henrietta Levitt.

Figure 3 illustrates an instructional strategy in the form of a graphic organizer that students can use to record and discuss intertextual connections between companion texts. Here, we used it with *Star Stuff: Carl Sagan and the Mysteries of the* Cosmos and *Look Up! Henrietta Leavitt, Pioneering Woman Astronomer*.

Figure 3: New Understandings, Ways of Thinking, Inquiry Questions

My new understanding about these famous scientists

 Carl Sagan was curious and imaginative about everything, especially the cosmos, throughout his life. He asked questions, sought answers, studied diligently, and read profusely. He developed the idea of sending mechanical explorers to gather data about planets, e.g. Voyager 1 and Voyager 2. Henrietta Leavitt was curious, too, about stars, specifically the distance of stars from earth.

My new way of thinking differently about this tipic (universe)

• From Sagan, I am thinking differently about stars, e.g each star is a sun, stars made the ingredients of life, and interstellar space. and the vastness of the universe. From Leavitt, I am thinking differently about vast distances, the importance of astronomy, and how the tiniest discovery can lead to important findings.

My new inquiry question

• How did Carl Sagan become such a popular TV personality in the 1960's? How is the scientific work of Sagan and Leavitt interconnected with the work of Stephen Hawking? What are asteroids and cosmic dust? Why do some stars blink? How far away is the Milky Way? How high is the sky?

Table 4 illustrates other companion texts on different topics in science.

Mathematics

What's Your Angle, Pythagoras? (Ellis, 2004) and Sir Cumference and the Great Knight of Angleland (Neuschwander, 2001) are companion texts on the topic of angles and the Pythagorean theorem.

What's Your Angle, Pythagoras? tells the story of a young, curious boy named Pythagoras who loved solving problems. He helps two builders balance crooked columns on a temple and finds a quicker route for his father to deliver his tiles to Crete. One day, while on a trip with his father to Egypt, Pythagoras meets Nef, a master builder, who uses a rope to teach him a special number pattern. Pythagoras uses this pattern to solve problems involving right angles. This pattern is the Pythagorean theorem.

Sir Cumference and the Great Knight of Angleland uses clever and informative wordplay to tell the story of Radius, a young boy who is a squire but wants to be a knight. He is the son of Sir Cumference and Lady Di of Ameter, and his teacher is Sir D'Grees, who teaches him to ride his horse at specific angles – right angles and straight angles. To be a knight, Radius must undergo a quest. He must find King Lell, who has mysteriously disappeared. To help, his parents give him a medallion in the shape of a perfect circle, and Sir D'Grees reminds him to remember right angles. Radius encounters a village with rooftops pointing in steep angles and calls them "cute." Then, he travels to the Mountains of Obtuse and eventually to a walled castle, where he finds a note from the brothers Zig and Zag about how to find King Zell. Radius follows the instructions and uses the medallion to follow which paths to take. Eventually, he finds and frees King Lell.

This companion text can widen the perspective on introducing or extending the understanding of the mathematical importance of the Pythagorean theorem. It can also introduce or extend our understanding of Pythagoras, the famous mathematician who developed and applied the theorem in real life. In many ways, this companion text can introduce or extend the mathematician behind the man and the man in front of the math.

Figure 4 illustrates an instructional strategy in the form of a graphic organizer that students can use to record and discuss intertextual connections between companion texts. Here, we used it

with What's Your Angle, Pythagoras? A Math Adventure and Sir Cumference and the Great Knight of Angleland: A Math Adventure.

Figure 4: Intertextual Connections Chart

Book Title	Mathematical Names	Mathematical Concepts	Journey	Discovery
Sir Cumference and the Great Knight of Angleland	Main characters include Radius, son of Sir Cumference & Lady Di of Ameter, and squire to Sir D'Grees, King Lell's pet dragons, Zig & Zag. Locations include the Kingdom of Angleland, the a(cute) rooftops, and the Mountains of Obtuse, Radius takes a knightly angle (a right angle) to the castle.	Circumference, diameter, acute, obtuse, and right angles, degrees,	King Lell of Angleland has mysteriously disappeared. Radius must find him. On horse, he travels through the kingdom to the King's castle. Using a medallion to make knightly right angles, he enters the castle only to find two fire-breathing dragons. The dragons are King Lell's pets and help Radius rescue the King who proclaims Radius as Sir Radius.	At one level, Radius successfully discovered the whereabouts of King Lell and saved him from harm. At another level, Radius discovered power and potential of angles, especially the Knightly right angle, to solve real-life problems. He also discovered differences between acute and obtuse angles in terms of degrees.
What's Your Angle, Pythagoras?	Main characters include Pythagoras, Saltos (salt) and Pepros (pepper), Leapus and Boundus	Balance vs. imbalance, vertically and horizontally straight, column, relationship between distance & time, right angles, base, triangles, right triangles, squares, length, squaring, sides. Pythagorean Theorem.	Pythagoras's father is a merchant who sells tiles. He and Pythagoras set sail for Egypt and arrive in Alexandria. There, they meet Nef, a builder of buildings. Nef shows Pythagoras the secret of his buildings, a knotted roper in the shape of a right triangle. Pythagoras uses this triangle to solve problems with leaning buildings, and a quicker route for his father to sail to Crete.	Historically, Pythagoras became a philosopher, musician, and astronomer. However, his legacy is as a mathematician who made a famous discovered. Today his discovery is commonly referred to as the pythagoreum theorem. $a^2 + b^2 = c^2$ when a and b are two legs of a right triangle, and c is the side opposite the right angle.

