

# **Grade 5: Module 2B:**Overview





# Researching to Build Knowledge and Teaching Others:

Inventions That Changed People's Lives

In this eight-week module, students learn about new or improved technologies that have been developed to meet societal needs and how those inventions have changed people's lives. They conduct authentic research to build their own knowledge and teach others through writing. In Unit 1, students read the graphic novel *Investigating the Scientific Method with Max Axiom, Super Scientist* by Donald B. Lemke as well as several informational articles about inventions that have been developed to meet people's needs. Students learn about and analyze structures and visual elements authors use to convey complex ideas. Then, they will write a short opinion paragraph about which of the inventions they learned about has been most important to people and why. In Unit 2, students will read *The Boy Who Invented TV: The Story of Philo Farnsworth* by Kathleen Krull, focusing on how the television was invented to meet societal needs.

Students will write an informative essay to explain why Philo Farnsworth wanted to invent television and how TV changed people's lives. In Unit 3, students are given the choice to conduct research about one of two inventions that were developed to meet societal needs, Garrett A. Morgan's traffic light or the Wright brothers' airplane. Students will closely read and collect information about one of these inventions in order to develop a narrative in the form of a graphic novelette that explains why the invention they researched was developed and how it changed people's lives. This task addresses **NYSP12 ELA CCLS R.I.5.9**, **W.5.2**, **W.5.3**, **W.5.4**, **W.5.5**, **W.5.6**, **W.5.7**, **W.5.8**, **L.5.3**, and **L.5.4**.

#### **Guiding Questions and Big Ideas**

- How do new or improved technologies meet societal needs?
- How do authors structure text and use visual elements to engage and support readers' understanding of complex ideas?
- New or improved technologies are developed to meet societal demands.
- Text structure and visual elements support our understanding of complex ideas.



Researching to Build Knowledge and Teaching Others:

Inventions That Changed People's Lives

#### **Performance Task**

#### **Graphic-Style Novelette**

After researching informational texts (on Garrett A. Morgan's invention of the traffic light or the Wright brothers' invention of the airplane), students will write a short informational narrative in the graphic novel style in which they describe how the invention was developed to meet societal needs and the ways the new technology changed people's lives. During the first half of this unit, students will continue to develop skills in both reading and writing necessary for success with this performance task: (1) They will closely read a variety of informational texts to gather evidence on one of two technologies that were developed to meet societal needs; and (2) they will analyze how the invention changed people's lives. In their graphic novelette, students will incorporate factual information from their research as well as visual and narrative elements of a graphic novel. This task centers on NYSP12 ELA CCLS R.I.5.9, W.5.2, W.5.3, W.5.4, W.5.5, W.5.6, W.5.7, W.5.8, L.5.3, and L.5.4. Students will present their graphic novelettes to triad group members.

# Researching to Build Knowledge and Teaching Others:

Inventions That Changed People's Lives

#### **Content Connections**

This module is designed to address English language arts standards as students read literature and informational text about inventions that have been developed to meet societal needs. However, the module intentionally incorporates scientific practices and themes to support potential interdisciplinary connections to this compelling content.

These intentional connections are described below.

NYS Science Standard 1: Analysis, Inquiry, and Design: Engineering Design

#### **Key Idea 1:**

Engineering design is an iterative process involving modeling and optimization (finding the best solution within given constraints); this process is used to develop technological solutions to problems within given constraints.

- T1.1 Identify needs and opportunities for technical solutions from an investigation of situations of general or social interest.
  - T1.1a Identify a scientific or human need that is subject to a technological solution that applies scientific principles.
- T1.2 Locate and utilize a range of printed, electronic, and human information resources to obtain ideas.

T1.2a Use all available information systems for a preliminary search that addresses the need.

