

a. What prevented the space shuttle from launching on July 20, 1999 and July 22, 1999?

The first launch attempt was canceled after a dangerous hydrogen buildup appeared in the engine compartment. It turned out to be a false alarm. The second lift-off was delayed because of storms.

b. What women other than Col. Collins are mentioned in this article, and in what ways are these women significant figures in history?

Hillary Clinton, who was, at the time this article, a senator, and is now Secretary of State. She is definitely a very significant person in this country.

c. In what way is this shuttle launch historically significant?

It was the first ever shuttle to have a woman, Colonel Collins, as its pilot and captain. Collins, a 42-year-old Air Force colonel, flew twice before in space, as a co-pilot.

d. What is the goal of this shuttle mission?

The shuttle was carrying the Chandra X-ray Observatory, a \$1.5 billion telescope that will spend at least five years searching for black holes and scrutinizing galaxies, quasars and exploded stars.

e. What is the Chandra X-Ray Observatory, and how will the shuttle place it in orbit?

Oops, I already answered half this question above. But here's the second half.

The five astronauts' first major task in orbit was to release Chandra, the heaviest payload ever packed into a space shuttle. The 45-foot telescope, along with an attached rocket motor and support gear, weighs 50,000 pounds.

f. What do scientists hope to learn from Chandra?

They hoped to learn about things that were previously invisible to us, such as black holes and exploded stars.