



## Congratulations 2018 Winners!

### **Best in Show for Junior Division**

BH-2: Lane Clavel, Roy Municipal School

*“Heavy Metal on the Rice: Phase 2”*

*Sponsor: Loretta Overberger*

### **Best in Show for Senior Division**

EE-26: Lillian Peterson, Los Alamos High School

*“Predicting Food Shortages in Africa from Satellite Imagery”*

*Sponsor: Katie Tauxe*

### **Animal Science**

#### **Junior Division**

**1<sup>st</sup>: AS-3:** Cohen McKown, Chamisa Elementary, White Rock, *“Attracting Birds”* **Sponsor:** Tammy Hinckley

**2<sup>nd</sup>: AS-4:** Cassandra Sánchez, Taos Middle School, *“Fruit Fly Café”* **Sponsor:** Ella M. Rael

**3<sup>rd</sup>: AS-5:** Kaitlin Sutberry, Peñasco Elementary, *“Right Pawed or Left Pawed”* **Sponsor:** Caroline Grant

#### **Senior Division**

**1<sup>st</sup>: AS-8:** Karin Ebey, Los Alamos High School, *“Modeling American Alligator Population Dynamics”* **Sponsor:** Katie Tauxe

**2<sup>nd</sup>: AS-9:** Alyssa Huerta and Oscar Rivera, Capital High School, *“Red Imported Fire Ants”* **Sponsor:** Irina Cislaru

**3<sup>rd</sup>: AS-7:** Marisa Armijo, West Las Vegas High School, *“How Does the Population of Big-Game Animals Shift Through the Hunting Season?”* **Sponsor:** Erika Guaba-Roldan

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## Behavioral & Social Sciences

### Junior Division

- 1<sup>st</sup>: SB-3:** Tyler Gonzales, Academy of Technology and the Classics, Santa Fe, *“How Clothing Choices Affect the Behavior of People Around Us”* **Sponsor:** Lori Brown
- 2<sup>nd</sup>: SB-1:** Maya Clausen, Los Alamos Middle School, *“Eyewitness Accuracy”* **Sponsor:** Eva Abeyta
- 3<sup>rd</sup>: SB-6:** Kaya Loy, Barranca Mesa Elementary, Los Alamos, *“How Many Senses Do You Need to Describe Different Objects?”* **Sponsor:** Audrey Juliani
- Honorable Mention:** SB-7: Sasha Simakov, Mountain Elementary School, Los Alamos, *“My mom and I don't speak the same language”* **Sponsor:** Michele Altherr

### Senior Division

- 1<sup>st</sup>: SB-11:** Nalesh Mukundan, Los Alamos High School, *“There's an App for That”* **Sponsor:** Harshini Mukundan
- 2<sup>nd</sup>: SB-12:** Roan Mulholland, Academy of Technology and the Classics, Santa Fe, *“Time Perception”* **Sponsor:** Lori Brown
- 3<sup>rd</sup>: SB-10:** Elias Elicio, Capital High School, *“Binaural Beats”* **Sponsor:** Kelly Phillips

## Biomedical & Health Sciences

### Junior Division

- 1<sup>st</sup>: BH-2:** Lane Clavel, Roy Municipal School, *“Heavy Metal on the Rice: Phase 2”* **Sponsor:** Loretta Overberger
- 2<sup>nd</sup>: BH-11:** Dominique Vigil, Taos Middle School, *“The Impact of Acidic Foods on Eggshells”* **Sponsor:** Debra Marval
- 3<sup>rd</sup>: BH-10:** Felice Vasquez, Taos Middle School, *“GMO vs. Worms”* **Sponsor:** Ella M. Rael
- Honorable Mention: BH-1:** Desinee Alcala-Martínez, Taos Middle School, *“Sun” Flower* **Sponsor:** Ella M. Rael

### Senior Division

- 1<sup>st</sup>: BH-15:** Ana Abeyta, Los Alamos High School, *“Drugs, Genetics, and Cancer”* **Sponsor:** Eva Abeyta
- 2<sup>nd</sup>: BH-13:** Ammarie Rodríguez, Roy Municipal School, *“Super Size at Your Demise”* **Sponsor:** Loretta Overberger
- 3<sup>rd</sup>: not awarded**