Table 5 illustrates other companion texts on different topics in mathematics.

Concluding Thoughts

We began this article with a vignette about a reading experience between Author 1 and his six-year-old granddaughter. This vignette sparked a collaborative inquiry project that explored a new way to develop and use companion texts across the curriculum. The results of this inquiry project raise several implications for curriculum, instruction, and assessment.

Regarding curriculum, we believe national and/or state academic standards are the driving force behind curriculum and curriculum development. From a blended genres perspective, one implication is that teachers become curriculum developers. Teachers use academic standards as a starting point to develop blended genres that address these standards.

A blended genres perspective also raises implications for instruction. One implication is that teachers move from a single-text to a multi-text view of reading and reading instruction. Like paired text in general, a blended genre consists of two texts or readings designed to be read together in a single reading and learning experience. Reading instruction is not viewed as reading single but multiple texts.

Lastly, a blended genres perspective raises implications assessment. In general, much reading assessment is based on a single text, uses text-based and objective instruments like a fill-in-the-blank worksheets, multiple choices questions, and summaries/retellings of the text, and focuses on text-based elements like main idea, character, setting, problem, solution, etc. One implication is that assessment of blended genres focuses not on each text, but on the reader creating intertextual connections between the two texts. Intertextual connections can, and often do, differ from reader to reader. From this perspective, creating and sharing intertextual connections offer readers to not only create personal meanings, but also learn multiple meanings from others. In the end, we hope this article will do for readers what a granddaughter did for her grandfather and his colleague. It allowed them to start new conversations and spark new thinking about the untapped and unlimited potential of companion texts.

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Table 1: Sports and Sports Figures

Topic	Text #1	Text #2
Golf: These companion texts widen the perspective on the sport of golf by introducing/extending understanding about a little known, but famous, character named William Powell	Golf Course Aerial Photobook: 30 Best Selected Images of Most Beautiful Golf Courses in the World (Cooper Photo Gallery, 2022)	Twice as Good: The Story of William Powell and Clearview, the Only Golf Course Designed, Built, and Owned by an African American (Michelson, 2012)
Little League Baseball: These companion texts widen the perspective on the history of the Little League Baseball World Series by introducing/extending understanding about the Cannon Street YMCA All- Stars.	Baseball for Kids: A Young Fan's Guide to the History of the Game (MacKinnon, 2020)	Let Them Play (Raven, 2005)
Professional Baseball: These companion texts widen the perspective on professional baseball by introducing/extending understanding about a little known, but famous, deaf baseball player named William Hoy.	Baseball's Greatest Players: 10 Baseball Biographies for New Readers (Martin, 2022)	The William Hoy Story: How a Deaf Baseball Player Changed the Game (Churnin, 2016)
Japanese Internment Camps: These companion texts widen the perspective on Japanese internment camps by introducing/extending understanding of day-to-day life of Japanese Americans during World War II.	Write to Me: Letters from Japanese American Children to the Librarian They Left Behind (Grady, 2019)	Baseball Saved Us (Mochizuki, 1993)
Women's Professional Baseball Team: These companion texts widen the perspective on professional baseball by introducing/extending understanding of women as professional baseball players and highlighting Marcenia Lyle, the 1 st woman to play for a professional baseball team.	Meet the Philadelphia Dolly Vardens: Inspired by the First African American Women's Professional Baseball Team (Brinson, 2020)	Catching the Moon: The Story of a Young Girl's Baseball Dream (Hubbard, 2005)
Women's Olympics: These companion texts widen the perspective on women's Olympics by introducing/extending understanding of two, historic women Olympians: Lucille Godbold and Wilma Rudolph.	Wilma Unlimited: How Wilma Rudolph Became the World's Fastest Woman (Krull, 2000)	Long-Armed Ludy and the First Women's Olympics (Patrick, 2019)
Professional Baseball: These companion texts widen the perspective on professional baseball by introducing/extending understanding of one famous player, Joe DiMaggio, and one little known, female player, Jackie Mitchell.	The Streak: How Joe DiMaggio Became America's Hero (Rosenstock, 2014)	Mighty Jackie: The Strike- Out Queen (Moss, 2004)
Baseball: These companion texts widen the perspective on baseball by introducing/extending understanding about Josh Gibson, a famous, African American home run hitter and Bunny Taliaferro, a little known, but famous African American little boy named Bunny Taliaferro.	Coming Home: A True Story of Josh Gibson, Baseball's Greatest Home Run Hitter (Mellage, 1999)	A Home Run for Bunny (2013)
Negro Baseball Leagues: These companion texts widen the perspective by introducing/extending understanding on the differences between the Negro Baseball Leagues and the Major Leagues.	A Negro League Scrapbook (Weatherford, 2022)	Leagues Apart: The Men and Times of the Negro Baseball Leagues (Ritter, 1995)

