

Apollo Mission Milestones that occurred in Flagstaff:



Apollo 11 crew: Neil Armstrong, Michael Collins and Edwin "Buzz" Aldrin, 1969 (photo: NASA)



Joe O'Connor testing spacesuit prototype, 1965 (photo: NASA)



Astronauts Jim Irwin and Dave Scott test lunar rover vehicle simulator "Grover" in Cinder Lake Crater Field, 1970 (photo: NASA)

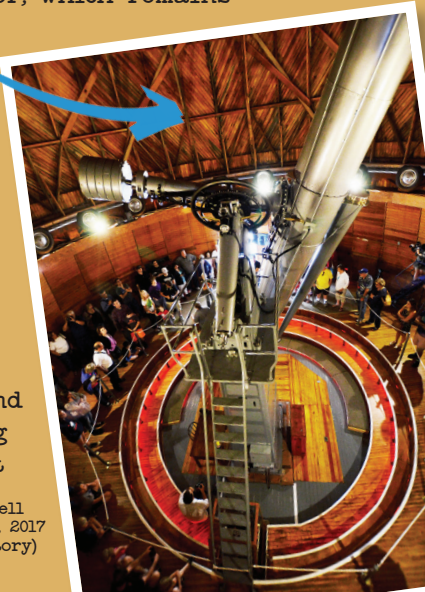
1969 NASA and the USGS test three lunar rover vehicle simulators at Sunset Crater, Merriam Crater and surrounding volcanic features. Two were built in Flagstaff, and one remains on display today at the USGS Astrogeology Science Center.

1961-1969 Artists worked with scientists at Lowell Observatory to create beautifully detailed lunar maps. Much of this work was accomplished by observing the Moon through Lowell telescopes, including the historic 24-inch Clark refractor, which remains in use today for public education.

1963 US Geological Survey Branch of Astrogeology begins operations in Flagstaff, with the purpose of providing lunar mapping and science training for astronauts destined for the Moon.

1963-today USGS astrogeologists created the lunar maps used for selecting landing sites on the Moon. Today, the USGS Astrogeology Science Center supports NASA and other space agencies with planetary mapping for numerous spacecraft missions throughout the solar system.

Clark Telescope at Lowell Observatory, Flagstaff, 2017 (photo: Lowell Observatory)



1963-1972 All astronauts who walked on the Moon, including Neil Armstrong, Alan Shepard, Buzz Aldrin, and Flagstaff scientist Jack Schmitt, trained in Flagstaff and northern Arizona at multiple locations.

1969-1972 US Geological Survey (USGS) Branch of Astrogeology scientists worked in Mission Control in Houston during the Apollo Moon flights, helping direct the astronauts' lunar excursions.

