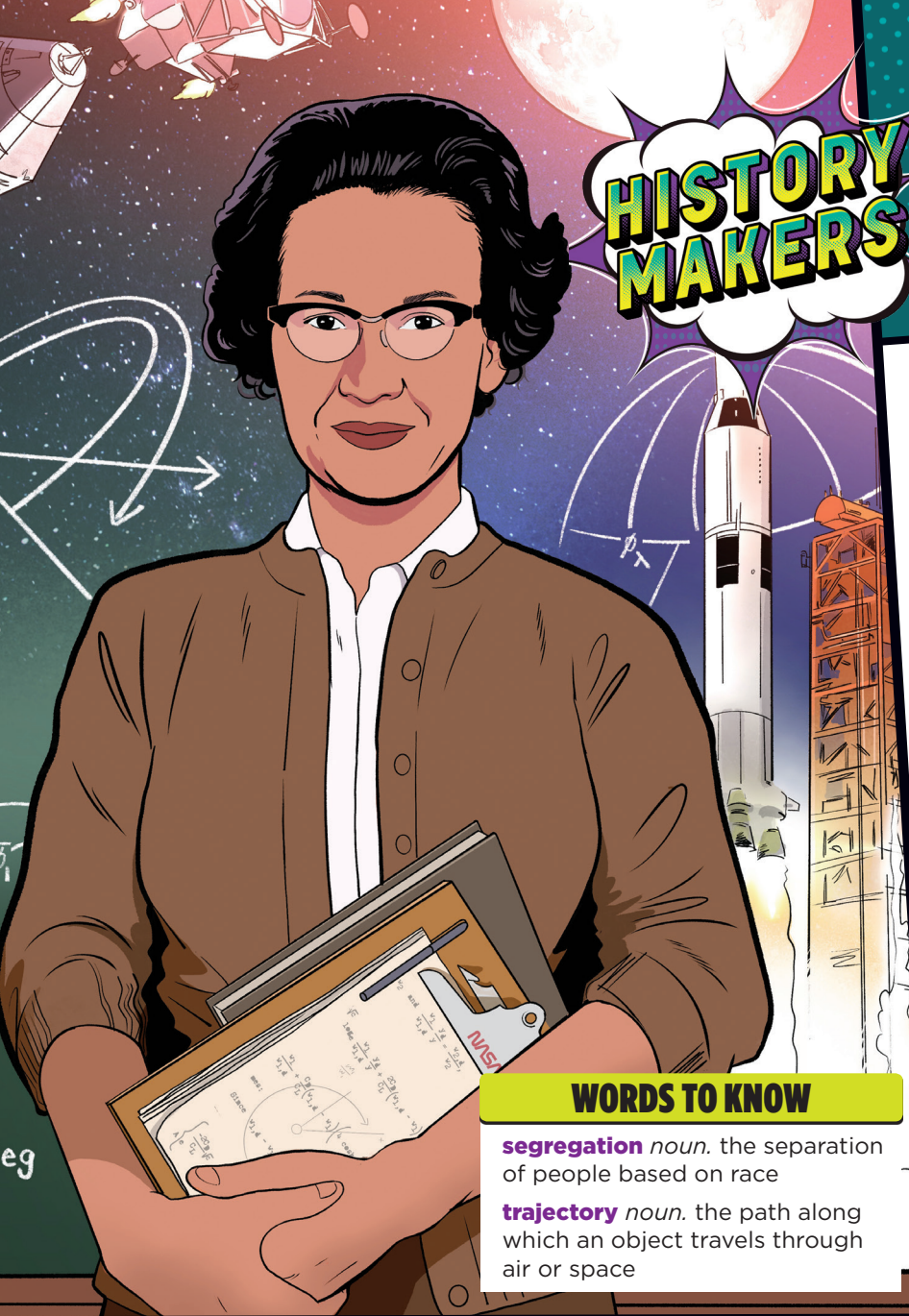


HISTORY
MAKERS

KATHERINE JOHNSON



Her math skills helped launch astronauts into the history books.

