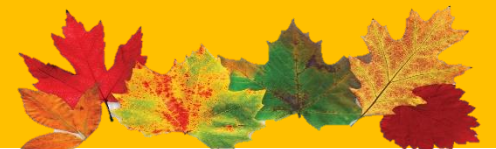




CELEBRATING 20 YEARS OF EXCELLENCE IN EDUCATION

The Mission

UTC CHALLENGER STEM LEARNING CENTER



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Award Winning, National and Local

The UTC Challenger STEM Learning Center received three awards from the Challenger Center for Space Science Education at the annual national conference in August.



Left to Right: Perry Storey, Dr. Lance Bush (President of the Challenger Center for Space Science Education), Racheal De'Friese, Dr. June Scobee Rodgers, Bill Floyd

The Challenger Center annual conference brings together crews from centers located on three continents, in four countries, and here in the United States, twenty-seven states for a week of

presentations, meetings, training sessions, and recognitions.

At the August conference, Challenger Headquarters recognized the UTC Challenger Center's service with three awards:

- Most Public Missions Flown
- Most Teachers Trained
- 2015 Achievement Award

In 2015, the UTC Challenger Center flew 307 missions with 6,525 students and 718 teachers, parents, and other adults. The Center provided the general public with 1,107 missions.

Locally, UTC's Center for Community Career Education recently honored the Challenger Center with their 2015 Volunteer Service Award. The Challenger

Center partners with Community Career Education by providing free missions and coding labs to students of the PAWS, College Knowledge, and Upward Bound programs.



Perry Storey (left) accepts the 2015 Volunteer Service Award from Sandy Cole (right)

UTC Challenger Center's Micronaut Program Used by 25% of Network Centers



In the early 2000s, many local elementary schools requested missions at the Challenger Center. At the time, there were no programs tailored for kindergarten through fourth grade classes as the Center's programs were geared more toward middle school students.

Given that early exposure to hands-on STEM learning enables a stronger understanding of STEM concepts as students advance through grades, Challenger Center staff embarked on a new mission – to create a unique program for K-4 elementary students. Designing and testing spanned a two-

year period and resulted in the Micronaut Program. The program's original 12 science stations and 3 EVAs (Extra Venue Activities) incorporated and supported Tennessee State Education Standards covered by teachers in the classroom.

In 2012, Challenger staff updated the Micronaut Program to incorporate more STEM educational standards. The current program now contains 25 science stations and 5 EVAs. Further enhancement of the program occurred once again in 2013 with the addition of a preschool curriculum to

accommodate local preschool and Head Start program populations.

Today, 25% of the network Challenger Centers use our Micronaut Program.

THE MICRONAUT LOGO

The original concept for the logo was to create a young, yet educational look that would represent the age group targeted while simultaneously expressing the scientific nature of the program. Use of a unique shape to display instruments of science, depictions of the space station and a shuttle with a child-like character brought the concept into reality.

Miss Tennessee Assists with Mars Probe Launch



Although beauty pageant winners perform many duties and travel extensively for appearances during their reign, few get to travel to Mars.

In October Miss Tennessee 2015 Hannah Robison embarked on a journey to Mars, along with students from Harding Academy, during an appearance at the Challenger Center. She was assigned to the probe launch team during the mission, which was appropriate given Ms. Robison loves to conduct science experiments during her visits to schools. Being a chemistry major at UT Martin, Ms. Robison is an ideal person to promote STEM education throughout Tennessee; it is also one of her

professional duties as a spokesperson of Governor Haslam's office. More importantly, it is a personal passion for Ms. Robison. She strives to be a positive role model for young girls interested in science, and encourages them to pursue their interest throughout their formal educational years by relating her own experience of feeling intimidated by high school math, but persevered to study subjects she loved.

Ms. Robison said she was excited to visit the Challenger Center and interact with the Harding Academy students.

FROM THE SEVEN SEAS TO THE FINAL FRONTIER: THE NAMING OF THE SHUTTLE *ENDEAVOUR*

Tallah Falls School has a unique legacy with the shuttle program. In 1989, Tallulah Falls students submitted a winning entry in a national contest to name the new spacecraft replacing the lost Challenger shuttle. One of the contest rules stated the name had to come from a sea vessel used in research and exploration. The Tallulah Falls students choose the name *Endeavour*, paying homage to Captain James Cook's ship the *HMS Endeavour*; it was the first sailing vessel he commanded, and on its maiden voyage he studied the stars and the planet Venus. President Bush chose the entry as the new shuttle's name.



