

ANNUAL REPORT 2018











Building tomorrow's mathematicians, engineers and scientists. . . Today!









Keep Up With Mesa!









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Letter From the **BOARD PRESIDENT AND EXECUTIVE DIRECTOR**

35 years can be a lot of years in the nonprofit world. That is how long New Mexico Mathematics, Engineering, Science Achievement, Inc. (NM MESA) has been around. Not very many nonprofits can say that in New Mexico. NM MESA has impacted thousands of students and teachers throughout its 35-year history. As the premier pre-college STEM program in New Mexico, we are fortunate to have the teachers and students that make this recognition possible. Along with the teachers, the NM MESA staff deserves this credit also for their unwavering dedication and compassion to improve the well-being of New Mexico students. This in turn improves college/university graduation rates and having qualified individuals to address our state's workforce concerns. NM MESA is ready to assist the state and the nation.

Organizations who are constantly evolving have the best chance to survive and make an impact. NM MESA is that type of organization and we strive to stay relevant and yet still help the students who are struggling with academics and who lack a sense of belonging in their schools and who are uncertain about their future. Our tested program offerings improve student academic outcomes and inspire hundreds of students every year to explore possibilities they never thought possible.

In 2018 the White House Office of Science and Technology Policy and National Science Foundation awarded NM MESA the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. NM MESA was one of fourteen who received this prestigious honor. Awardees represent schools and organizations in all 50 U.S. states.

CONGRATULATIONS to our middle school program from Chaparral Middle School from Chaparral, NM. The team of three students won the national championship of the MESA USA National Engineering Design competition. The Chaparral MS team faced teams from Arizona, Oregon, California, Utah, Washington, Maryland, and Pennsylvania.

These successes and achievement by NM MESA is a testament to the commitment and compassion of our partners, our financial supporters, our volunteers, and our staff. We, the NM MESA Board of Directors, thank you!







Sincerely,

Jonathan Hawkins

President, NM MESA Board of Directors

Sincerely,

Joney Begor Tony Begay

Executive Director, NM MESA

WHO WE ARE



Competition

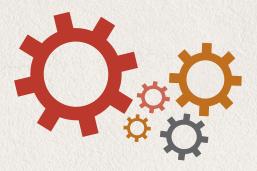
STEM Competitive activities for students that challenges their knowledge and understanding of STEM. These activities provide students with the chance to meet other students from around the state and nationally. It improves their problem solving and leadership skills.

- RoboRave
- Innoventure
- Supercomputing
- BEST Robotics
- CyberEChallenge
- Alternative Fuels Challenge
- NM Electric car challenge
- MESA Day
- MESA USA National Engineering Design Competition
- AFRL's STEM Challenge Flight
- Envirothon
- Science Olympiad
- School Science Fair
- Vex Robotics, Future Cities UNM Architecture College









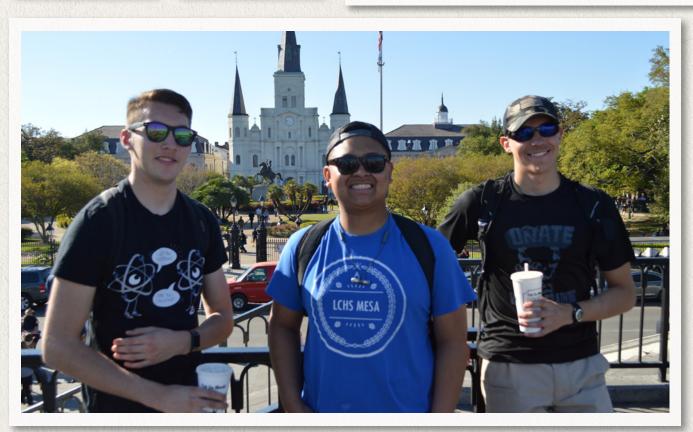
Workshops/Speaker

Workshops held at the MESA school to help students and Advisors prepare for any STEM competitions, including MESA Day and MESA USA. These activities are also used to help enhance students' awareness of STEM careers, preparation for higher education or other related STEM or STEAM subjects.





