

2019 ANNUAL REPORT

NEW MEXICO MESA

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







A, INCORPORATED

2019 ANNUAL REPORT

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BOARD PRESIDENT & 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.

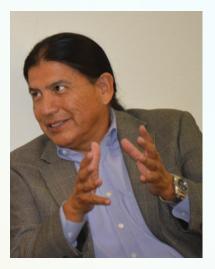
In 2018 the White House Office of Science and Technology Policy and National Science Foundation awarded NM MESA the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. NM MESA was one of fourteen who received this prestigious honor. Awardees represent schools and organizations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



President, NM MESA Board of Directors Jonathan Hawkins



Executive Director, NM MESA Tony Begay

Sincerely,

Jonathan Hawkins

President, NM MESA Board of Directors

Sincerely,

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
- AFRL's STEM Challenge Flight
- Envirothon

- Science Olympiad
- School Science Fair
- MESA USA National Engineering Design Competition
- 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.







- 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

^{*}All activities listed are for College Visit and STEM Industry

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.

- 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

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.







MESA SCHOOLS

NORTH CENTRAL (16) Atrisco Heritage Academy HS

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

NORTH (16) Carlos F. Vigil MS

Carlos F. Vigil MS
Española Valley HS
Memorial MS, Robertson HS
Mesa Vista MS
Mesa Vista HS
Lazaro Garcia MS
Mora HS
Santa Rosa HS
Santa Rosa MS
Anton Chico MS
Taos HS
Taos MS
West Las Vegas HS
West Las Vegas MS
West Las Vegas Valley JHS
Robertson HS
Memorial MS

SOUTHWEST (16)

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 Socorro HS

WEST (16)

Milagro MS

Crownpoint HS
Gallup HS
Miyamura HS
Middle College HS
Thoreau HS
Tohatchi HS
Crownpoint MS
Chief Manuelito MS
John F Kennedy MS
Thoreau MS
Tohatchi MS
Grants HS
Laguna Acoma HS
Laguna Acoma MS
Los Alamitos MS
Navajo Preparatory School

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
Belen MS

SOUTHEAST (16) Alamogordo HS

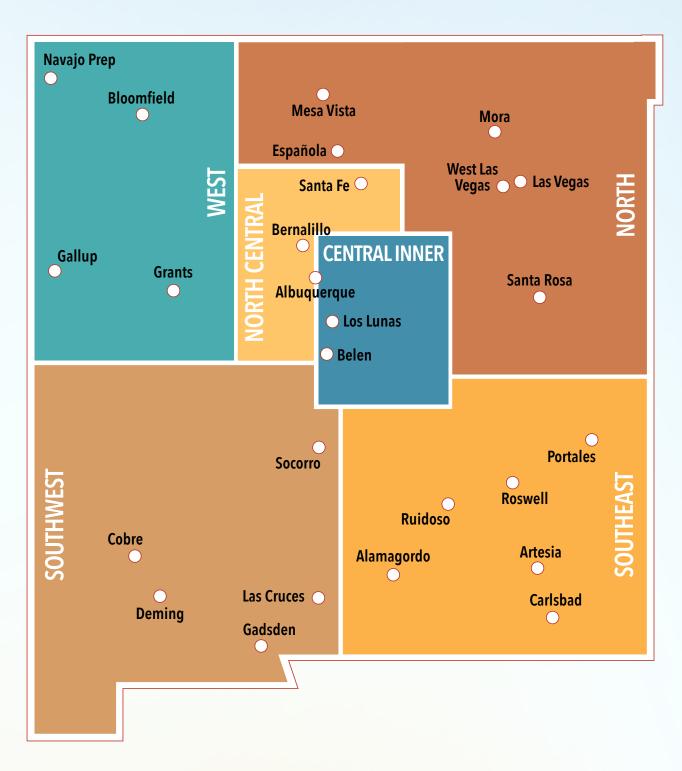
Alamogordo HS
Holloman MS
Mountain View MS
Carlsbad HS
Carlsbad Intermediate School
Carlsbad Sixth Grade Academy
Portales HS
Portales JH
Goddard HS
Roswell HS
Berrendo MS
Mesa MS
Mountain View MS
Sierra MS
Ruidoso HS
Ruidoso MS







