

## Rose Baca-Rivet Award

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### Junior or Senior Division

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#### Recognition

Plaque

**Sydney E Gilbert**

Piedra Vista High School

Teacher/Sponsor: Jennifer Riddle

Title: Baroque'n Brain: A Glimpse Into Baroque Musics Neurological Support in Education'

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## Klipsch School of Electrical & Computer Engineering, NMSU

up to 12 Scholarship Certificates for students if they enroll in the BSEE program

Up to 6 \$50 gift cards

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### Junior or Senior Division

#### Recognition

up to 12 Scholarship Certificates for students if they enroll in the BSEE program

Up to 6 \$50 gift cards

#### **Simon G Armijo**

Carlsbad High School

Teacher/Sponsor: Deborah Haggerton

Title: Optical Navigation System For All-Terrain Robot'

#### **Samuel R Crooks**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Implementing an Artificial Neural Network to Recognize Handwritten Digits'

#### **Marc M Mirabal**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: EMG Controlled Bionic Hand'

#### **Jen Marie B Phifer**

Los Lunas High School

Teacher/Sponsor: Lynne A Mozer

Title: What's Missing?'

#### **Devin P Munson**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: No Child Left Behind'

#### **Jordan S Sanders**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Artificial Robotic Movement: A wearable device '

#### **Xander O Jones**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Graphene Supercapacitors: Energy of the Future'

#### **Charles S Strauss**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Teaching an Artificial Intelligence with an Artificial Intelligence'

#### **T# 1 Erik R Boldt**

Albq. Institute for Math and Science

Teacher/Sponsor: Reginald Tyler

Title: Raspberry Pi Cluster Computer 2.0'

#### **T# 2 Victor M Ramirez**

Albq. Institute for Math and Science

Teacher/Sponsor: Reginald Tyler

Title: Raspberry Pi Cluster Computer 2.0'

#### **Elijah - Pelofske**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: RSA Based Primality Test'

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## Scientific Paper Competition-NMJAS

To showcase student research, participation in science fairs, and an annual written and oral technical paper competition.

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### Senior Division

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#### Third Place

NM Academy of Science, Senior Div, 3rd Place, \$100 Cash Award

**NMAS Scientific Paper Competition: Karin R  
Ebey**

Modeling American Alligator Population

#### Second Place

NM Academy of Science, Senior Div, 2nd Place, \$150 Cash Award

**NMAS Scientific Paper Competition: AnaMaria  
Perez**

Analyzing Patterns Within an Original Egyptian Fraction Decomposition Algorithm

#### First Place

NM Academy of Science, Senior Div, 1st Place, \$250 Cash Award

**NMAS Scientific Paper Competition: Lillian K  
Petersen**

Presentation on Predicting food shortages in africa from satellite imagery

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**Scientific Paper Competition, AVS Science & Technology Awards****Scientific Paper Competition**

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**Senior Division**

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**Second Place**

\$175 Cash Award

**AVS Science and Tech Paper Competition:  
Heather D Wheeler**

Heather's presentation in the AVS Science and Technology Competition

**First Place**

\$200 Cash Award

**AVS Science and Tech Paper Competition:  
Lillian K Petersen**

Lillian's presentation in the AVS science and Technology Competition

**Teacher Award**

\$200 each of 1st place winner

**AVS Science and Tech Paper Competition:  
Mark R Petersen**

Sponsor for Lillian Petersen

**Teacher Award**

\$175 to teacher of first place winner

**AVS Science and Tech Paper Competition:  
Christie Vliss**

Sponsor for Heather Wheeler

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**Albuquerque Chapter of the American Statistical Association**

Criteria: Best use of statistics in science fair project

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**Senior Division**

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**Third Place**

Cash Award

**Paris C Reuel**

V. Sue Cleveland HS

Teacher/Sponsor: Angelica E Lopez

Title: Caffeine: The Real Killer?'

**First Place**

Cash Award

Team Split

**Lillian K Petersen**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Predicting Food Shortages in Africa from Satellite Imagery'

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**American Chemical Society - Central New Mexico Local Section**

To project that best demonstrates a thorough and logical approach to the investigation and observation of a chemical phenomena or property using the principles of the scientific method.

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**Senior Division**

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**Recognition**

Cash award

**Miauaxochitl K Haskie**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Sunscreen: Natural Clay vs. Commercially Made'

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**American Meteorological Society**

Outstanding achievement for creative scientific endeavor in the areas of atmospheric and related oceanic and hydrologic sciences.

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**Senior Division**

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**Recognition**

Certificate

**Samantha A Multari**

St. Pius X High School

Teacher/Sponsor: Rebecca Giron

Title: Can Seaweed Save the Coral? Part V'

**Ryan S Helmer**

Jefferson Montessori Academy

Teacher/Sponsor: Kerrie Thatcher

Title: Solar Water Farming: Using Desiccants to Explore New Water Opportunities in Arid Climates'

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**American Nuclear Society, Trinity Section**

For best project related to nuclear science or nuclear engineering.