- AMP event workshops
- Citizen Science
- Soilutions
- Park Ranger
- Animal Humane Society
- Math Moves U
- UNM Engineering
- NM Tech
- NMSU Agricultural Sciences
- Gear Up Careers
- Sandia Peak/Tram
- Catching the Dream
- NM Military Institute
- Coding 101
- NM Highlands University
- UNM Physics and Astronomy
- Natural History Museum
- Explora
- Sandia National Labs
- Los Alamos National Labs
- Northern Community College



FIELD TRIP



College Visit

A MESA planned trip to a college to learn about admissions requirements, the process in applying, a view of campus life, and their next steps toward higher education.

STEM Industry

Activities planned by the NM MESA Advisors, or Regional Coordinator, away from the school site in order for students to experience new or novel STEM information and learning, and view how a STEM education relates in the workforce in a hands-on environment.

*All activities listed are for College Visit and STEM Industry

- NM Tech
- NM Highlands University
- New Mexico State University
- UNM
- Dine College
- New Mexico State Legislature
- Very Large Array
- Senior Incentive Field Trip to New Orleans Louisiana
- Tent Rocks
- Tech Convention at UNM
- Old Town STEAMventure with UNM Architecture College
- STEM Discovery Day
- STEM Fiesta with Explora
- Dream Big Event with New Mexico Natural History Museum
- Math Moves U Explora
- ABQ Bio Park

- National Museum of Nuclear Science and History
- Hyde Memorial Park
- NM Military Institute
- Sandia Peak
- National Youth Image Summit
- Tijeras Creek
- Rio Mora Wildlife Refuge
- Sandia National Labs
- UNM Health Sciences Center
- Albuquerque Balloon Fiesta Park
- Air Force Research Laboratories
- Intel
- PNM
- Flight Simulators at NMSU
- Northrop Grumman
- Meow Wolf



SERVICE LEARNING

Activities planned by Advisors in which students' volunteer time and effort in projects benefitting their school or community. The emphasis is in growing and developing STEM leadership for the future in our students. Strong stewardship grows strong leaders.

Other Activities that NM MESA Students participate in:

FUNDRAISING

These activities provide students with the opportunity to earn funds for use in MESA related activities.

LEADERSHIP

These activities expose students to opportunities to grow in his/her interpersonal, leadership and group communication skills.

STUDENT MEETINGS

These recurring weekly meetings are student led and allow students to prepare for upcoming competitions, work on STEM related activities and take care of typical club business.



- Food Drive
- Roadrunner Foodbank
- LIMBS International
- Veterans Drive
- School Clean Up
- School Eco-Systems Project
- HS MESAs mentor MS MESA students
- MS MESA's mentor elementary school students
- Raise funds for Animal Humane Society,
- Working with Senior Citizens
- Create school food banks and clothing banks
- Clean water projects
- Summer Reading Fiesta at Highlands University
- Homeless Clothing Drive



MESA SCHOOLS







NORTH CENTRAL (15)

Bernalillo MS Bernalillo HS Cochiti MS Gonzales MS Atrisco Heritage Academy HS Ernie Pyle MS Cibola HS Jefferson MS East Mountain HS Jimmy Carter MS West Mesa HS John Adams MS Taft MS Taylor MS, Truman MS

NORTH (14)

Robertson HS Memorial MS Mora HS Mora MS Santa Rosa HS Santa Rosa MS Anton Chico MS West Las Vegas HS West Las Vegas Valley JHS West Las Vegas MS Mesa Vista MS Mesa Vista HS Carlos F. Vigil MS Espanola Valley HS

SOUTHWEST (15)

Cobre HS C.C. Snell MS Deming HS Deming MS Red Mountain MS Alta Vista Early College HS Chaparral HS Chaparral MS Centennial HS Lynn MS Las Cruces HS Vista MS Mayfield HS Onate HS Sarracino MS

WEST (14)

Mesa Alta JHS Crownpoint HS Crownpoint MS Gallup HS John F Kennedy MS Miyamura HS Thoreau HS Thoreau MS Tohatchi HS Tohatchi MS Grants HS Los Alamitos MS Navajo Preparatory HS Chief Manuelito MS

CENTRAL INNER (16)

