

# NASA technology and education initiatives offered to New Mexico high schools

By **Cheerie Patneau**

**P**lans for two NASA-sponsored events that would directly involve New Mexico high school students from throughout the state were presented at a recent meeting of the Las Cruces Public School Board by Pleddie Baker, senior technology and education outreach representative, at the NASA White Sands Test Facility.

The first program, the Mars Settlement Design Competition, emulates the experience of working as a member of an aerospace company team and developing a design and operating proposal for a new Mars base. "The requirements for the new base will be complex, challenging and exciting, requiring imaginative and innovative approaches and solutions," says one of the creators of the event, Anita Gale, a Boeing aerospace engineer.

The event teaches about Mars, space science, the space environment, engineering careers, organization, and

integration of complex activities, teamwork, management, and effective communications. This year's competition will be held at Oñate High School in Las Cruces the weekend of February 16-18.

The second program, the Johnson Space Center's "Fly High Program," offers the opportunity to design and conduct an experiment under microgravity conditions similar to orbital space flight. Eight southwestern New Mexico high schools were invited to participate and entered proposals, leading to the selection of Mayfield High School's "Alternative Cardiopulmonary Resuscitation Methods for Microgravity Environments" and Las Cruces High School's "Mo'Mentum" proposals.

The Mayfield team will design and build a mechanical CPR unit which will compare the rate and force of compressions using traditional CPR methods under microgravity conditions with results obtained on Earth. The Las Cruces High School experiment is designed to demonstrate and confirm the conservation

of momentum, both linear and angular, under idealized conditions. Students will use a ballistic pendulum to launch an object into motion and then measure the velocities of the system.

The two teams will travel to JSC on April 19-27, where they will fly on NASA's KC-135A microgravity simulator aircraft, dubbed the "Vomit Comet," with their teacher and a NASA mentor.

"The purpose of NASA programs like these is to show students that science is intellectually challenging and fun," said Baker. "The participants will also begin to think about what they want to do when they graduate from high school and may consider a technical field. While these students will experience several periods of microgravity about 25 seconds at a time, it is as close as you can come to being in space without actually going there. Of course it is possible that some of them may some day become astronauts and spend months in space or even go to Mars. We at NASA think that would be terrific!" ■



Pleddie Baker explains the NASA JSC KC-135A Fly High Program to Las Cruces High School students.

## When in doubt, call the 33333's

*Prompt attention available for medical, fire and security emergencies*

**I**n February of last year, JSC Space and Life Sciences initiated a campaign called "Got the Squeeze, Call the 33333's" to increase heart disease awareness and expand the number of cardiopulmonary resuscitation-trained personnel on site.

Employees on site at JSC, Ellington Field and the Sonny Carter Training Facility are reminded that emergency medical service is available for anyone suffering from any atypical physical symptom, be it chest pains or any other discomfort regardless of whether it is or is not work related.

"People need to call for emergency assistance for any medical problem—for any symptom they are experiencing that is outside of the norm," says Julie Davis, a paramedic with Kelsey-Seybold in the Occupational Health and Test Support Office. "It doesn't mean that we're going to take the patient to the JSC Clinic or to a hospital. It just means that we're going to be able to get to the person in need of assistance and find out what's going on. If it's nothing, then there's no problem.

But if it is something and people don't call or they try to walk over to the JSC Clinic, then very serious problems could occur."

Employees located on the JSC main site and at the Sonny Carter Training Facility should call x33333 for medical, fire and security issues. Employees at Ellington Field should call x44444 for emergency assistance.

The JSC Clinic reports three recent cases with potentially harmful or fatal results where no attempt—or a delayed attempt—was made to contact emergency personnel. Employees need to call promptly if there is an immediate need for medical attention. Two paramedics and two ambulances are ready to respond to all calls and medical personnel are trained to work a full code.

"If an employee is experiencing chest discomfort, shortness of breath, an allergic reaction or any other symptom, he or she or a co-worker should call immediately and get help," said Bob Gaffney, JSC emergency preparedness manager. "It's better to call for help and

not need any than to wait and let a potentially serious situation become a dire emergency or, even worse, a fatality. We want to err on the side of being safe."

According to Davis, callers may be reluctant to call because they fear seeing all of the fire protection specialists and safety personnel who assist the paramedics show up in their workplace. "What scares a lot of people is that a number of people respond with us. These people are an asset to the team. But those in need of emergency assistance do need to call for help."

Employees may call the emergency numbers any time—during regular business hours, after hours, or on weekends. When the clinic is closed, the Houston Fire Department becomes the primary medical response for emergencies at JSC.

"This is a great service that NASA offers to all employees," said Davis. "I have never made an insignificant ambulance call. If you're in enough doubt that you don't know whether you need an ambulance or not, then you need an ambulance." ■

## Deadline for NASA Scholarship applications approaching

**S**cholarship applications for the NASA College Scholarship Fund are due by March 30.

This fund will be awarding seven scholarships of \$2,000 each. The scholarship is renewable for six years, not to exceed \$8,000. Applicants must be pursuing a course of study that will lead to an undergraduate degree in science or engineering at an accredited college or university in the United States.

Applicants must be dependents of current or retired NASA employees or dependents of former NASA employees who died while employed by NASA. Applicants must be graduates of an accredited public, private, or parochial high school or be currently enrolled in college with good academic standing. An applicant must have a combined high school grade and college (if any) grade point average of 2.5 on a 4.0 scale or the equivalent.

After meeting the minimum requirements, applicants will be ranked based on the following objective standards:

- Academic preparation, including grades, class rank, and pattern of courses;
- School activities;
- Community activities;
- Performance on SAT or ACT;
- Written recommendations from individuals who know applicant;
- One-page statement of academic purpose by applicant.

Applications and additional information are available in Bldg. 12, Rm. 105 or online at the following Web site: [http://jsc.people.jsc.nasa.gov/jsc-hro-2/special\\_programs/nasa\\_college\\_scholarship\\_fund](http://jsc.people.jsc.nasa.gov/jsc-hro-2/special_programs/nasa_college_scholarship_fund)

**Completed applications may be mailed to JSC, The NASA College Scholarship Fund, Inc.; Mail Code AH12/Scholarship Committee; Houston, TX; 77058. For details, contact Candy Hunt 281-483-1836 or Mary O'Connell 281-483-5774.**