

GOING UP!

ELISHA OTIS'S TRIP TO THE TOP



Monica Kulling Illustrated by David Parkins

IT'S A SNAP!

GEORGE EASTMAN'S FIRST PHOTOGRAPH



Monica Kulling Illustrated by Bill Slavin

IN THE BAG!

MARGARET KNIGHT WRAPS IT UP



Monica Kulling Illustrated by David Parkins

ALL ABOARD!

ELIJAH MCGOY'S STEAM ENGINE



Monica Kulling Illustrated by Bill Slavin

ZAP!

NIKOLA TESLA TAKES CHARGE



Monica Kulling Illustrated by Bill Slavin

SPIC-AND-SPAN!

LILLIAN GILBRETH'S WOYDER KITCHEN



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MAKING CONTACT!

MARCONI GOES WIRELESS



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Great Idea Series

TO THE RESCUE!

GARRETT MORGAN UNDERGROUND



Monica Kulling

Illustrated by David Parkins

EDUCATORS' GUIDE

Penguin Random House TUNDRABOOKS

DEAR EDUCATOR

To the Rescue! Garrett Morgan Underground is the inspirational story of African-American inventor Garrett Morgan, whose incredible safety hood became the forerunner to the gas mask that saved thousands of soldiers in the trenches of World War I. *To the Rescue!* can be used in the classroom in a number of ways including:

- Exploring conceptual and thematic connections such as function, change, connection, invention, adversity, racism, ambition and heroism
- As an introduction to the genre of biography
- As a resource in STEM curriculum subjects
- As a whole class or small group read-aloud of Literary Non-Fiction

The activity guide that follows includes a variety of discussion questions, prompts and activities to elicit a meaningful understanding of the text. The suggested activities can be adapted to suit the needs of your students.

Where applicable, activities have been aligned with Common Core State Standards.

ABOUT THE BOOK



The son of freed slaves, Garrett Morgan was determined to have a better life than laboring in the Kentucky fields with his parents and ten siblings. He began by sweeping floors in a clothing factory in Cleveland, Ohio, where he decided to invent a stronger belt for sewing machines. When he was promoted to sewing-machine repairman, Garrett was on his way. In 1911, 146 workers died in the shocking Triangle Shirtwaist Factory fire in New York City, so Garrett decided to invent a safety hood for firefighters. Little did he know that most people wouldn't be interested in buying his safety hood when they discovered its inventor was black. But an explosion that trapped workers in a tunnel under Lake Erie soon changed all that. Garrett's hoods were rushed to the scene and used to rescue as many men as possible. Developed further, Garrett's invention came to save thousands of soldiers from chlorine gas in the trenches of World War I.

ABOUT THE AUTHOR

Monica Kulling is a poet who has published over fifty books for children, including picture books, adaptations of classic novels and biographies. Known for introducing biography to children who are just learning to read, she has written about Harriet Tubman, Henry Ford, Houdini, Eleanor Roosevelt and Amelia Earhart, among others. Her award-winning Great Idea Series features biographies of inventors and their captivating inventions. She is also the author of the hilarious *Merci Mister Dash!* and *Mister Dash and the Cupcake Calamity*. For more information, please visit www.monickulling.com.



Photo Credit: Monica Kulling

ABOUT THE ILLUSTRATOR



Photo Credit: David Parkins

David Parkins is an award-winning illustrator of more than fifty books for children. After studying wildlife illustration in Wales and general illustration at the Lincoln College of Art, he became a freelance illustrator whose work has appeared in *The Guardian*, *Toronto Star*, *Bloomberg Business Week*, *Nature*, *The Economist* and in the British children's comic *The Beano*. He does a regular editorial cartoon for *The Globe and Mail* and is the critically acclaimed illustrator of three other books in Monica Kulling's Great Idea Series: *In the Bag! Margaret Knight Wraps It Up*, shortlisted for the 2013 Governor General's Literary Award in Children's Illustration, *Going Up! Elisha Otis's Trip to the Top* and *Spic-and-Span! Lillian Gilbreth's Wonder Kitchen*. For more information, please visit www.davidparkins.com.

OTHER BOOKS IN THE GREAT IDEA SERIES

Making Contact! Marconi Goes Wireless
Spic-and-Span! Lillian Gilbreth's Wonder Kitchen
Clean Sweep! Frank Zamboni's Ice Machine
Zap! Nikola Tesla Takes Charge

It's a Snap! George Eastman's First Photograph
All Aboard! Elijah McCoy's Steam Engine
In the Bag! Margaret Knight Wraps It Up
Going Up! Elisha Otis's Trip to the Top

PRE-READING DISCUSSIONS / ACTIVITIES

- Review/introduce the genre of biography as a class. Take out a few simple but diverse biographies from the school library to act as examples. Give students the opportunity to quickly skim through some of the books. Introduce the idea of a biography told in a picture book format. As a class, make a list of the essential elements of a biography.
- Discuss the difference between fiction and non-fiction. Can a book have both fiction and non-fiction elements in it? Can you think of an example of this?
- What is an inventor? How does this differ from an innovator? What characteristics and/or qualities do you think are necessary to be a successful inventor? Have you ever invented anything?
- Read the prologue, “Underground.” What do you think this poem is about? Why would men be, “lowered on ropes / to underground tunnels / where disaster can strike?”

(SL.K.1, SL.K.6, SL.1.1, SL.2.1, SL.3.1)

VOCABULARY

- Introduce and/or review students’ understanding of the following words and phrases: sunbaked, “hardscrabble life,” slaves, patent/patented, “fighting chance,” forerunner, doomed, emerged, “heroic efforts.”
- Assign one word or phrase to individuals, pairs or groups of students, and ask them to use their word or phrase in a new sentence to demonstrate their understanding of its meaning.

