

COLUMBIA MISSOURIAN

Student-run space simulation program celebrates 25 years

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Participants in the CASA space simulation sift through data in the control room Feb. 6. Throughout the weeklong program, students learn the basic math and science behind flying a space craft. ; [Katie Yaeger](#)

COLUMBIA — Three years ago, a student dressed in an astronaut suit visited John Gillis' eighth-grade class. Gillis, now a junior at Rock Bridge High School, has been involved with the Columbia Aeronautics and Space Association ever since.

"I thought it looked cool, so I came to the trainings, and after that I was hooked," Gillis said. "I started out in Mission Control and really loved the problem-solving aspect, then got involved with the technical side and production, and now I'm running the entire thing as student director."

Every February, CASA hosts a week-long student-run simulation based on a NASA mission. This year marked the 25th mission. Held Feb. 4 to 9 and dubbed "Mission 2513: Infinite Curiosity," it

was based on NASA's exploration of Mars.

"This is the only student-run program based off NASA in the entire United States," CASA interim director Cheryl Haynes said. "The neat part about CASA is that we take our students' interests and talents and develop them, whether it's computers, math, science or even painting."

During the week, students were able to design and contribute to various parts of the mission. Some participants created the storyline for "Infinite Curiosity," while others built rovers or produced live broadcasts to be aired on the local school channel.

"I can't think of a comparable program in other school districts," said state Sen. Kurt Schaefer, R-Columbia, whose sons Wolf, 11, and Max, 14, participated in this year's mission. "My two boys' interest in space is great. You get to be smart here and role-play to solve problems."

The simulation is unlike others in that it doesn't follow a set script, Gillis said. Students modified the simulation throughout the week based on whether participants were able to solve problems that arose.

"It allows students to use their critical thinking skills rather than their reading skills," he said.

Change over time

CASA looks completely different than when it began at Rock Bridge in 1988, participant and Hickman junior Paige Oursler said.

Started by teacher Pat Daugherty, the first mission took three days and involved 15 students, four

of whom lived and worked on a mock lunar habitat at Rock Bridge.

Twenty-five years later, more than 100 students participate in the simulation each year, which has moved to a remodeled auto shop near Hickman High School.

Renovated completely by students, the interior of the auto shop resembles the International Space Station. Every year, students continue to build and expand the station, Oursler said.

"That's the neatest thing — we get to see the change over time," she said.

Last year's additions included a teleprompter, Smart Boards and solar panels on the roof. CASA received grant money this year to purchase a 3-D printer.

The building might look different, but the mission of the program has not changed, CASA alumnus Steve Dawson said.

"We have a 3-D printer now, which would have been unheard of at the time I was here," Dawson said. "Technology has advanced, but the look and feel of what kids are learning here is consistent with what I remember."

A participant in the public relations portion of the program, Dawson said what he learned at CASA 10 years ago has stayed with him. Dawson returned to Columbia about five months ago and helped train this year's on-air personalities during the simulation.

"After CASA, I moved to Chicago to be an actor," Dawson said. "Even while I was there, I would make short videos that I had started when I was in CASA. I had never made short videos like that, and it turned out to be a lifelong thing."

The next 25 years

Even as NASA exploration declines, CASA will continue to grow, Gillis said.

"CASA is about developing the skill sets students have and furthering them regardless about what they're interested in," Gillis said. "Even though we're aerospace-themed, the program at its heart is still the same no matter what. So even with NASA declining, we're still able to continue."

Future CASA director Ken Thompson said he hopes to freshen up the program next year. Thompson has taught space and aeronautics for the past 17 years and currently teaches at Jefferson Junior High School.

"NASA isn't focusing on space shuttles anymore," Thompson said. "We'll have to alter, too, focusing more on the building and engineering of robotics."

The CASA program was one of his inspirations to go into teaching, Thompson said.

"A teacher I shadowed, Jim Kyd, helped to build the CASA program to where it is today," Thompson said. "He made it so fun and engaging. CASA was a main reason why I went into teaching, and now I'm here."

One of the main benefits students gain from the program is confidence in their futures, Oursler said.

"Because of the program, I do feel like I have a better chance at being more successful in engineering and technology," she said. "It has propelled people into great careers."

One CASA alumna, Ann Esbeck, is now at the Johnson Space Flight Center in Houston. Other program graduates have gone on to study at NASA's Marshall Space Flight Center in Huntsville, Ala., with the hopes of making it to space.

"CASA has changed a lot of people's lives in the process," Gillis said. "We've been going strong for 25 years and hope to go on for 25 more or longer."

Supervising editor is [Elizabeth Brixey](#).