

Counting on Katherine

How Katherine Johnson Saved Apollo 13

A RIF GUIDE FOR EDUCATORS

Themes: Civil Rights, Exploration, Problem Solving

Book Brief: You've likely heard of the historic Apollo 13 moon landing. But do you know about the mathematical genius who made sure that Apollo 13 returned safely home?

Content Connections: Engineering, Math, Science, Social Studies,

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Illustrator:
Dow Phumiruk



TIME TO READ!



BEFORE WE READ LET'S LOOK AT...

The Cover: Read the title, what does it mean to count on someone? Who is someone that you can count on?

The Pictures: Flip briefly through the pictures. During what time period do you think this takes place? Why?

Prior Knowledge: Discuss with your students what the term "segregation" means. Explain that many places such as schools and workplaces were segregated by race. In the 1950s, NASA began to hire Black women, like Katherine Johnson, as mathematicians.

To build background knowledge about the Apollo 13 mission, watch some of the original television coverage: Apollo 13: 'Houston, We've Had a Problem' - YouTube <https://www.youtube.com/watch?v=MdvoA-sjsOA>

Vocabulary: mathematician, segregated, NASA, Apollo 13, computer

Purpose for Reading: As we read, pay attention to Katherine's resilience and all her different accomplishments. How do her accomplishments have an impact on people today?

WHILE WE READ

MONITORING FOR COMPREHENSION

- Why couldn't Katherine go to the high school in her town?
- Why did Katherine become an elementary school teacher?
- How did Katherine feel about her first job at NASA?
- How is math "a kind of language"?
- Why was Katherine promoted to Project Mercury?
- Why did John Glenn require Katherine to okay the numbers before his flight?
- What happened to Apollo 13? How did Katherine save the mission?
- Why does Katherine repeatedly say, "You can count on me" throughout the book?

LET'S THINK ABOUT

Our Purpose: What were Katherine Johnson's accomplishments? How have they impacted people today?

Extending Our Thinking: Have your students discuss with a partner some of the challenges that Katherine Johnson faced. Optional: Share out with the class.

NOTE TO EDUCATORS

- Extension Activities for Educators are also available.
- Vocabulary Scaffolding sheet also available.