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**Senior Division**

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**Recognition**

Cash Award

**Zachary E Goodrich**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Asteroid Repulsion'

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**American Psychological Association**

Outstanding research in psychological science under the category of behavioral and social sciences or any category related to psychology.

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**Junior or Senior Division****Recognition**

Certificate

**Rakin R. Faruk**

AIMS@UNM

Teacher/Sponsor: Reginald L Tyler

Title: Do Stress Levels Differentiate Based on an Individual's Brain Dominant Hemisphere?'

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**New Mexico American Vacuum Society**

For the most creative chemistry or physics entry that successfully followed the scientific method.

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**Senior Division****Second Place**

Cash prize

Teacher will also receive \$200

**Isabela G Cenicerros**

Bernalillo High School

Teacher/Sponsor: Ivy Alefante

Title: Effects of Geometry and Voltage on Ion Engine Design'

**First Place**

Cash Prize

Teacher will also receive \$300

**Nydia E. Sanchez**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Scientific Art'

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**Rev. Charles and Mary Ashmore Memorial Awards**

In memory of Rev. Charles and Mary Ashmore Memorial Awards

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**Junior or Senior Division**

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**Recognition**

\$25 cash award

**Jade E Cates**

Jefferson Montessori Academy

Teacher/Sponsor: Kerrie Thatcher

Title: Can I Train My Brain To Be Happier?'

**Recognition**

\$25 Cash Award

**Desiree R Molina**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Got Stress?'

**Stormy M Valenzuela**

Carlsbad High School

Teacher/Sponsor: Deborah Haggerton

Title: Effects of ADHD'

**Alyssa E Marquez**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Students Cheating'

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**ASM International - Los Alamos Chapter**

For Excellence in Materials Science-projects that emphasize the science of materials (metallurgy, ceramics, polymers, etc) and how the materials properties, processing or structure influences performance.

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**Junior or Senior Division**

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**Second Place**

\$150 Cash Prize

**Skyler S Hughes**

Albq. Institute for Math and Science

Teacher/Sponsor: Reginald Tyler

Title: Analysis of Spidron- Fractal Based Structures in Force Absorption Applications'

**First Place**

\$200 Cash Award

**Xander O Jones**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Graphene Supercapacitors: Energy of the Future'

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**Association for Women Geoscientists**

Projects created by female students who exemplify high standards of innovativeness and scientific excellence in the geosciences.

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**Junior or Senior Division****Recognition**

Certificate

**Lillian K Petersen**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Predicting Food Shortages in Africa from Satellite Imagery'

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**ASU Walton Sustainability Solutions Initiatives**

Recognized for a project that conveys intent to solve a complex problem that involves social justice, environmental and economic prosperity.

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**Senior Division****Recognition**

\*\*TEAM: MEMBERS SPLIT Certificate and nomination to enter for the Grand Prize of a trip to Arizona for the 2017 Sustainability Solutions Festival.5

**T# 1 Tessa K Holderman**

Rio Rancho High School

Teacher/Sponsor: melissa marks

Title: Eco-friendly Ant repellents '

**T# 2 Mariana Palero Estrada**

Rio Rancho High School

Teacher/Sponsor: melissa marks

Title: Eco-friendly Ant repellents '

**Recognition**

Certificate and nomination to enter for the Grand Prize \$500.0.

**Lillian K Petersen**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Predicting Food Shortages in Africa from Satellite Imagery'



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## Ball Aerospace and Technologies Corp.

1st, 2nd and 3rd place awards will be given in the Junior and Senior categories for Experiments, mathematical models or engineering designs related to application of light or heat. Fields of interest: Physics, Chemistry, Mathematics, and Engineering.

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### Senior Division

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#### Third Place

\$100 Cash Award

#### **Brittany C Cartwright**

Alta Vista Early College HS

Teacher/Sponsor: alicia stevens

Title: Colored Light On Plant Growth'

#### Second Place

\*\*TEAM: MEMBERS SPLIT \$150 Cash Award

#### **T# 1 Alandra C Barreda**

Rio Rancho High School

Teacher/Sponsor: Robert Keeney

Title: Effects of Lighting Conditions on Plant Pigment part. 2'

#### **T# 2 Chloe I Fabbri**

Rio Rancho High School

Teacher/Sponsor: Robert Keeney

Title: Effects of Lighting Conditions on Plant Pigment part. 2'

#### First Place

\$250 Cash Award

#### **Zachary E Goodrich**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Asteroid Repulsion'

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## Brittini Romero Award

Project with research focused in water remediation and/or energy.

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### Senior Division

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#### Recognition

\$100.0

#### **Riley E Jakino**

Piedra Vista High School

Teacher/Sponsor: Jennifer Riddle

Title: Water Purification Using Plants'

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## Clay T. Smith Award

Project with the greatest potential for immediate practical application.