Professional Baseball: These companion texts widen the perspective on professional baseball by introducing/extending understanding of two little known, but famous, historic stories. One story is about the All-American Girls Professional Baseball League, and the other about a spy for the United States during World War II and played professional baseball after the war.

Girls in Baseball: These companion texts widen the perspective on girls in baseball by introducing/extending understanding two girls who are famous, but little known, for their groundbreaking athletic achievements.

Players in Pigtails (Corey, 2003) The Spy Who Played Baseball (Jones, 2018)

Anybody's Game: Kathryn Johnston, the First Girl to Play Little League Baseball (Lang, 2018) Girl Wonder: A Baseball Story in Nine Innings (Hopkinson, 2003)

Table 2: Lewis and Clark

Topic	Text #1	Text #2
	The Lewis & Clark Expedition (Houk, 1999)	The Journey of York: The Unsung Hero of the Lewis and Clark Expedition (Davis, 2019)
Lewis & Clark Expedition: These companion texts widen the perspective by introducing/extending understanding about the important historical characters on the Lewis & Clark expedition.	How We Crossed the West: The Adventures of Lewis and Clark (Schanzer, 2002)	York's Adventures with Lewis and Clark: An African American's Part in the Great Expedition (Blumberg, 2003
	I Am Sacajawea, I Am York: Our Journey West with Lewis and Clark (Murphy, 2005)	American Slave, American Hero: York of the Lewis and Clark Expedition (Pringle, 2006)
Lewis & Clark Expedition: These companion texts widen the perspective by introducing/extending understanding about the important historical characters on the Lewis & Clark expedition, both	The Lewis and Clark Expedition (Peritano, 2010)	SeaMan: The Dog Who Explored the West with Lewis and Clark (Karwoski, 2003)
human and non-human.	Lewis & Clark (Mulhall, 2017)	Seaman's Journal: On the Trail with Lewis and Clark (Eubank, 2010)
	The Lewis and Clark Trail: Now and Then (Patent, 2002)	Lewis and Clark and Me: A Dog's Tale (Myers, 2002)
Lewis & Clark Expedition: These companion texts widen the perspective by introducing/extending understanding about the day-to-day life on the Lewis & Clark expedition.	Plants on the Trail with Lewis and Clark (Patent, 2003)	Cooking on the Lewis and Clark Expedition (Gunderson, 2000)
Explorers & Exploratory Tools: These companion texts widen the perspective by introducing/extending understanding about the explorers and the tools they used on the Lewis & Clark expedition.	Lewis and Clark: Explorers of the American West (Kroll, 1994)	Lewis and Clark's Compass: What an Artifact Can Tell Us About the Historic Expedition (Micklos, 2021)
Sacagawea: These companion texts widen the perspective on one of the most important historical characters involved in the Lewis & Clark expedition.	The Lewis & Clark Expedition (Domnauer, 2012)	What's So Great About Sacagawea? (Rogers, 2014)

Sacagawea: Journey Sacagawea (Erdrich, 2003) into the West (Gunderson, 2006)

