

★ EDUCATOR GUIDE ★

MILES LEWIS

WHIZ KID



★ BY KELLY STARLING LYONS ★
ILLUSTRATED BY WAYNE SPENCER



ABOUT THIS BOOK

AGES 6–8 ★ FICTION ★ GRADES 1–3

MILES LEWIS continues his explorations in science.

With the science fair approaching, teamwork makes the dream work! Friends and family come together to brainstorm a creative and collaborative science project. Is their project a winner? Can they cross the finish line and earn a gold medal? Check out Miles's latest adventure!

VOCABULARY

switch	basil
electricity	windflowers
maze	brilliant
hypothesis	sketched
backdrop	element
ramps	snubbed
stampede	rattled
fidgeted	ingredients
whiz	racetrack
dramatic	solution
separation	ramps
jealous	smirk
GOAT	tweaking
oregano	

SKILLS

ENGLISH LANGUAGE ARTS

Reading, Writing,
Speaking, & Listening

Drawing Conclusions,
Making Inferences

PHYSICAL SCIENCE

Observation &
Investigation

Experimentation &
Exploration

HISTORY/SOCIAL SCIENCE

Profiles in Science:
Biographies

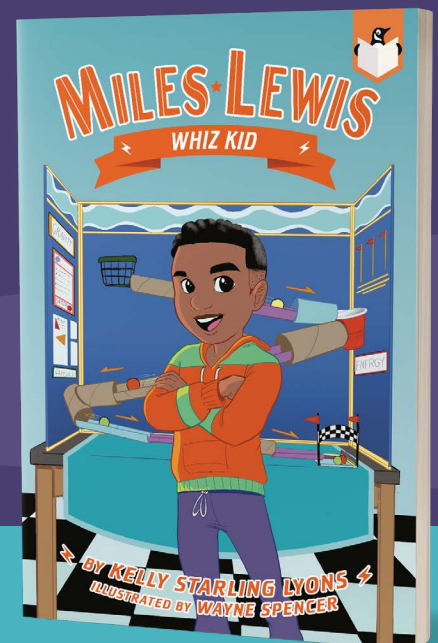
THEMES

Friendship

Family

Courage

Conflict resolution



BEFORE YOU READ

Anticipate and relate . . .

- ★ Have you participated in a science fair? Describe your experiment or project. What was the most memorable part of your science fair experience?
- ★ Can you predict what Miles will choose for his science project this year? Use the cover illustrations and the teaser on the back for clues.
For more hints, quickly flip through the book's pages and browse the inside illustrations.

AS YOU READ

Peruse and muse . . .

- ★ Miles's family often comes together around the dinner table. One night, they have Nana's fried catfish and spaghetti. Another night, they have buffalo wings and hamburger pizza. Why do you think they choose to spend time together this way? How do you spend time with close friends and family? Describe a special time spent with family or friends.
- ★ When Cam comes over, he meets Miles's friends from school. When introducing them, Miles gives Jada, Gabi, and RJ their shine. If you were introducing Miles to your friends, how would you describe him? What positive qualities or attributes would you include in your introduction?

AFTER YOU READ

Reflect and connect . . .

- ★ Miss Taylor encouraged Miles and the class to "learn something new and have fun" during the science fair. Do you think her students took her advice? Why or why not?
- ★ This year, Miles worked with a team of classmates to submit a science project. Last year, he submitted the light bulb experiment on his own. Compare and contrast working with a team versus working alone. Which do you think Miles might like better? Use the text to support your opinion. Which do you prefer? Discuss and share with others.

LANGUAGE ARTS

READING COMPREHENSION

- ★ Retell *Miles Lewis: Whiz Kid* orally or in writing. Include the setting and main characters. Describe the conflicts and how they were resolved.
- ★ If you could invite Miles or another character to your house, what would you do together? *Refer to the text for ideas about your guests' likes and dislikes.*
- ★ Have you read Miles's earlier adventure, *Miles Lewis: King of the Ice*? Compare with *Miles Lewis: Whiz Kid*. Which book did you enjoy most? Create a poster and include illustrations from your favorite scenes. Be sure to include a paragraph (or more) with highlights from the book that you chose.