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### Recognition

Plaque

#### **Mustafa R Muhyi**

Las Cruces High School

Teacher/Sponsor: James McDowell

Title: An Interactive Design and Emotion Assessment of an Upper Limb Therapy with Tangible Robotic Companio'

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**Climate Change New Mexico**

Presented to the student whose project demonstrated the greatest insight into climate change using the scientific method.

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**Senior Division****Recognition**

Cash prize and Certificate  
Team Split

**Lillian K Petersen**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Predicting Food Shortages in Africa from Satellite Imagery'

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**Coalition for Excellence in Science and Math Education (CESE)**

Based on which project best uses the scientific method to solve, or help solve a real-world problem that has direct application to improving the world condition.

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**Junior or Senior Division****Recognition**

\$200 Check  
Team Split if necessary

**Ryan S Helmer**

Jefferson Montessori Academy

Teacher/Sponsor: Kerrie Thatcher

Title: Solar Water Farming: Using Desiccants to Explore New Water Opportunities in Arid Climates'

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**"Excellence in Geoscience" Award**

Geoscience awards will be based on research projects that demonstrate scholarship, creativity, and thoroughness within the broad area of geoscience.

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**Senior Division****Recognition**

Cash Award and Certificate

**Lillian K Petersen**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Predicting Food Shortages in Africa from Satellite Imagery'

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**Dr. William A. Gross Memorial Award**

Project that best embodies the objective of "Helping to Make the World a Better Place."

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**Junior or Senior Division****Recognition**

\$100 Cash Award

**Ryan S Helmer**

Jefferson Montessori Academy

Teacher/Sponsor: Kerrie Thatcher

Title: Solar Water Farming: Using Desiccants to Explore New Water Opportunities in Arid Climates'

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## Intel Excellence in Computer Science Award

Awarded to the top two projects in the Senior Computer Science category.

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### Senior Division

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#### Recognition

\$200 Cash Award and Certificate

#### **Charles S Strauss**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Teaching an Artificial Intelligence with an Artificial Intelligence'

#### **Samuel R Crooks**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Implementing an Artificial Neural Network to Recognize Handwritten Digits'

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## Theresa G. Johnson Memorial Award

In memory of Theresa G. Johnson, teacher and supporter of NMSEF.

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### Junior or Senior Division

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#### Recognition

\$100 Cash Award

#### **Zachary E Goodrich**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Asteroid Repulsion'

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**Dr. Walter Kirschbaum & Dr. Brunhilde Mau Kirschbaum Memorial Award**

In memory of Walter Kirschbaum, MD & Brunhilde Mau Kirschbaum, MD

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**Senior Division**

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**Recognition**

\$25 cash award

**Sydney E Gilbert**

Piedra Vista High School

Teacher/Sponsor: Jennifer Riddle

Title: Baroque'n Brain: A Glimpse Into Baroque Musics Neurological Support in Education'

**Isabella M Harmon**

San Juan College High School

Teacher/Sponsor: Geizi Dejka

Title: The Effect of Music on the Brain During Testing'

**Recognition**

\$25 Cash Award

**Lillie D Davis**

Jefferson Montessori Academy

Teacher/Sponsor: Kerrie Thatcher

Title: Behavioral Reinforcement Effects on Scholarly Behavior'

**Rakin R. Faruk**

AIMS@UNM

Teacher/Sponsor: Reginald L Tyler

Title: Do Stress Levels Differentiate Based on an Individual's Brain Dominant Hemisphere?'

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**Mu Alpha Theta Award**

To a project that demonstrtaes the most challenging, original, thorough, and creative investigation of a problem involving mathematics, but not necessarily a project in the Mathematics category.

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**Senior Division**

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**Recognition**

Certificate

**AnaMaria Perez**

Albuquerque Academy

Teacher/Sponsor: Kevin W Fowler

Title: Analyzing Patterns with in an Original Egyptian Fraction Decomposition Algorithm'

**Elijah - Pelofske**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: RSA Based Primality Test'

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**Naval Science Award Program**

Recognition of individual project at the NM Science and Engineering Fair for production and presentation of quality science and engineering projects.

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**Senior Division****Recognition**

Certificate of Achievement; Medallion; and \$75 gift card.

**Skyler S Hughes**

Albq. Institute for Math and Science

Teacher/Sponsor: Reginald Tyler

Title: Analysis of Spidron- Fractal Based Structures in Force Absorption Applications'

**Marc M Mirabal**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: EMG Controlled Bionic Hand'

**Zachary E Goodrich**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Asteroid Repulsion'

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**New Mexico Biotechnology & Biomedical Association (NMBio)**

NM BioGENEius challenge. The best SR Division Biotechnology or biomedical related project will be the New Mexico BioGeneius Challenge winner and will advance to the national competition held in conjunction with the BIO trade convention in Boston, MA.

