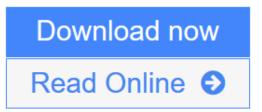


# Hidden Figures: The True Story of Four Black Women and the Space Race

Margot Lee Shetterly, Winifred Conkling, Laura Freeman (illustrator)



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Dorothy Vaughan, Mary Jackson, Katherine Johnson, and Christine Darden were good at math...really good.

They participated in some of NASA's greatest successes, like providing the calculations for America's first journeys into space. And they did so during a time when being black and a woman limited what they could do. But they worked hard. They persisted. And they used their genius minds to change the world.

In this illustrated picture book edition, we explore the story of four female African American mathematicians at NASA, known as "colored computers," and how they overcame gender and racial barriers to succeed in a highly challenging STEM-based career.

# Hidden Figures: The True Story of Four Black Women and the Space Race Details

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# From Reader Review Hidden Figures: The True Story of Four Black Women and the Space Race for online ebook

### Lynn says

A picture book, children's version of Hidden Figures, of an adult non-fiction book of the same name. There is also a hit film also called Hidden Figures. This is a touching story of four African-American women who worked between 1941-1970 as computers for NASA to help the war effort in making jet planes fly faster and safer and later, rockets in the space program. The women survived discrimination both as females and as African-Americans. It is written in an interesting and comprehensible way that many kids can understand. Kids can also relate to these people and their experiences, a more difficult thing to do with such a complex subject. It is written very well.

# Stephanie Anze says

Before rockets where launched into space and man walked on the moon, a group of underrepresented women worked in shadows. Hired as computers, these women used their minds, a ruler and paper for complex equations that set trajectories and made history. Of black descent, theirs was a story that had been previously been unknown. Now Dorothy Vaughn, Mary Jackson, Katherine Johnson and Christine Darden finally have the spotlight and theirs is a story that rises higher than the rockets they help sent into space.

This is an incredible narrative. I watched the movie and was absolutely amazed. Inspiring and touching, this book should be part of every children's library. Dorothy, Mary, Katherine and Christine were hired as human computers. Dealing with intricate and complex math equations, their work helped NASA beat Russia in the space race. They were very good at math, very good. But for all their work, they were kept separate in a different space than their white counterparts and not given the proper recognition. Having to deal with racism and sexism, these group of women pushed boundaries and made history. The illustrations are colorful a bright. The message universal. I already have the full length novel and look forward to reading it soon. As for this work, its a great book of even greater women.

#### Aliza Werner says

Black women in math and science who changed our world. An important book to have in the classroom.

### **Danielle says**

This is such a lovely picture book version of the book. Perfect for children so they can learn this important story of these incredible women.

# Jill says

Thanks to the book by the same name for adults, as well as the successful movie based on that book, many people know the story of the four African-American women who helped NASA send men into space. Now the author and an illustrator have teamed up to bring the story to children.

Dorothy Vaughan, Mary Jackson, Katherine Johnson, and Christine Darden were "really good" at math, and they loved it enough to want to make a career out of it. Dorothy Vaughan got interested during WWII, out of a desire to serve the country by working for the National Advisory Committee for Aeronautics [NACA], the government agency that designed airplanes. This was in the 1940's, when "computers" were actually persons who did math by hand. But the government agency was in the state of Virginia, where "Jim Crow" laws were in effect.

[Jim Crow is a term adapted from the song "Jump Jim Crow" performed by a white minstrel in blackface. It came to mean the social customs, policies, and laws put in place to maintain the hierarchy of whites over blacks. The Jim Crow Era lasted from the end of Reconstruction after the Civil War to the Civil Rights Movement of the 1950s and 1960s.]

Thus, in Virginia, blacks and whites could not eat in the same restaurants, drink from the same water fountains, use the same restrooms, attend the same schools, sit by each other in theaters, and so on.

But Dorothy had confidence that she was so good at math, the NACA would overlook her color. She was indeed offered a job at NACA's Langley Laboratory in Hampton, Virginia, in 1943, although she had to work in a separate building with other black "computers." She stayed on after the war, as the Americans were trying to build faster and safer planes.

