Challenger CENTER®

Located on the campus of the University of Tennessee Chattanooga, the Challenger Center is a state of the art, informal, educational facility. The Challenger Center at UTC is formally aligned with the College of Health, Education, and Professional Studies.

Mission simulations and other programs are regularly scheduled throughout the week. Other evening and Saturday flights can be arranged.

For booking, pricing, or any other information about the Challenger Center at UTC, call (423) 425-4126 or visit our website at:

http://www.utc.edu/Outreach/ChallengerCenter

You are invited to become a part of this experience by financially supporting the Challenger Center through tax-deductible gifts.

The University of Tennessee at Chattanooga

Challenger Center

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Challenger Center Micronaut Program

RENDEZVOUS WITH COMET HALLEY · RETURN TO THE MOON · VOYAGE TO MARS · Encounter EARTH

The Ultimate Classroom

CHALLENGER CENTER

University of Tennessee at Chattanooga

The Dream

The Challenger Center is a living testimony to the dream of the Challenger crew.

When the crew of the Challenger space shuttle perished in 1986, they were on a pioneering mission to extend the boundaries of human knowledge. Challenger Learning Centers are continuing that mission today by preparing students for life.

Through participation in the Center's simulated space adventures, Challenger Center officials have created a positive educational experience that encourages students to excel in math and science, and possibly pursue careers in science, engineering and technology.

What's important is that the children can accomplish the mission with their very own hands and that science, math, and technology can be fun."

-Dr. June Scobee Rodgers

Challenger Center Funding Chair

Missions

A **Full Mission** is a 2 hour simulation that includes Mission Control, launching into space, and conducting research in the Space Lab.

Maximum of 34 participants; 5th grade reading level required.

A **Mini Mission** is a 1 hour simulation where crew members are launched into space and conduct research in the Space Lab. **10-18 participants.**

RENDEZVOUS WITH COMET HALLEY

It is the year 2061. An earth-orbiting space station moves towards Halley's Comet which last passed through our solar system in 1986 and will not return for another 76 years. The crew has two hours to rendezvous with the comet and launch a scientific probe into its coma.

RETURN TO THE MOON

Return to the Moon mission answers the call of the new 2020 Space Initiative. In this mission, our crew establishes a permanent lunar base that will serve as a staging area for further Solar System exploration. As the crew moves toward our closest neighbor, they will capture a stranded probe, repair and rebuild the probe and launch it to the Moon. A complete team effort is required for the ultimate challenge: a safe and successful lunar landing!

VOYAGE TO MARS

Our Voyage begins in the year 2076 with a relief crew in route to the Red Planet. The mission-to relieve the existing Mars Crew that has manned Mars Control for the past two years and launch a probe to one of the Martian moons.

ENCOUNTER EARTH

Currently not available.

Extra Venue Activities

EVA (EXTRA VENUE ACTIVITY) -

Hands-on, investigative activities designed as companions to Full Missions which incorporate math and science related themes. EVAs are recommended to accommodate larger groups may that require back to back missions. Each EVA lasts approximately two hours.

MOON MANEUVERS

(Grade Level 5 -9)

Students explore the Lunar Landing sites of the Apollo astronauts. Students use a shaded relief map to investigate the different lunar landing sites, and learn about a variety of lunar surface features. Knowledge of the terrain will assist the team in planning a lunar excursion for their Lunar Rover Vehicle. Students will use map reading, graphing skills, and problem solving to calculate the shortest trip time. *This EVA is designed to complement the Return to the Moon Mission.*

MARS ROVER

(Grade Level 4-8)

Students use their creative skills to design and build their own Mars Rover. The students, who are placed in engineering design teams, follow a basic specification checklist to assign functions, determine mass and the overall cost of their Rover. *This EVA is designed to complement the Voyage to Mars Mission.*

POP ROCKETS

(Grade Level 3-7)

Students investigate Newton's Laws of Motion through the construction and launch of pop rockets. They see how the laws affect what happens to the rockets. *This EVA is designed to complement the Rendezvous with Comet Halley Mission.*

Extra Venue Activities

EMU (EXTRA MOBILITY UNIT) CONSTRUCTION

(Grade Level 5-8)

Participants work in teams of five to construct the EMU using the large Quadros pieces. Each member of the team is assigned a unique role with specific guidelines for construction. The emphasis is on clear, unambiguous verbal communication between team members. Students will give and follow verbal instructions to replicate the EMU. After construction is complete, students will determine the dimensions of the EMU by measuring length, width, diameter, and radius using a meter stick. In addition, students will find the surface area and volume of the EMU by substituting values into mathematical formulas and performing the indicated operations.

SHORT CIRCUITS

(Grade Level 4- 8)

Students use graphing calculators and voltage probes to investigate circuits. The electrician specialist will collect and analyze voltage readings of batteries in series and parallel circuits.

MOTION PICTURES

(Grade Level 6-9)

Students use graphing calculators and motion sensors to investigate motion. The students will graph their own motion, calculate motion velocity, and match distance vs. time graphs. The students will work with the latest in data collecting equipment while learning how to calculate slope and velocity. Maximum of 24 students.

*Special booking required

Workshops

TEACHER PROFESSIONAL DEVELOPMENT

The Challenger Center staff welcomes the opportunity to help you with your Teacher Professional Development needs. A variety of math, science, and technology workshops are available that cover specific content standards for grades K-10 and address No Child Left Behind requirements.

GRAPHING CALCULATORS ACROSS THE CURRICULUM

EXPLORING THE TI-84 PLUS GRAPHING CALCULATOR FOR ALGEBRA I & II

DISCOVERING SPACE WITH MICRONAUTS (K-4)

A.R.I.E.S. WORKSHOPS (grades 3-8): astronomy based physical science curriculum developed at the Harvard Smithsonian Center for Astrophysics.

EXPLORING TIME

EXPLORING EARTH IN MOTION

EXPLORING MOON AND STARS

EXPLORING LIGHT AND COLOR

EXPLORING MOTION AND FORCES

EXPLORING ENERGY

EXPLORING WAVES

EXPLORING NAVIGATION

Micronaut K-4

Beginning to low reading levels

DISCOVERY (K-2)

Traveling 230 miles above the Earth's surface aboard the International Space Station, the Discovery crew continues the mission of the largest scientific cooperative program in history. This elite team of scientists, engineers, and mathematicians will engage in unique research using a variety of hands-on experiments.

MICRONAUT EVAS

MICRONAUTS IN ORBIT is a hands-on activity that addresses the theme of living in space.

MICRONAUT TECH is a hands-on activities that addresses the use of technology.

MICRO-COMET (3-4)

It is the year 2061. Traveling between Earth and Mars, the Micro-Comet crew is on a mission to locate Comet Halley. This scientific team of explorers will launch a probe into the comet to unlock the secrets of this fascinating comet.

MICROCOMET EVA'S

MICRONAUT ORIGAMI NANOSAT is a hands-on activity that addresses space technology and mathematics concepts.

MICRONAUT MOON PHASES is a hands-on activity to explore moon phases.

MICRONAUT POP ROCKETS is a hands-on activity that addresses Rocketry and Newton's Laws of Motion.