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**Senior Division****First Place**

All expense paid trip to Boston to compete in the national competition June 4-7, 2018

**Marc M Mirabal**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: EMG Controlled Bionic Hand'

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## New Mexico Network for Women in Science and Engineering

Given to projects which best match NMNWSE's goal to encourage young women to develop their potential as future leaders in scientific and technical fields.

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### Junior or Senior Division

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#### Recognition

\$50 Cash Prize, certificate and tote bag with career materials.

##### **Lillian K Petersen**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Predicting Food Shortages in Africa from Satellite Imagery'

##### **Makayla R Gates**

Valencia High School

Teacher/Sponsor: Holly Ice-Gates

Title: Mimosa pudica as Indicator for Comparative Adverse Effects of Topical Anesthetics'

##### **Isabela G Cenicerros**

Bernalillo High School

Teacher/Sponsor: Ivy Alefante

Title: Effects of Geometry and Voltage on Ion Engine Design'

##### **Riley J Clavel**

Roy Municipal School

Teacher/Sponsor: Loretta m Overberger

Title: Who's the Boss of the Moss?'

##### **T# 1 Angelina M Lopez**

Rio Rancho High School

Teacher/Sponsor: scotia kurowski

Title: The Effects of Amino Acids on Stem Cell Growth'

##### **T# 2 Breana c Sotelo**

Rio Rancho High School

Teacher/Sponsor: scotia kurowski

Title: The Effects of Amino Acids on Stem Cell Growth'

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**Junior or Senior Division**

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**Honorable Mention**

Certificate and tote bag with career materials (\$25 value)

**Samantha A Multari**

St. Pius X High School

Teacher/Sponsor: Rebecca Giron

Title: Can Seaweed Save the Coral? Part V'

**Kalieyah Z Boyd**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Do Magnets Affect Regeneration In Earthworm?'

**Lien T Tang**

Manzano High School

Teacher/Sponsor: Achraf Nouredine

Title: Optimization of Lipid-Coated Mesoporous Silica Nanoparticles for Cancer Immunotherapy'

**Angelina J Espindola**

East Mountain High School

Teacher/Sponsor: Teresa M Espindola

Title: Do Vitamins Enhance Herbs?'

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**New Mexico Optometric Association**

Projects related to visual, ocular (eyes), optics, color vision, or medical ocular problems.

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**Senior Division**

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**Third Place**

Cash Prize and Certificate

**Lien T Tang**

Manzano High School

Teacher/Sponsor: Achraf Nouredine

Title: Optimization of Lipid-Coated Mesoporous Silica Nanoparticles for Cancer Immunotherapy'

**Second Place**

Cash Prize and Certificate

**Sydney M Anderson**

Piedra Vista High School

Teacher/Sponsor: Jennifer Riddle

Title: How Exercise Impacts Blood Glucose'

**First Place**

Cash Prize and Calculator

**Kaylin N McLiverty**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Diabetes Biomarker Study on the Navajo Reservation'

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**New Mexico Solar Energy Association**

Outstanding projects in solar energy, renewable energy or sustainable living.

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**Senior Division**

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**Second Place**

\$50 Cash Award

**Xander O Jones**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Graphene Supercapacitors: Energy of the Future'

**First Place**

\$75 Cash Award

**Ryan S Helmer**

Jefferson Montessori Academy

Teacher/Sponsor: Kerrie Thatcher

Title: Solar Water Farming: Using Desiccants to Explore New Water Opportunities in Arid Climates'

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**Professional Aerospace Contractors Association**

For an outstanding project relevant to aerospace science and engineering.

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**Senior Division**

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**First Place**

Cash Award

**Isabela G Cenicerros**

Bernalillo High School

Teacher/Sponsor: Ivy Alefante

Title: Effects of Geometry and Voltage on Ion Engine Design'

**First Place**

Cash Award

**Lien T Tang**

Manzano High School

Teacher/Sponsor: Achraf Nouredine

Title: Optimization of Lipid-Coated Mesoporous Silica Nanoparticles for Cancer Immunotherapy'

**First Place**

Cash Award

**Marc M Mirabal**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: EMG Controlled Bionic Hand'



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## RealD Perfecting the Visual Image Award

There will be one award for each division (jr & Sr) Awards go to the projects the RealD judge represent the most interesting optical, human visual, or technology for entertainment project.

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### Senior Division

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#### Recognition

100\$ cash

#### **Jordan S Sanders**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Artificial Robotic Movement: A wearable device '

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### Senior Division

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#### Honorable Mention

\*\*TEAM: MEMBERS SPLIT Gift card

#### **T# 1 Kief Gonzales**

Silver High School

Teacher/Sponsor: todd pugmire

Title: Popcorn'

#### **T# 2 Julian m saucedo**

Silver High School

Teacher/Sponsor: todd pugmire

Title: Popcorn'

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## Rex Robinson Award

Awarded to a student who had a thorough analysis of data, which allowed an appropriate conclusion to be reached.