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## Chemistry

### Junior Division

**1<sup>st</sup>: CH-11:** Jason Pieck, Los Alamos Middle School, “*Time to Repaint the House*” **Sponsor:** Eva Abeyta

**2<sup>nd</sup>: CH-16:** Harrison Coe, Barranca Mesa, Los Alamos, “*Molecular Gastronomy: The Chemistry of Making Edible Spheres*” **Sponsor:** Audrey Juliani

**3<sup>rd</sup>: CH-1:** Annalee Auer, Carlos Gilbert Elementary School, Santa Fe, “*The Effect of Sodium Bicarbonate Concentration on Electrolysis Rate of Water*” **Sponsor:** Erica Wheeler

**Honorable Mention: CH-5:** Daniel Kim, Piñon Elementary White Rock, “*Polymer Permeability*” **Sponsor:** Katie Steinberg

### Senior Division

**1<sup>st</sup>:** *not awarded*

**2<sup>nd</sup>: CH-21:** Joseph Durán, Roy Municipal School, “*Natures Way of Detoxification*” **Sponsor:** Loretta Overberger

**3<sup>rd</sup>: CH-19:** Ryan Johnson, Roy Municipal Schools, “*Ion Exchange Station*” **Sponsor:** Loretta Overberger

**Honorable Mention: CH-20:** Etta Pope, Academy of Technology and the Classics, Santa Fe, “*Fat Content vs. Calorie Value*” **Sponsor:** Lori Brown

## Earth & Environmental Sciences

### Junior Division

**1<sup>st</sup>: EE-3:** Riley Clavel, Roy Municipal Schools, “*Who's the Boss of the Moss?*” **Sponsor:** Loretta Overberger

**2<sup>nd</sup>: EE-18:** Veronica Sofia Parra, Mountain Elementary School, Los Alamos, “*Locating the Epicenter for the 2017 Central New Mexico Earthquake*” **Sponsor:** Michele Altherr

**3<sup>rd</sup>: EE-21:** Marlen Stoessel, Taos Charter School, “*A Nation of Filtration*”; **Sponsor:** Sally Greywolf

**Honorable Mention: EE-19:** Sarah Randall, Taos Middle School, “*BPA Hidden Dangers?*” **Sponsor:** Ella M. Rael

### Senior Division

**1<sup>st</sup>: EE-26:** Lillian Peterson, Los Alamos High School, “*Predicting Food Shortages in Africa from Satellite Imagery*” **Sponsor:** Katie Tauxe

**2<sup>nd</sup>: EE-27:** Hailey Valdez, West Las Vegas High School, “*Comparing the Water Quality of the Gallinas and Pecos Rivers*” **Sponsor:** Erika Guaba-Roldan

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## **Energy: Chemical/Energy Physical**

### **Junior Division**

**1<sup>st</sup>: EP-5:** Keenan Greywolf, Taos Charter School, "*Killer Calls?*" **Sponsor:** Sally Greywolf

**2<sup>nd</sup>: EC-5:** Michael Mondragon, Taos Charter School, "*Woodn't You Like to Know the Temperature?*" **Sponsor:** Sally Greywolf

**3<sup>rd</sup>: EP-8:** Santiago Tafoya, Taos Middle School, "*Pickin' Away*" **Sponsor:** Debra Marval

**Honorable Mention: EC-7:** Makayla Vigil, Taos Charter School, "*Freeze, Melt, or Slush?*"  
**Sponsor:** Sally Greywolf

**Honorable Mention: EC-3:** Jonathan Dominguez, Taos Middle School, "*Acid CO<sub>2</sub>*" **Sponsor:**  
Ella M. Rael

## **Engineering: Mechanics**

### **Junior Division**

**1<sup>st</sup>: EM-15:** Robert Strauss, Los Alamos Middle School, "*Liquid Sand: Buoyancy in a Fluidized bed*" **Sponsor:** Charlie Strauss

**2<sup>nd</sup>: EM-3:** Everest Gessler, El Dorado Community School, "*Long-Range Wi-Fi Communication*"  
**Sponsor:** Damian Gessler

**3<sup>rd</sup>: EM-14:** Julian Singell, Mountain Elementary, "*What Curvature of an Arch Creates the Strongest Bridge*" **Sponsor:** Michele Altherr

