

# New Mexico Science and Engineering Fair

## Junior Animal Sciences, Cellular and Molecular Biology

### Honorable Mention

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Esperanza Herrera	JR-ASCMB-1 <sup>1</sup>	Faster Running Gels	Taos Middle School
Iris Huang	JR-ASCMB-1 <sup>1</sup>	A Study in New Mexican Endangered and Threatened Animal Species	Albuquerque Academy
NASA EARTH System Science Award			

### Third Place

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Max Berger	JR-ASCMB-1 <sup>1</sup>	Chickens and Robots: How Will They Interact	Albuquerque Academy
C02 & Greenhouse Gas Reduction			
Max Berger	JR-ASCMB-1 <sup>1</sup>	Chickens and Robots: How Will They Interact	Albuquerque Academy
Thermo Fisher			
Felix Gray	JR-ASCMB-1 <sup>1</sup>	Chickens and Robots: How Will They Interact	Albuquerque Academy
C02 & Greenhouse Gas Reduction			
Felix Gray	JR-ASCMB-1 <sup>1</sup>	Chickens and Robots: How Will They Interact	Albuquerque Academy
Thermo Fisher			

### Second Place

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Caroline Aldrich	JR-ASCMB-1 <sup>1</sup>	Voices in the Air: From Syrinx to Symphony	Holy Child Catholic School
ASM International - Los Alamos Chapter			
Caroline Aldrich	JR-ASCMB-1 <sup>1</sup>	Voices in the Air: From Syrinx to Symphony	Holy Child Catholic School
New Mexico Network for Women in Science & Engineering			

### First Place

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Rylee Sanchez	JR-ASCMB-1 <sup>1</sup>	Protein Powered Cows	MILAN ELEMENTARY
ASM International - Los Alamos Chapter			
Rylee Sanchez	JR-ASCMB-1 <sup>1</sup>	Protein Powered Cows	MILAN ELEMENTARY
C02 & Greenhouse Gas Reduction			

# New Mexico Science and Engineering Fair

## Junior Behavioral and Social Sciences

### Honorable Mention

Irie Dodge	JR-BEHA-203	The Stroop Effect: How it affects people	St Bonaventure School
Bennett Weber	JR-BEHA-201	How Does Caffeine Affect Typing Speed and Accuracy? CO2 & Greenhouse Gas Reduction	TSE'BIT'AI MIDDLE
Bennett Weber	JR-BEHA-201	How Does Caffeine Affect Typing Speed and Accuracy? Thermo Fisher	TSE'BIT'AI MIDDLE

### Third Place

Haley Vincent	JR-BEHA-206	The Affect of Natural Vs. Artificial Lighting on Humans Performing Skills. American Psychological Association & Teachers of Psychology in Secondary	Albuquerque Institute of Math & Science
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### Second Place

Santiago Del Curto	JR-BEHA-207	Food for Thought	St. Thomas Aquinas School
Vanetta Perry			

### First Place

Celeste Hunter	JR-BEHA-204	The Rested and Restless	LOS ALAMITOS MIDDLE
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# New Mexico Science and Engineering Fair

## Junior Biomedical and Health Sciences

### Honorable Mention

Emma Baca	JR-BMED -30	Scrub those hands	MOUNT TAYLOR ELEMENTARY
C02 & Greenhouse Gas Reduction			
Emma Baca	JR-BMED -30	Scrub those hands	MOUNT TAYLOR ELEMENTARY
Thermo Fisher			
Javier Chacon	JR-BMED -30	Waxidermy	LOS ALAMOS MIDDLE
ASM International - Los Alamos Chapter			
Brandon Keller	JR-BMED -30	Waxidermy	LOS ALAMOS MIDDLE
ASM International - Los Alamos Chapter			
Autumn Nguyen	JR-BMED -30	Unveiling Ichthyosis: A Comparative Study on Moisturizer Efficacy in Ichthyosis Vulgaris	Eisenhower Middle School
American Vacuum Society			