(RI.K.4, RI.2.4)

CHECK FOR UNDERSTANDING

- Where did Garrett Morgan grow up? What was his family like? What inspired him to leave home?
- Garrett was born in 1877, and left home when he was fourteen. What year was it when he left home? In 1895, Garrett was promoted to sewing machine repairman. How old was he? How old was Garrett when he and his wife opened up the tailoring shop?
- What prompted Garrett’s promotion in 1895 to sewing machine repairman? The author writes that at this point in his life, “Garrett was on his way!” What does this mean?
- Explain how Garrett’s first invention came to be. What other inventions followed? How did his success allow him to pursue his passion?
- Why did Morgan’s Safety Hood and Smoke Protector sell so poorly? How did he try and get around this problem? What happened to change people’s thinking?
- Review the list of biography characteristics from the pre-reading discussion. How does *To the Rescue!* connect to this list?
- If you were to sum up the story of Garrett Morgan as told in this biography in one word, what would it be? Why?

(RI.K.1, RI.K.10, RI.1.1, RI.2.1, RI.3.1)

UNDERGROUND

- Re-read the prologue, “Underground.” How has your understanding changed from when you read it during the pre-reading discussion? How does it connect to the rest of the book and Garrett Morgan’s story?

TO THE RESCUE

- Make a list of all of the inventions mentioned in the book that Garrett was responsible for. How might each of these connect to the book's title, "To the Rescue!"?
- If you had to choose just one of Garrett's inventions discussed in the book as being the most important or life-changing, which one would you choose and why? Write and/or draw a brief description of this invention and the impact it had.

(RI.K.1, RI.K.3, W.K.2, RI.1.1, W.1.2, RI.2.1, W.2.2, RI.3.1)

FIRE!

- "Fires were common in cities, where many buildings were made of wood." What two historical fires does the author refer to? Further research the circumstances behind these fires. How did these fires inspire Garrett?
- Research the equipment modern day firefighters wear to protect themselves from the dangers of entering a burning building. Draw a picture of a firefighter and their equipment and label each piece of equipment. Which part of the equipment was influenced by one of Garrett Morgan's inventions?
- Imagine you are one of the American firefighters in 1916. Your fire department has just received Morgan's Safety Hoods to use in your work. How might you feel about the opportunity to use the equipment? Write a letter to Garrett Morgan explaining the importance of his invention in your work.
- "In a fire, smoke, dust and poisonous gases rise. The air at ground level is breathable." Explain how Garrett uses the science behind how fires burn to design his invention.

(W.K.2, W.K.8, W.1.2, W.1.8, W.2.2, W.2.8, W.3.7)

GARRET MORGAN, THE INVENTOR

- Given what we have learned about Garrett Morgan from the book, brainstorm a list of characteristics that describe him. Refer to information given in the book about his life that proves your description is accurate. How does each of these characteristics connect to his interest and success as an inventor? Were you able to add any qualities to the pre-reading list of inventor qualities that you brainstormed?
 - Identify each of the following statements as True or False. For each statement, refer to the book to explain your thinking.
 - Garrett Morgan was a hardworking man.
 - Garrett Morgan was always treated fairly by the people in his community.
 - Garrett Morgan was a very intelligent man.
 - Garrett Morgan was not a very caring person.
 - What is your definition of a hero? Does Garrett Morgan fit your definition? Why or why not?

(RI.K.3, RI.1.3, RI.3.1)



ILLUSTRATIONS

- Re-read the book but look only at the illustrations. Re-tell the story of Garrett Morgan aloud or in writing, using the pictures as prompts.
- Select one illustration in the story that you found to be particularly powerful. How did the illustration help with your understanding of the text?

(RI.K.7, RI.1.7, RI.3.7)

COMMON CORE STATE STANDARDS

READING: INFORMATIONAL TEXT

CCSS.ELA-Literacy.RI.K.1 With prompting and support, ask and answer questions about key details in a text.

CCSS.ELA-Literacy.RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.

CCSS.ELA-Literacy.RI.K.4 With prompting and support, ask and answer questions about unknown words in a text.

CCSS.ELA-Literacy.RI.K.7 With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).

CCSS.ELA-Literacy.RI.K.10 Actively engage in group reading activities with purpose and understanding.

CCSS.ELA-Literacy.RI.1.1 Ask and answer questions about key details in a text.

CCSS.ELA-Literacy.RI.1.3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.

CCSS.ELA-Literacy.RI.1.7 Use the illustrations and details in a text to describe its key ideas.

CCSS.ELA-Literacy.RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

CCSS.ELA-Literacy.RI.2.4 Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

CCSS.ELA-Literacy.RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

CCSS.ELA-Literacy.RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

WRITING

CCSS.ELA-Literacy.W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

CCSS.ELA-Literacy.W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

CCSS.ELA-Literacy.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

CCSS.ELA-Literacy.W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

CCSS.ELA-Literacy.W.2.2 Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

CCSS.ELA-Literacy.W.2.8 Recall information from experiences or gather information from provided sources to answer a question.

CCSS.ELA-Literacy.W.3.7 Conduct short research projects that build knowledge about a topic.

SPEAKING AND LISTENING

CCSS.ELA-Literacy.SL.K.1 Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

CCSS.ELA-Literacy.SL.K.6 Speak audibly and express thoughts, feelings, and ideas clearly.

CCSS.ELA-Literacy.SL.1.1 Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

CCSS.ELA-Literacy.SL.2.1 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

CCSS.ELA-Literacy.SL.3.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.