Albuquerque HS Del Norte HS Garfield MS Manzano HS nexGen Academy Kennedy MS Valley HS Van Buren MS Amy Biehl HS South Valley Academy Los Lunas HS Los Lunas MS Valencia HS Valencia MS Belen HS

SOUTHEAST (14)

Alamogordo HS Holloman MS Mountain View (Alamogordo) MS Artesia HS Carlsbad HS Carlsbad 6th Grade Academy Carlsbad Intermediate School Portales HS Portales JHS Goddard HS Roswell HS Berrendo MS Ruidoso HS Ruidoso MS

Belen MS

MESA REGIONS

CENTRAL INNER

Albuquerque Belen Los Lunas

NORTH CENTRAL

Albuquerque Bernalillo Santa Fe

NORTH

Las Vegas West Las Vegas Mora Española Mesa Vista

SOUTHEAST

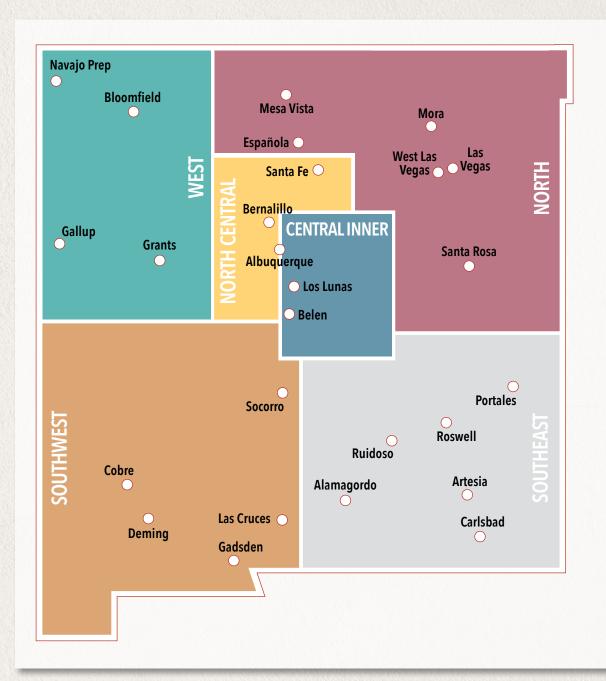
Alamogordo Artesia Carlsbad Portales Roswell Ruidoso

SOUTHWEST

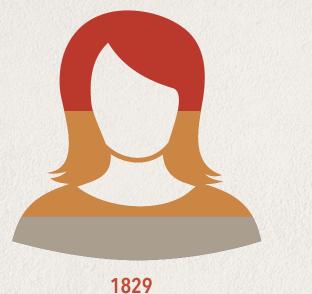
Cobre Deming Gadsen Las Cruces Socorro

WEST

Bloomfield Gallup Grants Navajo Prep



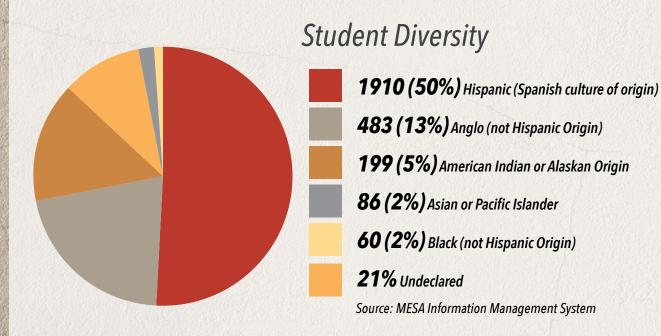
STUDENT DEMOGRAPHICS



48% FEMALE



52% MALE



COLLEGES ATTENDING

Adams State University	3	Fort Lewis	1	Red Rocks Community	
ASA College	1	Lubbock Christian University	1	College	1
Brigham Young University	1	Luna Community College	3	Texas Tech	6
Chapman University	1	Military Enlistments	3	University of Arizona	1
CNM	2	NM Highlands University	15	University of Texas in El Paso	1
Colorado State University	1	NM Military Institute	2	UNM	26
Columbia	1	NM Tech	15	Western NM University	2
Cotty College	1	NMSU	22		
Dona Ana Community College	1	Northern Arizona University	1		
Embrey Riddle Aeronautical		Northern NM Community			
University	1	College	1		
ENMU	9	Scripps College	1		









