

YOUR PASSPORT TO

THE  
**COLOR**  
OF SCIENCE™



**Space**  
EDITION



## Mae Jemison, MD

Former NASA Astronaut

Dr. Jemison is an engineer, physician, and former NASA astronaut. She became the first black woman to travel into space when she served as a mission specialist aboard the Space Shuttle Endeavour in 1987. After her incredible work at NASA, Jemison went on to be a professor of environmental studies at Dartmouth College and at Cornell University. She continues to advocate strongly in favor of science education and getting minority students interested in science.



Image Credit: NASA

### Did you know?

About every four years, NASA accepts applications for a new class of astronauts.



## Sally Ride, PhD

Former NASA Astronaut

Dr. Ride was an American astronaut and physicist. Born in Los Angeles, she joined NASA in 1978 and became the first American woman in space in 1983. Ride was the third woman in space overall. Once she completed her PhD in Physics from Stanford, Dr. Ride applied to be a NASA astronaut after seeing an advertisement in the Stanford student newspaper, and was one of only 35 people selected out of the 8,000 applications.



Image Credit: NASA

### Cool Fact:

There are mountains on Pluto.



## Jonny Kim, MD

NASA Astronaut in Training

Dr. Kim is a US Navy lieutenant (and former SEAL), physician, and NASA astronaut. He is currently serving as one of the 22 astronauts assigned to the Artemis program. On June 7, 2017, Kim was one of twelve candidates chosen from a pool of over 18,300 applicants to join NASA Astronaut Group 22.



Image Credit: NASA

### Interesting Fact:

Only 1 in 5 Candidates become a Navy SEAL.



## Jessica Watkins, PhD

NASA Astronaut in Training

Dr. Watkins is a NASA astronaut, geologist, aquanaut and former international rugby player. At just 32, she is one of the 22 astronauts chosen for the Artemis mission. As a collaborator on the Mars Science Laboratory Science Team, she participated in daily planning of the Mars rover activities and uses its image data combined with orbital data to investigate the stratigraphy, geology, and geomorphology of Mars.



Image Credit: NASA

### Astronaut Fact:

Candidates train for two years before they can become astronauts



## Kathy Sullivan, PhD

Geologist & Former NASA Astronaut

Dr. Sullivan is a geologist and a former NASA astronaut. A crew member on three Space Shuttle missions, she was the first American woman to walk in space on October 11th, 1984, and logged 532 total hours in space. On June 7, 2020, she became the first woman to dive to the Challenger Deep in the Mariana Trench, the deepest part of the Earth's oceans. Dr. Sullivan is also a past president and CEO of COSI!



Image Credit: NASA

### Fun Fact:

Space is completely silent.



## John Glenn, Hon PhD

NASA Astronaut

Dr. Glenn was a United States Marine Corps aviator, engineer, astronaut, businessman and politician. He was the third person and the first American to orbit the Earth, circling it three times in 1962. When astronauts were assigned to provide pilot input for the design and development of spacecraft, Glenn specialized in cockpit layout and control functioning, including some of the early designs for the Apollo Project.



Image Credit: NASA

### Our Hometown Hero:

The international airport in Columbus, Ohio is named after him!



## Katherine Johnson, MS

NASA Mathematician

Katherine Johnson was a NASA mathematician, and her calculations helped send the first American astronauts into space. She worked for NASA for three decades, and is one of the most celebrated Black women in space science. Katherine was the first Black woman to attend graduate school at West Virginia University. With her genius level math skills, Johnson earned a reputation for mastering complex manual calculations and helped pioneer the use of computers to perform the tasks.



Image Credit: NASA

Image Credit: 20th Century Fox



### Interesting Fact:

Katherine's work was highlighted in the critically acclaimed film, *Hidden Figures*.

