Project Gemini: Stepping Stone to the Moon

Project Gemini was America's second manned spaceflight program. It took place after Project Mercury and before the Apollo program. The Project Gemini spaceflight missions took place during 1965 and 1966. The missions helped astronauts learn and practice difficult skills that would be needed to successfully land on the Moon.

The project's name, Gemini, came from the Latin word for "twins." The name was inspired by the two-manned space capsule designed for the missions. The capsules used for previous Project Mercury spaceflights could only hold one astronaut. Although the Project Gemini capsule was large enough to hold two astronauts, the space inside was still very small.

No astronauts were onboard the Gemini 1 and Gemini 2 flights. They were unmanned flights conducted to test the safety of the space capsule. Gemini 3 was the first manned mission of the program. It was launched on March 23, 1965 and completed three low Earth orbits.

The Gemini 4 mission achieved a milestone—America's first spacewalk. Astronaut Edward White became the first American to venture outside a space capsule. While outside the capsule, he used a special device called a Hand-Held Maneuvering Unit. This device used pressurized oxygen to help him move around in space. The Gemini 4 crew also conducted scientific experiments and captured photographs of Earth's terrain.

The Gemini 5 mission also set a space record. The Gemini 5 crew remained in orbit for a week. This was longer than any previous astronaut crew. The mission was an important astronaut endurance test. A future Moon landing would require that astronauts be able to remain in space for extended periods of time.

The Gemini missions that followed helped scientists better understand how to maneuver space capsules. The Gemini 6A and Gemini 7 missions proved that two capsules could meet in space. During the Gemini 8 mission, the astronaut crew performed the first-ever space docking. They connected the Gemini 8 capsule to an unmanned spacecraft while in orbit. The Gemini 9A mission also involved spacecraft maneuvering exercises as well as a spacewalk.

The final Project Gemini missions continued to build knowledge and skills for future travel to the Moon. Astronauts on the Gemini 10 mission practiced space docking and spacewalking skills. The Gemini 11 crew flew higher than any previous U.S. space mission. Edwin "Buzz" Aldrin of the Gemini 12 crew proved that astronauts could safely take long spacewalks.

Project Gemini was a critical space program. Mission astronauts and space scientists achieved many important goals. They proved that spacewalking and docking with another spacecraft were possible. The Gemini missions also proved that astronauts could remain in space for long periods of time. The milestones achieved by Project Gemini helped build a path to the Apollo program and a successful moon landing.

Questions

1. What was the main difference between the Project Mercury space capsule and the Project Gemini space capsule?

2. Why was the Gemini 5 mission an important test of astronaut endurance?

3. What does *maneuver* mean here: "The Gemini missions that followed helped scientists better understand how to maneuver space capsules"?

4. What is the origin of the word Gemini? What does the word mean?