

OREGON MESA (MATHEMATICS, ENGINEERING, SCIENCE ACHIEVEMENT)

Parent organization: Portland State University serves as fiscal agent.
MESA USA - <http://mesa.ucop.edu/home.html>

Web address: <http://www.mesa.pdx.edu/>

Grade level: Grades 6 – 12

Overview: Oregon MESA is a pre-college academic program that engages 6th-12th grade students in hands-on, inquiry-based math, engineering, science and technology projects during weekly chapter meetings at school sites. The MESA Partnership Model connects students, teachers, schools and families with universities, community colleges, industry and government. Oregon MESA's mission is to provide students underrepresented in the STEM fields with the skills, knowledge and opportunities to develop their talents, explore technology-based careers, enter college and compete successfully in the workplace. More than 43% of MESA participants are African American, Hispanic or Native American; more than 50% of MESA participants are female.

Subjects covered: Math, engineering, science, technology, conducting inquiry projects in teams

Size of program: 6 High Schools; 11 middle schools. 700 students

Where offered: Metro Portland Area: Benson HS, Franklin HS, Grant HS, Gresham HS, Jefferson HS, Marshall HS, Roosevelt HS, Beaumont MS, Binnsmead MS, Fernwood MS, Five Oaks MS, Gregory Heights MS, Meadow Park MS, Ockley Green MS, Portsmouth MS, Tubman MS

Time spent by students: Conducting science inquiry projects in teams at weekly chapter meetings; working with mentors from academia and industry; field trips to college and museums; field work; participating in engineering competitions (MESA Day and PSU Design Competition) and science fairs (NWSE and District Science Fairs.)

Partners/Sponsors: Maseeh College of Engineering and Computer Science, the Center for Science Education and Portland State University, the Oregon University System, the State of Oregon, Portland Public School District, Beaverton School District and corporations, foundations, private donors and community organizations.

Materials available on web and/or purchase: Curriculum project units available to MESA Chapters include: Bridge Design & Construction, Architecture & Earthquakes, Urban Ecosystems, Stream Monitoring & Water Quality, Aerodynamics of Gliders, Multi-Purpose Vehicles (Mousetrap Cars), Soil Science & Microbiology, Trebuchets and the Science of Sound.

Training for teachers, facilitators, volunteers, leaders is: Available and required. Professional development opportunities are offered for MESA teachers three times a year; college credit can be earned at trainings. Training is also offered for volunteers.

Cost structure: MESA is offered at no charge to its student participants. To inquire about starting a MESA Chapter at your school, please call the Oregon MESA office at: (503) 725-4665.

Funding: Partnership funding is provided by the State of Oregon, the Oregon University System, Portland State University, two school districts, corporations, foundations, private donors and community organizations.

Other points of interest: Oregon MESA is a member of MESA USA, a partnership of MESA programs from eleven states. MESA was a recipient of the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring in 2000, as one of the nation's top ten programs to mentor students from underrepresented groups in the STEM fields. MESA USA statistics from several states show that 96% of graduating MESA high school seniors pursue post-secondary education, with more than two thirds declaring a major in a STEM Field. Seattle MESA reports the following: "Of MESA college graduates, 29% earn degrees in math, engineering, or science related fields, compared to six percent of the general population."