



# San Diego MESA Alliance

Mathematics  
Engineering  
Science  
Achievement



## Support Needs for Annual Student Activities

The San Diego MESA Alliance (SDMA) includes 5 MESA centers in San Diego and Imperial Counties serving over 2000 science, technology, engineering, and math (STEM) students, largely from disadvantaged backgrounds. Priority activities of the SDMA where outside resources are needed, such as volunteers and/or monetary support, are listed.

ACTIVITY*	DESCRIPTION	RESOURCES NEEDED	
		MONETARY SUPPORT	VOLUNTEER SUPPORT
<b>Industry/University and Other Field Trips</b>  Academic year 2011-2012	Middle/high school students tour college campuses during the year to become familiar with the college climate and inspire them to attend 4 year universities. We provide transportation for several campus tours during the year. Field trips also include Rueben H. Fleet Science Center, Air and Space Museum and Shadow Days where students shadow industry professionals in the STEM fields.	<b>\$3000</b> - donation to help defray transportation costs for each pre-college MESA center (min 2 needed/yr)	<ul style="list-style-type: none"> <li>• Industry hosts to provide tours of engineering, science and math based industries.</li> <li>• Volunteer chaperones</li> <li>• Industry shadow day opportunities</li> </ul>
<b>Speakers Bureau</b>  Academic year 2011-2012	We provide financial aid information, career planning and test preparation workshops. Industry speakers/alumni are needed who can engage students and talk with them about their own careers, career preparation, and the rewards of working in STEM fields.	N/A	<ul style="list-style-type: none"> <li>• Engaging, motivating Industry speakers are needed at all levels of MESA (from middle school to undergraduate students)</li> </ul>
<b>Tutor/Mentor Program</b>  Academic year 2011-2012	<p><b>Pre-College Level:</b> We provide tutors and mentors for all of our MESA affiliated schools. Tutors help middle and high school students with math homework and support the teacher/student in the classroom. Mentors expose young students to STEM careers and to college. They help build projects and work on robotics. Most are SDSU College of Engineering and/or MEP students.</p> <p><b>College Level:</b> The ratio of one tutor per 10 students seems to produce outstanding achievement in student performance resulting in improved GPA and high transfer/graduation rate. Qualified MESA students who work as tutors enrich their academic performance and improve their interpersonal skills.</p>	<p><b>\$2,000</b> - per year is requested to provide tutors/mentors to spend up to 4 hours per week per school for each pre-college MESA center (min 2 needed/yr)</p> <p><b>\$3,600</b> = \$10/hr * 20hrs/week * 36 weeks/yr for each tutor (min 3 needed)</p>	<ul style="list-style-type: none"> <li>• Industry volunteers are welcome tutor any time to tutor and/or mentor students at all MESA levels (from middle school to undergraduate students)</li> </ul>
<b>WOW (Walk on Water) Competition</b> Oct. 23, 2010 - 9am – 2pm	Teams from San Diego MESA Centers (middle school to college level) design and build shoes from recycled material focusing on buoyancy and propulsion; these shoes are used to walk across a swimming pool. Held at Southwestern College.	<b>\$1,000</b> to cover prizes and supplies	<ul style="list-style-type: none"> <li>• Volunteers needed to judge on day of</li> <li>• Volunteers to mentor teams from Sept to Oct.</li> </ul>
<b>Shadow Day</b> November 18, 2010 @ Various company sites throughout San Diego	MEP Students may have the opportunity to shadow an engineer or scientist in their field of study for the day at companies throughout San Diego County. Spots for high school students are encouraged.	<b>\$250</b> to cover the cost of student(s) lunch(es) at ~ \$10 per student * 25 potential students	<ul style="list-style-type: none"> <li>• Engineers/scientists needed to host students for the day at their company site</li> </ul>



# San Diego **MESA** Mathematics Engineering Science Achievement Alliance



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<b>Summer Team Internship Application process begins</b> February 2011	MEP students begin application process to work at various engineering/science firms in San Diego County for the summer. Contact Angeline Yang, <a href="mailto:ayang@projects.sdsu.edu">ayang@projects.sdsu.edu</a> for more information if your company might be interested in providing internships.	<b>\$1,250</b> = \$12.50/hr * 100 hours for each student.  Students may be available for additional hours as needed (min 5 needed/yr)	<ul style="list-style-type: none"> <li>Unpaid internships: A limited number of grants are available to pay for students at 100 hours for \$12.50/hr.= \$1250</li> </ul>
<b>MESA Days at SDSU, Imperial Valley &amp; Region</b> Serves 550 middle and high schools students in San Diego County  March & April 2011	As part of the MESA k-12 program, students build science and engineering competitions at their schools during the school year and then compete with other SDSU MESA middle schools and high schools for prizes and the opportunity to go on to MESA regional competitions. All students take math tests.	Sponsorships of any amounts are welcome!	<ul style="list-style-type: none"> <li>Volunteers to serve as competition judges on day of event from 7:30am to 4:30pm               <ul style="list-style-type: none"> <li>Two 4 hour training sessions two weeks prior to event. May be able to complete training online.</li> </ul> </li> <li>STEM related activities that students can engage in during down time would be helpful.</li> </ul>
<b>Olympics &amp; Robotics Competition</b> April 16, 2011 9am – 2 pm @ San Diego City College	Teams compete among all San Diego MESA Alliance programs. Exams will include Calculus, Physics, Chemistry and some Engineering material. Each school will also have 1-3 teams who will program a LEGO robot to compete in two heats.	<b>\$2,000</b> for prizes  <b>\$750</b> for catering and supplies	<ul style="list-style-type: none"> <li>Volunteers are also needed to proctor the competition and to judge the robotics challenge</li> </ul>
<b>2011 Scholarships</b>	Scholarships are donated by local companies and alumni. Company named scholarship(s) are awarded at \$1500 each for college level students. Book Scholarships at \$500 are given to pre-college students intending to pursue their education at SDSU. This supports MESA Pre-college as well as MEP.	<b>\$500</b> covers one book scholarship at pre-college level (min 2 needed/year)  <b>\$1,500</b> covers one scholarship at college level (min 3 needed/year)	<ul style="list-style-type: none"> <li>Volunteers needed to attend End of Year Banquets to help award the scholarship to the student</li> </ul>
<b>End of Year Banquets</b>	End of year ceremonies are hosted by each SDMA MESA center highlighting student accomplishments, recognizing achievements and awarding scholarships.	<b>\$100 - \$300</b> per company to attend helps support cost of event	<ul style="list-style-type: none"> <li>Representatives from companies to attend and network with students</li> </ul>
<b>TOTAL COST FOR 1 YEAR</b>	Donations in any amount can be made to fund specific activities listed or as a blanket donation that will provide support throughout the year.	<b>\$38,050 min. to fund total request for one year</b>	<ul style="list-style-type: none"> <li>Varies, 1 to 150 hours</li> </ul>