### Third Place

Joshua Bala	JR-BMED -30	Evaluating the Effectiveness of Medicine Reminder Apps	MANDELA INTERNATIONAL MAGNET (MIMS)
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### Second Place

Rosa Bonita Schwenk	JR-BMED -30	Which Pill Bottle is the safest?	Sacred Heart Catholic School
American Vacuum Society			

### First Place

Emma Munson	JR-BMED -30	Planaria and Weight Loss Drugs (GLP-1s)	LOS ALAMITOS MIDDLE
Rose Baca-Rivet			
Emma Munson	JR-BMED -30	Planaria and Weight Loss Drugs (GLP-1s)	LOS ALAMITOS MIDDLE
NMJAS Paper Competition			

# New Mexico Science and Engineering Fair

## Junior Chemistry and Biochemistry

### Honorable Mention

Samuel Cawkwell	JR-CHEBIO-4	Which juice a day keeps the doctor away?	BARRANCA MESA ELEMENTARY
Evelyn Fobes American Chemical Society	JR-CHEBIO-4	Prawn in 60 Seconds	MOUNTAIN ELEMENTARY
James Junghans	JR-CHEBIO-4	What affects avocado browning?	BARRANCA MESA ELEMENTARY

### Third Place

Jonathan Shockley	JR-CHEBIO-4	Clean Carbon	Albuquerque School of Excellence
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### Second Place

Omar Terrazas	JR-CHEBIO-4	Electrolyte Challenge	Albuquerque School of Excellence
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### First Place

Sabastian Griego C02 & Greenhouse Gas Reduction	JR-CHEBIO-4	Glow and Behold	LOS ALAMITOS MIDDLE
Sabastian Griego Thermo Fisher	JR-CHEBIO-4	Glow and Behold	LOS ALAMITOS MIDDLE

# New Mexico Science and Engineering Fair

## Junior Earth and Environmental Sciences

### Honorable Mention

Evan DeHerrera	JR-EAEV-507	Mystery Soils	TAOS MIDDLE
Anaya Faruk	JR-EAEV-505	Beat the Heat CO2 & Greenhouse Gas Reduction	Salam Academy
Anaya Faruk Clay T. Smith	JR-EAEV-505	Beat the Heat	Salam Academy

### Third Place

Alexya Hite	JR-EAEV-501	Freeze Fighters	MILAN ELEMENTARY
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### Second Place

Camylle Hubbard	JR-EAEV-506	Infrared Radiation and Thermal Absorption of Greenhouse Gases CO2 & Greenhouse Gas Reduction	Albuquerque Institute of Math & Science
Camylle Hubbard	JR-EAEV-506	Infrared Radiation and Thermal Absorption of Greenhouse Gases Climate Change NM	Albuquerque Institute of Math & Science
Camylle Hubbard	JR-EAEV-506	Infrared Radiation and Thermal Absorption of Greenhouse Gases Thermo Fisher	Albuquerque Institute of Math & Science

### First Place

Saideetya Chinala	JR-EAEV-503	Biodegradable Hydrogels for Conserving Water New Mexico Bureau of Geology and Mineral Resources & the New Mexico Geological Society	Albuquerque Institute of Math & Science
Saideetya Chinala	JR-EAEV-503	Biodegradable Hydrogels for Conserving Water New Mexico Network for Women in Science & Engineering	Albuquerque Institute of Math & Science

# New Mexico Science and Engineering Fair

## Junior Engineering Technology: Statics and Dynamics

### Honorable Mention

Mabel Bridgette Campug	JR-ETSD-704	Friction vs. Flight: The Science Behind CD Hovercraft	SAN RAFAEL ELEMENTARY
Andrew Gilbertson	JR-ETSD-712	Predicted Sensor Values of Satellite Launch	BARRANCA MESA ELEMENTARY
Klark Rivera	JR-ETSD-703	Comparing Rocket Stabilization Using Two Different Fin Models	MESA VIEW ELEMENTARY
Teresa Johnson			

### Third Place

Nathaniel Sandoval	JR-ETSD-702	How the Concrete Crumbles	St. Teresa of Avila Catholic School
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### Second Place

