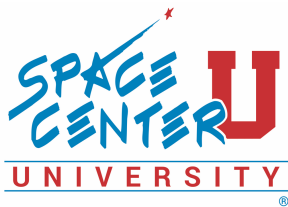


Space Center U Atmospheric Research

Join us on a mission to explore Earth's atmosphere

Ever wonder what it's like at the edge of space? How cold does it get? How much air pressure is at 100,000 feet?

The upper layers of our atmosphere are generally left unexplored, but with the Space Center U Atmospheric Research program, participants can join a high-altitude ballooning mission, take on flight roles and become a citizen scientist as they explore the troposphere and stratosphere.



citizen science.

The Space Center University Atmospheric Research program offers a challenging science, technology, engineering and mathematics (STEM) education program inspired by space exploration and

About the Atmospheric Research Program

Participants at the five-day program will get to perform hands-on engineering activities while collecting real data for analysis. Students will participate in interactive, project-based learning including flight predictions, payload design, high-altitude experiment design, collaborative teaming and global awareness development.



Program activities

- Launch and track a high-altitude weather balloon with cameras and sensors to study the troposphere and stratosphere.
- Determine team roles, analyze and report out scientific data from the flight.
- Participate in project-based learning that includes flight predictions, payload design, and high-altitude experiment design
- Have Brunch with an Astronaut and hear from experts in the field!

Age and class size requirements

Participants must be 16 or older and a minimum of 10 participants is needed to register to keep the event open. Each event is capped at 40 participants, although larger groups will be considered. A minimum of 1:10 chaperons to student ratio is required.

Pricing

Groups with less than 20 participants, registration costs \$724.95 per participant. Groups with more than 20 participants, registration costs \$629.95 per participant. Parents and non-program participants can attend graduation and brunch for \$69.95 per person.

Contact us

Our reservations staff is standing by to answer questions and start you on your way. Connect at +1 281-283-4755 or reservations@spacecenter.org

Flight Preparation

Students work together to prepare for the launch of their high-altitude balloon by assigning individual mission roles, developing pre-launch checklists, running equipment tests and flight prediction software to determine a safe flight path for their payload recovery.

Experiment Design

Students and registered participants will design an experiment in a 50-milliliter test tube and launch it into near space, where the payloads will be exposed to higher levels of radiation, extremely cold temperatures and low atmospheric pressure. A Flight Experiment Guide will be given to participants to assist in designing an experiment that will generate exciting results in this unique environment.

Launch, tracking and recovery

Students will first rehearse the launch procedure at Space Center Houston, to practice inflating the large weather balloon with helium, a delicate and important first step in the experiment. If all goes well, the balloons will launch from Motor Speedway Resort Houston the next day.

After launch, satellite communications allow the students to track the progress of the flight system in real time along with sensor-acquired data. Friends and family will be able to follow along from home with a shareable link.

Students will return to the center to track the flight system and analyze the data. A Space Center Houston flight recovery team will go out to recover the payload and return it to the center, so students can analyze

their experiments, data, photos and video from the flight.

Data analysis and presentations

Each team will present briefings and debriefings throughout the week based on their specific flight role. During this time, each student will share their flight experiment and any immediate data that can be presented to the group.

Tour NASA and Space Center Houston

As part of the program, students will receive a behind-the-scenes tour of NASA Johnson Space Center with stops at Historic Mission Control, the Neutral Buoyancy Laboratory and the Space Vehicle Mockup Facility including its full-size training modules of the International Space Station.

Participants will also get to tour and explore Independence Plaza, which features the high-fidelity shuttle replica Independence, mounted on top of the historic NASA 905 shuttle carrier aircraft, as well as our Starship Gallery, where they will touch a real moon rock and see flown spacecraft.

Graduate and have brunch with an astronaut

Join our center educators in celebrating and recognizing your students' achievements at the Space Center U graduation, surrounded by one of the world's most comprehensive collections of spacesuits in Astronaut Gallery. To commemorate their special experience, students will receive Space Center U certificates, group photos and be able to share their team mission patch designs. The experience wraps up with Brunch with an Astronaut where you'll hear first-hand stories about space exploration.

