



## Colorado Science and Engineering Fair

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### 2015 Colorado Science and Engineering Fair Award Winners

Fort Collins, CO (April 10, 2015) – This year’s Colorado Science and Engineering Fair (CSEF) was held April 9 – 11, 2015. 340 projects were on display from students in grades 6 through 12, at the Lory Student Center on the Colorado State University Fort Collins campus.

This year’s Grand and Special Awards winners were monumental; in fact, over 400 individual awards were presented at the awards ceremony. Attached is the list of winners.

Four Senior Division CSEF Finalists will be traveling to Pittsburgh, PA to compete in the Intel International Science and Engineering Fair in May. They are:

1<sup>st</sup> Place: Mary Hood, 11th grade, from Sargent Jr/Sr High School for the project *SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly*.

2<sup>nd</sup> Place: Logan Collins, 12th grade, from Fairview High School for the project *An RK2 Mediated Bacterial Conjugation Delivery System for Artificial Genes Coding for Antimicrobial Polypeptides: A Novel Synthetic Biology Approach to Antibiotic Resistance*.

3<sup>rd</sup> Place: Elliot Gorokhovskiy, 10th grade, from Fairview High School for the project *A Novel Algorithm for Model Counting*.

4<sup>th</sup> Place: Sam Scheeres, 12th grade, from Fairview High School for the project *Rigorous Constraints on Exchange for the 3-body Problem*.

The CSEF also presented the Lockheed Martin Teacher of the Year Award to Diego Martinez from Center High School in Center

Special thanks goes to all of the contributors and sponsors of the 2015 CSEF for their financial and in-kind support of Colorado’s future scientists. This year’s top sponsors (\$2,500 or more) included Bayswater Exploration & Production, Colorado State University, Intel Foundation, Black & Veatch – Building a World of

Difference Foundation , Lockheed Martin, US Department of Commerce, Colorado Dental Association, Seagate Technology, and Society of Petroleum Engineers.

For a complete list of all of the 2015 CSEF participants, sponsors, Colorado's Intel ISEF delegates and other CSEF details, please visit the CSEF website at [www.csef.colostate.edu](http://www.csef.colostate.edu).

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The Colorado Science and Engineering Fair (CSEF) is an independent, nonprofit corporation. Thanks to the support of generous corporations, foundations, government agencies, and donors who believe in the importance of science education, the CSEF has served Colorado and its students for 60 years.

# 2015 Colorado Science and Engineering Fair

## Grand Awards Press Release

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### Junior Division Best CSEF Project

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#### First Place

Kathryn Kummel 6th grade  
*The Danger of Drinking Water: How Mountain Lions Affect Elk Behavior and Aspen Regeneration*  
 North Middle School Colorado Springs

#### Second Place

Avery Lin 7th grade  
*War on Waves: A Study of Different Coastal Defenses and Their Effectiveness Against Tsunamis*  
 Stanley British Primary School Denver

#### Third Place

Emhyr Subramanian 7th grade  
*Potential Biodegradable Alternatives to Current Petroleum-Based Surfactants for Oil Spill Cleanup*  
 Cherry Creek Challenge School Denver

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### Senior Division Best CSEF Project

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#### First Place

Mary Hood 11th grade  
*SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly*  
 Sargent Jr/Sr High School Monte Vista

#### Second Place

Logan Collins 12th grade  
*An RK2 Mediated Bacterial Conjugation Delivery System for Artificial Genes Coding for Antimicrobial Polypeptides: A Novel Synthetic Biology Approach to Antibiotic Resistance*  
 Fairview High School Boulder

#### Third Place

Elliot Gorokhovskiy 10th grade  
*A Novel Algorithm for Model Counting*  
 Fairview High School Boulder

#### Fourth Place

Sam Scheeres 12th grade  
*Rigorous Constraints on Exchange for the 3-body Problem*  
 Fairview High School Boulder

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### Junior Division Animal Sciences

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#### First Place

Kathryn Kummel 6th grade  
*The Danger of Drinking Water: How Mountain Lions Affect Elk Behavior and Aspen Regeneration*  
 North Middle School Colorado Springs