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### Junior or Senior Division

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#### Recognition

Plaque

#### **AnaMaria Perez**

Albuquerque Academy

Teacher/Sponsor: Kevin W Fowler

Title: Analyzing Patterns with in an Original Egyptian Fraction Decomposition Algorithm'

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## Ricoh Sustainable Development Award

Presented to the student whose research has demonstrated the Principles and Technical Innovations that offer the greatest potential for Sustainable Development.

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### Junior or Senior Division

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#### Recognition

Certificate

#### **Stephen N Sanders**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: The Mean Green Polyethylene Machine'

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## Society for In Vitro Biology Award

Awarded to the most outstanding achievement for 11th grade students exhibiting in the areas of plant or animal in vitro biology or tissue culture.

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### Senior Division

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#### Recognition

Certificate

**Kallie L Williams**

Grants High School

Title: Yeast Get Going!

Teacher/Sponsor: Shelby Alexander

**Alissa M Puderbaugh**

Grants High School

Title: Dialing Diseases - How Safe is your Phone?'

Teacher/Sponsor: Shelby Alexander

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**Stockholm Junior Water Prize Water Environment Federation**

Recognition of outstanding water-related research in the Senior Division.

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**Senior Division**

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**Recognition**

Certificate-Nomination

**Omar J Ordoñez**

Los Lunas High School

Title: A Salt Solution '

Teacher/Sponsor: Lynne A Mozer

**T# 1 Xavier McTeigue**

Los Alamos High School

Title: Hydroponic Agriculture: Individual vs Commercial Growth in New Mexico'

Teacher/Sponsor: Eva Abeyta

**T# 2 Uriah S Sanchez**

Los Alamos High School

Title: Hydroponic Agriculture: Individual vs Commercial Growth in New Mexico'

Teacher/Sponsor: Eva Abeyta

**T# 3 Gabriel M Holesinger**

Los Alamos High School

Title: Hydroponic Agriculture: Individual vs Commercial Growth in New Mexico'

Teacher/Sponsor: Eva Abeyta

**Riley E Jakino**

Piedra Vista High School

Title: Water Purification Using Plants'

Teacher/Sponsor: Jennifer Riddle

**Riley J Clavel**

Roy Municipal School

Title: Who's the Boss of the Moss?'

Teacher/Sponsor: Loretta m Overberger

**McKayla T Gilbert**

Farmington High School

Title: Impacted Zea Mays After the Gold King Mine Spill'

Teacher/Sponsor: Robert L Watson

**Ryan S Helmer**

Jefferson Montessori Academy

Title: Solar Water Farming: Using Desiccants to Explore New Water Opportunities in Arid Climates'

Teacher/Sponsor: Kerrie Thatcher

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**U.S. Air Force**

To encourage studies in the math, sciences, technology and engineering areas.

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**Junior or Senior Division****Recognition**

Messenger bag containing card reader/writer, custom single speaker, and a beta adapter set.

**Skylar S Hughes**

Albq. Institute for Math and Science                      Teacher/Sponsor: Reginald Tyler  
Title: Analysis of Spidron- Fractal Based Structures in Force Absorption Applications'

**T# 1 Erik R Boldt**

Albq. Institute for Math and Science                      Teacher/Sponsor: Reginald Tyler  
Title: Raspberry Pi Cluster Computer 2.0'

**T# 2 Victor M Ramirez**

Albq. Institute for Math and Science                      Teacher/Sponsor: Reginald Tyler  
Title: Raspberry Pi Cluster Computer 2.0'

**Clara Chavez**

Alta Vista Early College HS                                      Teacher/Sponsor: alicia stevens  
Title: Papercrete vs. Concrete: Which is the Best Sound Insulator'

**Nicholas R Harvey**

Jefferson Montessori Academy                              Teacher/Sponsor: Kerrie Thatcher  
Title: Visualizing Pitch'

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**U.S. Metric Association Award**

Given to the project that involves quantitative measures using the SI metric system.

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**Junior or Senior Division****Recognition**

Certificate

**Kaylin N McLiverty**

Navajo Preparatory School Inc                              Teacher/Sponsor: Yolanda Flores  
Title: Diabetes Biomarker Study on the Navajo Reservation'

**Alexander Glick**

V. Sue Cleveland HS    Teacher/Sponsor: Austin Grant  
Title: Sticking to the Road'

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**Vannetta Perry Award**

Project which best exemplifies the love of scientific exploration.