Table 3: Social Studies

Topic	Text #1	Text #2
Japanese Internment Camps: These companion texts introduce/extend understanding about Japanese Internment Camps in America during WWII.	So Far from the Sea (Bunting, 2009)	Home of the Brave (Say, 2002)
Winnie the Pooh: These companion texts introduce/extend understanding about the true story behind the famous teddy bear created by A.A. Milne.	Finding Winnie: The True Story of the World's Famous Bear (Mattick, 2015)	Winnie: The True Story of the Bear Who Inspired Winnie-the- Pooh (Walker, 2015)
Civil Rights Figures: These companion texts introduce/extend understanding about two civil rights figures, one famous, Malcolm X, and one famous but little-known figure, Fannie Lou Hamer.	Voice of Freedom, Fannie Lou Hamer: Spirt of the Civil Rights Movement (Weatherford, 2015)	Malcolm X: A Fire Burning Brightly (Myers, 2003)
Holocaust : These companion texts introduce/extend understanding about the holocaust from two children's perspectives.	Rose Blanche (Innocenti, 2011)	A Picture Book of Anne Frank (Adler, 1993)
Migrant Workers: These companion texts introduce/extend understanding about migrant workers, one famous, Cesar Chavez, and one famous, but little-known, Dolores Huerta.	Dolores Huerta: A Hero to Migrant Workers (Warren, 2012)	Harvesting Hope: The Story of Cesar Chavez (Krull, 2003)
Decoders: These companion texts introduce/extend understanding about codes and coding during WWII.	Alan Turing: The Power of Curiosity (Valenti, 2021)	The Unbreakable Code (Hunter, 2007)
Nazi Resistance: These companion texts introduce/extend understanding about Nazi resistance during WWII from two different European countries.	The Yellow Star (Deedy	The Whispering Town (Elvgren, 2014)
Boston Tea Party: These companion texts introduce/extend understanding about the Boston Tea Party and one famous child in the Boston Tea Party.	The Boston Tea Party (Freedman, 2013)	Crispus Atticks: Hero of the Boston Massacre (Beier, 2003)
Civil War: These companion texts introduce/extend understanding about warfare in the water during the Civil War by a battleship, The Monitor, and a submarine, H.L. Hunley.	The Monitor: Civil War Battleship (Thompson, 2003)	Secrets of a Civil War Submarine: Solving the Mystery of the H.L. Hunley (Walker, 2023
Civil Rights: These companion texts introduce/extend understanding about the actions of a famous person, Harriet Tubman, and a famous but little-known person, Henry Brown, to gain freedom.	Moses: When Harriet Tubman Led Her People to Freedom (Weatherford, 2006	Box: Henry Brown Mails Himself to Freedom (Weatherford, 2020)
Pirates: These companion texts introduce/extend understanding about a famous male pirate, Blackbeard, and a famous but little-known female pirate, Zheng Yi Sao.	Blackbeard the Pirate King (Lewis, 2006)	Pirate Queen: A Story of Zheng Yi Sao (Becker, 2020)

Revolutionary Spies : These companion texts introduce/extend understanding about famous female spies during the Revolutionary War.	Culpers, Codes, and Quakers: Female Spies of the Revolutionary War (Ryan, 2016)	The Scarlet Stockings Spy (Noble, 2004)
American Revolution Heroes: These companion texts introduce/extend understanding about famous American Revolution female spies, and one famous but little-known spy, Sarah Edmonds.	Great Women of the American Revolution (Hall, 2012)	Nurse, Soldier, Spy: The Story of Sarah Edmonds, a War Hero (Moss, 2016)
Buffalo Soldiers: These companion texts introduce/extend understanding about Buffalo Soldiers.	From Slave to Soldier (Hopkinson, 2007)	Buffalo Soldiers: Heroes of the American West (Baker, 2015)
Abraham Lincoln: These companion texts introduce/extend understanding about the life and times of Abraham Lincoln.	Young Abe Lincoln: The Frontier Days 1809-1837 (Harness, 2008)	My Best Friend Abe Lincoln: A Tale of Two Boys from Indiana (Bloch, 2011)
American Civil War: These companion texts introduce/extend understanding about two famous but little known child soldiers during the Civil War.	Johnny Reb: The Confederate Soldier in the Civil War (Books, 1993)	Johnny Clem's Civil War Story (Marsico, 2018)
American Revolution: These companion texts introduce/extend understanding about warfare in water during the Revolutionary War, one a battleship, one a submarine.	The Monitor vs. The Merrimac: Ironclads at War (Abnett, 2006)	American Turtle Submarine: The Best-Kept Secret of the American Revolution (Lefkowitz, 2012)
World War II: These companion texts introduce/extend understanding about the bravery and patriotism of WWII pilots, especially The Tuskegee Airmen.	You Wouldn't Want to Be a World War II Pilot (Graham, 2009)	The Tuskegee Airmen Story (Homan, 2002)
Animals Soldiers: These companion texts introduce/extend understanding about two famous but little-known animal soldiers, one a horse and one a donkey.	Bunny the Brave War Horse (Macleod, 2014)	The Donkey of Gallipoli: A True Story of Courage in World War I (Greenwood, 2008)
Animal Soldiers: These companion texts introduce/extend understanding about two famous but little-known animal soldiers, one a dog and one a horse.	Stubby: The Dog Soldier and World War I Hero (Hoena, 2014)	Sgt. Reckless the War Horse: Korean War Hero (Higgins, 2014)
Animal Soldiers: These companion texts introduce/extend understanding about two famous but little-known animal soldiers, one a pigeon and one a dog.	Cher Ami: Based on the World War I Legend of the Fearless Pigeon (Potter, 2022)	Rags: Hero Dog of WWI: A True Story (Raven, 2014)
Statue of Liberty: These companion texts introduce/extend understanding about the statue of liberty from two different but complimentary perspectives.	The Story of the Statue of Liberty (Maestro & Maestro, 1989)	Emma's Poem (Glaser & Nivola, 2013)
American Revolutionary War Soldiers: These companion texts introduce/extend understanding about the life of an American Revolutionary war soldier and one famous but little-known female war soldier, Deborah Sampson.	How to Be a Revolutionary War Soldier (Ratliff, 2006)	Cloaked in Courage: Uncovering Deborah Sampson, Patriot Soldier (Anderson, 2022)
Martin Luther King: These companion texts introduce/extend understanding about the life, work, and funeral of Martin Luther King.	Belle, the Last Mule at Gee's Bend (Ramsey & Stroud, 2016)	The Cart That Carried Martin (Bunting, 2018)

