

**Rio Rancho High School  
2008-09 Fall Senior Research EXPO  
Placement Awards**

**Outstanding Young Researcher**

**\$250 award**

**(Name, Project Title, Category)**

- Amber Porter, Who's Got the Power? Political Election Analysis - Phase III, Behavioral and Social Sciences
- Lauren Reed, Manipulating Antibiotics for the Use Against Resistant Infections, Medicine and Health
- Rachel Lopez, Ghost Nets: Biodegradable or Not? Part III Testing Sap on Agavacae Fibers, Environmental Science
- Megan Flowers, Comparing Architectural Techniques in Earthquake-Prone Areas, Engineering

**Behavioral and Social Sciences**

**Name, Project Title**

**(Awards split among team members for team projects)**

**First place: \$100**

- Amber Porter, Who's Got the Power? Political Election Analysis - Phase III

**Second place: \$80**

- James Osterlund, Enter the World of Lucid Dreaming

**Third place: \$60**

- Brittany Cordova & Shelby Lynn, Who's Smarterer?

**Fourth place: \$40**

- Nicholas Griffith, Crash Course

**Honorable Mention: \$15**

- Claren Wilson, Oh the Places They'll Go
- Darina Linnik, The Personality of Historical Figures Is Revealed In Their Handwriting
- Lucas Archuleta and Jorel Johnson, Links in Elements of Teen Life
- Aleena Weeks, The Stroop Effect: Does Gender Matter?

**Biology**

**Name, Project Title**

**(Awards split among team members for team projects)**

**First place: \$100**

- Kailah Case, Ant Tunnels and How They Change Based on Variations in the Environment

**Second place: \$80**

- Alex Heimgartner, Ant Lion Habitat: The Ultimate Choice

**Third place: \$60**

- Cameron Gage, Deterioration of Store Bought Tomatoes vs. Home-grown Tomatoes

**Fourth place: \$40**

- Samantha Heimgartner, The Generational Effects of Cryogenic Freezing on *Brassica rapa* Seeds

**Fifth place: \$20**

- Ryan Laws-Watts, The Effects of Social Isolation on Rats

**Honorable Mention: \$15**

- Lauren Huey, Cow Emissions II
- Aislinn Zink, Provoking Sahara: Phase III
- Savana Carollo, Lights and Plants
- Jaime Davis, Is Rock the Root of All Evil?
- Alisha Haddock, Race To The Finish Line
- Jordan Rhinehart, The Effect of Temperature on the Vitality of Corn Cultivation
- Megan Vandergriff, Which Natural Preservative Will Cause Less Mold?
- Han Qin, Electromagnetic Fields vs Plant Growth

**Chemistry/Biochemistry****Name, Project Title**

(Awards split among team members for team projects)

**First place: \$100**

- Samantha Miller and Angelica Romero, Not So Sweet

**Third place (tie): \$60 each project**

- Erin Garcia and Kandis Wright, Eat My Turf... or Not!!!
- Ayana Glover, Yellow, Red, or Green, Which One Has More Vitamin C?

**Fourth place: \$40**

- Virginia Leal, Juicy Fuel

**Fifth place: \$20**

- Danielle Garcia and Jared Strommen, Is it Possible to Lift Clear Fingerprints Using Items Found Around the House?

**Honorable Mention: \$15**

- Victoria Sandstrom and Katy Schoen, Mummy Madness! (Determining How to Preserve Oranges Using Mummification)
- Sarah Larios, Hair to Dye For
- Cameron Bopp, Flame Vacuum
- Jordan Chavez, Please Pass the Iodine
- Matt Centeno, Strength of Everyday Acids
- Nate Robertson, Muriatic Acid's Corrosive Effects
- Kaili Olsen and Ashley Ordonez, Rainbow Water
- Victoria Armijo, Permanent Isn't Permanent?
- Jennifer Sample, Fizzle
- Lauren Lien, How Clean Is Green?
- Katie Sheffield, Rotting Fruits and Veggies
- Alyssa Abeyta, Salt and Water
- Kendra Cobb, Candy Chromatography!
- Amber Wright, Disappearing Water
- Richard Temple, Dissolving of Plaster, Endothermic or Exothermic

## **Energy**

### **Name, Project Title**

**(Awards split among team members for team projects)**

#### **First place: \$100**

- Ford Carty and Vaughn Carty, CO2 Biofixation Lipid Production Loop: Increasing Diatomaceous Algal Oils For a Renewable Biofuel Source Using a Photobioreactor Approach

#### **Second place: \$80**

- Autumn Sundt, A Better Way: Finding An Efficient Transportation System For Rio Rancho