## Vickie Kloeris, MS, CFS

NASA Food Scientist

Vickie Kloeris recently retired from NASA where she worked in space food systems for a total of 34 years. Her last position was manager of the International Space Station Food System. In that position she served as technical manager for the NASA contract that produces food for the International Space Station (ISS) crews. She has received several awards including NASA's highest award, the NASA Distinguished Service Medal in 2019.



Image Credit: NASA



### Did you know?

The International Space Station (ISS) has a menu of over 250 food & beverage items.

## Jim Bridenstine, MBA

NASA Administrator

Jim Bridenstine was the NASA Administrator from 2016-2020, he was the United States Representative for Oklahoma's 1st congressional district, based in Tulsa from 2013-2018. He is a former executive director of the Tulsa Air and Space Museum & Planetarium and was a Naval Aviator in both the active duty United States Navy and the United States Naval Reserve. Bridenstine flew at the Naval Strike and Air Warfare Center, the parent command to TOPGUN.



Image Credit: NASA

### Fun Fact:

The Apollo astronauts' footprints on the moon will probably stay there for at least 100 million years.



## Aprille Ericsson-Jackson, PhD

NASA Engineer

Dr. Ericsson-Jackson was the first female (and the first Black female) to receive a PhD in Mechanical Engineering from Howard University and the first Black female to receive a PhD in Engineering at NASA Goddard Space Flight Center. Currently she is the instrument manager for a proposed mission to bring dust from the Martian lower atmosphere back to Earth.



Image Credit: NASA

### Did you know?

Mars has the largest dust storms in the solar system.



## Ellen Ochoa, PhD

Engineer, Former NASA Astronaut

Dr. Ochoa is an engineer, former astronaut and former director of the Johnson Space Center. In 1993 Ochoa became the first Hispanic woman to go to space when she served on a nine-day mission aboard the Space Shuttle Discovery. After her time in space, Ochoa went on to become the first Hispanic director and the second female director of Johnson Space Center. Ochoa is also a classical flautist and played with the Stanford Symphony Orchestra. She brought a flute with her on her first mission to space.



Image Credit: NASA

### Did you know?

Only 7% of astronauts are Hispanic/ Latinx.



## Mary J. Lobo, MS

Director of the Office of Technology Incubation & Innovation at NASA

Mary Lobo is the director of the Technology Incubation and Innovation Office at NASA. She is responsible for aligning the center's early-stage technology investment opportunities with its long-term technology goals, strategic partnering for economic development in the region, and the transfer of Glenn-developed technologies to private industry.



Image Credit: NASA

### Fun Fact:

The technologies behind inventions like portable vacuum cleaners, blankets, invisible braces, and many more, were first discovered by NASA solely for space exploration.



## Debra Ludban, BEng

NASA Engineer

Debra Ludban is the deputy manager for the Gateway Program's vehicle integration office at NASA. Her team ensures the Gateway's systems, requirements, testing and verification plans all are in sync. The Gateway program will help establish a sustainable presence in deep space. Debra recently sat down with COSI's President and CEO, Dr. Frederic Bertley, for a chat about the Gateway program in space. You can check this out on COSI's Facebook page!



Image Credit: NASA



### Did you know?

99% of our solar system's mass is the sun!

## Serena M. Auñón-Chancellor, MD

NASA Medical Doctor

Dr. Auñón-Chancellor is a physician, engineer, and NASA astronaut. She visited the International Space Station (ISS) as a flight engineer for two expeditions. Serena contributed to hundreds of experiments in biology and biotechnology aboard the ISS. The crew also installed a new Life Sciences Glovebox, a sealed work area for life science and technology investigations that can accommodate two astronauts. Serena has logged 197 days in space.



Image Credit: NASA



### Fun Fact:

An astronaut's taste buds can change due to fluid shifts from weightlessness.

## Ronald McNair, PhD

Former NASA Astronaut

Ronald Erwin McNair was an American NASA astronaut and physicist. He died during the launch of the Space Shuttle *Challenger* on mission STS-51-L, in which he was serving as one of three mission specialists in a crew of seven.