In 1962, John Glenn was preparing to make a historic space flight. But the astronaut didn't trust NASA's computers to get him to space and back safely. Computers were fairly new. One error could mean the difference between life and death. Glenn trusted only one person's calculations.

Katherine Johnson was one of the most skilled mathematicians at NASA. She helped Glenn become the first American to orbit Earth. During her 33 years at NASA, Johnson made some of the most historic missions in space exploration possible.

Illustrations by Chris Danger

Counting Stars

Johnson was born in West Virginia in 1918. From a very young age, she had a curious mind. She constantly asked questions and wanted to know how things worked.

"She loved math from the time she was born," says Margot Lee Shetterly. Her book *Hidden Figures* highlights Black female mathematicians at NASA. "She counted everything—houses, stairs, dishes, the stars in the sky."

Johnson was so smart that she skipped several grades. In 1937, she graduated from college with a degree in math.

At the time, less than 5 percent of women earned college degrees. Johnson went into teaching, one of the few careers open to women.

NASA's Best

In 1953, Johnson got an opportunity that would change her life and the lives of others. She started working at the Langley Research Center, which later became part of NASA.

Johnson was a "human computer." She and other female mathematicians solved the difficult math equations needed to design, test, and fly planes—and later, rockets.

But Johnson faced many challenges. Back then, **segregation** was legal. Johnson was kept separate from White women who did the same job. Plus, women were paid less than men for similar work.

Still, Johnson rose to the top. Before working with Glenn, she helped calculate the **trajectory**

for America's first human spaceflight, in 1961.

But she was proudest of her role in the Apollo 11 mission in 1969. She helped get astronauts Neil Armstrong and Buzz Aldrin home safely from the moon. Johnson's team determined the best way to reconnect their spacecraft to the shuttle that would bring it back to Earth.

Watch a
SLIDESHOW
Find out more
about "human
computers."

An Inspiration for All

In 2016, a film version of Shetterly's book was released. It wasn't until then that Johnson gained worldwide recognition. NASA later named two buildings after Johnson, who died in 2020 at 101 years old.

"She would say 'I loved every single day of my job at NASA,'" Shetterly says.

—by Alicia Green

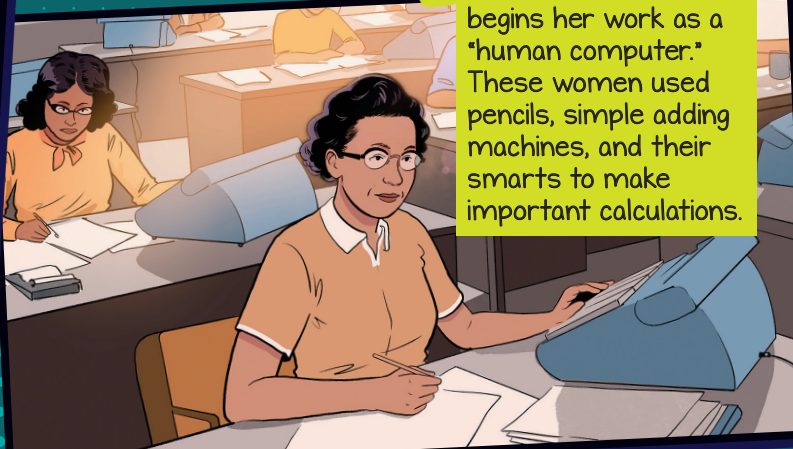
COUNT HER IN

Here are some important moments in Johnson's life.

1929 At just 10 years old, Johnson starts high school. She graduates from college when she is 18—the age at which most people start college.



1953 Johnson begins her work as a "human computer." These women used pencils, simple adding machines, and their smarts to make important calculations.



2015 President Barack Obama awards Johnson the Presidential Medal of Freedom, America's highest civilian honor.

