



# Space Shuttle

## The Space Shuttle through the years

- 1981: First flight by Space Shuttle Columbia.
- 1984: First walk in space by female astronaut Kathryn Sullivan. (Shuttle Challenger)
- 1990: Shuttle Discovery successfully launches The Hubble Space Telescope into orbit.
- 1993: Astronauts successfully repair the Hubble Telescope and set a record for the longest space walk. (Shuttle Endeavour)
- 1995: First in-orbit exchange of shuttle crew members. (Shuttle Atlantis)
- 2000: 100<sup>th</sup> shuttle mission. (Shuttle Discovery)

The Space Shuttle is a reusable aerospace vehicle that takes off like a rocket, maneuvers in orbit like a spacecraft, and lands like an airplane. It is launched into Earth orbit to deploy various types of satellites and to conduct experiments in space.

The shuttle system is 184 feet long and the orbiter is 122 feet long with a wingspan of 78 feet. It takes only about eight minutes for the Space Shuttle to accelerate to a speed of more than 17,000 miles per hour. A shuttle can hold up to seven crew members.

There have been five orbiters in the shuttle program's history: Atlantis, Challenger, Columbia, Discovery and Endeavour. Space Shuttle Columbia was launched as the very first shuttle mission on April 12, 1981.

The Space Shuttle has four major parts: the orbiter, the solid rocket boosters (two), the external tank, and the set of three Space Shuttle main engines in the rear of the orbiter. Only the orbiter and the main engines go into Earth orbit. The other parts are for liftoff and powered flight.

Aboard each Shuttle are experiments which in some way will help everyone here on Earth. These experiments are tested in space; the results are brought back to Earth and applied to our everyday lives.

NASA plans to retire its shuttle fleet by 2010 and build a replacement system that will be based on existing technology and designed to launch crew and cargo separately. The new "Crew Exploration Vehicle" (CEV) is scheduled to be available for launching crews to Earth orbit by 2014.