At the age of 26, he graduated with honors and earned his Ph.D. degree in LASER Physics from Massachusetts Institute of Technology.



Image Credit: NASA

### Did you know?

If two pieces of the same type of metal touch in space, they will bond and be permanently stuck together.



## Raja Chari, MS

Fighter Pilot & NASA Astronaut

Raja Chari is a test pilot and NASA astronaut. He is a graduate of the U.S. Air Force Academy, MIT, and U.S. Naval Test Pilot School, and has over 2,000 flying hours. June 2017, Chari was selected to be a NASA Astronaut candidate, and reported for duty in August to begin two years of training as an astronaut.



Image Credit: NASA

### High paying career alert!

On average, test pilots earn around \$110k a year!



## Guion “Guy” Bluford, PhD

Aerospace Engineer, Fighter Pilot,  
Former NASA Astronaut

Dr. Bluford Jr. is an aerospace engineer, retired U.S. Air Force officer and fighter pilot, and former NASA astronaut, who is the first Black man and the second person of African descent to go to space. After completing a total of four missions, Bluford has logged over 688 hours in space.



Image Credit: NASA

### Fun Fact:

Astronauts practice spacewalks under water.



## Frederick D. Gregory, MS

NASA Shuttle Pilot

The first Black Space Shuttle pilot, Gregory also became the first Black man to command a spaceflight when he led the STS-33 mission of Discovery in 1989. After his third and final flight in 1991, Gregory has worked his way up through the management at NASA.

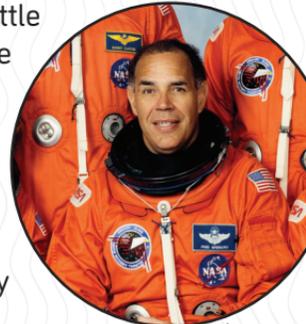


Image Credit: NASA

### Interesting Fact:

More energy from the sun hits Earth every hour than the planet uses in a year



# Stephanie Wilson, MS

NASA Engineer & Astronaut

Stephanie Wilson flew to space onboard three Space Shuttle missions, and is the second Black woman to go into space, after Mae Jemison.

Her 42 days in space are the most of any Black astronaut, male or female.

Stephanie was the voice of mission control for the recent all-female space walk. As a member of the Astronaut Office, she is currently the Mission Support Crew Branch Chief. You can follow her on Twitter at: @Astro\_Stephanie



Image Credit: NASA

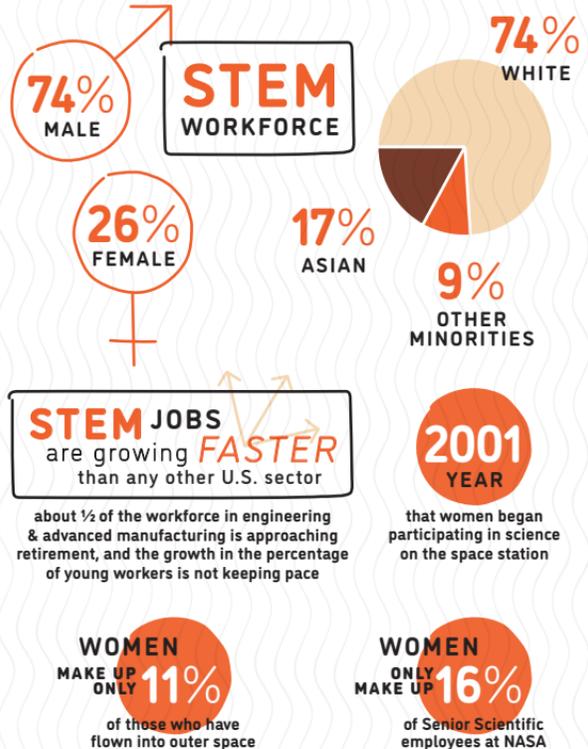
## Fun Fact:

One day on Venus is longer than one year on Earth.



## FUN FACTS

## WHY WE NEED DIVERSITY in STEM





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