



## 2016-17 Senior Science EXPO

### Placement Awards

Note: Outstanding Young Researchers and First, Second, and Third Place awardees qualify to exhibit at the Central New Mexico Science and Engineering Fair in March, 2017.

#### Outstanding Young Researcher

- Maribel Garcia and Jamie LeVie, Rio Rancho High, *Interleukin-10 and  $\beta$  Interaction in a Computational Biology Model*
- Paris Reuel, Cleveland High, *Sweet Strength: Retarder of Cement*

#### First Place Awards

- Arianna Abad and Megan Agena, Rio Rancho High, *Calcium and *Cantereus asperus* Shells*
- Fernando Guerrero and Richard Romero, Rio Rancho High, *The Comparative Study of the Antimicrobial Effect of Nanoparticles*
- Molly Klein, Rio Rancho High, *Blue Light v. Magnetism Magnetoreception in *Drosophila Melanogaster**
- Ellyn Kurowski, Cleveland High, *The Effect of Light and Temperature on Algae Growth in Rain Barrels*
- Zach Netcher, Cleveland High, *Solar Scenarios*
- Melissa Pinson, Rio Rancho High, *An Alternate Source: The Potential for Wind Energy on Mars*
- Daniel Wentland, Cleveland High, *Radioactive Decay and Shielding*

#### Second Place Awards

- Evan Crockett, Cleveland High, *Binocular Wide Field of View Satellite Tracking II*
- Bronson Eskridge, Cleveland High, *Crude Oil Cleanup*
- Gabriella Garcia, Cleveland High, *Is Studying That Important?*
- Evan Lau, Rio Rancho High, *What Sport Has the Best Recovery Heart Rate?*
- Nikki Grewal and Demetrios Morris, Cleveland High, *Work Smarter Not Harder*
- Morgan MacKenzie, Rio Rancho High, *An Analysis on the Effects of High Glycemic and Low Glycemic Foods on Athletic Performance*
- Spenser Millburn, Cleveland High, *Vibration Induced Combustion via Resonance*
- Mackenzie Mills, Rio Rancho High, *Comparing the Effects of the Components of Chemical Fertilizer on Algal Growth and Illuminance*
- David Ogden and Tony Sapradi, Rio Rancho High, *Pesticide Removal With Mushroom Compost*
- Eliana Roberts, Cleveland High, *Is Bottled Water Truly Smarter?*
- Jakob Salazar, Rio Rancho High, *Effects of Employment on Sleep Quality and Stress Levels*
- Chase Sluga and Christopher Thomas, Cleveland High, *Recipe for Strong Concrete*
- Gelyn Topacio, Cleveland High, *Using Carnivorous Plant Enzymes to Break Down Plastic*
- Cameron Zielinski, Rio Rancho High, *Do Mine Spills Really Destroy the Environment? Phase II*
- Graham Zielinski, Rio Rancho High, *To Stop or Not to Stop?*
- Katelyn Zuments, Cleveland High, *Body Heat Phone Charger*

## Third Place Awards

- Marissa Almanza, Rio Rancho High, *Appendectomies - Do They Run in Families?*
- Jacob Ankrum and Jacob Whisenhunt, Cleveland High, *Is Soil Needed if Fertilizer Is Present?*
- Jessica Arizpe and Tatum Barnaby, Rio Rancho High, *Evolutionary Significance of Plant Enzyme Optimal Temperatures*
- Brendon Armstead and Ethan Sena, Cleveland High, *Generating Electricity From Manure and Green Waste With Microbial Fuel Cells*
- Kathryn Beebe, Cleveland High, *The Effects of Salt on Bacterial Transformation*
- Justin Cabiltes and Estevan Najera, Rio Rancho High, *Improving the Efficiency of SODIS*
- Lisette Ceja and Molly Ventura, Cleveland High, *Holograms and Color Theory*
- Clayton Cortez and Saul Rodarte, Rio Rancho High, *Wireless Electricity*
- Margaret Deshler, Cleveland High, *Wavelength Correlation to Memory Cognition*
- Alyssa Dodson, Cleveland High, *Marigolds in the Garden?*
- Joseph Donahue, Rio Rancho High, *Slime Mold Little Slimy Maze Solver*
- Katelynn Brittany Everett and Cecilia Quesada, Rio Rancho High, *Effect of Zinc on Plant Transpiration*
- Matuke Fomukong, Rio Rancho High, *Helios Aqua System, Phase 3: Comparing the Methods of Thermal and Electrical Energy Storage for 24-Hour Water Purification*
- Xander Givens, Cleveland High, *Near-Infinite Energy? A Test of Fusion*
- Claire Golder, Rio Rancho High, *Stopping Fungus With Different Antifungal Substances*
- Andrew Green and Ross Scroggins, Cleveland High, *RefractiON*
- Sylvain Jones, Cleveland High, *Researching Distributed Computing With a Beowulf Cluster*
- Abigail Johnston and Elena Rivera, Rio Rancho High, *Water Filtration Using Phytoremediation*
- Carla Law, Cleveland High, *Going Into the Light: A Cell Phone Spectrophotometer*
- Taylor Lindsay, Rio Rancho High, *Radio Astronomy: There Is More Than Meets the Eye*
- Annalise Pacheco, Cleveland High, *Splatter Proof*
- Olivia Panaccione, Rio Rancho High, *An Ant's Transparent Abdomen*
- Julia Porter and Trinity Sorey, Rio Rancho High, *Crystal Science*
- Aleah Rodriguez, Rio Rancho High, *Cricket Life Span Eating Genetically Modified Corn*
- Arlette Ramos, Rio Rancho High, *Effects of Oil on the Growth Rate of Silkworms*
- Hayley Smith and Sarah Snippen, Cleveland High, *Killer pH: Rising Levels in Oceanic Acidity*