ENDEAVOUR FACTS

The name *Endeavour* was submitted as a shuttle name by more than 1,000 student groups.

Endeavour was the fifth and final shuttle built and flown in space.

Endeavour carried a piece of wood from Cook's ship inside the cockpit.

Endeavour is currently on display at the California Science Center in Los Angeles.

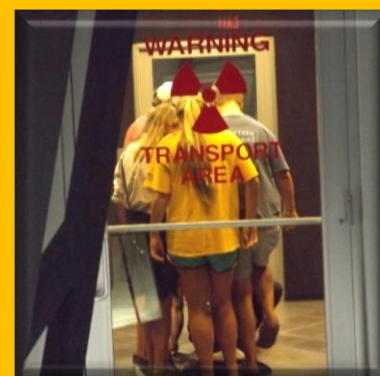
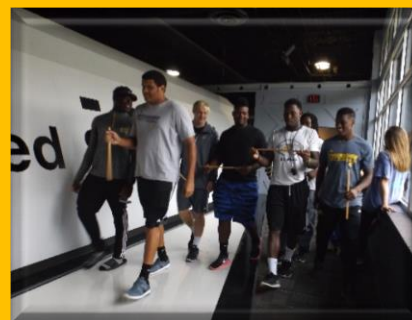
In November, a Tallulah Falls sixth grade class visited the Challenger Center to fly a mission. While here, they also met with Dr. June Scobee Rodgers, founding chair of the Challenger Center for Space Science Education and widow of Challenger commander Dick Scobee, and presented her with a gift commemorating their place in the shuttle program's history.

The *Challenger* name was retired to honor the seven astronauts killed in the 1986 explosion.

SEVENTY-EIGHT PERCENT OF FIRST YEAR STUDIES CLASSES COMPETE IN TEAM BUILDING AT THE CHALLENGER CENTER

Most of the freshmen enrolled the 2015 fall USTU 1250 courses spent a class session at the Challenger Center competing in a series of team building sessions. Seventy-eight percent of the USTU instructors booked a session at the Center, which consisted of various tasks designed to promote teamwork, communication, and problem solving among the students, as well as provide an out-of-the-classroom campus experience for them.

Each class was divided into smaller groups then given a problem to solve using whatever creative means the group conceived would solve the problem within the parameters given, such as time allotments and materials provided. The freshmen enjoyed these team building challenges and made friends with classmates in the process.



CHALLENGER CENTER HOSTS METRO NASHVILLE PUBLIC SCHOOLS ENCORE STUDENTS

For eight days in November, big red tour buses idled into UTC's Lot 9, bringing over 500 Nashville school children to the Challenger Center. This was the first time the Metro Nashville Public Schools offered field trips to the Center for its Encore program students. The Encore program is designed for intellectually gifted and academically talented students and combines interdisciplinary study with hands-on learning within a teamwork oriented structure.

The third and fourth grade students flew missions to Mars and launched space probes, designed Mars Rovers, built Extra Vehicular Mobility Units, and tested the "twinkling" stars myth. These Challenger Center activities incorporate math and science standards, engineering concepts, and verbal communication, and complement the Encore philosophy of examining universal concepts and truths, developing critical and creative thinking processes, and utilizing problem solving skills in math and science.

The 518 students were accompanied by their 18 teachers and 212 parents.

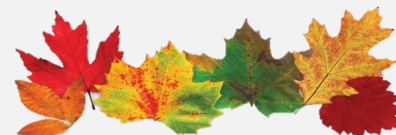


Challenger Center Connects with the Community

In addition to conducting missions at the Challenger Center on campus, the staff also participates in community outreach. Every Friday in October, director Perry Storey presented programs to the Road Scholars, a senior educational lifelong learning and adventure program created by Elderhostel, as well as presenting at a seniors' luncheon hosted by St. Paul Episcopal Church. In October and November, flight director Racheal De'Fries took space science on the road to science night events at Saddle Ridge Elementary, Wallace Smith Elementary, and Snow Hill Elementary.

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As a leader in science, technology, engineering, and math (STEM) education, Challenger Center and its international network of more than 40 Challenger Learning Centers use space-themed simulated learning environments to engage students in dynamic, hands-on opportunities. These experiences strengthen knowledge in STEM subjects and inspire students to pursue careers in these important fields. The UTC Challenger STEM Learning Center is part of the global network that reaches hundreds of thousands of students and tens of thousands of teachers each year. Founded in 1986, Challenger Center was created to honor the crew of shuttle flight STS-51L. To learn more, visit www.challenger.org.