MAJORS DECLARED

Accounting	1	Communications	2	Machining	1
Aerospace Engineering	4	Computer Engineering	2	Marine Biology	1
Architecture	1	Computer Science	9	Mechanical Engineering	15
Art	1	Criminal Justice	3	Nursing	10
Animation	1	Criminology	1	Mental Health	1
Athletic Training	1	Culinary Arts	1	Molecular Biology	1
Automotive Engineering	1	Design & Technology		Music	1
Aviation Maintenance		for Performance	1	Physical Therapy	3
Technology	1	Early Childhood Education	1	Pharmacy Tech	1
Biochemistry	4	Education	1	Photography	1
Biological Sciences	1	Electrical Engineering	7	Physics	3
Biology	15	Elementary Education	1	Politics & Government	1
Kinesiology	2	Emergency Medicine	1	Psychology	5
Biomedical Engineering	3	Engineering (general)	9	Software Engineer	1
Business – general	2	Film & Digital Media	1	Speech Pathology	1
Business Administration	2	Forensic Science	1	Speech therapy	1
Civil Engineering	2	Forestry	4	University Studies	1
Chemical Engineering	3	History	1		
Chemistry	2	Journalism	2		

GRADE LEVEL

Source: MESA Information Management System

6TH 7TH 537,4% 683,18% 806,21% 420,11% 490,3486,367,0%

9TH

8TH

GEOGRAPHIC LOCATIONS

Source: MESA Information Management System



of NM MESA Students live in Rural area of New Mexico as defined by USDA - Economic **Research Services**



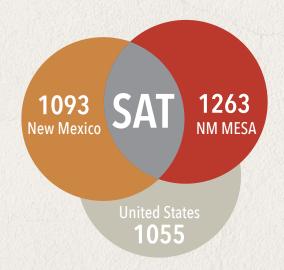
of NM MESA students reside in an Urban area

SENIOR ACADEMICS

Source: MESA Information Management System

AVERAGE SCORES FOR 2017 - 2018





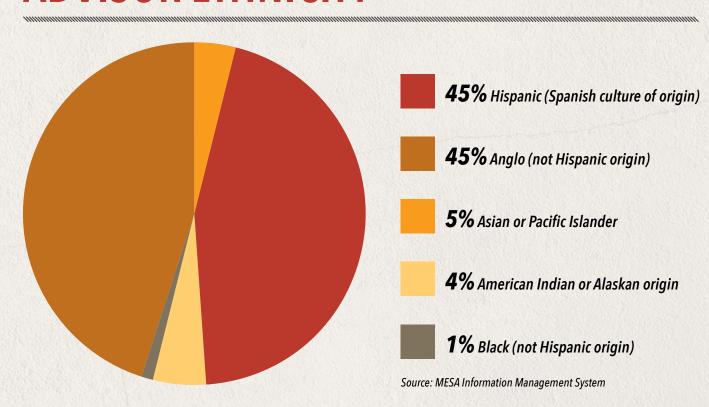
ADVISOR STATISTICS

11.1 YEARS average TEACHING experience of a MESA Advisor6.3 YEARS average length of SERVICE of a MESA Advisor

MALE 48% FEMALE 52%

Source: MESA Information Management System

ADVISOR ETHNICITY



ADVISOR TESTIMONIALS

"WHAT WAS THE BEST THING ABOUT MESA THIS YEAR?"

"I like the enormous support I get from the MESA coordinators and staff when I need it."

"Great program."

"Students participated in a variety of community service events which were affordable and gave them a sense of personal satisfaction and helped the community."

"Seeing the progress from last year and the student achievement"

"The leadership and service learning projects I found for my students were the best part of this year's MESA. There were also some local STEM opportunities my fellow advisors in the area and I put together that greatly engaged our MESA students."

MESA ACHIEVEMENTS & HIGHLIGHTS

The senior Incentive Field Trip (SIFT) for this year was to New Orleans, Louisiana. 24 seniors, 4 advisors chaperones from the NM MESA Programs statewide were selected to attend this annual activity.