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**Junior or Senior Division**

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**Recognition**

Plaque

**Miranda R McDaugale**

Grants High School

Title: Back to School Bacteria'

Teacher/Sponsor: Shelby Alexander

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**Yale Science & Engineering Association Award**

Most outstanding exhibit in Computer Science, Engineering, Physics or Chemistry

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**Senior Division**

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**Recognition**

Certificate

**Elijah - Pelofske**

Los Alamos High School

Title: RSA Based Primality Test'

Teacher/Sponsor: Katie Tauxe

**Samuel R Crooks**

Los Alamos High School

Title: Implementing an Artificial Neural Network to Recognize Handwritten Digits'

Teacher/Sponsor: Katie Tauxe

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**Senior Category: Animal Science**Top of Category

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**Senior Division**

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**Honorable Mention**

Certificate and Ribbon

**Louie R Martinez**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Effect of Different Vitamins and Minerals on Growth of Nematodes'

**Carrina R Tallbrother**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Looking Downstream: Effects of Nanosilver on Freshwater Organisms '

**Marissa Armijo**

West Las Vegas High School

Teacher/Sponsor: Erika Guaba

Title: How Does Population of Big-Game Animals Shift Through Hunting Seasons? '

**Third Place**

\$50, medal, and certificate

**Samantha A Multari**

St. Pius X High School

Teacher/Sponsor: Rebecca Giron

Title: Can Seaweed Save the Coral? Part V'

**Second Place**

\$100, medal, and certificate

**Paris C Reuel**

V. Sue Cleveland HS

Teacher/Sponsor: Angelica E Lopez

Title: Caffeine: The Real Killer?'

**First Place**

\$150, Medal, and Certificate

**Karin R Ebey**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Modeling American Alligator Population Dynamics'

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**Senior Category: Behavioral and Social Sciences**Top of Category

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**Senior Division**

---

**Honorable Mention**

Ribbon and certificate

**Nilesh Mukundan**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: There's and app for that!'

**Sydney E Gilbert**

Piedra Vista High School

Teacher/Sponsor: Jennifer Riddle

Title: Baroque'n Brain: A Glimpse Into Baroque Musics Neurological Support in Education'

**Third Place**

\$50, medal, certificate

**Elias G Elicio**

Capital High School

Teacher/Sponsor: Kelly Phillips

Title: Binaural Beats'

**Second Place**

\$100, medal, and certificate

**Mustafa R Muhyi**

Las Cruces High School

Teacher/Sponsor: James McDowell

Title: An Interactive Design and Emotion Assessment of an Upper Limb Therapy with Tangible Robotic Companio'

**First Place**

\$150, medal, an certificate

**Sammy R Homsy**

Centennial High School

Teacher/Sponsor: Rana Mreiwed

Title: A Monitoring Device For Congestive Heart Failure Patients And Its Affect on the patients Compliance'

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**Senior Category: Chemistry**Top of Category

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**Senior Division**

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**Honorable Mention**

Ribbon and Certificate

**Sarah Troescher**

Amy Biehl Charter Highschool

Teacher/Sponsor: Sandra Mack

Title: How does temperature affect the eerie blue glow of the chemical luminol?'

**Third Place**

\$50, medal and certificate

**Miaouxochitl K Haskie**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Sunscreen: Natural Clay vs. Commercially Made'

**Second Place**

\$100, medal, and certificate

**Nydia E. Sanchez**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Scientific Art'

**First Place**

\$150, medal, certificate

**Omar J Ordoñez**

Los Lunas High School

Teacher/Sponsor: Lynne A Mozer

Title: A Salt Solution '



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**Senior Category: Computer Science**Top of Category

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**Senior Division**

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**Honorable Mention**

Ribbon and Certificate

**Devin P Munson**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: No Child Left Behind'

**Samuel R Crooks**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Implementing an Artificial Neural Network to Recognize Handwritten Digits'

**Third Place**

\*\*TEAM: EACH MEMBER RECEIVES \$50, Medal, and Certificate

**T# 1 Erik R Boldt**

Albq. Institute for Math and Science

Teacher/Sponsor: Reginald Tyler

Title: Raspberry Pi Cluster Computer 2.0'

**T# 2 Victor M Ramirez**

Albq. Institute for Math and Science

Teacher/Sponsor: Reginald Tyler

Title: Raspberry Pi Cluster Computer 2.0'

**Second Place**

\$100, Medal, and Certificate

**Simon G Armijo**

Carlsbad High School

Teacher/Sponsor: Deborah Haggerton

Title: Optical Navigation System For All-Terrain Robot'

**First Place**

\$150, Medal, and Certificate

**Charles S Strauss**

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Teaching an Artificial Intelligence with an Artificial Intelligence'

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**Senior Category: Earth Sciences**

Top of Category

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**Senior Division****Honorable Mention**

Ribbon and Certificate

**Kerri J Nanco**

Grants High School

Title: The Weather Effects on Rocks'

Teacher/Sponsor: Shelby Alexander

**First Place**

\$150, Medal, and Certificate

**Lillian K Petersen**

Los Alamos High School

Title: Predicting Food Shortages in Africa from Satellite Imagery'

Teacher/Sponsor: Katie Tauxe

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**Senior Category: Energy and Transportation**

Top of Category

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**Senior Division****Honorable Mention**

Ribbon and Certificate

**Spencer G Pennypacker**

Carlsbad High School

Title: Issues with America's Roadways '

Teacher/Sponsor: Deborah Haggerton

**Third Place**

\$50, Medal and Certificate

**Declan G Oleary**

Los Alamos High School

Title: Does NM Code require enough Insulation of Slab Floors?'