#### Second Place

Felix Channiago 8th grade  
*The Effect of Temperature on Hunting Response Time of Female Habronattus Jumping Spiders*  
 West Jefferson Middle School Conifer

#### Third Place

Dovvie Knowlton 7th grade  
*Got Doggy Drool*  
 Fowler Junior High School Fowler

#### Fourth Place

Jacob Wright 8th grade  
*Wind in My Mane*  
 Walsh Jr/Sr High School Walsh

#### Honorable Mention

Quinn McConnell 8th grade  
*The Magic of Enzymes*  
 Peak to Peak Charter School Lafayette

#### Honorable Mention

Sydnee Roth 8th grade  
*Take the Bull by the Heart: The Effects of Energy Drinks on Heart rate of Daphnia*  
 Liberty School Joes

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### Senior Division Animal Sciences

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#### First Place

Margaret Preigh 12th grade  
*Pulsing Electromagnetic Radiation at 50/60Hz as a Pest Repellant in Insects*  
 Fairview High School Boulder

#### Second Place

Emily Zislis 11th grade  
*The Effect of Genetically Modified Soybean Consumption on Mouse Weight*  
 Cherry Creek High School Greenwood Village

#### Third Place

Katie Sanko 11th grade  
*The Effects of Imidacloprid Insecticide on Wolf Spiders (Lycosidae): A Pilot Study*  
 Fairview High School Boulder

#### Fourth Place

Kaitlyn Dumm 10th grade  
*Leftovers to Livestock: Turning Human Food Waste into Livestock Feed with Consistent Nutrient Values*  
 Windsor High School Windsor

#### Honorable Mention

Jeremiah Etter 11th grade  
*Fields for Flight: Effects of Magnetic Fields on Butterfly Navigation*  
 Monte Vista High School Monte Vista

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### Junior Division Behavioral & Social Sciences

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#### First Place

Caroline Jennings 8th grade  
*Ask Me Twice*  
 The Classical Academy Colorado Springs

**Second Place**

Elora Smith 8th grade  
*The Sweet Smell of You*  
 Sargent Jr/Sr High School Monte Vista

**Third Place**

Grace Abraham 8th grade  
*The Bunny Effect*  
 Aspen Middle School Aspen

**Fourth Place**

Clara Foisie 8th grade  
*Books or Nooks?*  
 The Classical Academy Colorado Springs

**Honorable Mention**

Evelyn Bodoni 7th grade  
*Whatever It Takes*  
 Cherry Creek Challenge School Denver

**Honorable Mention**

Amelia Greene 8th grade  
*Happy, Sad, Curious, Scared: Which Are You? Children's Emotional Response to Musical Chords & Varied Images*  
 The Classical Academy Colorado Springs

**Honorable Mention**

Mia Cravitz 8th grade  
 Jane Doherty 8th grade  
*What Engenders A Leader?*  
 Stanley British Primary School Denver

**Honorable Mention**

Meredith Neid 7th grade  
 Grace Fuselier 7th grade  
*Inferiority Inquiry*  
 Stanley British Primary School Denver

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**Senior Division  
 Behavioral & Social Sciences**

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**First Place**

Serena Rusk 11th grade  
*An Analysis of Risk Factors for Developing Low Body Satisfaction in Adolescents*  
 Fairview High School Boulder

**Second Place**

Sarena Wells 12th grade  
*Frustration Responses: An Analysis of Dispositional Learning*  
 Fort Morgan High School Fort Morgan

**Third Place**

Carmen Ruggles 11th grade  
*Can We Recycle That?*  
 Center High School Center

**Fourth Place**

Alexandria Sinkler 11th grade  
 Alan Pence 11th grade  
*Are Pueblo Vehicle Repair Shops Sexist?*  
 Dolores Huerta Preparatory High School Pueblo

**Honorable Mention**

Johanna Mackay 10th grade  
 Bryanna Davis 10th grade  
*Shooting Accuracy of an Individual Within Varying Temperatures*  
 Edison High School Yoder