In 1951, Mary Jackson got a job as a computer at Langley, helping test model airplanes in wind tunnels. Mary was also a computer but wanted to be an engineer. The obstacles were great: she was not only a woman, she was a black woman. But she refused to give up, and eventually became the first African-American female engineer at Langley.

Katherine Johnson applied to the lab in 1953, doing math that analyzed the effects of turbulence on airplanes. Being so good at what she did also helped her, like the others, overcome the barriers put in her way on account of being both black and female.

In the 1950's, Langley bought a machine computer, and Dorothy helped program the machines. She also taught other black computer women to program.

In 1957, Russia launched Sputnik into space, and now the "space race" was on. NACA changed its name to the National Aeronautics and Space Administration, or NASA, and the people at Langley were tasked with figuring out how to send astronaut John Glenn into space and back to earth safely. Katherine helped calculate the trajectories for the rocket. Even though NASA was now using machine computers, Glenn wanted Katherine to double-check the machine computer's calculations before he would get into the rocket. Only when she confirmed them did he blast off into space.

Christine Darden came to Langley in 1967. As the author reports, Christine wanted to become an engineer, and thanks to Dorothy, Mary, and Katherine, she knew it was possible.

NASA meanwhile, was now working on getting a man to the moon:

"The next adventure wouldn't be easy and would require lots of tests and lots more numbers. But Dorothy, Mary, Katherine, and Christine knew one thing: with hard work, perseverance, and a love of math, *anything* was possible."

The book concludes with a timeline that goes from 1903 (the first powered flight) to 1969 (the first humans landing on the moon). The career spans of Dorothy, Mary, Katherine, and Christine are also shown on the timeline. Short biographies follow for each woman - "Meet the Computers." Finally, there is a glossary, and an Author's Note. In the Note, Shetterly writes:

"It's my hope that the heroines of *Hidden Figures* will spark the imaginations of the next generation of readers - and the next generation of scientists, mathematicians, and engineers - and encourage them to ride their dreams as high as their talent and determination will take them."

The terrific illustrations by Laura Freeman use bold colors to display the well-researched historical events the book describes. Her artwork is simple, and yet attitude is all over the faces of these four determined women! Freeman includes so many clever but subtle touches. She adds patterns to clothes and math symbols to dreams. To depict changes during the Civil Rights movements, she shows a diverse group of people holding hands, presumably inside a bus, while images of Civil Rights icons appear through the windows.

And Freeman realized her own dreams in becoming an artist. I love this reminiscence by the illustrator in an interview:

"... I was about five when, after looking at a beautiful children's book, I asked my mom about the pictures and she told me that it was someone's job to create them. I thought: 'Wow, that's a job?""

**Evaluation:** It's so gratifying to see more books for kids about women who persisted against huge odds to make a difference in any field, but especially those of science and math. The book isn't as exciting as the film of course, but it is perfect for the younger audience for whom it is intended.

#### **Pink STREAM says**

The book is about four powerful women who worked in NASA and helped NASA to be successful. Now their stories inspire both women and African Americans. Also, it shows how African Americans were segregated and threatened not equal, then how they earned their rights. There is also a pretty good movie with the same name "Hidden Figures". If you didn't watch it yet, watch it as soon as possible. Different from the movie, they added one more women, Dr. Christine Mann Darden, to the book.

Illustrations are very detailed and meaningful. For example, women's earrings are star, planet, and moon and there are pictures of civil rights activists.

There is a timeline which shows when the characters started to work at NASA and other important things between those years. And there is one-page information for each woman. They are short summaries but that is good to have more information about them. In the end, there is a glossary for hard words. That is good for young people so they will be able to look it up easily.

You should really read and watch "Hidden Figures".

#### ???? ????? says

#### **Christina Carter says**

I am grateful for a picture book edition of Hidden Figures that makes each woman's narrative accessible to our youngest readers. It tells the true stories of four black women: Dorothy Vaughn, Mary Jackson, Katherine Johnson, and Christine Darden, and the important roles they played working for NASA. Their work as computers (mathematicians) and engineers was critical in developing aircraft that could fly faster, higher, and safer. Their labor extended beyond our planet to outer space.