MESA REGIONS



CENTRAL INNER Albuquerque Belen Los Lunas

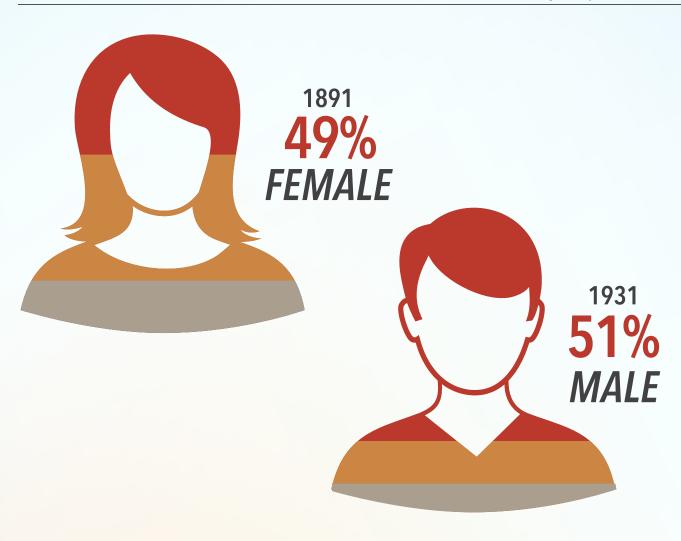
NORTH CENTRAL
Albuquerque
Bernalillo
Santa Fe

NORTH Las Vegas West Las Vegas Mora Española Mesa Vista SOUTHEAST
Alamogordo
Artesia
Carlsbad
Portales
Roswell
Ruidoso

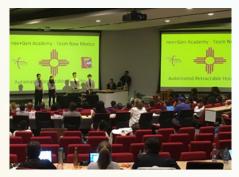
Cobre
Deming
Gadsen
Las Cruces
Socorro

WESTBloomfield
Gallup
Grants
Navajo Prep

STUDENT DEMOGRAPHICS Source: MESA Information Management System

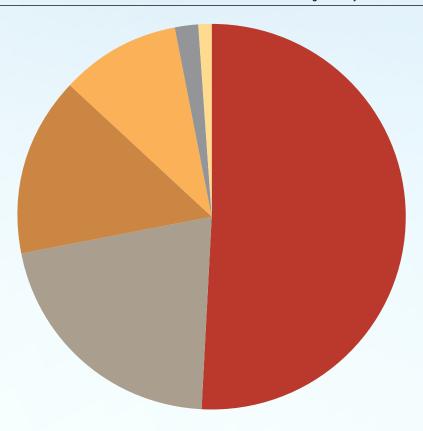








STUDENT DIVERSITY Source: MESA Information Management System



- **1812 (49%)** Hispanic (Spanish Culture of Origin)
 - **509 (14%)** Anglo (not Hispanic Origin)
 - **199** (5%) American Indian or Alaskan Origin
- **98** (3%) Asian or Pacific Islander
- **56 (1%)** Black (not Hispanic Origin)
- **843** (23%) Undeclared







COLLEGES ATTENDING Source: MESA Information Management System

Baylor University	1	Northern Arizona University	1
Brigham Young University	1	Northern Michigan University	1
CNM	5	South Dakota School of Mines and Technology	1
Colorado School of Mines	1	Texas Tech	2
Cornell	1	Tulsa Welding School	1
Duke University	1	University of Alabama	1
Eastern New Mexico University	5	University of Colorado	2
Fort Lewis College	4	University of Texas	2
Luna Community College	5	University of Southern California	1
Navajo Technical University	1	University of New Mexico	28
New Mexico Highlands University	8	Western New Mexico University	1
New Mexico Tech	16	Yale	1
New Mexico State University	39		