#### **Third place: \$60**

- Keegan Martin, Reinventing the Wheel II

#### **Honorable Mention: \$15**

- Bo Shao, Carbon Dioxide Phase Change Engine

## **Engineering**

### **Name, Project Title**

**(Awards split among team members for team projects)**

#### **First place: \$100**

- Megan Flowers, Comparing Architectural Techniques in Earthquake-Prone Areas

#### **Second place: \$80**

- Amanda Mackley, Race To The Finish: Aerodynamics of Go-Kart Nose Cones

#### **Third place: \$60**

- Adaire Smith, The Motorized Wheelchair

#### **Fourth place: \$40**

- Matthew Helmick, Stair Assistant

#### **Honorable Mention: \$15**

- Julianna Stringfield, Legato Light: The Relationship Between Light and Sound
- Sean-Paul Von Ancken, Parachute Shape: Effects on Drag
- Christine Shields, Improving Traffic Efficiency: Phase II
- Andrew Arndt, Building a Shock Absorber For a Rocket
- Brian Yarbough, Drive Forever
- Jason Belvin, Building a Cheaper Guitar Pickup
- Jessica Harmer, Homemade Bulletproof Vests III
- Elijah Wolfe and Bryan Bersosa, Tandem Bike

## **Environmental Science**

### **Name, Project Title**

**(Awards split among team members for team projects)**

#### **First place: \$100**

- Rachel Lopez, Ghost Nets: Biodegradable or Not? Part III Testing Sap on Agavaceae Fibers

**Second place: \$80**

- John Valdez, CO2 Reduction Employing Natural Absorbents: Phase 3

**Third place: \$60**

- Lauren Wade and Kimberly Schneider, Got Ants? Get Onions

**Fourth place: \$40**

- Mercedes Reuel, The Purification of Brackish Water in New Mexico

**Fifth place: \$20**

- Hana Ottesen, Landfill Bioreactors: Do They Really Work?

**Honorable Mention: \$15**

- Sydney Broderick, Will Antacids Help the pH of Soil Affected By Acid Rain?
- Cayla Payson, The Evolution of an Extinction
- Emily Warzeniak, Thermal Remediation of Eutrophied Recreational Water
- Kenndra Gatzke, How Much Nitrate Are You Drinking? Part Two: Effects of Alfalfa
- James Cleveland, Which Renewable Energy Source Is Best for New Mexico?
- Kaitlyn Zentz, How Refreshing is That Smoke?
- Elizabeth Wheeler, Roof Proof
- Dylan Jones, Soil Erosion

**Mathematics/Computer Science****Name, Project Title**

(Awards split among team members for team projects)

**First place: \$100**

- Suzannah Wood, Rio Rancho: A Population Study

**Second place: \$80**

- Alex Baker, Spinning Propellers

**Third place: \$60**

- Leslie Garza, Ratios of a Arbelos

**Honorable Mention: \$15**

- Brianna Ireland, The Inner Workings of the Everyday Triangle

**Medicine/Health****Name, Project Title**

(Awards split among team members for team projects)

**First place: \$100**

- Lauren Reed, Manipulating Antibiotics for the Use Against Resistant Infections

**Second place: \$80**

- Jordan Grainger, Fighting Bac! Phase II: Antibacteria Agents of Various Dilutions of Tannins on the Sensitivity of *Escherachia coli*

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**Third place: \$60**

- Hunter Loen, Amplifying Radioresistance in Microorganisms

**Fourth place: \$40**

- Ioan Belovarski, Got Fat? The Correlation Between Caloric Intake and Teenage Obesity

**Honorable Mention: \$15**

- Andrew Abernathy, The Isolation and Purification of Bacteriophages and Their Performance of the Lytic Cycle on *S. aureus*
- Moriah Wiegel, A Comparison of Cigarette Filter Effectiveness
- Katarina Pacheco, More Than Meets the Gene
- Marissa Flores, Bulky Backpack
- Kelly Powers, CPR: Fact and Fiction
- Sarah Lynas, Antibacterial vs Regular Cleaners
- Addie Himmelberger, Don't Touch That! Phase II

**Physics****Name, Project Title**

(Awards split among team members for team projects)

**First place: \$100**

- Travis Crockett, Planetary Surface Composition Inferred From Measured Hyper-Spectral Albedo Light Curves

**Second place: \$80**

- Lindsey Frederick, Can You Comprehend the Tension?

**Third place: \$60**

- Amanda Buffalow, An Up Close "Kodak Moment" or Not?

**Fourth place: \$40**

- Victoria Lett, Technological Advances In Fire Protection Gear Phase 4

**Fifth place: \$20**

- Melissa Bench, Hydrogen: The New Frontier

**Honorable Mention: \$15**

- Cody Byrne, Does The Type of Material on the Surface of a Skateboard Ramp Affect How Much Speed You Can Get?
- Sara Green, Testing the Thermal Expansion of Metals
- Geoffrey Errickson, The Effects of Sloped Armor
- Natasha Trujillo, Tornados
- Matthew Apodaca, Double Dribble
- Brandon Yazzie, Are Expensive Paintballs More Accurate Than Cheap Paintballs?
- Erin Perry, Suspended!