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# COLUMBIA'S HISTORIC FLIGHT



NASA describes what it was like for the two-man crew aboard *Columbia* to be the first shuttle astronauts to launch into space aboard the STS orbiter: "When Space Shuttle *Columbia*'s roaring engines launched STS-1 from Kennedy Space Center in Florida on April 12, 1981, the enormous jolt at liftoff told Commander John Young [seated left] and Pilot Robert Crippen [seated right] they were about to take an adventurous ride into a new frontier. 'There was no doubt you were headed someplace,' said Crippen. 'It was a nice kick in the pants.'" Image online, NASA.

*Columbia*, until the 1st of February in 2001, was the oldest orbiter in the shuttle fleet. She'd had many <u>successful flights</u> and was named for an eighteenth-century, Boston-based sloop captained by Robert Gray.

On 11 May 1792, Gray and his crew maneuvered their <u>Columbia</u> past a dangerous sandbar at the mouth of a <u>mighty river</u> now known as the Columbia. That ship (bearing <u>this flag</u>) also took Gray and his crew on the <u>first</u> <u>American circumnavigation</u> of the globe.

*Columbia*, the first shuttle, was soon joined by three sister ships: *Challenger* (in 1982); *Discovery* (1983), and *Atlantis* (1985). *Endeavor* came later, in 1991, after *Challenger's* disastrous loss.

When *Columbia* first launched on 12 April 1981, she had only two crew members - John W. Young and <u>Robert L.</u> <u>Crippen</u>. Their mission was to determine whether the shuttle could safely liftoff, travel in space and <u>return</u> to earth.

During the orbiter's departure from Cape Canaveral, NASA's cameras took pictures. Later, the shuttle team could study close-up views of *Columbia's* external tank and the joints of her two solid rocket boosters. At the time, of course, no one knew that a significant design flaw in those joints would cause the <u>Challenger disaster</u> less than five years later.

As she reached <u>the stage</u> where her solid rocket boosters would separate from the orbiter, *Columbia* continued on her launch path. Mission STS-1 was safely underway.

At the appropriate time, the <u>external fuel tank</u> would separate from the orbiter. Unlike the <u>solid-rocket</u> <u>boosters</u> - which were successfully <u>recovered</u> after they fell into the sea - the external fuel tank was not reused.

<u>Just before</u> her first landing, *Columbia* was accompanied by chase planes. Safely <u>touching down</u> - at Edwards Air Force Base, where crowds had gathered to <u>witness the historic event</u> - she awaited transport back to the Kennedy Space Center atop a <u>specially equipped NASA Boeing 747</u>.

It had been a triumphal flight, and *Columbia* would fly the next four shuttle missions. But something had happened to *Columbia's* heat tiles during launch. Sixteen tiles were lost and 148 others were damaged when an overpressure wave occurred as the solid rocket booster ignited.

See Alignments to State and Common Core standards for this story online at:

http://www.awesomestories.com/asset/AcademicAlignment/COLUMBIA-S-HISTORIC-FLIGHT-Columbia-Space-Shuttl

<u>e-Explosion</u>

See Learning Tasks for this story online at:

http://www.awesomestories.com/asset/AcademicActivities/COLUMBIA-S-HISTORIC-FLIGHT-Columbia-Space-Shuttl e-Explosion

### Media Stream



#### Columbia's Successful History Image, NASA.

View this asset at: <u>http://www.awesomestories.com/asset/view/Columbia-s-Successful-History</u>





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## Shuttle Landing

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### Joints of Solid Rocket Booster NASA image.

View this asset at: http://www.awesomestories.com/asset/view/Joints-of-Solid-Rocket-Booster

#### <u>STS1 - Separation of SRB from Orbiter</u> Image, NASA. View this asset at: <u>http://www.awesomestories.com/asset/view/STS1-Separation-of-SRB-from-Orbiter</u>



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Columbia Loaded Atop a Transport Jet

**Recovered Boosters Towed to Shore** 

Image, NASA. View this asset at:

Image, NASA.

<u>Columbia on Final Approach</u> Image, NASA. View this asset at: <u>http://www.awesomestories.com/asset/view/Columbia-on-Final-Approach-</u>



Floating Solid Rocket Boosters Image, NASA. View this asset at: <u>http://www.awesomestories.com/asset/view/Floating-Solid-Rocket-Boosters</u>







<u>Separated EFT - External Fuel Tank</u> Image, NASA. View this asset at: <u>http://www.awesomestories.com/asset/view/Separated-EFT-External-Fuel-Tank</u>

<u>Touching Down - The First Shuttle Landing</u> Image online, courtesy NASA. PD View this asset at: http://www.awesomestories.com/asset/view/Touching-Down-The-First-Shuttle-Landing

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