Black Enslaved Heroes: These companion texts introduce/extend understanding about the history of black enslaved heroes and one famous but little-known hero, Ona Judge.	Black Heroes of the American Revolution (Davis, 1992)	Never Caught, the Story of Ona Judge: George Washington's Courageous /Slave Who Dared to Run Away (Dunbar, 2020)
Underground Railroad: These companion texts introduce/extend understanding about the underground railroad and about a famous figure, Harriet Tubman and a famous but little-known figure, Henry "Box" Brown.	Aunt Harriet's Underground Railroad in the Sky (Ringgold, 1995)	Henry's Freedom Box: A True Story from the Underground Railroad (Levine, 2007)
Civil Rights: These companion texts introduce/extend understanding about civil rights and a about a famous figure, Rosa Parks, and a famous but little-known figure, Claudia Colvin.	Rosa (Giovanni, 2007)	Claudia Colvin: Twice Toward Justice (Hoose, 2010)
World War I: These companion texts introduce/extend understanding about the life and challenges of soldiers in WWI and how the war changed modern warfare.	How WWI Changed Modern Warfare (Professor, 2021)	The Letter Home (Decker, 2009)
Historic Aviators: These companion texts introduce/extend understanding about historic aviators, two famous, Wilbur and Orville Wright, and one famous but little known, Katherine Stinson Otero.	First to Fly: How Wilbur & Orville Wright Invented the Airplane (Busby, 2002)	Katherine Stinson Otero: High Flyer (Petrick, 2006)
Historic Women Aviators: These companion texts introduce/extend understanding about two famous but little-known women aviators, Ruth Law and Harriet Quimby.	Fearless Flyer: Ruth Law and Her Flying Machine (2016)	Brave Harriet: The First Woman to Fly the English Channel (Moss, 2001)
Civil War: These companion texts introduce/extend understanding about	Drummer Boy (Turner, 1998)	Red Legs: A Drummer Boy of the Civil War (Lewin, 2001)
Niagara Falls: These companion texts introduce/extend understanding about two famous, but little-known women who went over Niagara Falls in barrels.	Maggie's Adventure: I'm Going Over Niagara Falls (D'Arcangelo & Kirchmyer, 2018)	Queen of the Falls (van Allsburg, 2010)
American Revolutionary War: These companion texts introduce/extend understanding about the American Revolutionary War and about a famous, but little-known female soldier who fought bravely during the war.	Molly Pitcher: Young American Patriot (Glaser, 2006)	They Called Her Molly Pitcher (Rockwell, 2002)
Martin Luther King: These companion texts introduce/extend understanding about the life, times, and funeral of Martin Luther King.	Belle, The Last Mule at Gee's Bend: A Civil Rights Story (Ramsey & Stroud, 2016)	That Cart That Carried Martin (Bunting, 2013)
Musicians: These companion texts introduce/extend understanding about two internationally recognized musicians, one famous, Wolfgang Amadeus Mozart, and one famous, but little-known, Chevalier de Saint-George.	That's My Piano, Sir!: Wolfgang Amadeus Mozart (Gerhard, 2021)	The Other Mozart: The Life of the Famous Chevalier de Saint- George (Brewster, 2007)