Heath Linam	JR-ETSD-708	Engineering and Designing a Solar Plane C02 & Greenhouse Gas Reduction	Albuquerque Institute of Math & Science
Heath Linam	JR-ETSD-708	Engineering and Designing a Solar Plane Office of Naval Research (ONR)	Albuquerque Institute of Math & Science

### First Place

Gareth Jones	JR-ETSD-707	Reducing Friction in a Bearing Using Magnetic Levitation C02 & Greenhouse Gas Reduction	Albuquerque Institute of Math & Science
Gareth Jones	JR-ETSD-707	Reducing Friction in a Bearing Using Magnetic Levitation Thermo Fisher	Albuquerque Institute of Math & Science

# New Mexico Science and Engineering Fair

## Junior Environmental Engineering, Energy, & Materials Science

### Honorable Mention

Scarlett Henderson	JR-EEMS-601	Converting Organic Matter to Electricity C02 & Greenhouse Gas Reduction	HERMOSA MIDDLE SCHOOL
Charles Read	JR-EEMS-602	Hydroelectric Power	Bosque Farms Elementary School

### Third Place

Tanis Bower	JR-EEMS-612	Plastic Gas- Oops, no, not that gas! C02 & Greenhouse Gas Reduction	Taos Academy
Tanis Bower	JR-EEMS-612	Plastic Gas- Oops, no, not that gas! Ricoh Sustainable Development Award	Taos Academy
Tanis Bower	JR-EEMS-612	Plastic Gas- Oops, no, not that gas! Thermo Fisher	Taos Academy

### Second Place

Ashvita Prasankumar	JR-EEMS-608	Innovative Fire Safety: Utilizing Common Household Items as Fire Retardants	Desert Willow Family School
John Harty			

### First Place

Mason Garcia	JR-EEMS-611	Understanding Wind Turbines Using Lego	MOUNTAIN ELEMENTARY
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# New Mexico Science and Engineering Fair

## Junior Math, Robotics, Software and Technology

### Honorable Mention

Sequoia Ke	JR-MRST-806	Can AI Improve Algebra 1 Education in New Mexico? -Evaluating ChatGPT as a Math Tutoring Tool	Los Alamos Middle School
New Mexico Network for Women in Science & Engineering			

### Third Place

Liam Colgan	JR-MRST-808	The numbers game: why is 1 more popular than 9?	BARRANCA MESA ELEMENTARY
New Mexicans for Science and Reason (NMSR) Use of Scientific Method			

### Second Place

Jase Ontiveros	JR-MRST-801	Game Engineered: Programming an Interactive Arcade With Scratch and Makey Makey	CUBERO ELEMENTARY
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### First Place

Sahana Paruchuri	JR-MRST-807	Can AI Predict Diabetes? CO2 & Greenhouse Gas Reduction	Albuquerque Academy
Sahana Paruchuri	JR-MRST-807	Can AI Predict Diabetes? Thermo Fisher	Albuquerque Academy
Sahana Paruchuri	JR-MRST-807	Can AI Predict Diabetes? New Mexico Network for Women in Science & Engineering	Albuquerque Academy
Elena Schwarz	JR-MRST-807	Can AI Predict Diabetes? CO2 & Greenhouse Gas Reduction	Albuquerque Academy
Elena Schwarz	JR-MRST-807	Can AI Predict Diabetes? Thermo Fisher	Albuquerque Academy
Elena Schwarz	JR-MRST-807	Can AI Predict Diabetes? New Mexico Network for Women in Science & Engineering	Albuquerque Academy



# New Mexico Science and Engineering Fair

## Junior Physics and Astronomy

### Honorable Mention

Mireya Marquez	JR-PHAST-9C	How Bouncy Will it Get?	MOUNT TAYLOR ELEMENTARY
Claire Power	JR-PHAST-9C	Throwing Shade: A Study of Sunshade Effectiveness	Holy Ghost Catholic School
NMJAS Paper Competition			

