

# The Women Who Have Helped Build NASA

## Katherine Johnson

While many women are still fighting for equality in our modern world, it is important for us all to celebrate the huge successes of some very special women.

### Early Life and Education

Katherine Johnson was born in 1918 and lived in West Virginia. Early on in her life, Katherine's skill with numbers was clear. At 18 years old, she went to West Virginia State College, studying mathematics and French. She graduated with the highest honours possible in 1937 and began to teach in a school in Virginia.



In 1939, Katherine was considered so skilled in mathematics that she was one of only three black students chosen to attend West Virginia University. In the early 1900s, it was uncommon for women to go to university and it was even more rare for a black woman to go to university.

Katherine took a break from her studies to bring up her family, then returned to teaching.

### Her Career at NASA

In 1952, she found out that NACA (the National Advisory Committee for Aeronautics) had jobs available in their computing department. This was her chance to be involved in something new and exciting.

Katherine began work in the office in 1953. She impressed her boss, Dorothy Vaughan, so much that within two weeks of starting her job, she had been asked to work on a special project on space flight research. Her job was to study data from a test flight into space, and to investigate a plane crash that had occurred due to turbulence.

### The World of Science Was Changing

In 1957, Katherine's life and career was changed when Russia launched a satellite called Sputnik into space. America began to take space travel much more seriously and the NACA became NASA (National Aeronautics and Space Administration).

From then, Katherine was asked to use her amazing mathematical skills for complex calculations and research. It became clear that Katherine had a talent for celestial navigation (plotting and directing a route through space) and she plotted the path for America's first human spaceflight in 1961. This was a huge responsibility: if her equations were wrong, the astronauts could die.

During her successful career with NASA, Katherine co-wrote 26 scientific papers and calculated paths for space shuttles and emergency return directions. Thanks to her incredible work, she is regarded as a pioneer in space science and computing. In 1986, after 33 years working with NASA, Katherine Johnson retired.



### Awards

In 2015, Katherine Johnson was awarded the Presidential Medal of Freedom by Barack Obama, the US president of the time. These medals are given to people who have been especially helpful to the people of America and America's progress in the world.

In 2016, a building at NASA was named after her. When she attended the opening of the building, she received a Silver Snoopy award, which is given to those who have made an outstanding contribution to flight safety and mission success.

### Why Was She Important?

Katherine Johnson is regarded as a very important figure in recent history. She was very successful in her field of work (particularly early spaceflights) with NASA. Katherine Johnson is unique not only because she was a woman working in a male-orientated job, but because she was African-American too. At the time Katherine was working for NASA, black people were still being treated very poorly and as if they were not equal. She was a pioneer not just in her job but in showing what women and black people could do!



<b>Problems Katherine faced</b>	<b>How did she overcome them?</b>	<b>How did this inspire others?</b>

Katherine Johnson helped with the moon landing by:

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

Katherine Johnson has inspired me because now \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
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