**Next Generation Science Standards: 3-5 Engineering Design** 

#### **ETS1.B: Developing Possible Solutions**

- Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2)
- At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (3-5-ETS1-2)
- Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved. (3-5-ETS1-3)



# KPEDITIONARY English Language Arts Outcomes

CCS Standards: Reading—Literature	Long-Term Learning Targets	
• RL.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.	• I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences.	
• RL.5.7 Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).	I can analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text.	
<ul> <li>RL.5.11 Recognize, interpret, and make connections in narratives, poetry, and drama, to other texts, ideas, cultural perspectives, eras, personal events, and situations.</li> </ul>	• I can recognize, interpret, and make connections in narratives, poetry, and drama, to other texts, ideas, cultural perspectives, eras, personal events, and situations. (RL.5.11)	
<ul><li>a. Self-select text to develop personal preferences regarding favorite authors.</li><li>b. Use established criteria to categorize, select, and assess texts to make</li></ul>	<ul> <li>I can self-select texts to develop personal preferences regarding favorite authors.</li> </ul>	
informed judgments about the quality of the pieces.	<ul> <li>I can use established criteria to categorize, select, and assess texts to make informed judgments about the quality of the pieces.</li> </ul>	



CCS Standards: Reading—Informational Texts	Long-Term Learning Targets
• RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.	I can quote accurately from a text when explaining what the text says explicitly.
• RI.5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.	<ul> <li>I can determine two or more main ideas from a text and explain how they are supported by key details.</li> <li>I can summarize the text.</li> </ul>
• 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.	I can explain the relationship between two or more individuals, events, ideas, or concepts in a scientific text based on specific information in the text.
• RI.5.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.	I can determine the meaning of general academic and domain-specific words and phrases.
• RI.5.5 Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.	I can compare and contrast the structure of information in two or more texts.
<ul> <li>RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.</li> </ul>	I can draw on information from multiple print sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.	I can integrate information from several texts on the same topic in order to write about the subject knowledgeably.



CCS Standards: Foundational Skills	Long-Term Learning Targets
<ul> <li>RF.5.3 Know and apply grade-level phonics and word analysis skills in decoding words.</li> <li>a. Use combined knowledge of all letter-sound correspondences, syllabication</li> </ul>	I can apply my understanding of phonics and word analysis to read unfamiliar words.
a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.	
RF.5.4 Read with sufficient accuracy and fluency to support comprehension.	I can better comprehend texts by reading with sufficient accuracy and fluency.
a. Read grade-level text with purpose and understanding.	
<ul> <li>Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.</li> </ul>	
c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	



CCS Standards: Writing	Long-Term Learning Targets
• W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.	I can write opinion pieces, supporting a point of view with reasons and information.
<ul> <li>Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose.</li> </ul>	<ul> <li>I can introduce a topic clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support my purpose.</li> </ul>
b. Provide logically ordered reasons that are supported by facts and details.	b. I can provide logically ordered reasons that are supported by facts and details.
W.5.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	I can write informative/explanatory texts to examine a topic and convey ideas and information clearly.
<ul> <li>a. Introduce a topic clearly, provide a general observation and focus, and group related information logically, include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.</li> </ul>	
<ul> <li>Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.</li> </ul>	
<ul> <li>c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., in contrast, especially).</li> </ul>	
d. Use precise language and domain-specific vocabulary to inform about or explain the topic.	
e. Provide a concluding statement or section related to the information or explanation presented.	



CCS Standards: Writing	Long-Term Learning Targets	
• W.5.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	I can write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	
<ul> <li>a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.</li> </ul>		
<ul> <li>Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.</li> </ul>		
<ul> <li>Use a variety of transitional words, phrases, and clauses to manage the sequence of events.</li> </ul>		
d. Use concrete words and phrases and sensory details to convey experiences and events precisely.		
e. Provide a conclusion that follows from the narrated experiences or events.		
• W.5.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	I can produce clear and coherent writing in which the development and organization are appropriate to the purpose and audience.	
<ul> <li>W.5.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</li> </ul>	With guidance and support from peers and adults, I can develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.	
<ul> <li>W.5.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.</li> </ul>	I can use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others.	
W.5.7 Conduct short research projects that use several sources to build knowledge through the investigation of different aspects of a topic.	I can conduct short research projects that use several sources to build knowledge through the investigation of different aspects of a topic.	