WRITING

- ★ What if the characters from *Whiz Kid* came to life? Consider writing and performing a Readers' Theatre segment based on your favorite scene from this chapter book. What scene would you select? Which characters would you and your costars play?
- ★ Don't forget to check out the cool scientists included in the back of the book. Author Kelly Starling Lyons lists five famous scientists and their important contributions. Did you recognize their names and their work? What scientist would you add to the list? Research and present a biography of a scientist you named.



SCIENCE & ENGINEERING

ASKING QUESTIONS AND DEFINING PROBLEMS

Miles talks about his science experiment from the previous year when he made a switch that turned a light bulb on and off. For this science project, perhaps he investigated the question, "How does an electrical circuit work?" or "What makes a complete electrical circuit?"

He also recalls some science projects that might sound familiar. Take a look at the list below. What science questions might these projects ask and investigate?

- ★ Erupting volcanoes
- ★ Soda bottle tornadoes
- ★ "Bouncy" or rubbery eggs
- ★ Wind and solar power as alternate sources of energy
- ★ Plant finds its way to light source in a maze

PLANNING AND CARRYING OUT INVESTIGATIONS

Teamwork makes the dream work! The Marvelous Marble Grand Prix finally comes together. Cam listens as everyone chimes in during their brainstorming session. Miles and the crew settle on everyone's contributions: Miles's energy project suggestion and Jada's maze ideas connect with the first and second laws of motion. RJ suggests using a racetrack, and Gabi designs the backdrop and ramps for the marble race.

FIRST LAW OF MOTION

"An object at rest stays at rest and an object in motion stays in motion with the same speed and in the same direction unless acted upon by an unbalanced force."

SECOND LAW OF MOTION

"The greater the mass of an object, the more force it will take to accelerate the object."

SCIENCE & ENGINEERING

PLANNING AND CARRYING OUT INVESTIGATIONS (CONT.)

They asked the scientific question, “Which marble will have the fastest time on the track?”

- ★ Consider recreating their racetrack.
- ★ What scientific question would you explore?

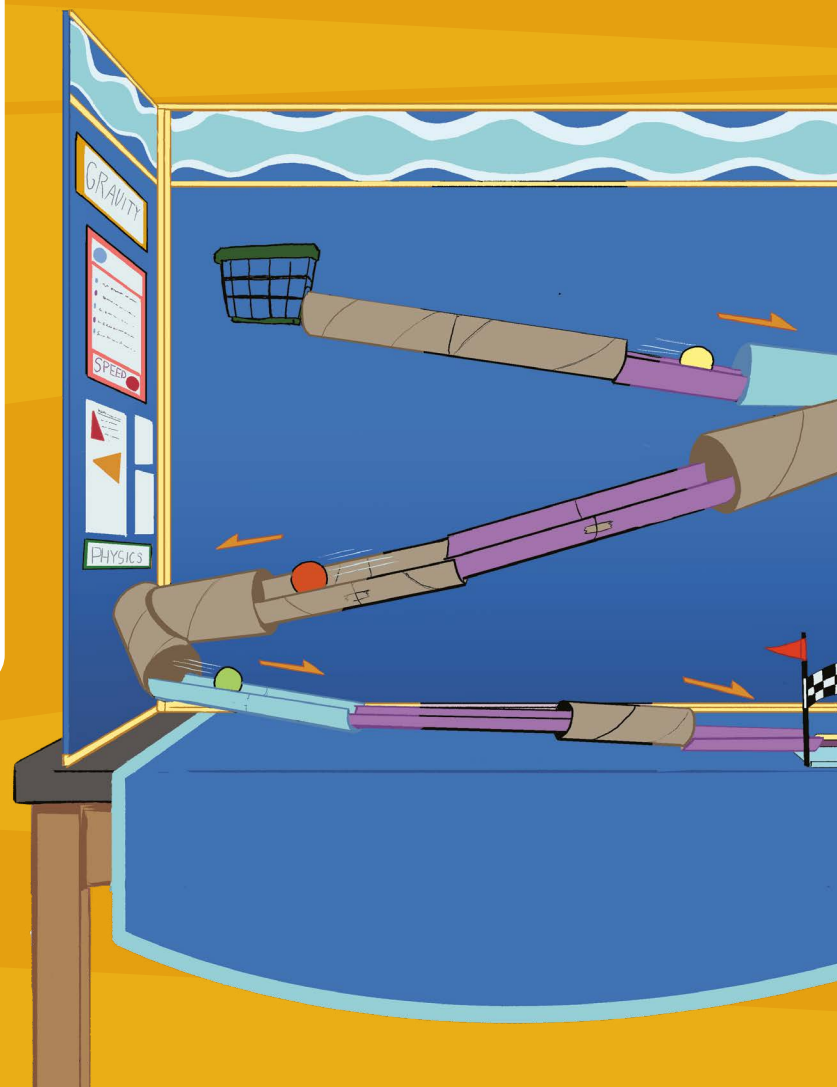
Hint: Think about the variables. How will changes to the racetrack design, the cars or the force used to propel the cars, affect the outcome or results?

