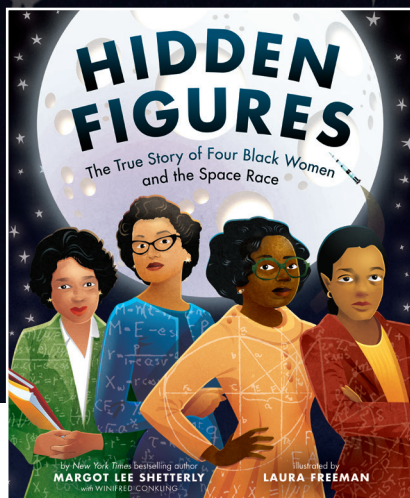


**With hard work,  
perseverance, and  
a love of math,  
anything was  
possible.**



**Mathematicians Dorothy Vaughan, Mary Jackson,  
Katherine Johnson, and Christine Darden**





# HIDDEN FIGURES

The True Story of Four Black Women and the Space Race

By **MARGOT LEE SHETTERLY**

Illustrated by **LAURA FREEMAN**

## About the Book

Dorothy Vaughan, Mary Jackson, Katherine Johnson, and Christine Darden were all phenomenal mathematicians who were among the first black women to work for the National Aeronautics and Space Administration. They used their spectacular math abilities to make significant contributions during World War II and then as the United States joined the Space Race. Though these incredible women faced many challenges, they persevered, and today we recognize their brilliance, their determination, and the undeniable impact they had on our country's exploration of air and space.

## Discussion Questions

- ★ What special strength did Dorothy Vaughan, Mary Jackson, Katherine Johnson, and Christine Darden use to help the United States?
- ★ In the 1940s, what did "computer" mean?
- ★ How did Dorothy want to help her country during World War II?
- ★ What was the state of Virginia like during the 1940s? How did segregation affect black people? How was segregation evident at Dorothy's job?
- ★ Describe Mary Jackson's job at the Langley Laboratory of the National Advisory Committee for Aeronautics.
- ★ Katherine Johnson learned how to analyze turbulence. How would this be helpful?
- ★ Katherine wanted to join her research group's meetings, but women were not permitted to attend. How was she able to change this?
- ★ Mary wanted to become an engineer, but she was told it was impossible. Why? How did she overcome this?
- ★ When the Langley Laboratory got its first machine computer, how did it function? What was necessary to make it operate successfully?
- ★ What was *Sputnik*? When the Russians launched it into space, how did this affect Katherine's job? How did the National Advisory Committee for Aeronautics change?
- ★ For many years, Langley had used math principles to design and improve airplanes. After *Sputnik*, what else was designed using math? How did Katherine's strong math ability help send astronaut John Glenn into space?
- ★ In the 1960s, how did segregation laws change?
- ★ How did Dorothy, Mary, and Katherine help Christine Darden become an engineer? What was her first job at NASA?

## Extension Activities

**Marvelous Math.** Ask the class to think about how and when we use mathematics in our daily life. List these examples on a chart, and discuss why there are so many applications of math in the real world. Then use math to accomplish a task in the classroom, such as tallying up the lunch count or calculating how many students are present vs. absent.

**Meet the Computers.** Toward the end of the book, the author invites readers to learn more about these influential women. Have each student choose one of the Meet the Computers passages to read. Then have them "turn and talk" with a partner and share their new knowledge with each other.

**Superwomen!** Have a class discussion about why these women's contributions have not been celebrated until recently. Then have students choose one of these women, or another woman who is renowned in the field of science and engineering, to research using both printed and digital resources. Have the students prepare an oral report on their research to present to the class.