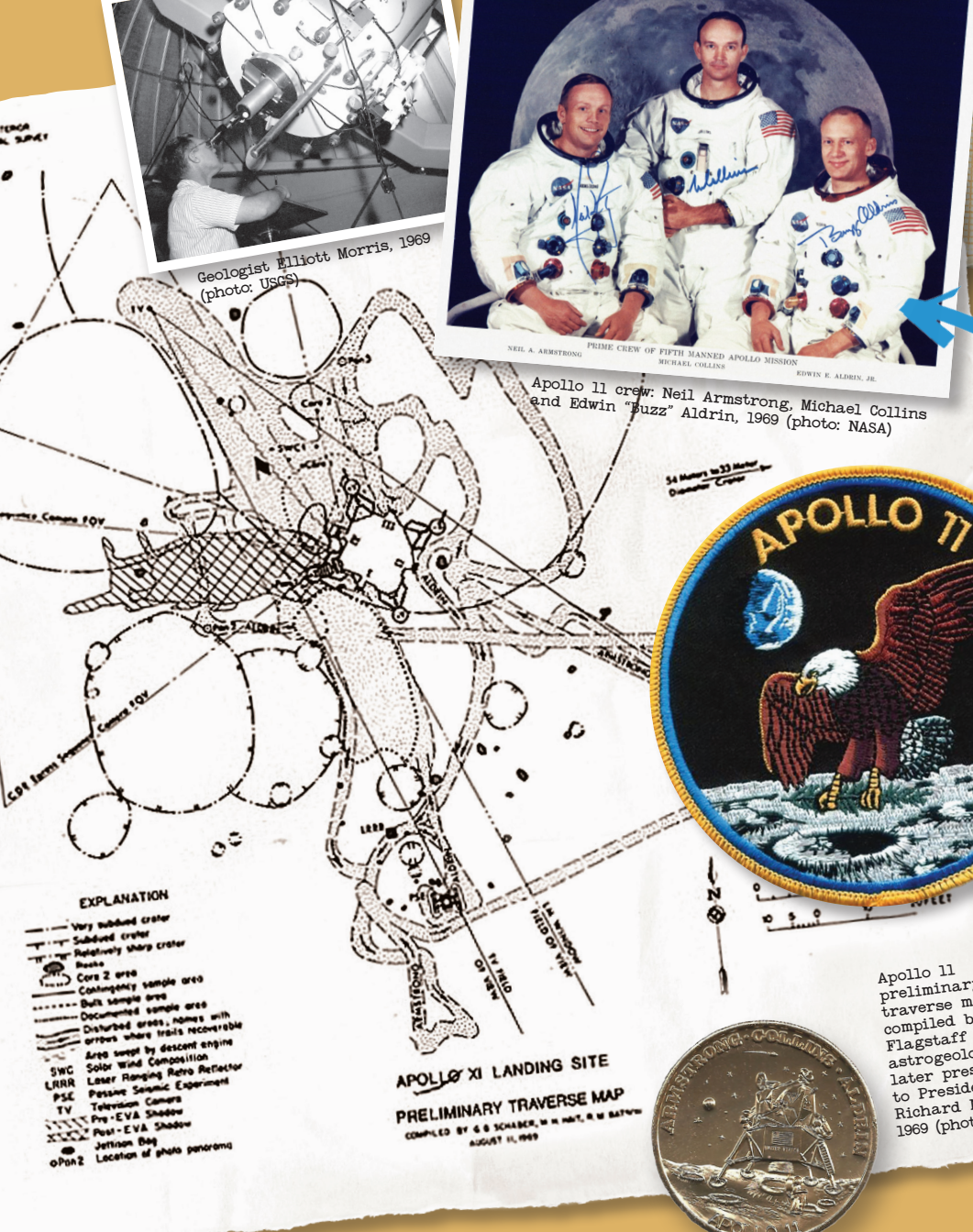
1969 Apollo 11 Mission is the first manned lunar landing and Coconino County Superior Court reporters traveled to Mission Control in Houston to transcribe conversations in real time between astronauts and Mission Control personnel.

1967 Using explosives, geologists create a simulated lunar surface in the cinder fields near Sunset Crater, complete with a network of craters modeled after authentic Moon craters. These fields were ideal for training astronauts and testing equipment, including lunar rover vehicle simulators (Moon buggies).

1963 USGS scientists studied the Moon through telescopes at Lowell Observatory, Northern Arizona University, the US Naval Observatory's Flagstaff Station, and the USGS telescope built specifically for lunar mapping.



Blast test following Crater Field #1 construction east of Flagstaff, 1967 (photo: USGS)



Apollo 11 preliminary traverse map compiled by Flagstaff USGS astrogeologists, later presented to President Richard Nixon, 1969 (photo: USGS)



Geologist Elliott Morris, 1969 (photo: USGS)

- EXPLANATION**
- Very subdued crater
 - - - Subdued crater
 - Relatively sharp crater
 - Crater
 - Core 2 area
 - Contingency sample area
 - Built sample area
 - Documented sample area
 - Disturbed areas, names with arrows where trails recoverable
 - Area swept by descent engine
 - Solar Wind Composition
 - Laser Ranging Retro Reflector
 - Passive Seismic Experiment
 - Television Camera
 - Pre-EVA Shadow
 - Post-EVA Shadow
 - Jetison Bag
 - Location of photo panoramas

Celebrating Flagstaff, Arizona's Scientific Role in the Apollo Moon Missions...