Remember, they used spherical objects like stainless steel marbles, glass marbles, gum balls, and beads.

- ★ What other types of objects might be good test “race cars”?

ANALYZING AND INTERPRETING DATA

How would you collect and organize data about each car and its performance? After conducting your version of the racetrack experiment, present your data. Think of the various ways that data can be shown; line graphs, bar graphs, and pictographs are a few examples.



SOCIAL-EMOTIONAL LEARNING

SELF-AWARENESS

In *Whiz Kid*, Miles faces challenges at school and at home.

He struggles to manage conflict with friends and family. He and RJ continue the competition and “one-upmanship” in their relationship. RJ’s teasing causes Miles doubt himself for a moment.

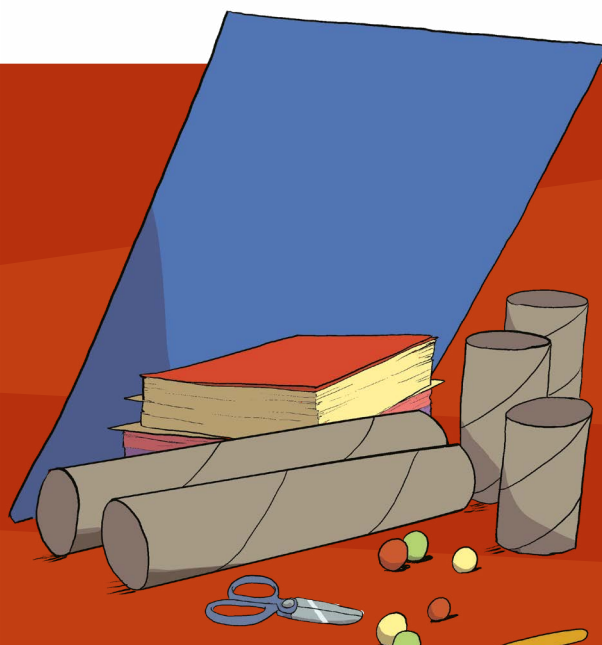
- ★ How do you respond to teasing? Does it bother you? Do you give it right back? Why or why not?

In the first chapter and throughout the book, Miles talks about the expectations he has for himself as a scientist. On page 2, he:

“I cheered for the winners . . . I could have done better. I promised myself I would try harder this year.”

When he and the team grapple with creating their science project, he questions himself and his contribution. Things don’t go as planned and Miles feels frustrated. He lashes out at team members and later needs to make amends.

- ★ Have you ever had a similar experience of questioning yourself and/or taking it out on others?



SOCIAL-EMOTIONAL LEARNING

RESPONSIBLE DECISION-MAKING

Miles must also deal with his own feelings of jealousy and competition with Cam. Are they brothers and cousins? Or are they rivals? On pages 41 and 61, he wonders if Cam is the better scientist:

“Here I was hating on Cam in my mind, and we were supposed to be brothers. What was wrong with me?” (p. 41)

“What, was I invisible? I was supposed to be in my element, but I couldn’t even help with somethingsimple. Some science whiz.” (p. 61)

With Cam in the picture, he wonders if he’s still “the man.”