CCS Standards: Writing	Long-Term Learning Targets
<ul> <li>W.5.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.</li> </ul>	<ul> <li>I can recall relevant information from experiences or gather relevant information from print and digital sources.</li> <li>I can summarize or paraphrase information in notes and finished work.</li> <li>I can provide a list of sources.</li> </ul>

CCS Standards: Speaking and Listening	Long-Term Learning Targets
• SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.	• I can engage effectively in a range of collaborative discussions with diverse partners about fifth-grade topics and texts.
a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.	
b. Follow agreed-upon rules for discussions and carry out assigned roles.	
c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.	
<ul> <li>Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.</li> </ul>	
<ul> <li>Seek to understand and communicate with individuals from different perspectives and cultural backgrounds.</li> </ul>	
f. Use their experience and their knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively.	



CCS Standards: Language	Long-Term Learning Targets
<ul> <li>L.5.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.</li> </ul>	I can use knowledge of language and its conventions when writing.
<ul> <li>Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.</li> </ul>	
b. Compare and contrast the varieties of English (e.g., dialects, registers) used in stories, dramas, or poems.	
• L.5.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.	I can determine the meaning of unfamiliar words and phrases, using a variety of strategies.
a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.	
b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., <i>photograph</i> , <i>photosynthesis</i> ).	
c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.	

#### Texts

- 1. Donald B. Lemke, *Investigating the Scientific Method with Max Axiom, Super Scientist* (North Mankato, Minnesota: Capstone Press, 2008), ISBN: 978-1-4296-1760-4.
- 2. Kathleen Krull, The Boy Who Invented TV: The Story of Philo Farnsworth (New York: Random House, Inc., 2009), ISNB: 978-0-375-84561-1.
- 3. "The Electric Motor" (written by Expeditionary Learning for instructional purposes).
- 4. "Ingenious Inventions by Women: The Windshield Wiper and Paper Bag Machine" (written by Expeditionary Learning for instructional purposes).
- 5. "Dr. James Naismith, Inventor of Basketball," http://www.kansasheritage.org/people/naismith.html (excerpts).
- 6. "First College Basketball Game," http://www.americaslibrary.gov/jb/progress/jb\_progress\_basketball\_1.html, http://www.americaslibrary.gov/jb/progress\_jbasketball\_2.html, http://www.americaslibrary.gov/jb/progress\_basketball\_3.html.
- 7. "Big Thinkers: Was Steve Jobs this Generation's Thomas Edison?" in Junior Scholastic. 11/21/2011, Vol. 114 Issue 6, p5-5. 1p.
- 8. "Steve Jobs," in *Time for Kids* http://www.timeforkids.com/news/steve-jobs/21806 (excerpts).
- 9. "Television Takes the World by Storm" (video excerpts), http://www.history.com/shows/modern-marvels/videos/television-takes-the-world-by-storm#television-takes-the-world-by-storm.
- 10. "The TV Guy," http://www.ilovehistory.utah.gov/people/difference/farnsworth.html.
- 11. Claudia Reinhardt and Bill Ganzel, "TV Turns On," http://www.livinghistoryfarm.org/farminginthe40s/life\_27.html.
- 12. Robert Hudson, "How Television Changed the World," http://www.infotechlive.com/how-television-changed-the-world.html.
- 13. Paula Morrow, "Garrett Morgan: Inventor Hero," in Ask Magazine, http://www.askmagkids.com/.
- 14. "Transportation, from the Soap Box Derby to the Jeep: First Automatic Traffic Signal," from The Ohio Academy of Sciences, Heartland Science www.heartlandscience.org.



#### **Texts (continued)**

- 15. "The Twofold Genius of Garrett Morgan," from Social Studies for Kids, http://www.socialstudiesforkids.com/articles/ushistory/garrettmorgan.htm.
- 16. "Garrett Augustus Morgan," http://www.enchantedlearning.com/inventors/page/m/morgan.shtml (excerpts).
- 17. "Airplane." The New Book of Knowledge, Grolier Online, 2013. Web. Sept. 16, 2013 (excerpts).
- 18. Shashank Nakate, "Invention of the Airplane," http://www.buzzle.com/articles/invention-of-the-airplane.html (excerpts).
- 19. "Wright Brothers: Inventors of the airplane," Ducksters, Technological Solutions, Inc. (TSI), http://www.ducksters.com/biography/wright\_brothers.php
- 20. "How Did We Learn to Fly Like Birds?" http://www.grc.nasa.gov/WWW/k-12/UEET/StudentSite/historyofflight.html (excerpts).



