Written by Staff Reports
Friday, 13 April 2018 08:50



ALBUQUERQUE — Sandia National Laboratories will bring hands-on science and engineering activities—like a LEGO robotics class—to a hundred New Mexico middle and high school students the week of April 13. The activities are part of Sandia's Dream Catchers Science Program, held this year at the University of New Mexico-Gallup campus.

Dream Catchers is designed for American Indian students in grades six through 12 and promotes involvement in science, technology, engineering and math and seeks to increase American Indian student interest in a variety of STEM careers.

The program was launched in 1991 by Sandia's American Indian Outreach Committee, now led by Ben Mar. He has volunteered with the committee and Dream Catchers for more than seven years and will be assisting with this year's robotics class.

Other activities include building solar cars, exploring cyber and information technology, and applying fundamental concepts of project management to organize everything from planning for college to planning and managing project costs. Classes are taught by Sandia volunteers, many of whom are American Indians.

What: 100 middle and high school students participating in hands-on science and engineering activities

When: 10 am-12 pm, April 13

Where: University of New Mexico-Gallup Campus, 705 Gurley Ave., Gallup

RSVP: Lindsey Kibler at (505) 331-4045 no later than 6 am April 13

"The program is intended to target American Indian students, and we do that by selecting areas where there are high populations of American Indians," Mar said. "When we go to these areas and the students see that the instructors look like them, it's empowering— they are better able to see themselves in these scientists and engineers."

Growing up, his mother worked as a keyboarding instructor for Albuquerque Public Schools, which exposed him to technology at an early age. He was able to learn more about computers and programming and, today, works as a cyber security engineer.

Mar said American Indian scientists and engineers who begin their career journeys by participating in a Dream Catchers event come back to tell their stories to students.

"Stories like that are really inspiring for students to see," Mar said.

Exposure, Mar said, is vital to getting students into STEM careers. Thanks to his mother's work, Mar was able to learn more about computers and programming and, today, works as a cyber security engineer

Partnering to bring STEM to rural areas.

This is the second year Sandia has partnered with New Mexico Mathematics, Engineering, and Science Achievement, or MESA.

MESA 's mission is to empower and motivate New Mexico's culturally diverse students with

STEM enrichment through partnerships with local colleges and universities, said Shawndeana Smith, MESA's west region coordinator.

One of the most obvious benefits of the partnership is the ability to bring the program to more rural areas, said Smith. Of the nearly 3,800 students participating in NM MESA last school year, 78 percent were minorities. In the west region, 98 percent of the roughly 500 MESA students are American Indian. The region includes Gallup-McKinley and Grants-Cibola county school districts, as well as Bloomfield Municipal schools and Navajo Preparatory School.

"There are a lot of STEM-focused programs available to students in larger or more populated areas, but the further away from the city, the less likely those opportunities will be available to students. The need for exposure to STEM fields in crucial in these areas," Smith said.

When she met Sandia's community relations manager, Amy Tapia, through the MESA advisory board, they discussed the need to help bridge the gap by providing STEM outreach in western New Mexico.

The partnership flourished, and Mar said student participation numbers more than doubled in the first year.

"A lot of these students have never been outside of their areas," Smith said. "They have no idea what a career in STEM would be like or that there are thousands of STEM jobs available to them."

In 2011, American Indians accounted for only 0.4 percent of the population working in STEM fields, according to a report by the U.S. Census Bureau.

"We want students to know there are endless STEM possibilities out there," Mar said. "Our hope

is that this program will spark something inside of them and will propel them to pursue a career in science, technology, engineering or math."

Sandia National Laboratories is a multimission laboratory operated by National Technology and Engineering Solutions of Sandia LLC. Sandia Labs has major research and development responsibilities in nuclear deterrence, global security, defense, energy technologies and economic competitiveness, with main facilities in Albuquerque, New Mexico, and Livermore, California.