- ★ How do you maintain your self-confidence while respecting others’ gifts, talents, and abilities?

MORE TOPICS FOR DISCUSSION

RELATIONSHIP SKILLS

- ★ Sharing friends and avoiding possessiveness in friendships. Cam and RJ’s budding friendship annoys Miles.

SOCIAL AWARENESS

- ★ Showing empathy and compassion. Cam and Nana making teacakes together helps Cam cope with his family situation.

SOCIAL-EMOTIONAL LEARNING

SELF MANAGEMENT

Regrouping after disappointment. Although Miles and his team gave their best effort, the fifth graders “took the top spots again.”

HOW TO APOLOGIZE

Have you ever had a misunderstanding with a friend or family member? Perhaps you need to talk with them and apologize for what you said or did. Here are the important parts of an apology:

- ★ I’m sorry for _____
- ★ It was wrong because _____
- ★ In the future, I will _____
- ★ [Name of the person], will you forgive me?

Learn more from this article, [“A Proper Apology: Four Essential Components”](#) from the Keller Institute.

For elementary students, social-emotional learning includes the tasks of:

- ★ forming friendships with another person
- ★ demonstrating self-control and showing emotions appropriately within the peer group
- ★ developing stable peer group relationships
- ★ solving “social difficulties” or conflicts with flexibility or a variety of solutions.

VIDEO LEARNING

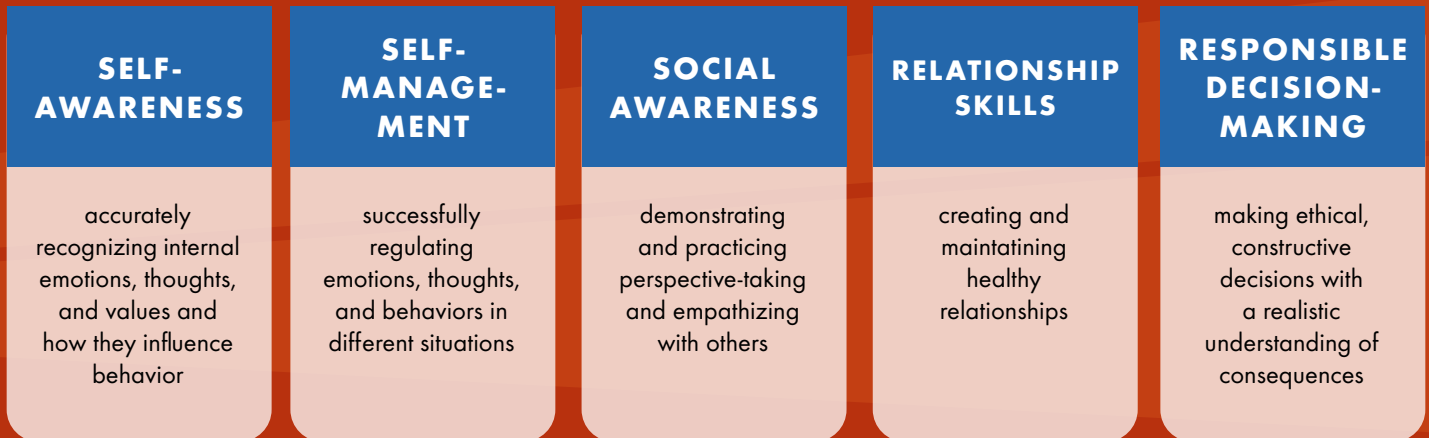
[SEL 101:](#)

[What are the core](#)

[competencies and](#)

[key settings?](#)

SOCIAL-EMOTIONAL LEARNING



SELF-AWARENESS

The ability to accurately recognize one's own emotions, thoughts, and values and how they influence behavior. The ability to accurately assess one's strengths and limitations, with a well-grounded sense of confidence, optimism, and a "growth mindset."