**Honorable Mention**

Kaleb Mora 11th grade  
 Angela Nelson 11th grade  
 Bryan Adams-Colon 11th grade  
*How Fast Are You?*  
 Central High School Pueblo

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**Junior Division  
 Chemistry**

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**First Place**

Emhyr Subramanian 7th grade  
*Potential Biodegradable Alternatives to Current Petroleum-Based Surfactants for Oil Spill Cleanup*  
 Cherry Creek Challenge School Denver

**Second Place**

Calista Law 7th grade  
*Eco-Plastics*  
 Boulder Country Day School Boulder

**Third Place**

Nicole Miller 7th grade  
*Blue Bottle Blues*  
 Ortega Middle School Alamosa

**Fourth Place**

Nethaniel Kiraly 7th grade  
*Fire Reducers*  
 Knowledge Quest Academy Milliken

**Honorable Mention**

Connor McCauley 7th grade  
*Vitamin C in Vegetables*  
 Blessed Sacrament Catholic School Denver

**Honorable Mention**

Dustin Medina 6th grade  
*Extracting Strawberry DNA*  
 Corwin International Magnet School Pueblo

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**Senior Division  
 Chemistry**

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**First Place**

Sirisha Gudavalli 10th grade  
*Chemical and Morphological Dependent Properties of Semiconductor Nanocrystals*  
 Fairview High School Boulder

**Second Place**

Annie Chen 10th grade  
*Determining the Stiffness Threshold of a PEG Hydrogel for Motor Neuron Axon Extension*  
 Boulder High School Boulder

**Third Place**

Sofia Antal 11th grade  
*Growth and Testing of New Cocrystals, Part 2*  
 Cherry Creek High School Greenwood Village

**Fourth Place**  
 Shelly Steinert 11th grade  
*Determining Flame Retardancy of Maize Stover, Medicago Sativa, and Hordeum Vulgare Ash*  
 Sargent Jr/Sr High School Monte Vista

**Honorable Mention**  
 Richard Mallory 11th grade  
*Hazardous Waste to Renewable Energy*  
 The Classical Academy College Pathways Colorado Springs

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**Junior Division  
 Earth & Space Sciences**

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**First Place**  
 Sara Nehring 6th grade  
*The Moon Is So Bright: Do You Need Sunglasses at Night?*  
 Monte Vista Middle School Monte Vista

**Second Place**  
 Max Warnock 7th grade  
*Testing the Viking Sunstone Legend*  
 Home School Fort Collins

**Third Place**  
 Jordyn Hall 8th grade  
*Temperamental Twisters*  
 Peak to Peak Charter School Lafayette

**Fourth Place**  
 Elani Frantz 8th grade  
 Paige Lessig 8th grade  
*What's the Weather Forecast in Space?*  
 North Middle School Colorado Springs

**Honorable Mention**  
 William Highfill 6th grade  
*Spoiled Rotten*  
 Corwin International Magnet School Pueblo

**Honorable Mention**  
 Antonio Campos 8th grade  
*Why Is Venice Sinking?*  
 Cherry Creek Challenge School Denver

**Honorable Mention**  
 Joshua Miller 6th grade  
*What Type of Soil Best Supports a House During a Liquefaction Event?*  
 Skinner Middle School Denver

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**Senior Division  
 Earth & Space Sciences**

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**First Place**  
 Jesse Zhang 12th grade  
*Effect of the Atlantic Ocean on Sudden Stratospheric Warming*  
 Fairview High School Boulder

**Second Place**  
 Casey Zhang 11th grade  
*The QBO and Solar Cycle Modulation in the Lower Atmosphere*  
 Fairview High School Boulder

**Third Place**  
 Ivo Erben 11th grade  
*The Effect of Climate on a Glacier's ELA and Ablation Gradient*  
 Boulder High School Boulder

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**Junior Division  
 Energy & Transportation**

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**First Place**  
 Mark Bloomfield 7th grade  
*Blow Out: Scaling Down Compressed Air Energy Storage for Household Use*  
 Holmes Middle School Colorado Springs