MAJORS DECLARED Source: MESA Information Management System

Aerospace Engineering	4	Forestry	2
Agricultural Science	2	International Business	1
Animal Science	1	International Relations	1
Astronomy	1	Journalism	1
Athletic Training	1	Kinesiology	1
Biochemistry	5	Materials Science Engineering	1
Biology	16	Mathematics	3
Biomedical Engineering	2	Mechanical Engineering	12
Business Administration	4	Medicinal Plant Chemistry	1
Chemical Engineering	1	Medical Engineering	1
Chemistry	2	Metallurgical Engineering	1
Civil Engineering	6	Neuroscience	1
Communications	1	Nuclear Engineering	1
Computer Engineering	2	Nuclear Medicine	1
Computer Science	6	Nursing	2
Creative Writing	1	Paleontology	1
Criminal Justice	2	Physics	1
Criminology	2	Political Science	1
Dental Assistant	1	Professional Welding	1
Diagnostic Medical Sonography	2	Psychology	3
Digital Media	1	Radiology	1
Education	1	Science	1
Electrical Engineering	2	Social Work	1
Engineering	6	Theater	1
English	2	Undeclared	6
Environmental Science	1		

GRADE LEVEL

Source: MESA Information Management System

572_{15%} 621_{18%} 803_{21%} 482_{13%} 10TH 11TH 12TH 478,2% 493,3% 373,10%

TOTAL

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 AVERAGE SCORES FOR 2018 - 2019 Source: MESA Information Management System





AVERAGE GPA OF GRADUATING MESA SENIOR = 3.63

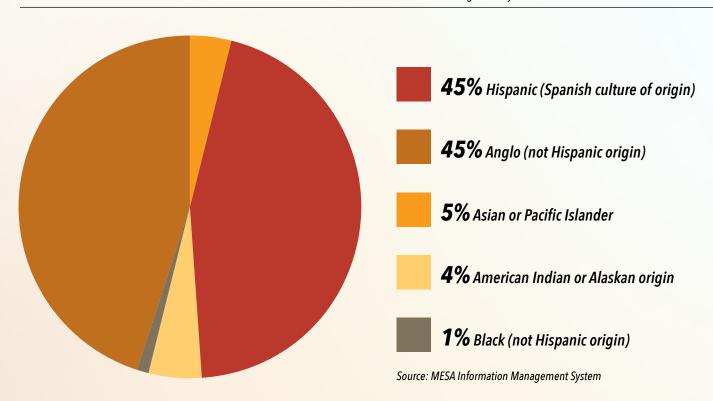
ADVISOR STATISTICS Source: MESA Information Management System

11 YEARS average TEACHING experience of a MESA Advisor 6 YEARS average length of SERVICE of a MESA Advisor

MIDDLE SCHOOL ADVISORS **HIGH SCHOOL ADVISORS** 74

MALE 48% FEMALE 52%

ADVISOR ETHNICITY Source: MESA Information Management System



ADVISOR TESTIMONIALS

"MESA is an extremely beneficial program for students."

"I just love it and I'm proud to be a part of it. Thanks for all the supplies."

"Professional Development is a big help as a teacher in MESA"

"I like the idea that vocational education could become part of what MESA supports. Thank you for supporting students going into the military."

"The MESA Program activities had been successful in sparking STEM interest in the students. There students who said they have a better understanding of what they want to pursue in the future because of the exposure they were given."

MESA ACHIEVEMENTS & HIGHLIGHTS

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

New Mexico MESA teams did very well at the 2019 MESA USA National Engineering Design Competition in Tucson, Arizona. Chaparral Middle School placed first overall in the National Human Centered Engineering Design Competition, with their spoon and cup for visually impaired students. nexGen Academy took fourth place overall in this competition with their automated school hoop house system that would allow for year round growing opportunities for student gardens on campus.

NM MESA Students participated at the 2019 Alliance for Minority Participation Conference at New Mexico State University.

NM MESA brought back the statewide MESA Day competition hosted at the Albuquerque Convention Center. Over 330 MESA students from middle schools and high schools around the state, participated in on-site and prepared engineering competitions, and on-site math and science competitions.

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

Over \$107,000 in Loyalty Awards were distributed in the Fall of 2019 to NM MESA seniors that graduated in the Spring of 2019.

NM MESA and Devon Energy continue to partner to provide a New Mexico student from Lea or Eddy County with a scholarship to attend a four-year college of their choice in STEM related major. Two students have graduated under this partnership and three more are working on their engineering degrees with this scholarship providing them financial support.