- Identifying Emotions
- Accurate Self-Perception
- Recognizing Strengths
- Self-Confidence
- Self-Efficacy

SELF-MANAGEMENT

The ability to successfully regulate one's emotions, thoughts, and behaviors in different situations—effectively managing stress, controlling impulses, and motivating oneself. The ability to set and work toward personal and academic goals.

- Impulse Control
- Stress Management
- Self-Discipline
- Self-Motivation
- Goal Setting
- Organizational Skills

SOCIAL AWARENESS

The ability to take the perspective of and empathize with others, including those from diverse backgrounds and cultures. The ability to understand social and ethical norms for behavior and to recognize family, school, and community resources and supports.

- Perspective-Taking
- Empathy
- Appreciating Diversity
- Respect for Others

RELATIONSHIP SKILLS

The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. The ability to communicate clearly, listen well, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively, and seek and offer help when needed.

- Communication
- Social Engagement
- Relationship Building
- Teamwork



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RESPONSIBLE DECISION-MAKING

The ability to make constructive choices about personal behavior and social interactions based on ethical standards, safety concerns, and social norms. The realistic evaluation of consequences of various actions, and a consideration of the well-being of oneself and others.

- Identifying Problems
- Analyzing Situations
- Solving Problems
- Evaluating
- Reflecting
- Ethical Responsibility

For more information about social-emotional learning and the Collaborative for Academic, Social, and Emotional Learning, visit casel.org.

COMMON CORE STANDARDS

ENGLISH LANGUAGE ARTS — READING & LITERATURE

CCSS.ELA-LITERACY.RL.1.1
CCSS.ELA-LITERACY.RL.1.2
CCSS.ELA-LITERACY.RL.1.3
CCSS.ELA-LITERACY.RL.1.4
CCSS.ELA-LITERACY.RL.1.6
CCSS.ELA-LITERACY.RL.1.7
CCSS.ELA-LITERACY.RL.1.9

CCSS.ELA-LITERACY.RL.2.1
CCSS.ELA-LITERACY.RL.2.2
CCSS.ELA-LITERACY.RL.2.3
CCSS.ELA-LITERACY.RL.2.5
CCSS.ELA-LITERACY.RL.2.6
CCSS.ELA-LITERACY.RL.2.7

CCSS.ELA-LITERACY.RL.3.1
CCSS.ELA-LITERACY.RL.3.2
CCSS.ELA-LITERACY.RL.3.3
CCSS.ELA-LITERACY.RL.3.4
CCSS.ELA-LITERACY.RL.3.5
CCSS.ELA-LITERACY.RL.3.6
CCSS.ELA-LITERACY.RL.3.9

ENGLISH LANGUAGE ARTS — WRITING

CCSS.ELA-LITERACY.W.1.1
CCSS.ELA-LITERACY.W.1.2
CCSS.ELA-LITERACY.W.1.3
CCSS.ELA-LITERACY.W.1.7
CCSS.ELA-LITERACY.W.1.8

CCSS.ELA-LITERACY.W.2.1
CCSS.ELA-LITERACY.W.2.2
CCSS.ELA-LITERACY.W.2.3
CCSS.ELA-LITERACY.W.2.7
CCSS.ELA-LITERACY.W.2.8

CCSS.ELA-LITERACY.W.3.1
CCSS.ELA-LITERACY.W.3.2
CCSS.ELA-LITERACY.W.3.3
CCSS.ELA-LITERACY.W.3.7
CCSS.ELA-LITERACY.W.3.8

ENGLISH LANGUAGE ARTS — SPEAKING & LISTENING

CCSS.ELA-LITERACY.SL.1.1
CCSS.ELA-LITERACY.SL.1.2
CCSS.ELA-LITERACY.SL.1.3
CCSS.ELA-LITERACY.SL.1.4
CCSS.ELA-LITERACY.SL.1.5
CCSS.ELA-LITERACY.SL.1.6

CCSS.ELA-LITERACY.SL.2.1
CCSS.ELA-LITERACY.SL.2.2
CCSS.ELA-LITERACY.SL.2.3
CCSS.ELA-LITERACY.SL.2.4
CCSS.ELA-LITERACY.SL.2.5
CCSS.ELA-LITERACY.SL.2.6

