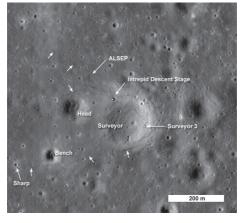
Astronauts who walked the lunar surface

- Neil Armstrong (1930-2012), Apollo 11
- Edwin "Buzz" Aldrin (1930-), Apollo 11
- Charles "Pete" Conrad (1930-1999), Apollo 12
- Alan Bean (1932-2018), Apollo 12
 Alan B. Shepard Jr. (1923-1998), Apollo 14
- Edgar D. Mitchell (1930-2016), Apollo 14
- David R. Scott (1932-), Apollo 15
- James B. Irwin (1930-1991), Apollo 15
- John W. Young (1930-2018), Apollo 10 (orbital), Apollo 16 (landing)
- Charles M. Duke (1935-), Apollo 16
 Eugene Cernan (1934-2017),
 Apollo 10 (orbital), Apollo 17 (landing)
- Harrison H. Schmitt (1935-), Apollo 17

APOLLO 12

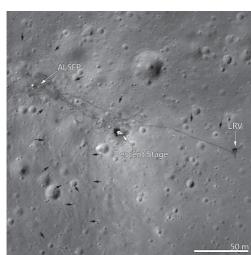


This image from Lunar Reconnaissance Orbiter shows the Apollo 12 landing site. The Lunar Module "Intrepid" descent stage, experiment package (ALSEP) and Surveyor 3 are all visible. Arrows point to astronaut footpaths.

APOLLO 15

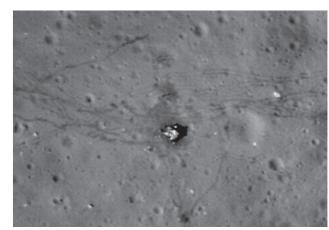


Lunar Roving Vehicle at Station 6a; note the slope is steep enough that one of the wheels is off the ground.



The Apollo 15 landing site is shown. The Lunar Roving Vehicle is parked to the far right, and the Lunar Module descent stage is in the center.

APOLLO 17



The Apollo 17 Lunar Module "Challenger" descent state is shown. Notice the tracks from the lunar rover around it.







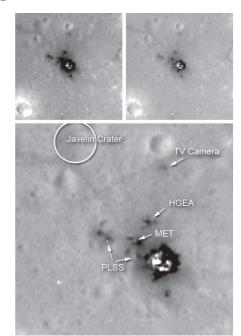
LROC's best look yet at the Apollo 11 landing site. The remnants of man's historic first steps on the surface are seen as dark paths around the Lunar Module "Eagle," lunar ranging retroreflector and passive seismic experiment package, as well as leading to and from the Little West Crater.

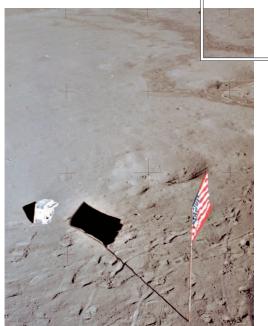
APOLLO 14

New LROC low orbit image of the Apollo 14 Lunar Module descent state. The upper two panels show a new image but with different contrast stretches, and the lower image is an enlarged version.

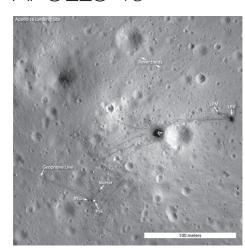
FAR RIGHT:

Post EVA view from LM looking west toward ALSEP. Notice the astronaut tracks in the surface.





APOLLO 16



Low orbit view of Apollo 16 landing site.

LUNAR RECONNAISSANCE ORBITER (LROC) IMAGES COURTESY OF NASA'S GODDARD SPACE FLIGHT CENTER AT ARIZONA STATE UNIVERSITY

Structure of the moon

The moon's core is proportionally smaller than other terrestrial bodies' cores. Besides iron, other minerals on the moon include olivine, pyroxene, oxygen, silicon, magnesium, iron, calcium and aluminum.

Liquid iron shell, 56 miles thick

Solid.

iron-rich

inner core;

149 miles

Partially molten layer; 93 miles

The mantle extends from the top of the partially molten layer to the bottom of the moon's crust

The crust ranges from 42 miles to 93 miles depending on the location on the moon

Orbit, rotation

The moon is rotating at the same rate that it revolves around Earth (called synchronous rotation), so the same hemisphere faces Earth all the time.

The other side: As the moon orbits Earth, different parts are in sunlight or darkness at different times. The changing illumination is why, from our perspective, the moon goes through phases.