Teacher/Sponsor: Eva Abeyta

**Second Place**

\$100, Medal, and Certificate

**Sabastian J Benavidez**

AIMS@UNM

Title: The Optimal Location for a Thermal Electric Generator on a Vehicle'

Teacher/Sponsor: Reginald L Tyler

**First Place**

\$150, Medal, and Certificate

**Alexander Glick**

V. Sue Cleveland HS

Title: Sticking to the Road'

Teacher/Sponsor: Austin Grant

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**Senior Category: Engineering**Top of Category

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**Senior Division**

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**Honorable Mention**

Ribbon and Certificate

**Delaney A Hammond**

Piedra Vista High School

Title: How to Make a More Efficient DC Motor'

Teacher/Sponsor: Jennifer Riddle

**Kayla M Moehn**

St. Pius X High School

Title: Rubber in the Rut'

Teacher/Sponsor: Rebecca Giron

**Third Place**

\$50, Medal, and Certificate

**Koen E Overberger**

Roy Municipal School

Title: Put it to the Test: Which on is the Best?'

Teacher/Sponsor: Loretta m Overberger

**Second Place**

\$100, Medal, and Certificate

**Marc M Mirabal**

Grants High School

Title: EMG Controlled Bionic Hand'

Teacher/Sponsor: Shelby Alexander

**First Place**

\$150, Medal, and Certificate

**Skyler S Hughes**

Albq. Institute for Math and Science

Title: Analysis of Spidron- Fractal Based Structures in Force Absorption Applications'

Teacher/Sponsor: Reginald Tyler

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**Senior Category: Environmental Sciences**

Top of Category

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**Senior Division****Third Place**

\$50, Medal, and Certificate

**Riley J Clavel**

Roy Municipal School

Title: Who's the Boss of the Moss?'

Teacher/Sponsor: Loretta m Overberger

**Second Place**

\$100, Medal, and Certificate

**Stephen N Sanders**

Grants High School

Title: The Mean Green Polyethylene Machine'

Teacher/Sponsor: Shelby Alexander

**First Place**

\$150, Medal, and Certificate

**McKayla T Gilbert**

Farmington High School

Title: Impacted Zea Mays After the Gold King Mine Spill'

Teacher/Sponsor: Robert L Watson

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**Senior Category: Mathematical Sciences**

Top of Category

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**Senior Division****Third Place**

\$50, Medal, and Certificate

**AnaMaria Perez**

Albuquerque Academy

Title: Analyzing Patterns with in an Original Egyptian Fraction Decomposition Algorithm'

Teacher/Sponsor: Kevin W Fowler

**Second Place**

\$100, Medal, and Certificate

**Jen Marie B Phifer**

Los Lunas High School

Title: What's Missing?'

Teacher/Sponsor: Lynne A Mozer

**First Place**

\$150, Medal, and Certificate

**Elijah - Pelofske**

Los Alamos High School

Title: RSA Based Primality Test'

Teacher/Sponsor: Katie Tauxe

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**Senior Category: Medicine and Health Science**Top of Category

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**Senior Division**

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**Honorable Mention**

Ribbon and Certificate

**Morgan E MacKenzie**

Rio Rancho High School

Teacher/Sponsor: Robert Keeney

Title: Investigating Trends that Articulate Correlation Between Obesity and Socioeconomic Factors '

**Third Place**

\$50, Medal, and Certificate

**Kaylin N McLiverty**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Diabetes Biomarker Study on the Navajo Reservation'

**Second Place**

\*\*TEAM: MEMBERS SPLIT \$100, Medal and Certificate

**T# 1 Nathaniel E Jobe**

San Juan College High School

Teacher/Sponsor: Geizi Dejka

Title: Biowarfare: Battle at the Cellular Level'

**T# 2 Jairaki E Davis**

San Juan College High School

Teacher/Sponsor: Geizi Dejka

Title: Biowarfare: Battle at the Cellular Level'

**First Place**

\$150, Medal, and Certificate

**Lien T Tang**

Manzano High School

Teacher/Sponsor: Achraf Nouredine

Title: Optimization of Lipid-Coated Mesoporous Silica Nanoparticles for Cancer Immunotherapy'

---

**Senior Category: Microbiology**Top of Category

---

**Senior Division**

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**Honorable Mention**

Ribbon and Certificate

**Heather D Wheeler**

San Juan College High School

Teacher/Sponsor: Geizi Dejka

Title: Determination of Antimicrobial Activity from Honey Produced from Different Flower Sources'

**Third Place**

\$50, Medal, and Certificate

**Mackenzie E Mills**

Rio Rancho High School

Teacher/Sponsor: Jennifer Miyashiro

Title: The Effects of Copper Chloride on Algal Growth and Bioluminescence'

**Second Place**

\$100, Medal, and Certificate

**Alissa M Puderbaugh**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Dialing Diseases - How Safe is your Phone?'

**First Place**

\$150, Medal, and Certificate

**George W Santarpia**

AIMS@UNM

Teacher/Sponsor: Reginald L Tyler

Title: Can Bacteriophage Be Used to Treat Bacterial Imbalances Associated With IBS and IBD?'