Calendared Curriculum Map:

Week-at-a-Glance

**Note**: As each unit is written, often assessments are revised. Use this document as a general guideline. But be sure to refer to each specific unit overview document for the most correct and complete write-ups of each assessment.

Week	Instructional Focus	Long-Term Targets	Assessments
	ng Background Knowledge: <i>Investigating the So</i> d to Meet Societal Needs	cientific Method with Max Axiom, Super Scier	ntist and Considering How Technologies
Weeks 1–2	<ul> <li>Revisiting norms that support group work.</li> <li>Introduction to fluency criteria and independent reading options and routines.</li> <li>Analyzing how visual elements in a graphic novel support readers' understanding of complex ideas.</li> <li>Using quotes and paraphrased information from the text to support explanations and draw inferences.</li> <li>Using a variety of strategies to determine the meaning of unfamiliar terms.</li> </ul>	<ul> <li>I can quote accurately from a text when explaining what the text says explicitly and when drawing inferences. (RL.5.1)</li> <li>I can analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text. (RL.5.7)</li> <li>I can recognize, interpret, and make connections in narratives, poetry, and drama to other texts, ideas, cultural perspectives, eras, personal events, and situations. (RL.5.11)</li> <li>a. I can self-select texts to develop personal preferences regarding favorite authors.</li> <li>b. I can use established criteria to categorize, select, and assess texts to make informed judgments about the quality of the pieces.</li> <li>I can apply my understanding of phonics and word analysis to read unfamiliar words. (RF.5.5)</li> <li>I can better comprehend texts by reading with sufficient accuracy and fluency. (RF.5.6)</li> <li>I can paraphrase information in notes and finished work. (W.5.8)</li> </ul>	Mid-Unit 1: Text Dependent Questions, Investigating the Scientific Method with Max Axiom, Super Scientist, pages 24–27 (RL.5.7, W.5.9, and L.5.4)

Week	Instructional Focus	Long-Term Targets (continued)	Assessments
Weeks 1-2, continued		• I can draw evidence from literary texts to support analysis, reflection, and research. (W.5.9)	
		• I can determine the meaning of unfamiliar words and phrases, using a variety of strategies. (L.5.4)	
		<ul> <li>a. I can use context as a clue to the meaning of a word or phrase.</li> </ul>	
		<ul> <li>I can use common, grade-appropriate</li> <li>Greek and Latin affixes and roots as clues to the meaning of a word.</li> </ul>	
		c. I can consult reference materials, both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.	
		• I can engage effectively in a range of collaborative discussions with diverse partners about fifth-grade topics and texts. (SL.5.1)	
	Building background knowledge about inventions that were developed to meet societal needs.	• I can quote accurately from a text when explaining what the text says explicitly. (RI.5.1)	• End of Unit 1: Using Quotes to Explain Relationships and Support an Opinion (RI.5.1, RI.5.3, RI.5.4, RI.5.5, and W.5.1 a
	<ul> <li>Continue using quotes and paraphrased details from the text to support explanations and draw inferences.</li> <li>Using context clues and other strategies to determine the meaning of unfamiliar terms.</li> </ul>	I can explain the relationship between two or more individuals, events, ideas, or concepts in a scientific text based on specific information in the text. (RI.5.3)	and b)

