

MESA--Preparing Tomorrow's Scientists

by Judith Costello

When young people are given opportunities to dream and create they will rise to the challenge of becoming tomorrow's leaders. That's the idea behind New Mexico MESA, one of the oldest STEM education programs in the state. MESA stands for Math, Engineering and Science Achievement. It has been operating as an afterschool enrichment program in New Mexico for 28 years. MESA currently engages the minds of 5500 students at 132 high school and middle school sites.

"The program began in California and is successfully used in seven other states. Programs start in new areas when a teacher is willing to act as an advisor," explains Julie Cervantes, one of the regional coordinators for the program. MESA receives funding from the state legislature. The program also receives support from corporate sponsors.

MESA asks school districts to provide the meeting place and a teacher stipend. MESA offers resource materials, workshops, field trips and annual competitions. Throughout the year, students meet weekly to discuss areas of interest and work on projects. The theme for 2010 is Amusement Parks. Students might design a roller coaster, do something with robotics or create a wind energy design.

In February, students compete within regions. The state competition is in April, bringing together hundreds of students and advisors. There are six competitive events at the state level. Three are impromptu events in which students come up with engineering, math or science creations on the spot. In three other events, participants present and compete with projects they have worked on during the year.

"It's amazing to see what these young people come up with," Cervantes adds. "We have tracked students who participate in MESA and most go on to college and have highly successful careers in areas of science, technology, math, engineering or education."

At Garfield Middle School, Albuquerque, students have partnered with UNM to do create unique versions of lip gloss. At Washington Middle School, Albuquerque, students do experiments in their school's greenhouse. Santa Fe High School has dominated other parts of the state in the design and programming of robots.

Last spring East Mountain High School hosted a Renaissance Faire which included a Trebuchet Competition, run by MESA students. Visitors were invited to build catapults and test them for accuracy and distance. Eggs were launched toward frying pans, golf balls to a cardboard block wall, and water balloons launched at candles.

MESA schools have taken field trips to the Mind Research Network in Albuquerque and to the state Legislature. Every year, seniors compete to attend the Senior Incentive Field Trip. In March, qualifying MESA seniors visit NASA in Houston, Texas.

The program however, doesn't stop with pre-college academics. MESA encourages leadership and community service "so students enter college with a well-rounded background." Students are assigned points for mentoring work, maintaining a high Grade Point Average and involvement in the community. MESA awards incentives in the form of college scholarships to those earning the highest points.

"If a school district is interested and willing to create a new group, we are ready to help, as much as our funding allows," says Cervantes.

For more information about NM MESA visit nmmesa.org. The public is invited to view projects at the April competition and to volunteer at MESA events. Call 505-366-2500 for details.