Table 4: Science

Topic	Text #1	Text #2
Galileo: These companion texts can introduce/extend understanding about Galileo and his inventions and discoveries.	Starry Messenger: A Book Depicting the Life of a Famous Scientist, Mathematician, Astronomer, Philosopher, Physicist (Sis, 1996)	Galileo's Treasure Box (Brighton, 1987)
Stars: These companion texts can introduce/extend understanding about the stars. One text is non-fiction, the other fiction, highlighting the story of Hypatia and her work on numbers and stars.	Stars (Simon, 2006)	Of Numbers and Stars: The Story of Hypatia (Love, 2006)
Archimedes: These companion texts can introduce/extend understanding about Archimedes and experimental design.	Archimedes: Ancient Greek Mathematician (Keating, 2002)	<i>Mr. Archimedes Bath</i> (Allen, 2001)
Big Bang: These companion texts can introduce/extend understanding about the Big Bang	It Started with a Big Bang: The Origin of Earth, You, and Everything Else (Bal, 2019)	Born with a Bang: The Universe Tells Our Cosmic Story (Morgan, 2002)
Oceanographers: These companion texts can introduce/extend understanding about one famous oceanographer, Jacques Cousteau, and famous, but little-known oceanographer, Sylvia Earle.	Manfish: A Story of Jacques Cousteau (Berne, 2015)	Life in the Ocean: The Story of Oceanographer Sylvia Earle (Nivola, 2012)
Astronauts: These companion texts can introduce/extend understanding about women astrounauts, one famous, Sally Ride, and one famous, but little-known, Mae Jemison.	Astronaut and Physicist Sally Ride (Goldstein, 2018)	Mae C. Jemison (Pincus, 2019)
Astronaut: These companion texts can introduce/extend understanding about famous women scientists, and one famous, but little-known astronaut, Ellen Ochoa.	She Persisted in Science: Brilliant Women Who Made a Difference (Clinton, 2022)	The Astronaut with a Song for the Stars: The Story of Dr. Ellen Ochoa (Mosca, 2019)
Plate Tectonics: These companion texts can introduce/extend understanding about plate tectonics and a famous pioneer of plate tectonics, Alfred Wegener.	The Island That Moved: How Sifting Forces Shape Our Earth (Hooper, 2004)	Alfred Wegener: Pioneer of Plate Tectonics (Young, 2010)
DNA: These companion texts can introduce/extend understanding about DNA, Gregor Mendel, and experimental design.	Grow: Secrets of Our DNA (Davies,	Gregor Mendel: The Friar Who Grew Peas (Bardoe, 2006)
Albert Einstein: These companion texts can introduce/extend understanding about	Albert Einstein (Inspired Inner Genius, 2021)	Alfie's First Word: A Tale Inspired by Albert Einstein's Childhood (Tourville, 2014)
Inventors: These companion texts can introduce/extend understanding about the accomplishments and the competitions between two famous inventors, Thomas Edison and Nikola Tesla.	A Wizard from the Start: The Incredible Boyhood and Amazing Inventions of Thomas Edison (Brown, 2010)	Electrical Wizard: How Nikola Tesla Lit Up the World (Rusch, 2013)
Wireless Communication: These companion texts can introduce/extend understanding about wireless communication.	Making Contact!: Marconi Goes Wireless (Kulling, 2013)	Radio Boy (Denslow, 1995)

Butterflies and Metamorphosis: These companion texts can introduce/extend understanding about butterflies, metamorphosis, and the famous, but little-known, scientist, Maria Merian.	Butterfly Boy (Kroll, 2002)	Summer Birds: The Butterflies of Maria Merian (Engle, 2010)
Comets: These companion texts can introduce/extend understanding about comets, and the famous, but little known, female astronomer, Maria Mitchell.	Famous Comets and Asteroids in Our Solar System (Pfiffikus, 2016)	<i>Maria's Comet</i> (Hopkinson, 1999)
Lunar Landing: These companion texts can introduce/extend understanding about the first lunar landing, and Margaret Hamilton, the scientist who saved the first lunar landing.	The First Lunar Landing (Fradin, 2010)	Margaret and the Moon: How Margaret Hamilton Saved the First Lunar Landing (Robbins, 2017)
Atomic Bomb: These companion texts can introduce/extend understanding about the development and use of the atomic bomb in World War II.	The Secret Project (Winter, 2017)	<i>Faithful Elephants</i> (Tsuchiya, 1997)
Nuclear Fission: These companion texts can introduce/extend understanding about nuclear fission, one famous nuclear scientist, Albert Einstein, and one famous, but little-known nuclear scientist, Lise Meitner.	The Story of Albert Einstein: A Biography Book for New Readers (Katz, 2020)	Lise Meitner: Had the Right Vision about Nuclear (Venezia, 2010)
Fossils: These companion texts can introduce/extend understanding about fossils and one famous, but little-known paleontologist, Mary Anning.	All About Fossils: Discovering Dinosaurs and Other Clues to the Past (Crane, 2021)	The Fossil Girl (Brighton, 1999)
Fossils: These companion texts can introduce/extend understanding about the science of fossils, and a famous, but little-known paleontologist, Mary Leakey.	Where Do Fossils Come From? How Do We Find Them? Archaeology for Kids (Bobo's Little Brainiac Book, 2016)	Fossil Huntress: Mary Leakey, Paleontologist (Diehn, 2019)
Charles Darwin: These companion texts can introduce/extend understanding about Charles Darwin, Theory of Evolution, and Natural Selection.	Animals Charles Darwin Saw (Markle, 2009)	The Mystery of Darwin's Frog (Crump, 2013)
Charles Darwin: These companion texts can introduce/extend understanding about Charles Darwin, scientist and father.	The Tree of Life: Charles Darwin (Sis, 2003)	The Bumblebee Hunter: Inspired by the Life & Experiments of Charles Darwin and His Children (Hopkinson, 2010)
Moon: These companion texts can introduce/extend understanding about the moon and science as evidence not belief.	When We Walked on the Moon (Long, 2019)	No One Walks on My Father's Moon (1996)
Pluto: These companion texts can introduce/extend understanding about the discovery of Pluto.	The Man Who Discovered Pluto (Dubowski	Pluto's Secret: An Icy World's Tale of Discovery (Weitekamp & DeVorkin
DNA: These companion texts can introduce/extend understanding about DNA and the scientists who discovered the phenomenon.	James Watson and Fricis Crick (Anniss)	Masterminds: Rosalind Franklin (Howell)