# **Calendared Curriculum Map:**

Week-at-a-Glance

Week	Instructional Focus (continued)	Long-Term Targets (continued)	Assessments
Weeks 1-2, continued	<ul> <li>Recognizing and explaining relationships between people and ideas.</li> <li>Comparing and contrasting how authors structure text to support readers' understanding of complex ideas.</li> <li>Writing to share an opinion about which invention has been most important to people.</li> </ul>	<ul> <li>I can determine the meaning of general academic and domain-specific words and phrases. (RI.5.4)</li> <li>I can compare and contrast the structure of information in two or more texts. (RI.5.5)</li> <li>I can write opinion pieces, supporting a point of view with reasons and information. (W.5.1)  a. I can introduce a topic clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support my purpose.</li> <li>b. I can provide logically ordered reasons that are supported by facts and details.</li> <li>I can engage effectively in a range of collaborative discussions with diverse partners about fifth-grade topics and texts. (SL.5.1)</li> <li>I can determine the meaning of unfamiliar words and phrases, using a variety of strategies. (L.5.4)  a. I can use context as a clue to the meaning of a word or phrase.</li> <li>b. I can use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word.</li> <li>I can consult reference materials, both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.</li> </ul>	

Week	Instructional Focus	Long-Term Targets	Assessments		
Unit 2: Case S	Unit 2: Case Study: The Boy Who Invented TV: The Story of Philo Farnsworth				
Weeks 3-5	• Introduction to the central text <i>The Boy Who Invented TV: The Story of Philo Farnsworth.</i>	• I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)	• Mid-Unit 2: Text-Dependent Short-Answer Quiz: "The TV Guy" (RI.5.1, RI.5.2, RI.5.4, and L.5.4 b and c)		
	<ul> <li>Understanding how television was developed to meet societal needs and the ways that television changed people's lives.</li> </ul>	• I can determine two or more main ideas from a text and explain how they are supported by key details (RI5.2)			
	Continue using norms that support group work.	• I can summarize the text. (RI.5.2)			
	Choose a new independent reading book and continue practicing fluent reading skills.	• I can determine the meaning of general academic and domain-specific words. (RI.5.4)			
	Continue using a variety of strategies to determine the meaning of unfamiliar terms.	I can determine the meaning of unfamiliar words and phrases, using a variety of			
	Continue using quotes and paraphrased details from the text to support explanations and draw inferences.	strategies. (L.5.4)  a. I can use context as a clue to the meaning of a word or phrase.			
	<ul><li>Determining two or more main ideas in a text.</li><li>Summarizing the ideas presented in a text.</li></ul>	<ul> <li>I can use common, grade-appropriate</li> <li>Greek and Latin affixes and roots as clues to the meaning of a word.</li> </ul>			
	Summar Emig the rueus presented in a textu	c. I can consult reference materials, both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.			
		• I can engage effectively in a range of collaborative discussions with diverse partners on fifth-grade topics and texts. (SL.5.1)			

Week	Instructional Focus	Long-Term Targets	Assessments
Weeks 3-5, continued	<ul> <li>Read the final pages of <i>The Boy Who Invented TV: The Story of Philo Farnsworth</i> to determine why he wanted to invent television.</li> <li>Continue using norms that support group work.</li> <li>Continue using quotes to support explanations and draw inferences.</li> <li>Continue using a variety of strategies to determine the meaning of unfamiliar terms.</li> <li>Continue recognizing and explaining relationships between people and ideas.</li> <li>Read informational articles and view a video to collect information that explains how television changed people's lives.</li> <li>Using evidence from texts to support analysis and write an informative essay about why television was invented and how it changed people's lives.</li> </ul>	<ul> <li>I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)</li> <li>I can explain the relationship between two or more individuals, events, ideas, or concepts in a scientific text based on specific information in the text. (RI.5.3)</li> <li>I can apply my understanding of phonics and word analysis to read unfamiliar words. (RF.5.5)</li> <li>I can better comprehend texts by reading with sufficient accuracy and fluency. (RF.5.6)</li> <li>I can write informative/explanatory texts to examine a topic and convey ideas and information clearly. (W.5.2)</li> <li>I can choose evidence from literary or informational texts to support analysis, reflection, and research. (W.5.9)</li> <li>I can engage effectively in a range of collaborative discussions with diverse partners on fifth-grade topics and texts. (SL.5.1)</li> </ul>	• End of Unit 2: On-Demand Informational Writing: Philo Farnsworth's Invention of the Television and How It Changed People's Lives, Parts I and II (RI.5.3, W.5.2, W.5.4, W.5.9 b, and L.5.4 a and b)

