

# ScienceNews

## Activity Guide for Students: The Past, Present and Future of Spaceflight

### Directions:

Have you ever wondered how NASA and other spacefaring programs choose who gets to fly to space? The requirements to become an astronaut have changed a lot over the years, which could make space a more diverse and accessible place.

### The past

Read the article "[Artemis missions will usher in a new, more diverse crew of astronauts](#)" from *Science News* online as homework. The article appeared in the Dec. 3, 2022 print edition of *Science News* with the title "Who gets to go to space?" Answer the following questions.

1. Why do you think NASA selected fighter pilots to be the first astronauts?
2. Why was there a height restriction for the first astronauts?
3. What was the diversity like in this first group of astronauts? Be descriptive.
4. Why do you think it was beneficial to have military fighter pilots as the first astronauts?
5. Eugene Cernan was an astronaut on Apollo 17. Cernan was both an engineer and a fighter pilot, but stated that "Science is not the reason we learned to fly." Do you agree with his statement? Why or why not?

### The present

Answer the following questions using information from "[Artemis missions will usher in a new, more diverse crew of astronauts](#)."

1. Why do you think NASA sent a geologist to the moon as one of the first science-astronauts?

2. Look at the diagram titled “Science expertise” and determine what percentage of Apollo astronauts had a science background. What percentage had a military background?
3. What percentage of the current NASA astronauts have a science background? What percentage have a military background?
4. How has the scientific training of astronauts changed over time? Use your calculations and the diagram to support your answer.
5. What do you think is the benefit of having a crew with diverse scientific backgrounds?
6. In what other ways have astronauts become more diverse?
7. Think of a time when you worked in a diverse group. How did having diverse perspectives help you accomplish a goal?

### **The future**

Answer the following questions to help you develop ideas for a creative writing project about the future of space travel and what it might look like. In answering these questions, think creatively. These questions are designed to help you develop characters, setting and plot for a fictional story about the future of space travel. You will expand on your answers to write a 250-word story for homework.

1. What does the quote “We can’t become a spacefaring species if only some of us can go” mean to you?
2. Why is AstroAccess organizing flights for people with disabilities?
3. Describe a problem or challenge that astronauts could face during space travel.

4. What might a diverse space crew look like in the future?

5. Create a diverse space crew, describing what experiences and motivations are bringing them to space.

6. How could each member of the team contribute to solving a problem or challenge you identified?

### **Space stories**

Using ideas developed from the prompt questions, write a creative story that shows how a diverse crew of astronauts could navigate a problem or challenge in space.

A good creative story includes strong characters, a well-described setting and a plausible plotline. The plot should make sense relative to the characters and the situations they find themselves in.

