



Virtual Learning

Aerospace Engineering

The Space Race

April 27, 2020



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Lesson: April 27, 2020

Objective/Learning Target:

Students will learn about the beginnings of space exploration and what countries were involved.



Bell Work:

What countries do you think were involved in the race to the moon?

Let's Get Started:

Watch Videos:

- [The Space Race \(1955-1975\)](#)
- [Space Race to the Moon | Free Documentary](#)



The Space Race

After World War II came to an end, a new conflict began. This was known as the Cold War, it pitted the world's two great powers, the United States and the Soviet Union, against each other. In the late 1950s, outer space would become another area added to this conflict, as both sides looked to prove the superiority of its technology.



Causes of the Space Race

In the mid-1950s, the U.S.-Soviet Cold War had made its way into everyday life for both countries, This was fueled by the arms race and the growing threat of nuclear weapons. These tensions would carry on throughout the space race.

On October 4, 1957, a Soviet R-7 intercontinental ballistic missile launched Sputnik, the world's first artificial satellite and the first man-made object to be placed into the Earth's orbit. The United States saw outer space as the next frontier, the logical next step of the American tradition of exploration. The U.S. thought it was important not to lose too much ground to the Soviets.



NASA is Created

In 1958, the U.S. launched Explorer I, which was designed by the U.S. Army under the direction Wernher von Braun. Later that year President Dwight D. Eisenhower signed a public order that created the National Aeronautics and Space Administration (NASA).

Eisenhower also created two national security space programs that would operate with NASA's program. The first, led by the U.S. Air Force, dedicated itself to finding ways to use the military's potential in space. The second, led by the Central Intelligence Agency (CIA), the Air Force and a new organization called the National Reconnaissance Office was code-named Corona. This would use orbiting satellites to gather intelligence on the Soviet Union and its allies.



Man Orbits Earth

In 1959, the Soviet space program launched Luna 2, the first space probe to hit the moon. In April 1961, the Soviet cosmonaut Yuri Gagarin became the first person to orbit Earth. The U.S.'s effort to send a man into space, nicknamed Project Mercury, had NASA engineers design a small, cone-shaped capsule that they tested the with chimpanzees. They had a final test flight in March 1961 before the Soviets were able to go ahead with Gagarin's launch. On May 5, 1961, astronaut Alan Shepard became the first American in space, but he did not orbit Earth.

Later that May, President John F. Kennedy made the public claim that the U.S. would land a man on the moon before the end of the decade. In February 1962, John Glenn became the first American to orbit Earth, and by the end of that year, the foundations of NASA's lunar landing program—dubbed Project Apollo—were in place.



“One small step for man, one giant leap for mankind.”

From 1961 to 1964, NASA’s budget was increased by almost 500% and the lunar landing program involved almost 34,000 NASA employees and 375,000 employees of industrial and university contractors.

In December 1968 Apollo 8 launched. It was the first manned space mission to orbit the moon. On July 16, 1969, U.S. astronauts Neil Armstrong, Edwin “Buzz” Aldrin and Michael Collins went on the Apollo 11 space mission. This was the first lunar landing attempt. After landing successfully on July 20, Neil Armstrong became the first man to walk on the moon. He famously called the moment “one small step for man, one giant leap for mankind.”



Who Won the Space Race?

By landing on the moon, the United States basically “won” the space race. The Soviets made four failed attempts to launch a lunar landing craft between 1969 and 1972. From beginning to end, the American public’s attention was captivated by the space race, and the various developments by the Soviet and U.S. space programs were heavily covered in the national media. Astronauts came to be seen as the American heroes. Soviets, in turn, were pictured as the ultimate villains, with their relentless efforts to surpass America and prove the power of the communist system.



Space Race Understanding

Research the Space Race. Then create a timeline that includes at least 10 important dates of the Space Race.