STATEMENT OF FUNCTIONAL EXPENSES

ITEM	PROGRAM SERVICES	G&A	FUNDRAISING	TOTAL
Salaries	\$409,817	\$129,635	\$20,765	\$560,217
Stipends	207,000	8,812	0	215,812
Employee Taxes & Benefits	72,319	48,575	3,388	124,282
Field Trips	116,702	1,739	0	118,441
Incentive Awards	107,966	0	0	107,966
Professional Consultants	1,805	83,107	0	84,912
Supplies	54,100	4,849	0	58,949
Travel	35,206	15,035	428	50,669
Occupancy	18,918	17,108	0	36,026
Meeting Meals	23,005	3,983	573	27,561
Gifts and Awards	21,010	2,335	0	23,345
Telephone	9,685	13,411	0	23,096
School Activities	22,759	0	0	22,759
Miscellaneous	1,635	14,024	0	15,659
Meetings & Conferences	11,970	32	0	12,002
Depreciation & Amortization	0	8,679	0	8,679
Professional Development	0	6,802	0	6,802
Printing & Postage	1,980	4,326	147	6,453
Marketing & Advertising	4,690	125	0	4,815
Interest	0	1,118	0	1,118
Repairs & Maintenance	0	18	0	18
TOTAL EXPENSES	\$1,120,567	\$363,713	\$25,301	\$1,509,58 ¹

STUDENT TESTIMONIALS

Danielle Tolino, Crownpoint High School, Western Region

"NM MESA has brought me a lot of opportunities. I got to see different colleges and learn about what they can do for me. There is a whole world out there outside of New Mexico. NM MESA helped open my eyes to that. I was able to learn new and exciting things while I was in the program. I met new people who had the same interest as me. While I was in 11th grade I had a great opportunity to travel out of the state and out of the Four Corners area and it was a great experience. The program taught me to work together with others and to have great communications skills. I am thankful that MESA was offered at my school."

Natalia Saiz, Valley High School, Central Inner Region

"MESA Competitions have taught me to e an engineer. Programming Arduino to writing papers to performing a technical presentation. Due to our dedication my team was lucky enough to make it to the Sate competition for four years. I will always treasure these memories. MESA competitions will always be something I will hold dear. Partaking in competitions was half the experience. MESA allowed me to establish a close group of friends, meet people from across the state and it introduced me to many new experiences I would have never thought I could have. I was lucky enough to be one of the 24 students form the state of New Mexico to go on the 2019 Senior Incentive Field Trip to San Francisco. The trip was a chance in a lifetime. Through MESA I have learned how to become a good leader. The past seven years with MESA have always been there for me, I have to thank MESA for all the opportunities that I have been given since my first day of sixth grade."

Savannah Garcia, Cibola High School, North Central Region

"MESA is one of the core reasons I got interested in the field of engineering. In my first year of MESA I was part of the first all-girls team to win state. That journey was one of my first taste of victory in the STEM field paving the way for my dedication and success in STEM classes. In turn encouraging me to pursue a degree field of engineering."

Lefonso Castillo Jr., Mora High School, Northern Region

"I feel that having a MESA program has had a great impact on helping e choose my career path and major in a STEM field. I am from a small school district where we do not have a large selection of elective credits including STEM classes. The only STEM classes I have taken in high school were the required core classes for Science and Mathematics. My science teacher incorporated engineering, but we never had a class that just focused on this. NM MESA has helped fil that missing link at our school, which helped my classmates and myself score better on our assessments. NM MESA provided my classmates and myself opportunities to participate in STEM activities that without the program, we may have never had the opportunity or would have never know existed."

Morgan Chase, Ruidoso High School, Southeastern Region

"MESA has introduced me to new subjects, such as epidemiology and engineering. When I first entered high school, I thought I wanted to go into engineering. Through MESA, I realized that engineering was not quite the right fit for me. I also realized that epidemiology is a really neat way to combine math and biology, which are two subjects that I really love."

Angelina Alvarez, Alta Vista Early College High School, Southwestern Region

"The first leadership role I earned was in MESA, during my eighth-grade year. I developed the skills of a strong leader early; taking the initiative, remaining open-minded, quick thinking and gaining a sense of confidence. The detailed planning and time management that went into preparing for the competition while also juggling my academics allowed me to keep organized and give my best efforts in every endeavor. I developed several skills that have become defining traits, as I explored STEM fields and all that MESA had to offer."

DONORS













































































NM MESA, INC. 2019-2020

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Monica Rodriquez-Hudson Goddard HS

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