CCSS.ELA-LITERACY.SL.3.1
CCSS.ELA-LITERACY.SL.3.2

CCSS.ELA-LITERACY.SL.3.4
CCSS.ELA-LITERACY.SL.3.5
CCSS.ELA-LITERACY.SL.3.6

NEXT GENERATION SCIENCE STANDARDS

- 3-PS2-1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.
- 3-PS2-2 Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.
- 3-5ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Science and Engineering Practices • Ask questions and define problems • Plan and conduct an investigation • Analyze and interpret data

HISTORY/SOCIAL SCIENCE STANDARDS

- K-5 History/Social Studies standards are integrated into the K-5 Reading standards.

For reading and responding to the biographies of historically significant figures, see:

ENGLISH LANGUAGE ARTS — READING: INFORMATIONAL TEXT

CCSS.ELA-LITERACY.RI.1.1
CCSS.ELA-LITERACY.RI.1.2
CCSS.ELA-LITERACY.RI.1.3

CCSS.ELA-LITERACY.RI.2.1
CCSS.ELA-LITERACY.RI.2.2
CCSS.ELA-LITERACY.RI.2.3

CCSS.ELA-LITERACY.RI.3.1
CCSS.ELA-LITERACY.RI.3.2
CCSS.ELA-LITERACY.RI.3.3

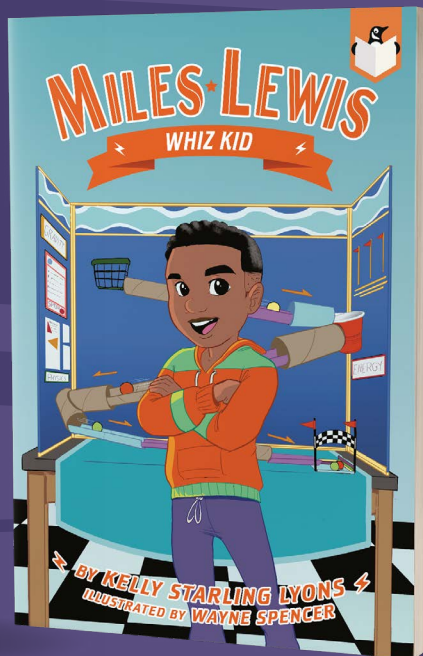
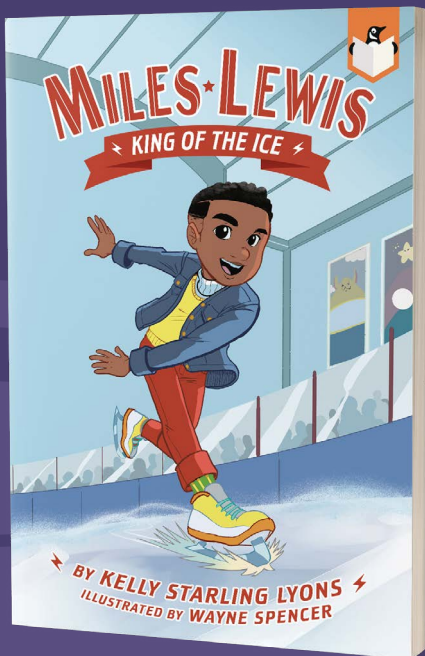
MILES'S SCIENCE FACTS

Trial and Error - "Messing was part of the process." (p. 72)

Persistence - "Part of being a scientist is continuing to try until you get it right." (p. 86)

Don't miss MILES★LEWIS

The new series from the creator of the Jada Jones series!



Praise for the series!

★ "Another great addition to this **heartwarming series** that introduces young readers to STEM activities along with a lesson about giving back to one's community."

—School Library Journal,
starred review for Matchmaker

"A thoughtful protagonist makes his series debut; sports lovers and the athletic-averse alike will be charmed."

—Kirkus Reviews on King of the Ice

"An honest, inspiring STEM-focused story starring an incredibly relatable future scientist."

—Kirkus Reviews on Whiz Kid