**Honorable Mention: EM-4:** Jaclynn Gonzales, Taos Middle School, "*Strike Out*" **Sponsor:** Ella  
M. Rael

### **Senior Division**

**1<sup>st</sup>: EM-13:** Koen Overberger, Roy Municipal School, "*Put it to the Test: Which One is the Best?*" **Sponsor:** Loretta Overberger

*Note: no additional entries*

## **Environmental Engineering:**

### **Junior Division**

**1<sup>st</sup>: EN-3:** Rose Osborne, Taos Middle School, "*Bio Power*" **Sponsor:** Ella M. Rael

**2<sup>nd</sup>: EN-6:** Anakaela Trujillo, Taos Middle School, "*Cleaner Air, a Cleaner Way*" **Sponsor:** Ella  
M. Rael

**3<sup>rd</sup>: EN-4:** Mariana Quintana, Taos Middle School, "*Clean Water Or Grey Water*" **Sponsor:** Ella  
M. Rael

**Senior Division:** *no entries*

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## Materials Science

### Junior Division

- 1<sup>st</sup>: **MS-8:** Dominic Serrano, Santo Nino Regional Catholic School, Santa Fe “*Insulation 101*”  
**Sponsor:** DiAnna Ruiz
- 2<sup>nd</sup>: **MS-10:** Naveen Velappan, Los Alamos Middle School , “*Magnetic Transportation*”  
**Sponsor:** Eva Abeyta
- 3<sup>rd</sup>: **MS-7:** Estevan Salazar, Taos Middle School, “*Natural vs. Chemical Wood Sealers*”  
**Sponsor:** Ella M. Rael

### Senior Division

- 1<sup>st</sup>: **MS-13:** Declan O’Leary, Los Alamos High School, “*Does NM Law Require Enough Insulation for Slab Floors?*” **Sponsor:** Katie Tauxe

*Note: No other places awarded in this category*

## Mathematics:

### Junior Division

- 1<sup>st</sup>: **MA-3:** Weston Keller, Desert Academy, Santa Fe, “*The Musical Equation*” **Sponsor:** William Neuwirth
- 2<sup>nd</sup>: **MA-4:** Alexander Livescu, Los Alamos Middle School, “*The Not-so-weird world of Quantum Computing: Bits, Qubits, and Really Large Primes*” **Sponsor:** Daniel Livescu
- 3<sup>rd</sup>: **MA-2:** Ruben Goettee, Los Alamos Middle School, “*Bet you Can’t Hit Me in the Science of Catapult Statistics*” **Sponsor:** Eva Abeyta
- Honorable Mention: MA-1:** Daniel Borovina, Los Alamos Middle School, “*Parabolas and the Perfect Hot Dog*” **Sponsor:** Eva Abeyta

### Senior Division

- 1<sup>st</sup>: **MA-6:** Samuel Crooks, Los Alamos High School, “*Implementing an Artificial Neural Network to Recognize Handwritten Digits*” **Sponsor:** Bill Crooks
- 2<sup>nd</sup>: **MA-7:** Elijah Pelofske, Los Alamos High School, “*RSA Based Primality Test*” **Sponsor:** Katie Tauxe
- 3<sup>rd</sup>: **MA-8:** Charles Strauss, Los Alamos High School, “*Teaching an AI to teach an AI: Image Completion in Tensorflow*” **Sponsor:** Charlie Strauss

## Microbiology

### Junior Division

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- 1<sup>st</sup>: MB-5:** Jocelyn Gutierrez, Taos Middle School, "*Clean Bud*" **Sponsor:** Ella M. Rael
- 2<sup>nd</sup>: MB-8:** Maximus Pasada, Barranca Mesa Elementary, "*Eggs with a side of Bacteria?*"  
**Sponsor:** Audrey Juliani
- 3<sup>rd</sup>: MB-4:** Marielle Gomez, Taos Charter School, "*Medicinal Halos*" **Sponsor:** Sally Greywolf
- Honorable Mention: MB-9:** Ciara Salazar, Taos Charter School, "*Moldy Burgers (The Race to the Mold)*", **Sponsor:** Sally Greywolf
- Honorable Mention: MB-11:** Hanna Weinman, Taos Charter School, "*Lettuce, Wash it Right*"  
**Sponsor:** Sally Greywolf