### Third Place

Tanya Wyatt	JR-PHAST-9C	Project Shaolin Jester (determining radioactivity)	Our Lady of The Assumption Catholic School
C02 & Greenhouse Gas Reduction			
Tanya Wyatt	JR-PHAST-9C	Project Shaolin Jester (determining radioactivity)	Our Lady of The Assumption Catholic School
Thermo Fisher			

### Second Place

Kalliope Welch	JR-PHAST-9C	Modeling Fast-Moving Objects as They Travel through Crowded Astronomical Neighborhoods	Welch Homeschool
American Vacuum Society			

### First Place

Alisha Wald	JR-PHAST-9C	Innovating Stealth Through Optical Comparisons of Aircraft Designs	MANDELA INTERNATIONAL MAGNET (MIMS)
C02 & Greenhouse Gas Reduction			
Alisha Wald	JR-PHAST-9C	Innovating Stealth Through Optical Comparisons of Aircraft Designs	MANDELA INTERNATIONAL MAGNET (MIMS)
Lemelson Early Inventor Prize			
Alisha Wald	JR-PHAST-9C	Innovating Stealth Through Optical Comparisons of Aircraft Designs	MANDELA INTERNATIONAL MAGNET (MIMS)
American Vacuum Society			

## New Mexico Science and Engineering Fair

### Junior Plant Science & Microbiology

#### Honorable Mention

Zachary White	JR-PSMB-101	How Stimuli Affect Micro-organisms	BARRANCA MESA ELEMENTARY
Daniel Yampolsky	JR-PSMB-101	How Stimuli Affect Micro-organisms	BARRANCA MESA ELEMENTARY

#### Third Place

Gaganasree Munaga	JR-PSMB-101	Natural and Artificial Preservatives	Albuquerque Institute of Math & Science
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#### Second Place

Nneka Anozie	JR-PSMB-101	E.Coli vs. Antibiotics	St. Thomas Aquinas School
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#### First Place

Lucas Rychener	JR-PSMB-101	Don't Drink The Water!	St. Teresa of Avila Catholic School
NMJAS Paper Competition			

## New Mexico Science and Engineering Fair

### Senior Animal Sciences, Cellular and Microbiology

#### Honorable Mention

Irina Gruzdeva	SR-ASMB-101	Oxidized Metal Surfaces: A Disinfection Quest	V. Sue Cleveland High School
Hamsini Murali	SR-ASMB-101	How Does the Concentration of Kombucha Affect the Fermentation Process in Plant-based Oat Milk Compared to Cow's Milk?	Rio Rancho High School
CO2 & Greenhouse Gas Reduction			

#### Third Place

MackKynzy Hunter	SR-ASMB-101	Don't Sweat the Small Stuff	GRANTS HIGH
CO2 & Greenhouse Gas Reduction			

#### Second Place

Isabella Halley	SR-ASMB-101	See Them Spread	GRANTS HIGH
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#### First Place

Charlie Groves	SR-ASMB-101	Health Hazards of Microorganisms that Survive in Wildfire Smoke	Albuquerque High School
Society for In Vitro Biology			

# New Mexico Science and Engineering Fair

## Senior Behavioral and Social Sciences

### Honorable Mention

Jayden Carwile Anthony Ortiz	SR-BEHA-2021	Serenaded Sleep	GRANTS HIGH
Peyton Dimitt Anthony Ortiz	SR-BEHA-2021	Serenaded Sleep	GRANTS HIGH
Jayden Narciso American Psychological Association & Teachers of Psychology in Secondary	SR-BEHA-2021	Musical Charms: Which Genre of Music Will Boost Focus and Productivity the Most in Classrooms?	SAN JUAN COLLEGE HIGH SCHOOL

### Third Place

Lance Andrei Garcia C02 & Greenhouse Gas Reduction	SR-BEHA-2021	Stressed to Impress: Fly Edition	GRANTS HIGH
Sophia Rafaelle Romasar C02 & Greenhouse Gas Reduction	SR-BEHA-2021	Stressed to Impress: Fly Edition	GRANTS HIGH