Experience the 50th anniversary of one of humankind's grandest achievements in setting foot on another world. When Neil Armstrong stepped onto the Moon on July 20, 1969, he at once met the audacious challenge of President John F. Kennedy to land an American safely on the Moon, while turning our species into citizens of the world. Over the ensuing three years, 11 other people walked on and explored the Moon. This was possible only with years of preparation, in which many milestones occurred in the Flagstaff area including astronaut science training, instrument development and lunar mapping.

Lunar Legacy launch event

July 20, 2018

Historic downtown Orpheum Theater

Concert with Pink Floyd tribute band

Children's crafts

Special guests

Presentations about Flagstaff's role in preparing for the Moon missions

Mayor Proclamation recognizing Flagstaff AZ Lunar Legacy celebration



Celebrating Flagstaff's Scientific Role in the Apollo Moon Missions



Immerse yourself in epic Apollo Mission moments at the following sites:

In Flagstaff:

- Lowell Observatory
- Museum of Northern Arizona
- Historic downtown Flagstaff
- Northern Arizona University
- Coconino Center for the Arts
- Moonshot at NACET
- US Geological Survey
- Astrogeology Science Center

1 hour or less drive time:

- Meteor Crater
- Sunset Crater Volcano National Park

1-1/2 hour drive time:

- Grand Canyon National Park



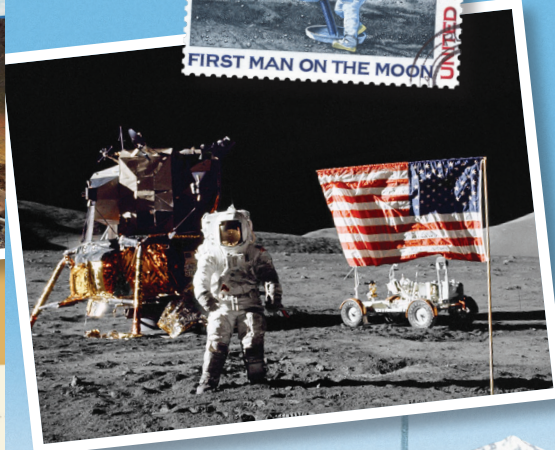
Meteor Crater

Activities through 2019:

- Tours at Lowell Observatory, United States Geological Survey, and cinder field training sites
- Monthly Lunar Lecture Series featuring presentations highlighting various aspects of the science and cultural impact of the Moon
- Enjoy specially crafted lunar-themed menu options at participating restaurants
- Exhibits about astronaut training and lunar mapping
- Demonstrations of student-created robotic rovers
- Lunar-themed art exhibits

Flagstaff Convention & Visitors Bureau
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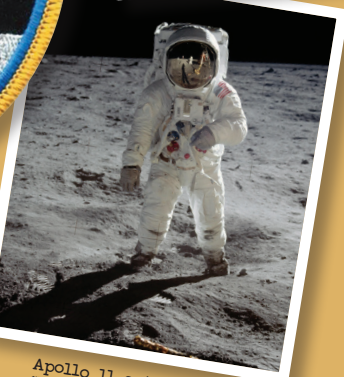
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Celebrating Flagstaff's Scientific Role in the Apollo Moon Missions



USGS Field Test Support Unit with lunar rover vehicle simulator "Explorer", Flagstaff, 1969 (photo: USGS)
Inset photo (top): Apollo 17 astronaut Harrison "Jack" Schmitt on the Moon, 1971 (photo: NASA)



Apollo 11 astronaut Edwin "Buzz" Aldrin on the Moon, 1969 (photo: NASA)

Visit flagstaffarizona.org for more information.