

# Havasupai students face "the final frontier"

Article by Sharon Dunham

[Today's News-Herald](#) (Used with permission.)

Top three pictures by Shellie Clark

They were on a mission to change history.

Eighteen years to the day after the Challenger space shuttle mission ended in a fiery blaze, fifth-graders at Havasupai Elementary School safely completed that mission on Wednesday.

During their class trip to the [Challenger Space Center](#) in Peoria, they not only launched and landed the craft, they also discovered a brand new comet that they named after their teacher, Shellie Clark.

It was all part of the space education program the center offers that highlights the mysteries of the universe, along with down-to-earth experiences in both a mission control room and aboard a spacecraft.

These 28 students, one of three fifth-grade sections at Havasupai, took on the Rendezvous With A Comet scenario after studying related material in class for 10 weeks, one hour each school day. Students were told that their small space station in an orbit around the sun between Earth and Mars was hot on the trail of Comet Encke, which comes close enough to be viewed from the Earth every 3.3 years. The flight crew had two hours to determine a rendezvous point with the comet and launch a scientific probe into its tail.



**MaKayla, Chelsea, and Nick work on a problem.**

Half the class - 14 students - staffed mission control, a room with three banks of computers facing four large television screens, showing mission data, including views of their classmates aboard the space craft. Each had an assigned position with projects. With the staff at their stations, the room resembled the real-life Houston mission control area.

Shortly after takeoff, a message interrupted mission control's work, saying the space crew had only three minutes of oxygen left, and requesting help from the life support team, which jumped into action.

Austin on the communication team said, "This is cool. It's freaky. That emergency was scary and made me jump because we didn't know what to do right away."

Workers solved that problem, but it was only a prelude to the second emergency, an unknown object showing up in space on the spacecraft's camera. The crew's research determined that the object, which was surrounded by a debris field, was a comet.

That meant the crew had to evacuate. The mission was unsuccessful after all.

Glumly, mission control and spacecraft teams met in a classroom to find out what happened. "This was no one's fault," Flight Director Jonathan Bird told them. "Nobody failed. But it's up to the commander whether we continue."

The second flight director, Rich De Sinone told students, "As you tried to find out what the object was, it started to wreak havoc with the spacecraft, and you had to come back."



**Space Center employee Adrian helps a student.**

After a vote, students decided to name the object "Comet Clark" to honor their teacher, and to go after it, instead of pursuing Comet Encke. Bird, tongue-in-cheek, told the class that the spacecraft had been repaired with duct tape and sheet metal, and was ready for another flight.

But because the original space crew had been contaminated with radiation, the flight directors ordered them to swap jobs with mission control.

The new crew, wearing matching blue NASA vests, entered the spacecraft, where they sat on bench seats flanked by screens showing the live shuttle launch, mission status, and a map of Earth. Loud noises simulated the launching, and open ports showed real views of the Earth passing by. The footage had been gathered from previous shuttle journeys.

Hurtling 240 miles above the earth at 17,500 miles an hour, the shuttle docked with an international space station. Leaving their launching room, students went to another room where they took their places at workstations with assigned projects, where they directed the rendezvous and scientific probe launching into the comet tail.

After that successful mission, students returned to their classroom for a recap, still dressed in the matching space mission, tie-dyed T-shirts they'd made in their Lake Havasu City class. They each also wore the patch one of their classmates had designed for the mission with the motto "In space and God we trust."

With the mission completed, some in the class said they wanted to become astronauts, or to work in a science field. Jesenia, part of the medical team, said, "I've always wanted to be a doctor and help people, so I think I'd like to be a doctor on a space mission."

This trip, along with other field trips students in the Lake Havasu Unified School District take, was financed with [tax credit funds](#). Other classes in the district have also visited the space center, and more trips are planned this year.

You may contact the reporter at [sdunham@havasunews.com](mailto:sdunham@havasunews.com)



Daniela and Michael on the job.

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But the story does not end there.

As the newspaper article above explains, trips to the Space Center are usually preceded and followed by space inspired classroom activities. Having attended the Challenger Mission on January 29th, Jamaica Elementary 5th graders came back to spend Friday afternoon "cookin' up a comet". The students used what they had learned at the Challenger Center to identify the parts of a comet on a model built by their teacher, Mrs. Mitchell, using dry ice. The students enjoyed watching the sublimation\* of the dry ice form a comet's tail when the ice was held in front of a fan.

\*Changing from a solid to a gaseous state without becoming a liquid.



Jamaica students examine a "comet"