

LIFTOFF SUMMER INSTITUTE

Fact Sheet



WHAT IS LIFTOFF SUMMER INSTITUTE?

In 1990, the Texas Space Grant Consortium created the “LiftOff” program, a week-long professional development training for middle and high school teachers. A collaborative effort of Texas Space Grant Consortium members and affiliates, NASA, and industry, the workshops are organized around an aerospace or space science theme drawn from NASA’s diverse engineering and scientific research programs. The program is designed to combine the strengths of the collaborators to enrich teaching and learning of science, mathematics, technology and engineering.

LIFTOFF OBJECTIVES

1

Liftoff is an ongoing workshop organized around an aerospace or space science theme drawn from the many research and engineering programs of NASA.

2

Liftoff workshops emphasize and enrich teaching of math, science, and technology by providing teachers with information, ideas, hands on activities, and materials that can be used to augment their regular curriculum and that can be shared with colleagues.

3

Materials from the workshop and presentations by space scientists and engineers should be provided to the participants before the Liftoff workshop is over to enable them to conduct pre-service workshops beginning around the first of August.

PAST LIFTOFF THEMES & PARTICIPANT INVOLVEMENT

Themes for the LiftOff Summer Institute change each year based upon NASA missions, current topics, and needs of professional educators. Samples of past programs include: Catch a Falling Star: Comets, Meteorites and Asteroids, Have Spacesuit Will Travel, Journey to the Red Planet, Biomedical Aspects of Space Operations, Exploring the Unknown, Life on the Edge, Living in Freefall, and Return to the Moon, just to name a few. Hands-on activities, lectures, and field trips are combined with daily sharing of space science activities and materials that were developed by or been successful to participants.



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<http://www.tsgc.utexas.edu/liftoff/>

LIFTOFF FEATURES, MATERIALS & HIGHLIGHTS

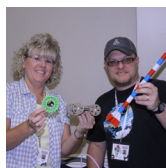
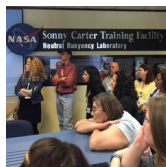
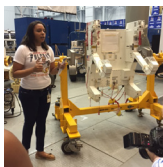


The workshop features presentations by NASA scientists and engineers, astronauts, and university and industry partners such as NASA, the Lunar and Planetary Institute, and the University of Texas at Austin for the most recent discoveries in human spaceflight and planetary science, while incorporating hands-on activities from NASA curriculum. Visits to the Houston Museum of Natural Science, Galveston Moody Gardens, George Observatory, and missions in the Challenger Center provide quality educational materials for incorporation into lessons and activities.

Designed to include material relevant to teachers in many fields (such as biology, physics, chemistry, Earth science, environmental science, math, and technology) this train-the-trainer concept works well as the 50 participants selected to attend annually average training over 1,000 additional educators in their respective districts and work with approximately 5,000 students upon their return. Due to the popularity and noteworthy educational content of this workshop, other states now send representatives to the LiftOff Summer Institute. Inquiry based strategies and experiential learning allows these educators to incorporate techniques into their teaching to actively engage student learning in math, science, and technology.



The LiftOff workshops have shown that the excitement that teachers and students feel about space science and exploration can be tapped to enrich math, science, and technology classes. The workshops also provide teachers the rare – for some, unique – opportunity to spend a week working with professional scientists and engineers.



IN THE WORDS OF LIFTOFF ATTENDEES

"Best experience of my 23+ year teaching career."

"I am amazed at what you are able to do for teachers. This is a lifetime experience."

"I feel truly blessed to be able to attend, motivated to teach students, and more confident to discuss space and conduct labs. Thank you, thank you, thank you!"

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