## Honorable Mention:

- Caitlin Barnard and Enrique Godina, Cleveland High, *Do Men & Women See Things Differently?*
- Isabella Bonura and Emma Rounsville, Cleveland High, *The Effects of the pH of a Solution on the Rate of Corrosion*
- Gilad Callahan and Gabriella Mayes, Rio Rancho High, *Optimization Ready for Take Off - Part II*
- Dennis Chavez and Mikayla McIntyre, Cleveland High, *The Effects of Microwave Radiation on Different Plants*
- Alex Espenship, Cleveland High, *Does Weather Affect When the Gambel's Quail Feed?*
- Aidan Friberg and Zachary Rodriguez, Rio Rancho High, *Solar Powered Phone Charger*
- Rosemary Garcia, Cleveland High, *Testing the Factors that Affect the Burning Rate of Candles*
- Riley J. Hendricks, Cleveland High, *Non-Newtonian Syringe Dynamics*
- Jackson Lent-Koop and Jake Lent-Koop, Cleveland High, *What Is the Super Sediment for the "Evaporating Fridge"?*

- Kendra Levesque and Elizabeth Sedillo, Rio Rancho High, *Cosmic Tomatoes*
- Jordan Minke, Cleveland High, *The Effects of Oxidation on the Antimicrobial Properties of Copper*
- Kiarah Rios, Cleveland High, *The Ability of Various Cosmetics to Provide SPF Protection With Different Light Sources*
- Doug Rodriguez, Rio Rancho High, *Bean Plant Size and How Salt Affects It*
- Mariah Smith, Rio Rancho High, *The Effect of Cigarette Smoke on the Transpiration Rate of Plants*
- Renatta Vigil, Cleveland High, *Diffusion of Pollution in Water*

## Special Award Winners

These awards recognize projects for special merit based on criteria determined by the sponsor of the award.

### I-SWEEEP Award

I-SWEEEP, The International Sustainable World (Energy, Engineering, and Environment) Project, is a groundbreaking science fair competition open to high school students. The Rio Rancho Senior Science EXPO sends one student project to the international I-SWEEEP competition in Houston, TX every year. The mission of I-SWEEEP is to create a collaborative yet competitive environment in which students can present their innovative ideas on today's challenges in energy, engineering, and the environment, and creating a more sustainable world for tomorrow.

- Maribel Garcia and Jamie LeVie, Rio Rancho High, *Interleukin-10 and A $\beta$  Interaction in a Computational Biology Model*

### TheART Science Award

*Excellence in Scientific Research*

- Walker Stovall, Cleveland High, *Plasmid in Transformation Solution*

### Associated Students of RRHS

*Projects that Demonstrate Leadership or Political Science*

- Ashley Gabaldon and Alyssa Sanchez, Rio Rancho High, *The Political Views Don't Fall Far From the Tree*

### The Athletic Training Award

*Excellence in Detail and Organization*

- Bailey Paul, Cleveland High, *"Water" You Drinking?*

### Awesome Sauce Award

*Amazing Research in Science*

- Alyssa Dodson, Cleveland High, *Marigolds in the Garden?*

### Cleveland High Principal's Award-Math

*An Outstanding Researcher*

- Kyle Reeves Cleveland High, *The Math Challenge Has/Has Not Changed Over the Last 50 Years*

