America's First Laboratory in Space

Skylab was America's first space station. The 169,950-pound station orbited Earth from 1973 to 1979. Astronauts lived aboard the station and conducted scientific experiments. They also studied the Sun using the station's solar observatory. Skylab proved that it was possible for astronauts to spend extended periods in space.

On May 14, 1973, Skylab 1 was launched into space atop a powerful Saturn V rocket. There was no crew aboard Skylab 1 when it was launched. It was an unmanned flight. Within minutes after liftoff, a problem was detected. The station's reflective meteoroid shield deployed too soon and was torn away. Without the protection of the shield, temperatures inside the station rose dramatically. Skylab 1's solar panels were also damaged in the launch. These panels were necessary to power the space station. Many people feared that Skylab 1 was damaged beyond repair.

Scientists set to work trying to figure out how to repair Skylab 1. On May 25, 1973, a three-astronaut crew known as Skylab 2 was launched into space. Their mission was to dock with Skylab 1 and repair the damage that had occurred during liftoff. The astronauts worked very hard to fix the station. They installed a new shield that acted like an umbrella to protect the station from the sun's extreme heat. They also repaired the solar array. After the repairs were completed, the astronauts remained on Skylab to conduct scientific experiments. They returned to Earth on June 22, 1973.

A little over a month later, a new three-astronaut crew launched into space. They were known as Skylab 3. They performed important maintenance activities aboard the Skylab 1 space station. They also conducted additional scientific experiments and medical studies. The Skylab 3 crew lived and worked in space for 59 days.

Skylab 4 was the final three-astronaut crew to reside aboard the space station. They launched into space on November 16, 1973. They continued the research programs conducted by the crews of Skylab 2 and Skylab 3. They also observed and studied the Comet Kohoutek. The Skylab 4 crew spent 84 days in space.

Scientists originally planned to leave Skylab 1 in space. They thought that future astronauts might be able to use the space station. But they were unable to keep Skylab 1 in orbit. On July 11, 1979 the large space station fell back to Earth. It disintegrated when it re-entered the Earth's atmosphere. Pieces of Skylab debris were found in Australia and the Indian Ocean.

The experiments conducted aboard Skylab 1 helped scientists better understand our planet and the Sun. The astronauts collected information and data about Earth's weather. They also studied features of the Sun like coronal holes. These are areas of the Sun's corona that are darker and cooler. The space station program both increased scientific knowledge and expanded knowledge about living in space. The lessons of Skylab helped scientists develop important future space station programs like Spacelab and the International Space Station.

Questions

1. What went wrong during the launch of Skylab 1?

2. How was it repaired?

3. What was the name of the comet that the Skylab 4 crew observed and studied?

4. What does *disintegrated* mean here: "It disintegrated when it re-entered the Earth's atmosphere"?