New Mexico MESA teams did very well at the 2018 MESA USA National Engineering Design Competition in Philadelphia, Pennsylvania. Chaparral Middle School placed first overall in a new National Human Centered Engineering Design Competition, with their city drain cleaning design system to help reduce flash flooding on city streets during summer monsoons. nexGen Academy took third place overall in this competition with their soil moisture sensor designed to help lessen human and invasive plant impact in the Bosque.

NM MESA Students presented at the 2018 Alliance for Minority Participation Conference at New Mexico State University.

NM MESA hosted in Albuquerque the first STEAM Extravaganza. Over 290 students from the top middle school and high school MESA programs around the state, attended specialized workshops to experience a day filled with on-site industry events in STEM careers.

22 NM MESA graduated seniors declaring majors at NMSU Engineering College received additional scholarships to attend NMSU Engineering.

Over \$110,000 in Loyalty Awards were distributed in the Fall of 2018 to NM MESA seniors that graduated in the Spring of 2018.

STATEMENT OF FUNCTIONAL EXPENSES

	PROGRAM SERVICES	G&A	FUNDRAISING	TOTAL	%
Salaries	395,377.32	140,155.72	19,263.37	564,692	43.13%
Taxes & Benefits	70,479.04	45,281.91	3,594.28	119,355	9.28%
Field Trips	130,698.21	0	0	130,698	10.16%
Professional/Consultant	0	40,991.19	40,672.64	81,664	6.35%
Travel	40,327	15,639	327	56,293	4.38%
Loyalty Awards	118,000	0	0	118,000	9.17%
Training & Development	11,688	5,191	0	16,879	1.31%
Program/Event Services	780	2,451	0	5,483	0.43%
Supplies	35,201.83	23,902.37	0	59,104	4.59%
Occupancy	0	5,930.00	0	5,930	0.46%
Meetings & Conferences	6,875.00	0	0	6,875	0.53%
Equipment Expenses	50	1,832	0	1,882	0.15%
Telephone	8,085.40	12,122.72	0	20,208	1.57%
School Activities	22,580.00	0	0	22,580	1.76%
Other	59,151	27,231	304	86,686	6.74%
TOTAL EXPENSES	899,292	320,728	64,161	1,286,434	100.00%

STUDENT TESTIMONIALS

Bailey Dodson - Cibola HS

MESA has impacted me in several ways. It has taught me teamwork and how to be a leader. One of my proudest moments was being elected President of our MESA club at school. During my time I learned how to build a robotic arm and to use the software to program it. As a member of the winning team for the MESA Day State Competition my desire for a career in the STEM field was certain. I chose to attend New Mexico Tech this fall to obtain a Bachelor's Degree in Mechanical Engineering. After that I plan to pursue a Master's Degree in Biomedical Engineering. Through STEM, my end goal is to integrate technology with medicine. Without the positive impact MESA has had on me I would not have chosen a career in the STEM field. I appreciate everything MESA has done for me and I am excited for the journey ahead.

Kevin Dominguez - West Las Vegas HS

I have been in MESA since 6th grade. Through MESA I have gotten to meet so many great people. People who have done something great in their community. That's my goal in life and that's why I joined MESA. I saw all the great things the students were doing at the high school level and I wanted to be a part of that. It has opened my eyes to what a small town guy like myself can do. MESA has showed me different types of places all over the state and how valuable they are, from universities from down south to the heart of our state in Albuquerque, and in even my own back yard at New Mexico Highlands University. MESA showed me that with an education you can do great things. MESA has showed me that a community can work together to make us better. MESA has also showed me that team work is great and at the end of the day we just aren't' a team but we are a family. I like to think that MESA made me into the person I am today. I hope that one day I can come back and tell students what MESA has done for me so they can also follow their dreams.

Fernando Flores - Albuquerque HS

MESA has done a lot for me. I have been in it since 6th grade, and I started because I thought the problem solving and science aspect of it was very interesting. Trying to come up with stuff for the competitions was amazing and I really liked how the competitions really required you to think outside the box. MESA has really helped me realize that I wanted to go into a STEM field. We visited New Mexico Tech multiple times and it really got me hooked on that school so MESA has also helped me decide on the college I want to go to. Getting to do lots of community service was also fun and I am glad I was able to help my community multiple times over my years in MESA. Of course, learning more about the topics we covers in competitions/meetings/field trips was also great and the critical thinking and problem solving skills associated with all these will really help me in my career path.