Imprinting: These companion texts can introduce/extend understanding about Konrad Lorenz, the scientist who pioneered the concept of imprinting in animal behavior.	Goose Family Book (Kalas, 1991)	The Goose Man: The Story of Konrad Lorenz (Greenstein, 2009)
Gravity: These companion texts can introduce/extend understanding about the concept of gravity.	The Day Gravity Goes Loco (Maloney, 2016)	Gravity (Chin, 2014)
Katherine Johnson: These companion texts can introduce/extend understanding about the life and work of Katherine Johnson, the scientist and mathematician who put astronauts on the moon.	One Step Further: My Story of Math, the Moon, and a Lifelong Mission (Johnson, 2021)	Counting on Katherine: How Katherine Johnson Put Astronauts on the Moon (Becker, 2018)
Galileo: These companion texts can introduce/extend understanding about Galileo and his inventions and discoveries.	Starry Messenger: A Book Depicting the Life of a Famous Scientist, Mathematician, Astronomer, Philosopher, Physicist (Sis, 1996)	Galileo's Treasure Box (Brighton, 1987)

Table 5: Mathematics

Topic	Text #1	Text #2
International Mathematicians: These companion texts introduce/extend understanding about two famous, but little known, mathematicians.	Nothing Stopped Sophie: The Story of Unshakable Mathematician Sophie Germain (Bardoe, 2018)	Maryam's Magic: The Story of Mathematician Maryam Mirzakhani (Reid, 2021)
International Mathematicians: These companion texts introduce/extend understanding about two international mathematics, one famous, the other little known.	Pythagoras (Klepis, 2017)	The Boy Who Loved Math: The Improbable Life of Paul Erdos (Heiligman, 2013)
International Coders: These companion texts introduce/extend understanding about coding and two famous international code breakers.	Alan Turing and the Power of Curiosity (Valenti, 2021)	Grace Hopper: Queen of Computer Code (Wallmark, 2017)
Measurement: These companion texts introduce/extend understanding about measurement.	The Know-Nonsense Guide to Measurements: An Awesomely Fun Guide to How Things are Measured (Fiedler, 2017)	The Librarian Who Measured the Earth (Hawkes, 1994)
Computer Programming: These companion texts introduce/extend understanding about computer programming, highlighting a famous, but little, known computer programmer.	Computer Coding: An Introduction to Computer Programming (DK, 2014)	Ada Byron Lovelace and the Thinking Machine (Wallmark, 2015)
Tangrams: These companion texts introduce/extend understanding about tangrams based on a traditional fairy tale.	The Three Pigs (Weisner, 2012)	Three Pigs, One Wolf, and Seven Magic Shapes (Maccarone, 1997)
Counting: These companion texts introduce/extend understanding about counting.	The History of Counting (Schmandt-Besserat, 1999)	Counting with an Abacus: Learning the Place Value of Ones, Tens, and Hundreds (Murphy, 2004)