The emphasis throughout is that each woman loved math and they were also really good at it (I love this about the book). They were persistent and determined, and trailblazers for change. I felt empowered by their stories and really enjoyed getting to know a little bit about them. This book includes a timeline of events, short bios, and a glossary of important terms. Thank you to Margot Lee Shetterly for her research and for teaching us about important women who are hidden no more.

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#### Joan says

This was very abbreviated. I guess I'll have to read the adult edition to get more information. Actually most of it just left me wondering and wanting more info. For example: in the half page long biographies at the back, Katherine Johnson contributed calculations to the Apollo 11 mission to the moon in 1969. I can see why that was so important, no question. However, that was a long time ago and she is still alive (according to Wikipedia) at age 99. She didn't do anything noteworthy since 1969? At least her retirement date from NASA could have been noted. This feeling of incompleteness is also true for Dr. Darden. I also felt as though these people were presented as very isolated from the whole team at NASA. Did any of them mentor the other 3 "hidden figures"? Did they even know each other? Nasa is a huge place, although kids might not realize that.

This is an attractive book but could have been much more without necessarily being much longer. A few sentences here and there would have made a big difference.

#### Julie Kirchner says

I'm super excited to have a little easier book to share with students about these incredible women. My students were very intrigued by Hidden Figures last year when the movie came out, but the text of the book, even the children's version, was inaccessible to some of my students. I'm happy to have this one as a step into the longer, more involved text. It may be a little hard to follow for some students since all the stories are somewhat combined and not clearly defined. The back matter, especially the timeline and biographies of each, will help I think!

#### **Inge says**

A+ illustrations, a perfect book for reading aloud.

# **Audrey says**

I could do with a bit more explicitness around "because racism" — I think segregation is presented mostly as "separate spaces" and less "also not equal & danger." But overall, it's a beautiful book & gives brief bios of each of the four women. I also think there could have been a bit more math. Interested to read the grownup book & what made it to this version. (This library hold came through first.)

# **Bethany says**

Phenomenal. This was loaned to me by a teacher and I've already ordered a copy for the library. Gorgeous art and a well-told story brings the history of the black women who helped shape NASA to life for elementary kids. In addition to the biographical aspect, the book uses very age appropriate language to talk about the social aspects of their achievements. It highlights some of the struggles faced by all African Americans during the civil rights era, as well as discussing the ways in which women were marginalized, particularly in the field of science. The language is plain and clear, but doesn't talk down to kids. And the illustrations are beautiful and multi-faceted. A page that tells about the changing culture -- how the work areas became integrated, among other important gains -- has a background image of the Freedom Riders seen through bus windows.

I can't wait to share this with my students!

#### Elizabeth says

I really like this illustration style (the matte paper).

Whereas the adult book and ensuing movie works to show how Dorothy, Mary, and Katherine were part of a community together, this picture book merely moves from one woman to the next. Because I read quickly, I would often find myself confused and then remember that oh yes, the name of this woman was different than

the name of the previous woman I was reading about.

Although it talks about various legal and cultural barriers the women faced because of racism (and, implied, sexism), because each woman's story is isolated, I often felt sort of detached from that broader socio-cultural context while reading this book -- maybe because I read so fast? There's a 2-page spread after John Glenn and before Christine Darden (who started at Langley in 1967, as opposed to the other women who started there in the 1940s and 50s) about segregation ending (I loved the background image of 4 Civil Rights leaders, though I could only name Rosa Parks and MLK). I appreciated that its text ended with, "Across the country, people started to think about ways to bring equality to *all* Americans" -- because the "started to think about" undercut the potential idea that all of segregation etc. got solved in that moment in history (though okay, it is a bit disingenuous to imply that people were only just starting to think about it now).

After the narrative ends, there's a timeline, brief bios of each of the 4 women, a glossary, and an author's note.

# KC says

A wonderful telling of the African American women who helped launch the space program. In the bio for Katherine Johnson the author failed to mentioned her Medal of Freedom award.