

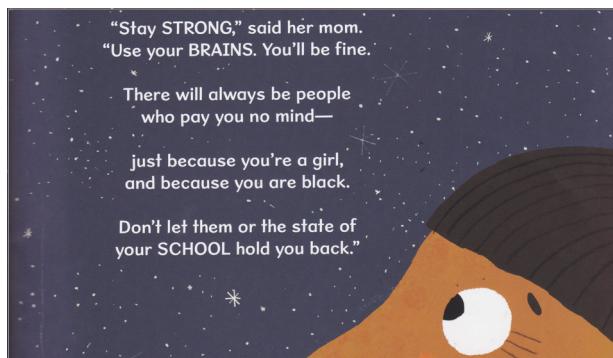
The Girl With a Mind for Math

by Julia Finley Mosca and Daniel Rieley

AGE LEVEL 6–8 YEARS

About the Story

In the 1950s, Raye Montague, a young Black girl, dreamed of becoming an engineer who built submarines. Yet at that time, many adults (wrongly) thought that girls could not become engineers. Also, her Arkansas schools were segregated and Black children's education was of poor quality. Raye's mom encouraged her to let nothing hold her back. Raye did just that. She overcame obstacles in college, where she was not allowed to study engineering, and in the workplace, where her talents were disparaged. Eventually, she designed the first ship by computer!



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Illustrations by Daniel Rieley
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Words to Learn

engineer, headstrong, potential, segregated, grit, blueprints, abhorrible, deplorable, applauded, propel

About the Math

As children read the Raye Montague story, they can learn that:

- Engineers use complex math to build boats, submarines, and much more.
- Computer programs can speed up the process.
- Raye Montague's family helped her believe that she had potential and that she should not let discrimination she faced from being a Black girl deter her.
- Raye worked hard, with determination, and refused to let people stand in the way of her remarkable achievements as an engineer.



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Math Talk During Reading

Ask your child to think about what Raye might have enjoyed about math/engineering that made her eager to do it despite its difficulty.

TALK ABOUT THE PRACTICAL USES OF MATH

Discuss how math can be useful (and fun) for practical challenges, from shopping to understanding baseball.

TALK ABOUT WHY PEOPLE LAUGHED AT RAYE'S PLAN

Discuss how some people felt—and some still feel—that girls and Black children do not have the ability to do math. Ask your child whether they have ever experienced someone holding incorrect stereotypes like these.

TALK ABOUT MOTIVATION

Ask your child about their experience when they are faced with a really hard task. How do they feel about it? What do they do?

Try to come up with some of your own questions and comments, too!

Activity After Reading

EXPLORE INFORMATION ON WOMEN MATHEMATICIANS.

Check out these sites:

<https://www.womendomath.org/profiles/>

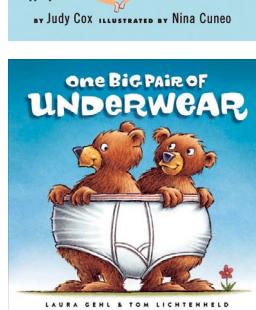
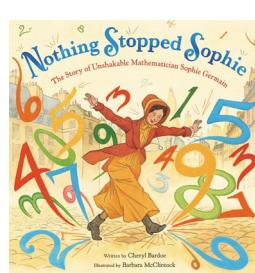
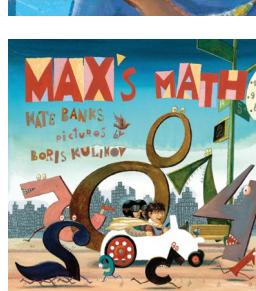
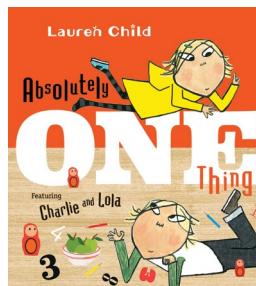
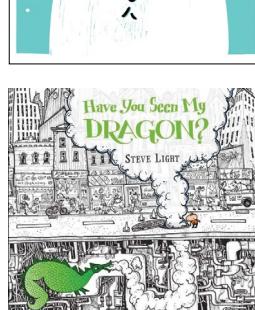
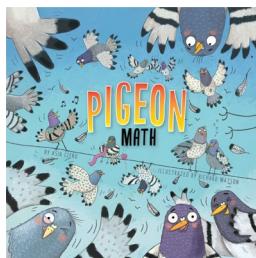
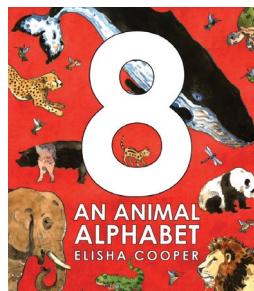
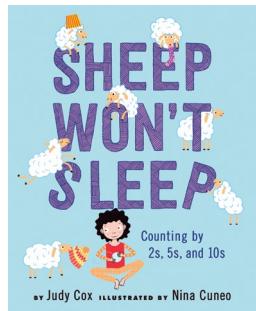
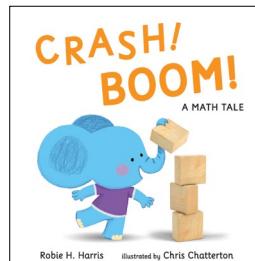
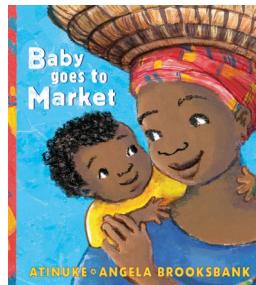
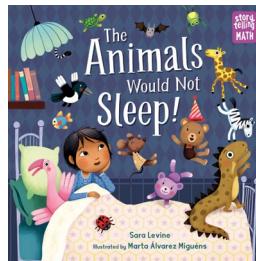
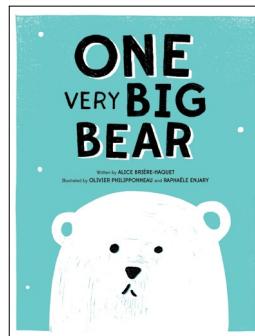
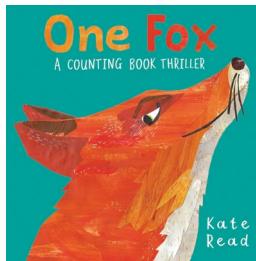
<https://www.lathisms.org/calendars/calendar-2021>

