



# FACT SHEET

# UNITED STATES AIR FORCE

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## AFRL La Luz Academy STEM Expeditions



The AFRL La Luz Academy offers Science, Technology, Engineering, And Mathematics (STEM) Expeditions for various groups at its classroom facility on Kirtland Air Force Base. These short visits, typically one to two hours long, are scheduled as time availability permits.

STEM Expeditions are ideal for extracurricular groups such as New Mexico Mathematics Engineering Science Achievement (MESA) Inc., Scout troops, Junior ROTC groups, and Civil Air Patrol cadets. The types of hands-on activities that students have participated in during a STEM Expedition include:

- Trying to inflate a Bernoulli Bag using nothing but lung power and knowledge of Bernoulli's Principle (faster moving air has less pressure), correlate that experience to the role of airplane control surfaces such as rudders, ailerons, and yokes, and applying these experiences to computer flight simulation.
- Using teamwork and leadership skills to successfully navigate a set of multi-user Intergalactic Skis, or to deposit some spilled "radioactive" material (actually painted rocks) safely, using a multi-user rope tool from a distance, in Mission LunaGlow 63-8B;
- Soldering electronic components such as resistors, 555 timers, capacitors, and light-emitting diodes (LEDs) to a printed circuit board to make a working "I have the power!" flashing LED badge;
- Exploring the states of matter by participating in an interactive cryogenics demonstration using liquid nitrogen to flash-freeze marshmallows, balloons, and other items.

- MORE -

In 2009 we added a *Summer STEM Camp* to our STEM Expeditions. The Summer STEM Camp is a week-long STEM program at AFRL La Luz Academy, held annually during the summer, for rising fifth, sixth, and seventh grade children of military personnel on Kirtland Air Force Base. Students spend the week engaged in a variety of hands-on/minds-on STEM activities in topics such as flight simulation and robotics.

For more information, contact AFRL La Luz Academy at (505) 846-8042  
or go to: [www.vs.afrl.af.mil/LaLuz](http://www.vs.afrl.af.mil/LaLuz).

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