### Second Place

Daveany Lohr C02 & Greenhouse Gas Reduction	SR-BEHA-2021	Investigating Age Related Differences in the Recognition of Real vs Fake News	Albuquerque Institute of Math & Science
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### First Place

Carley Carmen Chavez-W American Statistical Association, Best use of Statistics	SR-BEHA-2021	Fighting Words: An Investigation of the Narrative Abilities in Professional Boxers	New Mexico Connections Academy
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# New Mexico Science and Engineering Fair

## Senior Biochemistry, Computational Biology, and Biomedical Engineering

### Honorable Mention

Rachel Rede	SR-BIOCE-3C	Simulating the Effects of Beverages on Plasma through Osmosis	Rio Rancho High School
Salinda Stallings	SR-BIOCE-3C	Simulating the Effects of Beverages on Plasma through Osmosis	Rio Rancho High School
Rachel Taylor	SR-BIOCE-3C	How Varied Amounts of a Serine Proteases Hemotoxin Affects Mammalian Red Blood Cells and Coagulation	Rio Rancho High School

### Third Place

Evan Pena	SR-BIOCE-3C	Nature Paint 2: Natural, low VOC, low environmental impact, intumescent paint	Taos Academy
C02 & Greenhouse Gas Reduction			

### Second Place

June Loukinas	SR-BIOCE-3C	The Influence of Altered Gravity on Drosophila Larval Development: A Genomic and Behavioral Analysis in Simulated Spaceflight Conditions	SAN JUAN COLLEGE HIGH SCHOOL
Office of Naval Research (ONR)			

### First Place

Alyssa Sun	SR-BIOCE-3C	Know-It-All Networks on Pneumonia	LOS ALAMOS HIGH
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## New Mexico Science and Engineering Fair

### Senior Biomedical and Health Sciences

#### Honorable Mention

Kiarys Abigail Asencio Ja	SR-BMED-40	Acne's Correlation to School	Albuquerque Institute of Math & Science
Ahana Koushik	SR-BMED-40	Epigenetic Analyses for Diabetes Risk and Resiliency	Albuquerque Academy

#### Third Place

Aditi Ganti	SR-BMED-40	Gut Instinct: An AI-Driven Approach to Inflammatory Bowel Disease Diagnosis Using Microbial and Metabolite Data	La Cueva High School
CO2 & Greenhouse Gas Reduction			

#### Second Place

Sowmya Sankaran	SR-BMED-40	MED-X: An Explainable Multi-Agent System for Efficient Diagnostic Decision-Making Utilizing Multimodal Gastrointestinal Datasets	Albuquerque Academy
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#### First Place

Meher Garg	SR-BMED-40	Human Glioblastoma Cancer Stem Cells Differentiation by Retinoic Acid: A Potential Therapeutic Strategy	Homeschooled
Regeneron Biomedical Science Award			

## New Mexico Science and Engineering Fair

### Senior Chemistry

#### Third Place

Charley Torres	SR-CHEM-50	Combating Enamel Erosion	Albuquerque School of Excellence
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#### Second Place

Joel Small	SR-CHEM-50	Exploration of Paracetamol Synthesis	GRANTS HIGH
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#### First Place

Aspyn Kaskalla	SR-CHEM-50	Empirical Verification of the Electrochemical Nernst Equation for Two Metal Pairs	NAVAJO PREPARATORY SCHOOL (FARMINGTON)
New Mexico Network for Women in Science & Engineering			
Aspyn Kaskalla	SR-CHEM-50	Empirical Verification of the Electrochemical Nernst Equation for Two Metal Pairs	NAVAJO PREPARATORY SCHOOL (FARMINGTON)
American Vacuum Society			