### Senior Division

- Honorable Mention: MB-12:** Krista Garnand, Celina Gonzales, and Brooke Silva, Santa Rosa High School, "*The Natural Fight*" **Sponsor:** Estrela Thompson

## Physics and Astronomy

### Junior Division

- 1<sup>st</sup>: PA-10:** Phillip Ionkov, Los Alamos Middle School, "*Dark Star*" **Sponsor:** Eva Abeyta
- 2<sup>nd</sup>: PA-2:** Anna Batista, Los Alamos Middle School, "*Measuring Small Objects with Light Defraction*" **Sponsor:** Eva Abeyta
- 3<sup>rd</sup>: PA-8:** Samuel Hagele, Academy of Technology and the Classics, Santa Fe, "*The Accuracy of Viking Compasses*" **Sponsor:** Lori Brown
- Honorable Mention: PA-18:** Daniel Thorp, Atalaya Elementary, Santa Fe, "*Game Physics*"  
**Sponsor:** L. Sanchez

### Senior Division

- Honorable Mention: PA-22:** Jake Werner, Los Alamos High School, "*Can we Stop an Electromagnetic Pulse?*" **Sponsor:** Katie Tauxe

*Note: No other places awarded in this category*

## Plant Sciences:

### Junior Division

- 1<sup>st</sup>: PS-12:** Kindal Smith, Roy Municipal Schools, "*Tissue Proliferation by Manipulation*"  
**Sponsor:** Loretta Overberger
- 2<sup>nd</sup>: PS-3:** Selma Baca, Roy Municipal Schools, "*Plant Enhancement with a Zap*" **Sponsor:**  
Loretta Overberger
- 3<sup>rd</sup>: PS-7:** Ariana Gutierrez, Taos Middle School, "*How do Plants Grow?*" **Sponsor:** Valerie Fresquez
- Honorable Mention: PS-5:** Tyler Chamberlin, Aspen Elementary, Los Alamos, "*Plant Media and Growth*" **Sponsor:** Heather Coy

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**Senior Division**

**1<sup>st</sup>: PS-15:** Gabreel Helesinger, Xavier McTeigue, and Uriah Sanchez, Los Alamos High School,  
“Hydroponic Agriculture: Commercial vs. Individual Growth In NM” **Sponsor:** Donald Davis

*Note: No other places awarded in this category*

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***Northeastern Regional Representation:***

***Thirty different Sponsors from twenty different schools mentored our 2018 winners!***

***We will add Special Award Winners soon.***

***Thank you to all students, teachers, parents, and official sponsors. See you in 2019!***

Carol Cutler Linder, Ph.D  
Director, Northeastern New Mexico Regional Science and Engineering Fair  
[clinder@nmhu.edu](mailto:clinder@nmhu.edu) or [nenmsciencefair@gmail.com](mailto:nenmsciencefair@gmail.com)



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# NORTHEASTERN REGIONAL SCIENCE AND ENGINEERING FAIR

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Dr. John Reid III, Taos Orthopaedic

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## **New Mexico Junior Academy of Science**

### **Scientific Research Paper Competition**

Northeastern Regional Director for the paper competition: Dr. Maureen Romine, Phone: 505-454-3264  
Email: [romine\\_m@nmhu.edu](mailto:romine_m@nmhu.edu)

#### **Junior Division:**

**1<sup>st</sup> place:** Daniel Borovina, Los Alamos Middle School, *“Parabolas and the Perfect Hot Dog”*

**2<sup>nd</sup> place:** Phillip Ionkov, Los Alamos Middle School, *“Dark Star”*

**Honorable Mention:** Veronica Sofia Parra, Mountain Elementary, *“Locating the Epicenter for the 2017 Central Mexico Earthquake”*

#### **Senior Division**

**1<sup>st</sup> place:** Lillian Peterson, Los Alamos High School, *“Predicting good shortages in Africa from Satellite Imagery”*

**2<sup>nd</sup> place:** Karin Ebey, Los Alamos High School, *“Modeling American Alligator Population Dynamics”*

**Honorable Mention:** Elijah Pelafske, Los Alamos High School, *“RSA Based Primality Test”*

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