

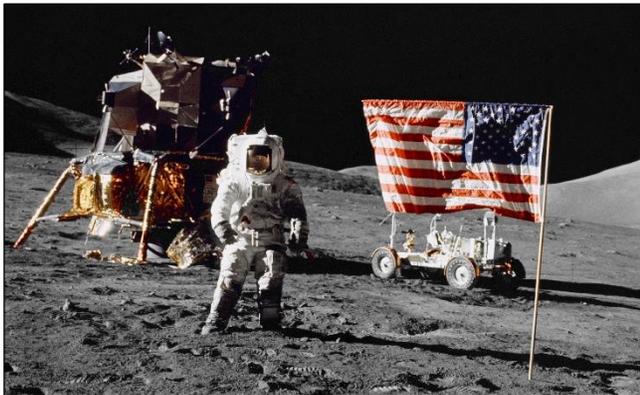


Updated February 18, 2026

## Artemis: NASA's Program to Return Humans to the Moon

Between 1969 and 1972, the Apollo program of the National Aeronautics and Space Administration (NASA) landed 12 American men on the Moon and returned them safely to Earth (see **Figure 1**). Since then, no human has been farther from Earth than low-Earth orbit, a few hundred miles up; the distance to the Moon is about 240,000 miles. Artemis, named for Apollo's twin sister in ancient Greek mythology, is NASA's program for a return to the Moon by American astronauts—one of them a woman—by 2028.

**Figure 1. Most Recent Human Lunar Mission: Apollo 17 (1972)**



Source: NASA, <https://www.nasa.gov/image-detail/amf-as17-134-20382/>.

Note: December 13, 1972, image of Apollo 17 astronaut Harrison H. Schmitt on the Moon's surface with the Lunar Module and the Lunar Roving Vehicle.

### Orion and the Space Launch System

Artemis has evolved from plans initiated in the NASA Authorization Act of 2010 (P.L. 111-267). The act established a statutory goal of “expand[ing] permanent human presence beyond low-Earth orbit” and mandated the development of a crew capsule and a heavy-lift rocket to accomplish that goal. The capsule, now known as Orion, and the rocket, known as the Space Launch System (SLS), have been in development since that time (see **Figure 2**).

Each Orion capsule consists of a crew module with room for four to six astronauts, as well as storage space and a docking port; a service module (contributed by the European Space Agency) to provide power and propulsion; and a launch abort system. The crew module is designed to be reusable and is the only portion intended to return to Earth at the end of a mission.

The SLS is an expendable rocket designed to carry Orion into space and set it on an initial trajectory to the Moon. Potentially, the SLS could also be used for other missions involving heavy payloads or requiring very high thrust. It is designed to be upgraded in stages (known as Block 1, Block 1B, and Block 2) by substituting improved versions

of its major elements. For Block 1B, NASA is developing the Exploration Upper Stage to replace the Block 1 upper stage, known as the Interim Cryogenic Propulsion Stage.

In December 2014, a partially complete Orion was launched on a Delta IV Heavy rocket and orbited Earth twice before splashing down in the Pacific Ocean. This uncrewed mission tested the crew module's heat shield and parachutes, as well as other systems.

The first launch of Orion on an SLS was in November 2022. During this mission, known as Artemis I, a complete but uncrewed Orion orbited the Moon before returning to Earth. The mission was designed to provide the data for NASA to certify safety for crewed flights.

Artemis II, the first crewed test of Orion and the SLS, is scheduled to launch no earlier than March 2026. During this 10-day mission, Orion and its crew of four are to fly around the Moon at an altitude of about 4,000 miles before returning to Earth.

The Artemis III mission, planned to launch by 2028, is to include the first human Moon landing since 1972. Achieving that goal would require the development of other systems, such as a lunar lander.

Subsequent Artemis missions, with more lunar landings and various additional capabilities, are planned approximately every year starting in 2028.

### Human Landing System

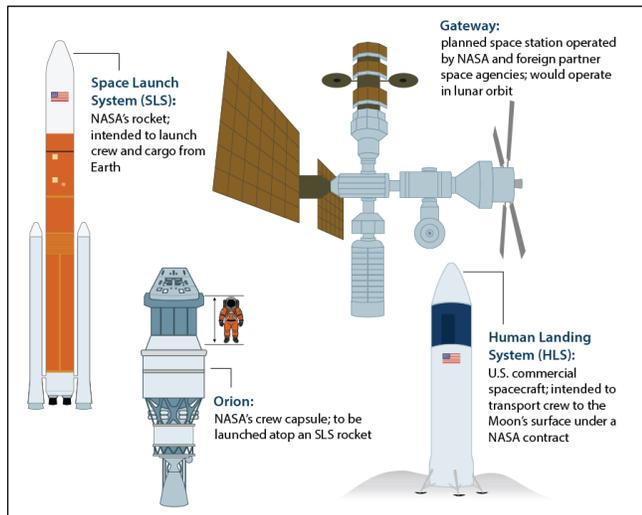
The Orion capsule is not designed to land on the Moon. Instead, for Artemis III and subsequent lunar surface missions, astronauts are to transfer to a separate spacecraft, known as a Human Landing System (HLS), for lunar descent and ascent (see **Figure 2**). In April 2021, NASA selected SpaceX to provide an HLS as a commercial service starting with Artemis III. In May 2023, NASA awarded a second HLS contract to Blue Origin to provide an alternative to the SpaceX system starting with Artemis V. Both systems are in development. Through committee reports and explanatory statements accompanying appropriations, Congress has repeatedly encouraged NASA to issue contracts to two commercial providers in order to ensure redundancy and bolster competition.