# New Mexico Science and Engineering Fair

## Senior Earth and Environmental Sciences

### Honorable Mention

Gary Chavez	SR-EAEV-603	Protein Power	GRANTS HIGH
Joseph Martinez	SR-EAEV-603	Protein Power	GRANTS HIGH
Sebastian Stoker	SR-EAEV-606	Analysis of Microplastic Pollution in Albuquerque Water Sources Utilizing FTIR Spectroscopy	Albuquerque Institute of Math & Science
United States Metric Association			
Sebastian Stoker	SR-EAEV-606	Analysis of Microplastic Pollution in Albuquerque Water Sources Utilizing FTIR Spectroscopy	Albuquerque Institute of Math & Science
NMJAS Paper Competition			
Sebastian Stoker	SR-EAEV-606	Analysis of Microplastic Pollution in Albuquerque Water Sources Utilizing FTIR Spectroscopy	Albuquerque Institute of Math & Science
American Vacuum Society			
Sebastian Stoker	SR-EAEV-606	Analysis of Microplastic Pollution in Albuquerque Water Sources Utilizing FTIR Spectroscopy	Albuquerque Institute of Math & Science
Stockholm Jr. Water Prize			

### Third Place

Cadince Woody	SR-EAEV-601	Effective Approaches to Detect then Remediate Crude-Oil Contaminated Soil from Areas of the Navajo Nation	NAVAJO PREPARATORY SCHOOL (FARMINGTON)
Coalition For Excellence in Science and Math Education (CESE)			
Cadince Woody	SR-EAEV-601	Effective Approaches to Detect then Remediate Crude-Oil Contaminated Soil from Areas of the Navajo Nation	NAVAJO PREPARATORY SCHOOL (FARMINGTON)
Climate Change NM			
Cadince Woody	SR-EAEV-601	Effective Approaches to Detect then Remediate Crude-Oil Contaminated Soil from Areas of the Navajo Nation	NAVAJO PREPARATORY SCHOOL (FARMINGTON)
New Mexico Network for Women in Science & Engineering			
Cadince Woody	SR-EAEV-601	Effective Approaches to Detect then Remediate Crude-Oil Contaminated Soil from Areas of the Navajo Nation	NAVAJO PREPARATORY SCHOOL (FARMINGTON)
American Vacuum Society			

### Second Place

Gael Zeller	SR-EAEV-605	Using Various Types of Algae to Sequester CO2 from the Atmosphere	Albuquerque Institute of Math & Science
CO2 & Greenhouse Gas Reduction			

### First Place

Lukas Colburn	SR-EAEV-604	Plastic Decomposing Mushrooms	GRANTS HIGH
CO2 & Greenhouse Gas Reduction			
Lukas Colburn	SR-EAEV-604	Plastic Decomposing Mushrooms	GRANTS HIGH
Society for In Vitro Biology			
Lukas Colburn	SR-EAEV-604	Plastic Decomposing Mushrooms	GRANTS HIGH
New Mexico Bureau of Geology and Mineral Resources & the New Mexico Geological Society			

## New Mexico Science and Engineering Fair

### Senior Earth and Environmental Sciences

Ryan Tortalita	SR-EAEV-604	Plastic Decomposing Mushrooms	GRANTS HIGH
C02 & Greenhouse Gas Reduction			
Ryan Tortalita	SR-EAEV-604	Plastic Decomposing Mushrooms	GRANTS HIGH
Society for In Vitro Biology			
Ryan Tortalita	SR-EAEV-604	Plastic Decomposing Mushrooms	GRANTS HIGH
New Mexico Bureau of Geology and Mineral Resources & the New Mexico Geological Society			

## New Mexico Science and Engineering Fair

### Senior Engineering Technology: Statics and Dynamics

#### Honorable Mention

Shundiin Antonio	SR-ETSD-801	Blade Designs and Wind Speed	NAVAJO PREPARATORY SCHOOL (FARMINGTON)
C02 & Greenhouse Gas Reduction			
James Hung	SR-ETSD-804	Using Ansys to Analyze the Thermal Conductivity of EV Cooling Systems	Albuquerque Institute of Math & Science
C02 & Greenhouse Gas Reduction			
James Hung	SR-ETSD-804	Using Ansys to Analyze the Thermal Conductivity of EV Cooling Systems	Albuquerque Institute of Math & Science
Rex Robinson Award			
Dillan Uphoff	SR-ETSD-805	Shattering The Fog: Suicide Deterrence System Models for Elevated Structures	Taos Academy
Mario Vargas	SR-ETSD-805	Shattering The Fog: Suicide Deterrence System Models for Elevated Structures	Taos Academy