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**Senior Category: Physics and Astronomy**Top of Category

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**Senior Division**

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**Honorable Mention**

Ribbon and Certificate

**Elizabeth Quintana**

Alta Vista Early College HS

Teacher/Sponsor: alicia stevens

Title: Laminar Flow: A Comparative Study of Newtonian Fluids to Water'

**Emma C Mohs**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Cost Savings by Eliminating Wasted Electricity'

**Third Place**

\$50, Medal, and Certificate

**Sky A Harper**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Lunar Origin: Is It Really Made of Cheese?'

**Second Place**

\$100, Medal, and Certificate

**Isabela G Cenicerros**

Bernalillo High School

Teacher/Sponsor: Ivy Alefante

Title: Effects of Geometry and Voltage on Ion Engine Design'

**First Place**

\$150, Medal, and Certificate

**Zachary E Goodrich**

Grants High School

Teacher/Sponsor: Shelby Alexander

Title: Asteroid Repulsion'

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**Senior Category: Plant Sciences**Top of Category

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**Senior Division**

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**Honorable Mention****\*\*TEAM: EACH MEMBER RECEIVES Ribbon and Certificate****T# 1 Alandra C Barreda**

Rio Rancho High School

Teacher/Sponsor: Robert Keeney

Title: Effects of Lighting Conditions on Plant Pigment part. 2'

**T# 2 Chloe I Fabbri**

Rio Rancho High School

Teacher/Sponsor: Robert Keeney

Title: Effects of Lighting Conditions on Plant Pigment part. 2'

**Third Place****\*\*TEAM: MEMBERS SPLIT \$50, Medal and Certificate****T# 1 Xavier McTeigue**

Los Alamos High School

Teacher/Sponsor: Eva Abeyta

Title: Hydroponic Agriculture: Individual vs Commercial Growth in New Mexico'

**T# 2 Uriah S Sanchez**

Los Alamos High School

Teacher/Sponsor: Eva Abeyta

Title: Hydroponic Agriculture: Individual vs Commercial Growth in New Mexico'

**T# 3 Gabriel M Holesinger**

Los Alamos High School

Teacher/Sponsor: Eva Abeyta

Title: Hydroponic Agriculture: Individual vs Commercial Growth in New Mexico'

**Second Place**

\$150, Medal and Certificate

**Logan C Reano**

Navajo Preparatory School Inc

Teacher/Sponsor: Yolanda Flores

Title: Anti-Glycemic Properties of Traditional Navajo Plants'

**First Place**

\$150, Medal and Certificate

**Makayla R Gates**

Valencia High School

Teacher/Sponsor: Holly Ice-Gates

Title: Mimosa pudica as Indicator for Comparative Adverse Effects of Topical Anesthetics'



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## Senior Division Life Sciences Grand Award

Highest award given by New Mexico Science and Engineering Fair to a project in the Senior Division in the field of Life Sciences.

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### Senior Division

#### Excellence

All-expense paid trip to Grand Prize winners and one sponsor to the Intel International Science and Engineering Fair held in Pittsburgh, PA on May 13-18, 2018.

#### George W Santarpia

AIMS@UNM

Teacher/Sponsor: Reginald L Tyler

Title: Can Bacteriophage Be Used to Treat Bacterial Imbalances Associated With IBS and IBD?'

#### Excellence

All-expense paid trip to Grand Prize winners and one sponsor to the Intel International Science and Engineering Fair held in Phoenix, AZ on May 8-13, 2016.

#### Lien T Tang

Manzano High School

Teacher/Sponsor: Achraf Nouredine

Title: Optimization of Lipid-Coated Mesoporous Silica Nanoparticles for Cancer Immunotherapy'

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## Senior Division Physical Sciences Grand Award

Highest award given by New Mexico Science and Engineering Fair to a project in the Senior Division in the field of Physical Sciences.

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### Senior Division

#### Excellence

All-expense paid trip to Grand Prize winners and one sponsor to the Intel International Science and Engineering Fair held in Pittsburgh, PA on May 13-18, 2018.

#### Lillian K Petersen

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Predicting Food Shortages in Africa from Satellite Imagery'

#### Excellence

All-expense paid trip to Grand Prize winners and one sponsor to the Intel International Science and Engineering Fair held in Phoenix, AZ on May 8-13, 2016.

#### Charles S Strauss

Los Alamos High School

Teacher/Sponsor: Katie Tauxe

Title: Teaching an Artificial Intelligence with an Artificial Intelligence'

#### Skyler S Hughes

Albq. Institute for Math and Science

Teacher/Sponsor: Reginald Tyler

Title: Analysis of Spidron- Fractal Based Structures in Force Absorption Applications'