

GETTING TO THE MOON WITH APOLLO: EARLY SPACE EXPLORATION

Before the first human landed on the Moon, the United States and Soviet Union (now called Russia) led the world's space exploration. Both countries achieved several firsts:

- Russia sent the first artificial satellite, Sputnik, to space.
- Cosmonaut (a Russian astronaut) Yuri Gagarin was the first human to visit space.
- Alan B. Shepard was the first United States Astronaut to visit space.

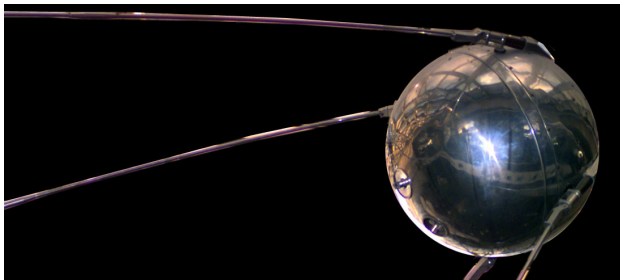


Photo Credit: NASA

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GETTING TO THE MOON WITH APOLLO: FIRST MOON LANDING

Two American astronauts, Neil Armstrong and Buzz Aldrin, became the first humans to walk on the Moon.

Neil and Buzz were able to film the moment, and it was broadcast to people on Earth. Neil Armstrong famously said, ***“That’s one small step for man, one giant leap for mankind.”***

The United States sent over 20 more astronauts to the Moon as part of the Apollo missions.

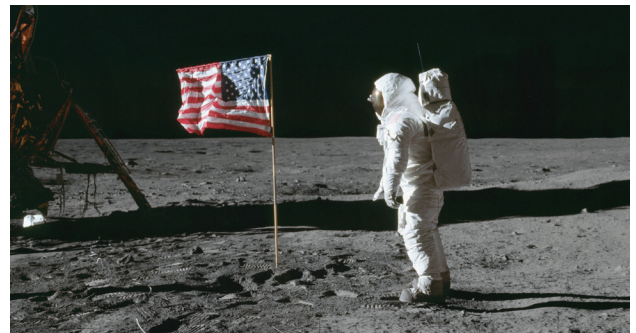


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GETTING TO THE MOON WITH APOLLO: SPEECH BY PRESIDENT JOHN F. KENNEDY

“We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard.”

President Kennedy said these words to a crowd of 35,000 people at Rice University to announce that a United States spacecraft would land on the Moon before the end of the 1960s.



Photo Credit: NASA

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FROM APOLLO TO ARTEMIS: TRANSPORTING HUMANS AND THINGS TO SPACE

After reaching the Moon, we worked on building reusable space vehicles that could take humans and things to space over and over again.

The United States created the Space Shuttle. The Russians built the Soyuz spacecraft.



Photo Credit: NASA

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FROM APOLLO TO ARTEMIS:

BUILDING A HABITAT IN SPACE

Russia built the first space stations. In the 1990s, Russia, Japan, the United States, Europe, and Canada collaborated to build the International Space Station (ISS). The ISS is as long as an American football field (108 meters) and has rooms in which humans can work, eat, and sleep.



Photo Credit: NASA

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NEW FRONTIERS WITH ARTEMIS:

ARTEMIS MISSIONS LAUNCH

With the Artemis missions, NASA's aims to land the first woman and first person of color on the Moon by 2025 and develop an ongoing presence there.

The first of three missions, Artemis I, was an uncrewed flight to test the safety of the vehicle and test the orbit path around the Moon and back to Earth. Artemis I was a success!



Photo Credit: NASA / Terry White / SLS

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FROM APOLLO TO ARTEMIS:

CONDUCTING RESEARCH IN SPACE

Once the International Space Station (ISS) was built, astronauts started living and working on it. Over 240 astronauts from 17 countries have lived and worked together on the ISS for over 20 years.

During that time, the astronauts have conducted experiments on how to grow food in space, how to keep humans healthy in space, and how to repair a spacecraft in space. The things we learned on the ISS will help us live on the Moon.



Photo Credit: NASA

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NEW FRONTIERS WITH ARTEMIS:

REMAINING ARTEMIS MISSIONS

Artemis II will be the first crewed mission, carrying four astronauts on a 10-day mission. They will conduct a lunar flyby and return to Earth.

After Artemis II, Artemis III will land astronauts on the lunar surface for research. The astronauts will use a lunar lander to reach the Moon's south polar region. The astronauts will remain on the Moon for around one week.



Photo Credit: NASA

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NEW FRONTIERS WITH ARTEMIS:

LAYING THE GROUNDWORK FOR MARS

The Artemis program's long-term goal is to establish a permanent base camp on the Moon and facilitate human missions to Mars.

While on the Moon, we will build habitats and learn what humans need to live in space for a long time. This information will help us plan for a long trip to Mars.

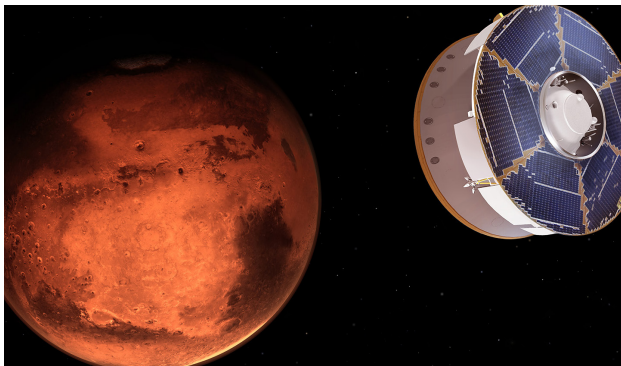


Photo Credit: NASA / JPL / Caltech
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AFTER ARTEMIS:

ESTABLISHING A BASE ON MARS

The Moon and Mars are not exactly the same. They have different climates, geographies, atmospheres, and gravity. We will use what we learned on the Moon to build habitats that can sustain human life on Mars.



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AFTER ARTEMIS:

LAUNCH MARS MISSIONS

The Artemis missions are complete, and we are ready to get astronauts to Mars! NASA aims to launch astronauts to Mars by the late 2030s or early 2040s.

The round-trip travel time would be about 500 days, or about nine months each way. Since it takes so long to get there and back, the astronauts that go there must stay on the planet for a while.

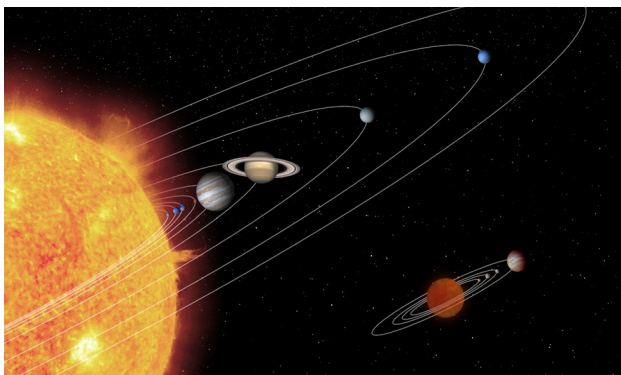


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AFTER ARTEMIS:

DECIDE WHERE TO GO NEXT!

You're up! Where would you go next to explore space?



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