

First photo of the surface of Mars from the Viking 2 Lander.



Aug. 20, 1975 – Launch of Viking 1.

# Viking: A Trailblazer for Our Journey to Mars

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## Viking: Blazing a Trail

A picture is worth a thousand words, or in the case of the NASA Viking project, 16,000 pictures are worth, well you do that math. The Viking Orbiter and Lander made those pictures of the Martian surface come to life by offering answers to unknown questions about the red planet, leading to scientific discoveries that benefit humanity today.

On July 20, 1976 at 8:12 a.m. EDT, NASA received the signal that the Viking Lander 1 successfully reached the Martian surface. This major milestone represented the first time the United States successfully landed a vehicle on the surface of Mars, collecting an overwhelming amount of data that would soon be used in future NASA missions. Upon touchdown, Viking 1 took its first picture of the dusty and rocky surface and relayed the historic image back to Earthlings eagerly awaiting its arrival. Viking 1, and later Viking Orbiter 2, collected an abundance of high-resolution imagery and scientific data, blazing a trail that will one day take humans to Mars.

Viking 1 was launched from Complex 41 at Cape Canaveral Air Force Station in Florida at 5:22 p.m. EDT on August 20, 1975, beginning a nearly half-billion mile, 11-month journey through space to explore Mars. The 4-ton spacecraft went into orbit around the red planet in June of 1976. On September 9, 1975, Viking 2 was launched, following its twin to the Mars orbit destination, and on September 3, 1976, the Viking 2 lander successfully touched down on the surface. Each orbiter and lander operated years beyond its design lifetime.

## Why Land on Mars?

The goal of the project was to characterize the structure and composition of the atmosphere and surface of Mars and search for evidence of life. The results gave the world its most complete view of Mars. Though no evidence of life was found, the discovery of perplexing chemical activity in the planet's soil, as well as its self-sterilizing nature, left researchers intrigued, sparking a thirst to learn more.

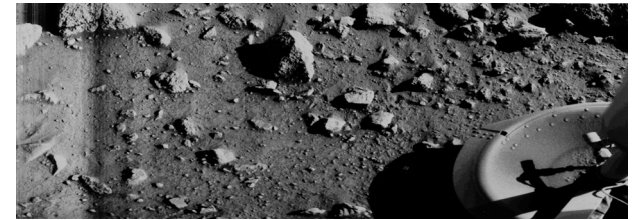
## Journey to Mars

Viking continues to inform researchers working on landing humans on Mars. NASA is making progress on our deep space exploration programs including Orion, Space Launch System (SLS) and the Asteroid Redirect Mission (ARM). These new capabilities will enable our next steps on the journey to Mars. With SLS, Orion, ARM, and future habitation capabilities and in-space propulsion, NASA will extend human presence tens of thousands of miles beyond the moon. There we will test and validate the systems that will carry humans to Mars in the 2030s.

## Team Effort

Men and women from NASA centers across the nation played key roles in reaching the Martian surface. The Viking project was managed by NASA's Langley Research Center in Hampton, Virginia, which was responsible for the Viking Lander system and mission operations. Prime contractor Martin Marietta Aerospace Corp., now Lockheed Martin

Corp., was responsible for lander integration with the orbiter. NASA's Jet Propulsion Laboratory in Pasadena, California, provided the orbiters and was responsible for tracking and data acquisition as well as the mission control and computing center. Lewis Research Center, now the Glenn Research Center in Cleveland, Ohio, was responsible for the launch vehicle. Kennedy Space Center in Florida was responsible for the launch facility.



*First photo of the Martian surface taken by Viking 1. This photo was taken to determine if the lander had sunken into the Martian surface because at the time, it was unknown how much dust was on the planet's surface.*