<https://mathematicallygiftedandblack.com/>

Mathical BOOK PRIZE

The Mathical Book Prize recognizes math-inspiring literature for kids ages 2-18. Prize-winning books are selected by a committee of teachers, librarians, mathematicians, and others. To get the Mathical List, plus reading guides, book reviews, and more, see

mathicalbooks.org



PreK WINNERS:

Baby Goes to Market by Atinuke
Crash! Boom! A Math Tale by Robie H. Harris
Have You Seen My Dragon? by Steve Light
Lia & Luis: Who Has More? by Ana Crespo
One Fox: A Counting Book Thriller by Kate Read
ONE Very Big Bear by Alice Briere-Haquet
8: An Animal Alphabet by Elisha Cooper

PreK HONOR TITLES:

Animal Shapes by Christopher Silas Neal
Count the Monkeys by Mac Barnett
Count with Maisy, Cheep, Cheep, Cheep! by Lucy Cousins
Goodnight, Numbers by Danica McKellar
I Know Numbers by Taro Gomi
A Mousy Mess by Laura Driscoll
One Happy Tiger by Catherine Rayner
One Is a Piñata: A Book of Numbers by Roseanne Greenfield Thong
Over in a River: Flowing Out to the Sea by Marianne Berkes
Press Here by Hervé Tullet
Round by Joyce Sidman
100 Bugs! A Counting Book by Kate Narita

GRADES K-2 WINNERS:

Absolutely One Thing: Featuring Charlie and Lola by Lauren Child
The Animals Would Not Sleep by Sara Levine
Max's Math by Kate Banks
Nothing Stopped Sophie: The Story of Unshakable Mathematician Sophie Germain by Cheryl Bardoe
One Big Pair of Underwear by Laura Gehl
Pigeon Math by Asia Citro
Sheep Won't Sleep: Counting by 2s, 5s, and 10s by Judy Cox

GRADES 2-K HONOR TITLES:

Billions of Bricks: A Counting Book about Building by Kurt Cyrus
Bird Count by Susan Edwards Richmond
The Boy Who Loved Math by Deborah Heiligman
Cao Chong Weighs an Elephant by Songju Ma Daemicke

Counting on Katherine: How Katherine Johnson Saved Apollo 13

by Helaine Becker
Counting the Stars: The Story of Katherine Johnson, NASA Mathematician by Lesa Cline-Ransom
Count on Me by Miguel Tanco
The Girl With a Mind for Math: The Story of Raye Montague by Julia Finley Mosca
How Many Jelly Beans? A Giant Book of Giant Numbers! by Andrea Menotti
Is 2 a Lot? An Adventure with Numbers by Annie Watson and Rebecca Evans
Lifetime: The Amazing Numbers in Animal Lives by Lola M. Schaefer
Shapes, Reshape! by Silvia Borando
When Sophie Thinks She Can't by Molly Bang
Zero the Hero by Joan Holub
3x4 by Ivan Brunetti

HALL OF FAME TITLES:

Hippos Go Berserk! by Sandra Boynton
One Grain of Rice: A Mathematical Folktale by Demi
The Very Hungry Caterpillar by Eric Carle