# Calendared Curriculum Map:

Week-at-a-Glance

Week	Instructional Focus	Long-Term Targets	Assessments		
Unit 3: Resea	Unit 3: Researching Inventions That Changed People's Lives and Teaching through Graphic Novels				
Weeks 6-8	<ul> <li>Working in expert groups to learn about either Garrett Morgan's invention of the traffic signal or the Wright brothers' invention of the airplane.</li> <li>Continue to build understanding about how inventions are developed to meet societal needs.</li> <li>Continue using norms that support group work.</li> <li>Choose a new independent reading book and continue practicing fluent reading skills.</li> <li>Continue using a variety of strategies to determine the meaning of unfamiliar terms.</li> <li>Continue using quotes and paraphrased details from the text to support explanations and draw inferences.</li> <li>Taking notes from informational articles to use in the creation of a graphic novelette for the final performance task.</li> <li>Locating answers to a question quickly by drawing on information from multiple sources.</li> </ul>	<ul> <li>I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)</li> <li>I can determine the meaning of general academic and domain-specific words. (RI.5.4)</li> <li>I can draw on information from multiple print sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (RI.5.7)</li> <li>I can paraphrase information in notes and finished work. (W.5.8)</li> <li>I can engage effectively in a range of collaborative discussions with diverse partners about fifth-grade topics and texts. (SL.5.1)</li> </ul>	• Mid-Unit 3: On-Demand Note Taking and Text-Dependent Questions: "Garrett Augustus Morgan" or "How Did We Learn to Fly?" (RI.5.1, RI.5.4, RI.5.7, W.5.7 and W.5.8)		

# **Calendared Curriculum Map:**

Week-at-a-Glance

Week	Instructional Focus	Long-Term Targets	Assessments
Weeks 6-8, continued	<ul> <li>Evaluating and summarizing notes to create a storyboard draft of a graphic novelette that explains: what people needed or wanted; background information about an invention; background information about the inventor(s); the process used to develop a solution that met people's needs; and the impact of the invention on society.</li> <li>Adding illustrations and other graphic novel elements to storyboards that support readers' understanding of the information presented.</li> <li>Continue using norms that support group work.</li> </ul>	<ul> <li>I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)</li> <li>I can determine the meaning of general academic and domain-specific words. (RI.5.4)</li> <li>I can integrate information from several texts on the same topic in order to write about the subject knowledgeably. (RI.5.9)</li> <li>I can write informative texts to examine a topic and convey ideas and information clearly. (W.5.2)</li> <li>a. I can introduce a topic clearly, provide a general observation and focus, and group related information logically; I can include illustrations to aid comprehension.</li> <li>b. I can develop the topic with facts, definitions, details, quotations, or other related information.</li> <li>c. I can link ideas within and across categories of information using words, phrases, and clauses.</li> <li>d. I can use precise language and domain-specific vocabulary to explain a topic.</li> <li>e. I can provide a concluding section related to the information presented.</li> </ul>	• End of Unit 3: Text-Dependent Questions and Storyboard Draft: "You Can Do a Graphic Novel" excerpt (RI.5.1, RI.5.4, RI.5.9, W.5.2, W.5.3 a and b, W.5.4, and W.5.8)