### Cleveland High Principal's Award-Science

*An Outstanding Researcher*

- Ellyn Kurowski, Cleveland High, *The Effect of Light and Temperature on Algae Growth in Rain Barrels*

### **Cleveland High Principal's Award-Social Studies**

*An Outstanding Researcher*

- Caitlin Barnard and Enrique Godina, Cleveland High, *Do Men & Women See Things Differently?*

### **D.R.E.A.M. Award**

*Detail in Project Vision and Presentation*

- Alexxus Bennett, Cleveland High, *Fruit Enzymes in Gelatin*

### **Elks Lodge Award**

*Detailed Biology Project*

- Amari Crupper, Cleveland High, *Bacterial Tomatoes*
- Nathaniel Marquez, Cleveland High, *Does an Ant Have the Nerve?*

### **Elks Lodge Award**

*Amazing Research in Chemistry*

- Chase Sluga and Christopher Thomas, Cleveland High, *Recipe for Strong Concrete*
- Reiley McCall, Cleveland High, *Color Changing Milk*

### **Every Drop Counts Award**

*Science projects which focus on water conservation or water quality*

- Abigail Johnston and Elena Rivera, Rio Rancho High, *Water Filtration Using Phytoremediation*

### **Follow Your Dream Award**

*Excellence in Medical Research*

- Mackenzie Cordova and Leo Duran, Cleveland High, *Digest the Pain*

### **IGAS Award**

*Projects that demonstrate growth or initiative in the field of science*

- Anwi Fomukong, Rio Rancho High, *Sub Aqua Turbo*

### **The Jonathan Madison Award of Excellence**

*Amazing Research in Science*

- Javian Bisetti, Cleveland High, *Magnetic Accelerator*

### **The Kappa Alpha Psi Scientific Achievement Award**

*Best Use of Scientific Practices*

- Sylvain Jones, Cleveland High, *Researching Distributed Computing With a Beowolf Cluster*
- Jake Lent-Koop and Jackson Lent-Koop, Cleveland High, *What Is the Super Sediment for the "Evaporating Fridge"?*

### **Keep it Clean Award**

*Excellence in Scientific Research*

- Eliana Roberts, Cleveland High, *Are There True Benefits to Bottled Water*

### **Launching New Dimensions in Science Award**

*Outstanding Articulation through Scientific Research*

- Annalise Pacheco, Cleveland High, *Splatter Proof*

### **The "Like a Boss" Award**

*Best Use of Scientific Practices in Biology*

- Kathryn Beebe, Cleveland High, *The Effects of Salt on Bacterial Transformation*

### **Miyashiro-Stuart Award for Biological Research**

*Projects addressing the natural history or environmental issues occurring in the southwest region*

- Alex Espenship, Cleveland High, *Does Weather Affect When the Gambel's Quail Feed?*
- Cameron Zielinski, Rio Rancho High, *Do Mine Spills Really Destroy the Environment? Phase II*

### **National Honor Society- "We'll Do the Honors" Award**

*Excellence in Detail and Organization*

- Paris Reuel, Cleveland High, *Sweet Strength: Retarder of Cement*
- Haley Smith and Sarah Snippen, Cleveland High, *Killer pH: Rising Levels in Oceanic Acidity*

### **The P.E.R. Association Award**

*Excellence in Scientific Research*

- Ethan Abreu, Cleveland High, *The Filtration of Gray Waters*
- Timothy Le, Cleveland High, *Amount of Energy Consumed by Standby Devices*
- Kiarah Rios, Cleveland High, *The Ability of Various Cosmetics to Provide SPF Protection With Different Light Sources*

### **The Power of Science Award**

*Outstanding Scientific Presentation*

- Riley J. Hendricks, Cleveland High, *Non-Newtonian Syringe Dynamics*

### **Putting Your Best Foot Forward Award**

*Excellence in Scientific Research*

- Bronson Eskridge, Cleveland High, *Crude Oil Cleanup*
- Gabriella Garcia, Cleveland High, *Is Studying That Important?*
- Mary Granstrom and Alexis Hunter, Cleveland High, *The Germination Project*
- Rhudovic Ramos and Hillary Ramoso, Cleveland High, *The Effect of Different Liquids on Mung Beans*
- Zoe Rappleyea, Cleveland High, *The Effects of Chemicals on Underwater Plants*
- Johann Shendo, Cleveland High, *Bioassay Toxicity Test*
- Gelyn Topacio, Cleveland High, *Using Carnivorous Plant Enzymes to Break Down Plastic*

