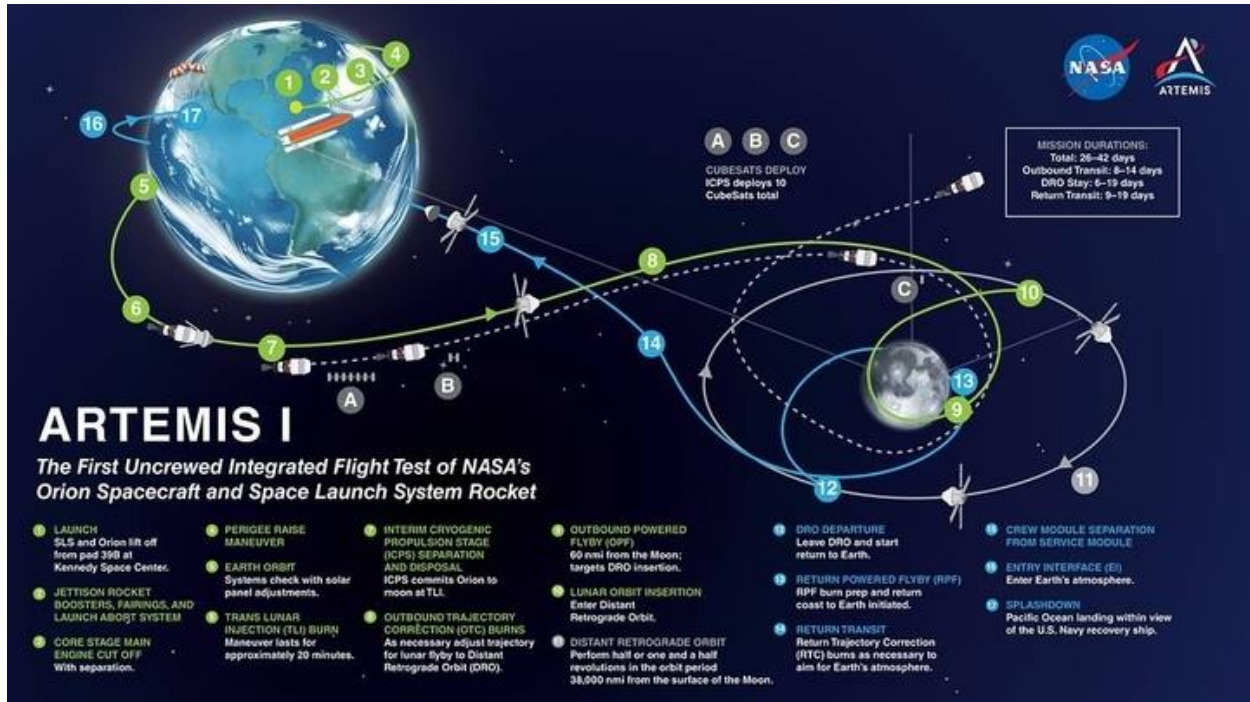


## NASA's Artemis I Mission

The National Aeronautics and Space Administration (NASA) wheeled out the Artemis I lunar mission to the launchpad for testing on March 17 at the Kennedy Space Center in Florida.



### What is the purpose of Artemis I's mission?

The Artemis expedition, named after Apollo's twin sister in Greek mythology, is hailed as the next generation of lunar exploration. Artemis is the goddess of the moon as well. NASA's deep space exploration system Artemis I is the first of its kind. It is an unmanned space mission that will launch aboard SLS — the world's most powerful rocket — and travel 2,80,000 miles beyond Earth for four to six weeks. The Orion spacecraft will spend more time in orbit than any other ship for astronauts has ever done previously, without docking to a space station. The SLS rocket was created for trips beyond the low-earth orbit.

### The mission's primary goals

NASA's Artemis Mission seeks to place humans on the moon by 2024, with the first woman and person of colour landing on the moon as well. NASA hopes to contribute to scientific discovery and economic rewards with this project, as well as inspire a new generation of explorers. NASA plans to build an Artemis Base Camp on the surface and a gateway in lunar orbit to assist robot and astronaut exploration.



The gateway will function as a multi-purpose outpost orbiting the moon and is an important part of NASA's long-term lunar activities.

### **Other organisations that were involved in this mission**

The Artemis programme also involves other space agencies. For the gateway, the Canadian Space Agency has committed to providing advanced robotics.

The International Habitat and the ESPRIT module, which will give extra communications capabilities among other things, will be provided by the European Space Agency.

The Japan Aerospace Exploration Agency intends to provide dwelling components as well as logistics replenishment.

### **What is the mission's course?**

In the summer of 2022, the SLS and Orion under Artemis I will be launched from the Kennedy Space Center in Florida, United States. The spaceship will deploy the intermediate cryogenic propulsion stage (ICPS), a liquid oxygen/liquid hydrogen-based propulsion system that will provide Orion with enough thrust to depart Earth's orbit and travel to the moon. Orion will be propelled to the moon by a service module provided by the European Space Agency (ESA). Through the deep-space network, the spacecraft will connect with the control centre on Earth.

It will travel around 100 kilometres over the moon's surface and utilise the moon's gravitational pull to send Orion into an opposite deep orbit around 70,000 kilometres away, where it will dwell for around six days.

### **What are the Artemis program's future missions?**

The program's second mission will include crew and will test Orion's essential systems with humans onboard. The Artemis program's findings will eventually be used to transport the first astronauts to Mars. NASA intends to use lunar orbit to obtain the experience needed to expand human space exploration further into the solar system.