### Gateway

To facilitate Artemis lunar landings and other missions, NASA is developing a modular platform, known as Gateway, to be placed in a permanent orbit around the Moon (see **Figure 2**). The first two Gateway modules—the Power and Propulsion Element (PPE) and the Habitation and Logistics Outpost (HALO, a pressurized habitat for astronauts)—are in development, with launch planned no earlier than 2027.

Gateway is intended to serve as a depot for storing supplies; a platform for science experiments; a location where subsystems launched separately can be assembled and integrated; and a rendezvous point where astronauts can transfer between Orion and the HLS. Gateway is also intended to enable astronauts to potentially depart for Mars in the future. NASA initially planned for Gateway to be the Orion-HLS transfer point for the Artemis III lunar landing. Gateway is no longer part of the plans for Artemis III, but it is to be used for subsequent missions starting with Artemis IV (planned for 2028).

**Figure 2. Major Elements of the Artemis Missions**



**Source:** CRS illustration based on information from NASA.

## Other Elements

In addition to Orion, SLS, HLS, and Gateway, NASA is planning robotic missions to demonstrate new technologies and explore potential landing sites on the Moon; developing new spacesuits; and developing technologies for lunar surface power, in situ use of lunar resources such as water, and other lunar surface systems such as rovers and habitats for missions after Artemis III.

## Issues for Congress

As Congress oversees the progress of the Artemis program and acts on NASA authorization and appropriations legislation, it may address issues such as the planned schedule for the first landing, cost concerns for the program as a whole, the architecture of the program, and the role of the commercial space sector.

## Schedule

As recently as early 2019, NASA was planning the first post-Apollo human lunar landing for 2028. An acceleration to 2024 was announced by Vice President Pence in March 2019. Supporters of the 2024 goal argued that it created a sense of urgency, focus, and motivation, and they emphasized that the U.S. space program is in competition with Russia and China. Opponents argued that the 2024 date was driven by political goals rather than by technical or scientific considerations. Congress deliberated questions such as what geopolitical or other benefits a 2024 landing might bring; how providing the funding needed to achieve a 2024 landing might affect the availability of funding for other NASA programs; how schedule pressure might influence safety decisions; and how design choices made to

meet the 2024 deadline might affect system reusability for subsequent NASA human exploration missions.

NASA's schedule for Artemis III (and subsequent Artemis missions) has since slipped several times, less due to these policy debates than to development challenges. As of February 2026, NASA anticipates that Artemis III will launch by the end of 2028.

## Budget

For FY2026, Congress provided \$7.8 billion for Artemis systems through P.L. 119-74. Congress provided an additional \$6.7 billion for Orion, Gateway, and SLS through the FY2025 reconciliation act (P.L. 119-21), to remain available through FY2032.

Congress may continue to consider (1) the budget of the overall Artemis program, (2) the individual Artemis missions, and (3) the various projects and components within the program. For example, according to a January 2024 Government Accountability Office (GAO) report, NASA had not estimated the cost of the Artemis III mission or subsequent Artemis missions. Likewise, NASA did "not plan to measure the production costs for the SLS rockets that constitute a significant proportion of future Artemis-related costs." In a subsequent 2025 report, the GAO estimated that cost overruns for three major Artemis projects total \$6.8 billion. GAO further noted that "growing complexity and scope of future Artemis projects" could negatively impact the agency's future cost performance, particularly as these projects are interdependent and "more complex than any previous human space flight programs." Thus, Congress may contemplate whether adjustments to the provided funding levels may be necessary or whether to keep funding levels as they are.

## Moon to Mars Architecture

Per the NASA Authorization Acts of 2022 and 2017 (P.L. 117-167, Title VII; P.L. 115-10), the Artemis program is a stepping stone for future Mars missions. P.L. 117-167 directed the agency to establish a Moon to Mars Office to oversee that approach. Policymakers continue to discuss NASA's Moon to Mars architecture. Topics of debate include whether the United States should pursue a sustained presence on the Moon; whether the SLS and Orion should be used after Artemis III or whether commercial companies could provide an alternative; and the viability of the agency's various Artemis components, particularly Gateway, the HLS, and the SLS.

## Role of the Commercial Space Sector

In recent years, NASA has placed growing emphasis on procuring services from the commercial space industry. Orion and the SLS are being developed as NASA-owned systems, but the HLS is to be provided as a commercial service, and several Artemis-related robotic missions are being conducted through the Commercial Lunar Payload Services (CLPS) initiative. Not all stakeholders support the commercial approach. For example, in January 2024, former NASA Administrator Michael D. Griffin testified that the emphasis on commercial services is "the fundamental flaw in the Artemis acquisition approach." The NASA Authorization Act of 2022 directed that Artemis human landing missions are to be "carried out solely by government astronauts" (P.L. 117-167, §10811).

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