### **Rio Rancho Astronomical Society**

*Excellence in the field of astronomy*

- **First Place** Taylor Linsday, Rio Rancho High, *Radio Astronomy: There Is More Than Meets the Eye*
- **Second Place** Melissa Pinson, Rio Rancho High, *An Alternate Source: The Potential for Wind Energy on Mars*
- **Third Place** Evan Crockett, Cleveland High, *Binocular Wide Field of View Satellite Tracking II*

### **Rio Rancho High Math Department One Million Dollar Award**

*The project that incorporates the most extensive use of mathematics and/or statistics in a project. Emphasis is given for use of higher levels of math, accuracy in its application, and depth of understanding by the researcher(s).*

- Maribel Garcia and Jamie LeVie, Rio Rancho High, *Interleukin-10 and  $A\beta$  Interaction in a Computational Biology Model*

### **Rio Rancho High Principal's Award**

*Excellence in Scientific Research by a 9th Grade Student*

- Elizabeth Sedillo, Rio Rancho High, *Cosmic Tomatoes*

### **Rio Rancho High Principal's Award**

*Excellence in Scientific Research by a 10th Grade Student*

- Hailey Allman and Breanna Ford, Rio Rancho High, *An Introduction to the Dark Side*

### **Rio Rancho High Principal's Award**

*Excellence in Scientific Research by a 11th Grade Student*

- Abigail Johnston and Elena Rivera, Rio Rancho High, *Water Filtration Using Phytoremediation*

### **Rio Rancho High Principal's Award**

*Excellence in Scientific Research by a 12th Grade Student*

- Mariah Smith, Rio Rancho High, *The Effect of Cigarette Smoke on the Transpiration Rate of Plants*

### **The Salute to Youth in Science Award**

*Outstanding Articulation Through Scientific Research*

- Alexxus Bennett, Cleveland High, *Fruit Enzymes in Gelatin*

### **"Science- It's LIT!" Freshman Award**

*Excellence in Detail and Organization*

- Lisette Ceja and Molly Ventura, Cleveland High, *Holograms and Color Theory*

### **Science that is the KEY!**

*Excellence in Scientific Research*

- Alex Espenship, Cleveland High, *Does Weather Affect When the Gambel's Quail Feed?*

### **STEM Hidden Figures Award**

*An Outstanding Young Researcher*

- Alexxus Bennett, Cleveland High, *Fruit Enzymes in Gelatin*
- Kamirah Decker, Rio Rancho High, *The Effect of Stress on Memory*
- Amari Crupper, Cleveland High, *Bacterial Tomatoes*
- Anwi Fomukong, Rio Rancho High, *Sub Aqua Turbo*
- Matuke Fomukong, Rio Rancho High, *Helios Aqua System, Phase 3: Comparing the Methods of Thermal and Electrical Energy Storage for 24-Hour Water Purification*

### **The Straight Outta Cleveland Award**

*Outstanding Detail in Presentation*

- Cesar Lujan-Flores and Xavier Lujan-Flores, Cleveland High, *The Geometry of Banking a Basket*

### **The Strong Award**

*Excellence in Detail and Organization*

- Evan Crockett, Cleveland High, *Binocular Wide Field of View Satellite Tracking II*

### **Stu-Go or not Stu-Go: That is the Question!**

*Excellence in Scientific Research*

- Savannah Cravens-Gras and Savannah Vasquez, Cleveland High, *Solar Energy Absorption*

### **The Thomas J. Henderson Award of Excellence**

*Excellence in Articulation and Scientific Research*

- Brendon Armstead and Ethan Sena, Cleveland High, *Generating Electricity From Manure and Green Waste With Microbial Fuel Cells*
- Omar-Rashon Borja and Nick Hall, Cleveland High, *Which Weather Service Is Most Accurate?*

### **The We Believe in You Award**

*Excellence in Scientific Research*

- Kate Armijo and Grant Mauk, Cleveland High, *Is the PLE True to You?*
- Alison Carpenter, Cleveland High, *Caffeine vs Sugar: Which Has Better Lasting Effects?*
- Carla Law, Cleveland High, *Going Into the Light: A Cell Phone Spectrophotometer*
- Shianne Mason, Cleveland High, *The Effect of Temperature and Concentration of Sucrose in Cellular Respiration of Yeast*
- Isaiah Molina and Zach Ortiz, Cleveland High, *How to Clean up a Crime Scene*
- Hannah Patrick, Cleveland High, *Got Mold?*
- Sophia Romine, Cleveland High, *Could Future Homes Be Insulated by Water Bottles?*

### **The Yeshemabet Turner Award in Medical Research**

*Excellence in Medical Research*

- Nikki Grewal and Demetrios Morris, Cleveland High, *Work Smarter not Harder*