#### Third Place

Kaylee Naef	SR-ETSD-804	LaserComm Micro	GRANTS HIGH
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#### Second Place

Len Janert	SR-ETSD-806	EmotionAid: Facial Emotion Recognition with Auditory Aid for Apperceptive Prosopagnosia	Albuquerque Institute of Math & Science
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#### First Place

Christina Agrusa	SR-ETSD-807	Spider Silk Sound Sensing	Rio Rancho High School
New Mexico Network for Women in Science & Engineering			
Marissa Montano	SR-ETSD-807	Spider Silk Sound Sensing	Rio Rancho High School
New Mexico Network for Women in Science & Engineering			

# New Mexico Science and Engineering Fair

## Senior Environmental Engineering, Energy, & Materials Science

### Honorable Mention

Lucas Tang	SR-EEMS-70	Brick by Brick: Paving the Way to a Sustainable Future in New Mexico	New Mexico Military Institute
C02 & Greenhouse Gas Reduction			
Lilia Viteva	SR-EEMS-70	FLASHED: A Feasibility Study of Waste Reduction through Household Plastic Glassification	LOS ALAMOS HIGH
Steven Xu	SR-EEMS-70	Brick by Brick: Paving the Way to a Sustainable Future in New Mexico	New Mexico Military Institute
C02 & Greenhouse Gas Reduction			
Sylvia Xu	SR-EEMS-70	Brick by Brick: Paving the Way to a Sustainable Future in New Mexico	New Mexico Military Institute
C02 & Greenhouse Gas Reduction			

### Third Place

Cash Wodrich	SR-EEMS-71	Algaethane: Pervaporation Bio-butanol Extraction from Chlorella Algae Feedstock	Taos Academy
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### Second Place

Idania Gutierrez	SR-EEMS-71	Aerobuddy: Robotic Personal Aerosol Contaminant Filtration System	Taos Academy
New Mexico Network for Women in Science & Engineering			

### First Place

Aarush Tutiki	SR-EEMS-70	A Novel Alternative Method (NAM) to Improve Safety and Targeting of Chemotherapeutics and Genetic Therapies by Accelerating Biofunctional Nanocarrier Development	Albuquerque Academy
American Vacuum Society			



# New Mexico Science and Engineering Fair

## Senior Math, Robotics, Software and Technology

### Honorable Mention

Aylen Hernandez	SR-MRST-90:	Smart Signal Detection LED Notice Sign	TUCUMCARI HIGH
Dylan Trinh	SR-MRST-90:	EduPredict: A Machine Learning Approach to Forecast Student Academic Performance	Albuquerque Institute of Math & Science

### Third Place

Euiyeon Kim	SR-MRST-90:	Machine Learning-Enhanced Path Guide: Integrating Object Detection and Depth Estimation for Navigation Assistance to the Visually Impaired	La Cueva High School
United States Air Force			
Euiyeon Kim	SR-MRST-90:	Machine Learning-Enhanced Path Guide: Integrating Object Detection and Depth Estimation for Navigation Assistance to the Visually Impaired	La Cueva High School
NMJAS Paper Competition			

### Second Place

Tanner Donaldson	SR-MRST-90:	Paradox Theory and Its Applications	Rio Rancho High School
Jacob Rice	SR-MRST-90:	Paradox Theory and Its Applications	Rio Rancho High School

### First Place

Helena Welch	SR-MRST-90:	Analyzing Pre-Indo-European Theory of Etruscan Language Origins Using Topological Data Analysis	Welch Homeschool
David Shortess			
Helena Welch	SR-MRST-90:	Analyzing Pre-Indo-European Theory of Etruscan Language Origins Using Topological Data Analysis	Welch Homeschool
NMJAS Paper Competition			

# New Mexico Science and Engineering Fair

## Senior Physics, Astronomy and Technology Arts

### Third Place

Joel Saltzman	SR-PHAST-10	ThermoWave 3: Circumference and Diameter Impact on Thermoacoustic Energy Conductance	Taos Academy
Yale Science and Engineering Association			

