

## 30 Years of preparing the technical workforce of the 21st century



Dottie Lindenburger, Astronaut and MESA Alumna signs autograph for students at 15<sup>th</sup> Annual MESA Awards

Colorado MESA fills the K-12 pipeline to technical careers with students who are underrepresented in mathematics, engineering and science professions - African Americans, Native Americans, Hispanics and women. By forming partnerships with businesses, school districts and academia, MESA strengthens K-12 education.

MESA's staff and board seek to serve schools with the lowest academic achievement, the highest dropout rates and students who, on an aggregate and surface basis, would be labeled least likely to succeed. Within these

high-need environments, students with various levels of "raw" talent and/or interest in mathematics and science either self-select or are identified and guided to the MESA program where MESA advisors, parents and volunteers from the corporate and academic communities work together to deliver support services and enrichment activities such as:

- Sponsorship of MESA classes/after-school programs.
- Tutoring and mentoring in effective study techniques and preparation for major tests including college admission tests such as the SAT and ACT.
- Career and academic advising.
- Assistance with scholarships and financial planning related to college.
- Collaborative projects that allow students to explore careers in math, science, health and engineering while enhancing their content and communication skills.
- Field trips to business and industry work sites to see the kind of work they would do as engineers and science professionals.
- Information from and visits to colleges and universities that help students prepare for and acclimate to the college environment.
- Parent and teacher workshops and conferences.
- Incentives to motivate student participation in MESA activities.



North High School students give Aerospace presentation at MESA Fall Fling

MESA starts early, engaging **elementary students** in enjoyable hands-on math and science activities. **MESA middle school and high school students** stay on-track for college with rigorous classes, teachers who care, and role models and mentors who help them make valuable connections to colleges and careers.



MESA students mug for camera after winning gold medal in Helicopter Egg Drop Competition.

- **In 2009-10, Colorado MESA served: 3,600 students in 166 Colorado schools.**
- **All MESA seniors graduate from high school fully prepared for college – no remediation necessary.**
- **Over 90% of Colorado MESA high school seniors go to college (MESA senior surveys), compared to 30% of all U.S. African American, Native American and Hispanic high school graduates.**
- **Over 70% of these students enrolled in math/science-based majors with biology/bio-tech/health sciences ranking second as major choice just behind engineering.**
- **80% of MESA students are from underrepresented and low income groups, including minority males and females.**

*"As a member of Skyline High School MESA, many opportunities opened for me. I made connections with adults in positions of influence. I met professors, earned a summer internship at the Univ. of Colorado, made connections with professional scientists, and gained a clear understanding of the opportunities available for my future."*

*Diana Silva, MESA Class of 2004,  
Received her BS in Mechanical Engineering at the University of Colorado in May, 2009*