Math Squares: These companion texts introduce/extend understanding about Benjamin Franklin and math squares.	A Picturebook of Benjamin Franklin (Adler, 2018)	Ben Franklin and the Magic Squares (Murphy, 2001)
Cartesian Coordinate System: These companion texts introduce/extend understanding about the Cartesian Coordinate System.	Mister Descartes and His Evil Genius (Mongin, 2016)	The Fly on the Ceiling (Glass, 1998)
Dimensionality: These companion texts introduce/extend understanding about dimensionality.	The Flatland Dialogues (Sayre, 2018)	<i>Flatland</i> (Sayre & Emberley, 2013)
Fibonacci: These companion texts introduce/extend understanding about Fibonacci and the Fibonacci number system.	Blockhead: The Life of Fibonacci (D'Agnese, 2010)	The Rabbit Problem (Gravett, 2009)
Fibonacci: These companion texts introduce/extend understanding about Fibonacci and the Fibonacci number system.	Growing Patterns: Fibonacci Numbers in Science (Campbell, 2010)	Wild Fibonacci: Nature's Secret Code Revealed (Hulme, 2010)
Problem Solving: These companion texts introduce/extend understanding about problem solving.	M.C. Escher Pop-Ups (McCarthy, 2011)	Palazzo Inverso (Johnson, 2010)
Probability: These companion texts introduce/extend understanding about probability.	That's a Possibility!: A Book About What Might Happen (Goldstone, 2013)	Probably Pistachio (Murphy, 2001)
Probability: These companion texts introduce/extend understanding about probability.	Bad Luck Brad: Probability (Herman, 2006)	A Very Improbably Story (Edward Einhorn, 2008)
Graphing: These companion texts introduce/extend understanding about graphing.	Groovy Graphing: Quadrant One and Beyond (Arias, 2019)	Tiger Math: Learning to Graph From a Baby Tiger (Nagda & Bickel, 2000)
Graphing : These companion texts introduce/extend understanding about graphing.	Lemonade for Sale (Murphy, 1998)	The Great Graph Contest (Leedy, 2005)
Tessellations: These companion texts introduce/extend understanding about tessellations.	Giraffe Pattern and Others Like It: Tessellations in Nature (Bine-Stock, 2021)	Toads and Tessellations: A Math Adventure (Morrisette, 2012)
Fractions: These companion texts introduce/extend understanding about fractions.	Fractions in Disguise (Einhorn, 2014)	Polar Bear Math: Learning about Fractions from Klondike and Snow (Nagda & Bickel, 2004)
Multiplication: These companion texts introduce/extend understanding about multiplication.	The Best of Times: Math Strategies That Multiply (Tang, 2002)	Multiplying Menace: The Revenge of Rumpelstiltskin (Calvert, 2006)
Division: These companion texts introduce/extend understanding about division.	The Great Divide (Dodds, 1999)	Cheetah Math: Learning about Division from Baby Cheetahs (Nagda, 2004)
Doubling: These companion texts introduce/extend understanding about doubling.	The King's Chessboard (Birch, 1988)	One Grain of Rice: A Mathematical Folktale (Demi, 1997)

The Greedy Triangle (Burns, 1994)	Shape Up! Fun with Triangles and Other Polygons (Adler, 1998)
Great Estimations (Goldstone, 2010)	Jellybeans for Sale (1996)
Happy Pi Day to You (Worth, 2020)	Sir Cumference and the Dragon of Pi: A Math Adventure (Neuschwander, 1999)
Perimeter, Area, and Volume: A Monster Book of Dimensions (Adler, 2013)	Spaghetti and Meatballs for All! A Mathematical Story (Burns, 1997)
Circles (Adler, 2016)	Sir Cumference and the First Round Table (Neuschwander, 1997)
Minnie's Diner: A Multiplying Menu (Dodds, 2007)	Amanda Bean's Amazing Dream: A Mathematical Story (Neuschwander, 1998)
Right, Acute and Obtuse Angles: Geometry for Kids (Professor, 2017)	The Great Knight of Angleland: A Math Adventure (Neuschwander, 2001)
Code Breaker and Mathematician Alan Turing (Schwartz, 2018)	Code Breaker, Spy Hunter: How Elizabeth Friedman Changed the Course of Two World Wars (Wallmark, 2021)
The H.L. Hunley Submarine: History and Mystery from the Civil War (Hawk, 2017)	The Girl with a Mind for Math: The Story of Raye Montague (Mosca, 2020)
Algebra and Geometry: Anything but Square (Green, 2011)	Mystery Math: A First Book of Algebra (Adler, 2011)
Caveman Teach Children Metric System (Rammage, 2022)	The Metric System (Adler, 2022)
The Encounter with Pythagoras (dos Santos, 2020)	Pythagoras and the Ratios: A Math Adventure (Ellis, 2010)
The Know-Nonsense Guide to Measurements: An Awesomely Fun Guide to How Things are Measured (Fiedler, 2017)	How Long or How Wide: A Measuring Guide (Cleary, 2009)
Millions, Billions, and Trillions: Understanding Big Numbers (Adler, 2013)	Mind-Boggling Numbers (Rosen, 2016)
	Great Estimations (Goldstone, 2010) Happy Pi Day to You (Worth, 2020) Perimeter, Area, and Volume: A Monster Book of Dimensions (Adler, 2013) Circles (Adler, 2016) Minnie's Diner: A Multiplying Menu (Dodds, 2007) Right, Acute and Obtuse Angles: Geometry for Kids (Professor, 2017) Code Breaker and Mathematician Alan Turing (Schwartz, 2018) The H.L. Hunley Submarine: History and Mystery from the Civil War (Hawk, 2017) Algebra and Geometry: Anything but Square (Green, 2011) Caveman Teach Children Metric System (Rammage, 2022) The Encounter with Pythagoras (dos Santos, 2020) The Know-Nonsense Guide to Measurements: An Awesomely Fun Guide to How Things are Measured (Fiedler, 2017) Millions, Billions, and Trillions: Understanding Big Numbers

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