Samanda Griffin - Goddard HS

I have been a part of MESA since my eighth grade year and I absolutely loved the program! It has been a huge part of my life. The friends and the memories I have made in MESA are ones that will last a lifetime! In my years of being with MESA, I have won a competition with a team of all girls. I have been on countless trips all over the state, but my favorite thing is the friendships I have made with other MESA students not just from my school, but also all over the state. The competition I won was during my Junior year, we went to Innoventure and we had to create a glove that could help people with Multiple Sclerosis. All aspects of that trip were amazing. Without MESA I would not have found a hobby that I thoroughly enjoy. MESA has shown me that girls can be into math and science and that it isn't only a program for boys.

Lynette Larson - Crownpoint HS

MESA has been around me since I was in middle school. I joined during 6th grade and I've been in the MESA program ever since then. MESA has had a huge impact on my life because I've made new friends and been to places I thought I would never get to visit. The activities that we do and the challenges that were given to me, prepared me for what is to come. I will be going to college this fall, and had I never been in MESA, I don't think I would be as talkative or outgoing as I am now. MESA changed me in a way that I thought could never happen. I was always shy and quiet. I would be the one in the back of the classroom behind everyone during meetings or even in my regular classes. When I heard of a club that involved science, engineering, mathematics, critical thinking, building, inventing and a whole lot of other things, I knew I wanted to be a part of that, because I have always loved Math and Science. They were my top two subjects that I enjoyed and moved further into such as AP Calculus AB and Honors Physics. I'm a senior now and at Crownpoint they don't have a lot of classes to offer seniors past this level. That didn't stop me. I enrolled in dual credit classes at San Juan College. I have taken Introduction to Music Theory, Introduction to Psychology, Abnormal Psychology and Human Development. All of this was because of MESA. MESA helped me challenge myself in a way that I couldn't do my myself. I recently went on the Senior Incentive Field trip to New Orleans, Louisiana and I enjoyed it a lot. I made many new friends and learned in the process. I'm Native American, specifically Navajo, and being Navajo made me kind of an outsider on the trip because I was different and quiet. It wasn't' easy for me to leave my reservation because I'm very traditional and I don't feel comfortable leaving my four sacred mountains. It makes me feel lost and alone in a way, but this trip was an eye opener for me because it gave me the opportunity to be on my own for a bit and to experience life outside of my comfort zone. It challenged me to branch out and learn about different people outside of my state. MESA has helped me to choose my major as well. At first, I had no idea what I wanted to do with my life. It is a big, big world and I am a very small person in it. I could do anything I wanted to do; MESA taught me that. I could be a ranger, a doctor, a pilot, even a dancer. I just have to try my hardest and focus on my passion. Psychology was not something I thought a lot about, but I knew that I wanted to help people and study them. I find the human brain, body, and mentality so interesting that it lead me to a major in Psychology. Psychology is a part of science and I love that. In conclusion, MESA has helped me become a better person, a more talkative person. It has prepared me for what is to come in the next chapter of my life. I hope that I get to share this with others as well because MESA is a great club to participate in. It benefited me and I know it will benefit others.

Cesar Garcia - Las Cruces HS

MESA has provided me with so much over the four years that I have participated. I have been given experiences that I would have never found just by attending school. MESA has shown me there are career opportunities around the country, with trips to facilities that I was not aware even existed. They showed me the work that is being done that can contribute or impact me in the future. MESA has provided me with career explorations on these trips. MESA has also majorly contributed to my growing interest in mechanical engineering. Throughout my high school years, it had become a place of comfort and like a second home to be. Becoming president of my school's MESA organization was truly a rewarding experience. It has shown that all my hard work led to something. My work has contributed to my school, my community and my future. I am grateful to MESA for giving me so many opportunities to change my life.

DONORS





































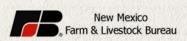






















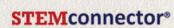


















NM MESA, INC. 2019-2020

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Monica Rodriquez-Hudson Goddard HS

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MESA EMERITUS MEMBERS

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