### Second Place

Jacob Cummings	SR-PHAST-10	It's Not Rocket Science: Are Radioisotope Thermal Engines Efficient?	Rio Rancho High School
United States Air Force			

### First Place

Tate Plohr	SR-PHAST-10	Constraining the Neutron Star Equation of State Using Observational Data	Los Alamos High School
Teresa Johnson			
Tate Plohr	SR-PHAST-10	Constraining the Neutron Star Equation of State Using Observational Data	Los Alamos High School
NMJAS Paper Competition			
Tate Plohr	SR-PHAST-10	Constraining the Neutron Star Equation of State Using Observational Data	Los Alamos High School
Richard N. Overdorf Grand Award			
Tate Plohr	SR-PHAST-10	Constraining the Neutron Star Equation of State Using Observational Data	Los Alamos High School
American Statistical Association, Best use of Statistics			

# New Mexico Science and Engineering Fair

## Senior Plant Science

### Honorable Mention

Lauren Buford	SR-PLNT-110	How Does the Ratio of Composted Coffee Grounds to Soil Affect the Growth Rate and Mass of Radishes?	Rio Rancho High School
Nataly Hernandez	SR-PLNT-110	Water Crystals vs. Biodegradable Hydrogels	Albuquerque Institute of Math & Science
Holly Steen	SR-PLNT-111	Optimizing Hydroponic Growth: Comparing System Performance and the Impact of Salinity Stress on Basil Plants	Eldorado High School
Allyson Tennent	SR-PLNT-110	How Does the Ratio of Composted Coffee Grounds to Soil Affect the Growth Rate and Mass of Radishes?	Rio Rancho High School

### Third Place

Jaylah Clay	SR-PLNT-110	The Road to a Greener Winter: Crafting an Eco-Friendly Deicer C02 & Greenhouse Gas Reduction	New Mexico Military Institute
Alehi Musani	SR-PLNT-110	The Road to a Greener Winter: Crafting an Eco-Friendly Deicer C02 & Greenhouse Gas Reduction	New Mexico Military Institute
That Bach Ton	SR-PLNT-110	The Road to a Greener Winter: Crafting an Eco-Friendly Deicer C02 & Greenhouse Gas Reduction	New Mexico Military Institute

### Second Place

Danna Renteria	SR-PLNT-110	Transforming Invasive Species into Sustainable Solutions: Evaluating Salt Cedar Biochar, Liquid Fertilizer, and Azospirillum brasilense for Eco-Friendly Agriculture C02 & Greenhouse Gas Reduction	ALTA VISTA EARLY COLLEGE HIGH SCHOOL
Danna Renteria	SR-PLNT-110	Transforming Invasive Species into Sustainable Solutions: Evaluating Salt Cedar Biochar, Liquid Fertilizer, and Azospirillum brasilense for Eco-Friendly Agriculture United States Air Force	ALTA VISTA EARLY COLLEGE HIGH SCHOOL
Danna Renteria	SR-PLNT-110	Transforming Invasive Species into Sustainable Solutions: Evaluating Salt Cedar Biochar, Liquid Fertilizer, and Azospirillum brasilense for Eco-Friendly Agriculture American Vacuum Society	ALTA VISTA EARLY COLLEGE HIGH SCHOOL
Danna Renteria	SR-PLNT-110	Transforming Invasive Species into Sustainable Solutions: Evaluating Salt Cedar Biochar, Liquid Fertilizer, and Azospirillum brasilense for Eco-Friendly Agriculture Stockholm Jr. Water Prize	ALTA VISTA EARLY COLLEGE HIGH SCHOOL

### First Place

Hyder Mandilawi	SR-PLNT-110	Effect of Variable Electric Stimulation on Early Plant Development in Hydroponics	Rio Rancho High School
Sean Rey-Vaughn	SR-PLNT-110	Effect of Variable Electric Stimulation on Early Plant Development in Hydroponics	Rio Rancho High School