Week	Instructional Focus	Long-Term Targets	Assessments
Weeks 6-8, continued		<ul> <li>I can produce clear and coherent writing in which the development and organization are appropriate to the purpose and audience. (W.5.4)</li> <li>I can summarize information in notes and finished work. (W.5.8)</li> <li>I can engage effectively in a range of collaborative discussions with diverse partners about fifth-grade topics and texts. (SL.5.1)</li> </ul>	
	<ul> <li>Creating informational-narrative graphic novelettes using revised and edited storyboards about either Garrett Morgan's invention of the traffic signal or the Wright brothers' invention of the airplane.</li> <li>Using technology and other sources to integrate visual elements found in a graphic novel that support readers' understanding of complex ideas.</li> <li>Continue using norms that support group work.</li> <li>Use peer critique to revise and strengthen written work.</li> <li>Continue practicing fluent reading skills.</li> <li>Presentation of graphic novelettes in triads for the final performance task.</li> </ul>	<ul> <li>I can quote accurately from the text when explaining what the text says explicitly and when making inferences. (RI.5.1)</li> <li>I can determine the meaning of general academic and domain-specific words. (RI.5.4)</li> <li>I can integrate information from several texts on the same topic in order to write about the subject knowledgeably. (RI.5.9)</li> <li>I can apply my understanding of phonics and word analysis to read unfamiliar words. (RF.5.5)</li> <li>I can better comprehend texts by reading with sufficient accuracy and fluency. (RF.5.6)</li> </ul>	• Final Performance Task: Graphic-Style Novelette (RI.5.9, W.5.2, W.5.3, W.5.4, W.5.5, W.5.6, W.5.7, W.5.8, L.5.3 and L.5.4)

# Calendared Curriculum Map:

Week-at-a-Glance

Week	Instructional Focus	Long-Term Targets (continued)	Assessments
Weeks 6-8, continued	Instructional Focus	<ul> <li>I can write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. (W.5.3)</li> <li>a. I can orient the reader by establishing a situation and introducing characters; organize an event sequence that unfolds naturally.</li> <li>b. I can use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events.</li> <li>c. I can use a variety of transitional words, phrases, and clauses to manage the sequence of events.</li> </ul>	Assessments
		<ul> <li>d. I can use concrete words and phrases and sensory details to convey experiences and events precisely.</li> <li>e. I can provide a conclusion that follows from the narrated experiences or events.</li> <li>• I can produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (W.5.4)</li> <li>• With guidance and support from peers and adults, I can develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (W.5.5)</li> <li>• I can use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others. (W.5.6)</li> </ul>	



Week	Instructional Focus	Long-Term Targets (continued)	Assessments
Weeks 6-8, continued		• I can conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (W.5.7)	
		• I can recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (W.5.8)	
		• I can engage effectively in a range of collaborative discussions with diverse partners about fifth-grade topics and texts. (SL.5.1)	
		• I can use knowledge of language and its conventions when writing. (L.5.3)	
		<ul> <li>a. I can expand, combine, and reduce sentences for meaning, reader/listener interest, and style.</li> </ul>	
		b. I can compare and contrast the varieties of English used in stories, dramas, or poems.	



#### Researching to Build Knowledge and Teaching Others:

Inventions That Changed People's Lives

#### **Preparation and Materials**

Released along with this module is a stand-alone document titled **Foundational Reading and Language Standards Resources Package for Grades 3–5**. This resource package is designed to give teachers resources and guidance for addressing the CCSS foundational reading and language ELA standards. The package cites example lessons within the modules in which these standards are addressed. It also includes resources for literacy instruction that occurs alongside the modules. The package includes the following resources:

- Sample Guided Reading and Accountable Independent Reading (GRAIR) Schedule
- · Show the Rule Strategy: resources and guidance for contextualized grammar and conventions instruction
- · Word Study Recommendations: specific suggestions and criteria for approaches to word work
- Additional Work with Complex Text: guidance on providing additional and more heavily scaffolded support as students work with the complex texts in the modules
- Fluency Packet: resources and guidance for fluency instruction
- Independent Reading Grades 3–5: resources and guidance for launching independent reading with students

These resources will be referenced throughout Module 2B, when opportunities exist for connecting and differentiating instruction in the lessons. Before launching this module, review the Foundational Reading and Language Standards Resources Package for Grades 3–5 and determine how your current GRAIR time aligns with these resources.

For grade 5, review the Fluency Packet, aligned with RF.5 and RF.6, in advance of Unit 1, as this unit provides opportunities for fluency work with students. Consider introducing criteria described on the Fluency Self-Assessment as a "kick-off" before Unit 1, Lesson 1.

- Review the recommended text list for each unit and collect a variety of books for students to read independently.
- Coordinate with technology and art instructors to provide support for students as they create graphic novelettes in Unit 3.