



## PATH TO HIGH ADVENTURE

Scouting offers some fantastic adventures ranging from scuba diving and sailing to backpacking and mountain climbing. But the greatest adventures just might be out of this world!



*Eagle Scout astronaut Raja Chari in front of a T-38 aircraft at Houston's Ellington Field in June 2017.*

### Eagle Scout Astronauts

Some former Scouts have experienced what might be considered the ultimate in high adventure. Roughly two-thirds of NASA's career astronauts had been Scouts, resulting in most of NASA's human space missions including at least one former Scout. Notably, 20 of the 24 men who flew to the Moon in 1968 to 1972 (on Apollo 8 and 10 to 17) had been Scouts, including 11 of the 12 men who walked on its surface.

Forty-one of those selected as NASA's career astronauts are Eagle Scouts. Some have become legends, like Neil Armstrong, the first man to land a spacecraft on another world, and Jim Lovell, the commander of the ill-fated Apollo 13 mission who led his crew safely back to Earth.

That legacy continues today where Eagle Scouts fly high as crew members and commanders of the International Space Station (ISS). Eagle Scouts Raja Chari and Kjell Lindgren are now preparing for upcoming ISS expeditions for which they were selected as commanders of the SpaceX Crew-3 and Crew-4 missions, respectively.

Looking further ahead, members of the Artemis Team of astronauts could become the first women and next men to walk on the Moon. While female Eagle Scouts have yet to be selected as astronauts, the Artemis Team includes astronauts Kayla Barron, Christina Koch, Jessica Meir, Kate Rubins, and Jessica Watkins, all of whom had been Girl Scouts. Chari and Lindgren are also Artemis Team members and thus candidates for lunar exploration.

### STEM

Do you enjoy figuring out how things work? Solving problems and puzzles? How about designing and building things? Do you like using computers? Studying science and math? If you answered "yes" to some of these questions, then a career in STEM may be a good match for you.

STEM is an acronym that stands for Science, Technology, Engineering, and Mathematics—skills that can solve some of our world's problems and make life better for all! But our Nation needs the next generation of engineers, scientists, and technicians to make that goal a reality.



*NASA astronaut and Assistant Scoutmaster Drew Morgan remotely contacted 2019 World Scout Jamboree participants from the International Space Station as can be seen at [www.nasa.gov/feature/stem/world-scout-jamboree.html](http://www.nasa.gov/feature/stem/world-scout-jamboree.html).*

## NASA Careers

Engineers and scientists make up about 60 percent of NASA's workforce. Engineers use math and science skills to design and invent, while scientists use them to explore and discover. There are a wide variety of both types of careers at NASA. Engineering disciplines include aerospace, chemical, electrical, mechanical, and many more. Engineers and scientists need at least a bachelor's degree (typically requiring 4 to 5 years of college), where graduate degrees (usually requiring at least 2 additional years) are common among NASA staff.

Roughly 10 percent of NASA's employees are engineering technicians who assemble hardware, operate facilities, and help conduct tests. A 2-year associate degree is typical preparation.

The remaining staff work in administrative, clerical, and other supporting functions. Given the nature of NASA's missions, a large fraction of its management also worked as engineers or scientists, just as many principals were former teachers.

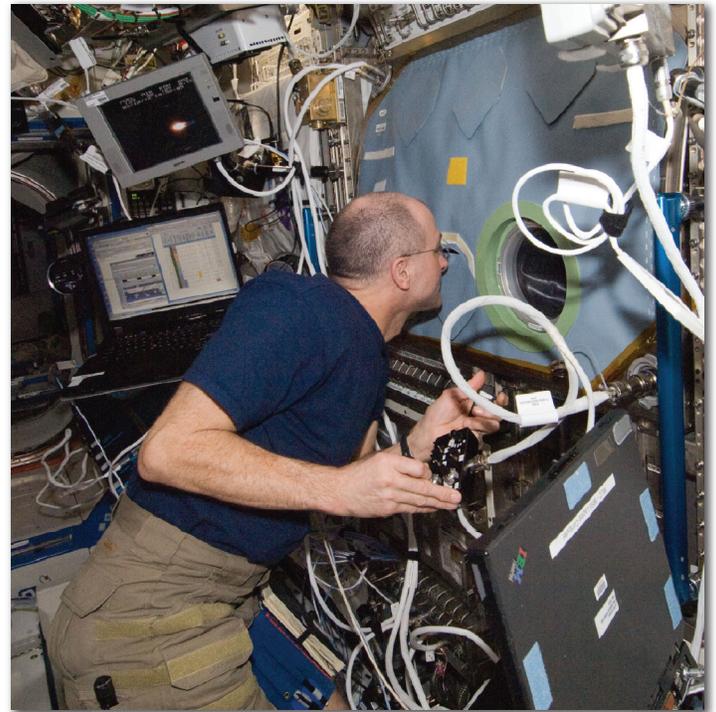


*Eagle Scout astronaut Kjell Lindgren photographing the Earth from the International Space Station in December 2015.*

## Trail to Space

While there are exceptions, most of today's astronauts have one of two backgrounds: (1) they are military pilots with a master's degree in engineering or another STEM field or (2) they have a doctoral degree in science, engineering, or medicine. In the first case, it is particularly valuable to have test pilot experience.

Regardless of the path you might take, another good skill to have is scuba diving because that is how astronauts practice space walking. Learning other languages, such as Russian, is helpful because of NASA's international partnerships. Even if you do not become a military pilot, learning how to fly can still help you get to space.



*Eagle Scout astronaut Don Pettit studying microgravity flames on the International Space Station in March 2012.*

## Suggested NASA Links



[www.facebook.com/NASAbsa](http://www.facebook.com/NASAbsa)



### Path to High Adventure Begins With Scouting

[www.nasa.gov/centers/glenn/multimedia/boyscouts.html](http://www.nasa.gov/centers/glenn/multimedia/boyscouts.html)

### Eagle Scout Recognition

[www.nasa.gov/about/contact/](http://www.nasa.gov/about/contact/) (near bottom of page)

### Scouting Posters

[www.flickr.com/photos/nasaglenn/sets/72157641308065615/](http://www.flickr.com/photos/nasaglenn/sets/72157641308065615/)

The posters cannot be ordered but are in the public domain to be freely downloaded for noncommercial use. They may be displayed—in print or via digital projection—at camps, courts of honor, Scout offices, troop meeting sites, etc.

<b>Artemis</b>	<a href="http://www.nasa.gov/specials/artemis/">www.nasa.gov/specials/artemis/</a>
<b>Astronauts</b>	<a href="http://www.nasa.gov/astronauts/">www.nasa.gov/astronauts/</a>
<b>Careers at NASA</b>	<a href="http://www.nasa.gov/careers">www.nasa.gov/careers</a>
<b>Internships</b>	<a href="http://intern.nasa.gov/">http://intern.nasa.gov/</a>
<b>ISS</b>	<a href="http://www.nasa.gov/mission_pages/station">www.nasa.gov/mission_pages/station</a>
<b>Spot the Station</b>	<a href="https://spotthestation.nasa.gov/">https://spotthestation.nasa.gov/</a>
<b>STEM</b>	<a href="http://www.nasa.gov/stem">www.nasa.gov/stem</a>