**Second Place**  
 Maia Drugmand 8th grade  
*Dirty Energy*  
 Peak to Peak Charter School Lafayette

**Third Place**  
 Parker Randolph 8th grade  
*Potential Pitch: The Effect of Sound Frequency on Electricity Generation*  
 Monte Vista Middle School Monte Vista

**Fourth Place**  
 Kendrick Castillo 8th grade  
*Isn't Electricity "Greyt"*  
 Notre Dame Catholic School Denver

**Honorable Mention**  
 Joe Haase 6th grade  
*Easy Breezy*  
 Eads Middle School Eads

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**Senior Division  
 Energy & Transportation**

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**First Place**  
 Trevor Jordan 11th grade  
*A Wing of the Future: Part II*  
 Animas High School Durango

**Second Place**  
 Kelsey Lindbloom 11th grade  
*Fueling the Future Phase 4: Constructing an Aqueous Vehicle Powered by a Microbial Fuel Cell*  
 Salida High School Salida

**Third Place**  
 Sanjna Bhartiya 12th grade  
 Apoorva Krishnan 11th grade  
*Preventing the Degradation of Dye-Sensitized Solar Cells*  
 Cherry Creek High School Greenwood Village

**Fourth Place**  
 Max Markuson DiPrince 9th grade  
*Windmill Efficiency: Using a 3D Printer to Engineer More Efficient Windmill Blades*  
 Central High School Pueblo

**Honorable Mention**

Austin Katzer	11th grade
Cameron Van Vleet	11th grade
Noah Haswell	11th grade
<i>Is Biodiesel Really Green?</i>	
Paonia Jr/Sr High School	Paonia

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**Junior Division  
Engineering**


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**First Place**

Cristian Granados	8th grade
<i>Put A Little Spring in Your Step</i>	
North Middle School	Colorado Springs

**Second Place**

Pranav Subramanian	8th grade
<i>Ultrasonic-Based Optics Utilized for the Blind and Visually Impaired</i>	
Campus Middle School	Greenwood Village

**Third Place**

Ethan Gearhart	8th grade
<i>The Great Color Sort: Developing an Arduino Based Laundry Sorter</i>	
Sargent Jr/Sr High School	Monte Vista

**Fourth Place**

Cole Palmer	7th grade
<i>Catch E'm If You Can</i>	
The Classical Academy	Colorado Springs

**Honorable Mention**

Finn Stowers	8th grade
<i>Frac Fluid Friction: Does Sand Grain Size Affect the Viscosity of Hydraulic Fracturing Fluid?</i>	
St. Columba Catholic School	Durango

**Honorable Mention**

Devin Conn	6th grade
<i>Sound Propagation Sensing in the Stratosphere</i>	
Corwin International Magnet School	Pueblo

**Honorable Mention**

Scott Prieve	6th grade
<i>Let It Flow: What Rate Will Different Volumes of Water Travel Down Different Shaped Channels?</i>	
North Middle School	Colorado Springs

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**Senior Division  
Engineering**


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**First Place**

Mary Hood	11th grade
<i>SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly</i>	
Sargent Jr/Sr High School	Monte Vista

**Second Place**

Ian Wilkins	12th grade
<i>Optimizing 3D CAD Scanning Algorithms Through Multi-Sensor Data Input</i>	
Fairview High School	Boulder

**Third Place**

Kevyn Kelso	10th grade
<i>Automatic Trombone Tuner</i>	
The Classical Academy	Colorado Springs

**Fourth Place**

Leighton Burt	10th grade
<i>Life Saving Locating: Developing Autonomous Avalanche Rescue</i>	
Sargent Jr/Sr High School	Monte Vista

**Honorable Mention**

Isaac Jordan	9th grade
<i>Save the World, Bomb the Forest</i>	
Animas High School	Durango

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**Junior Division  
Environmental Sciences**


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**First Place**

Avery Lin	7th grade
<i>War on Waves: A Study of Different Coastal Defenses and Their Effectiveness Against Tsunamis</i>	
Stanley British Primary School	Denver

**Second Place**

Advaita Singh	8th grade
<i>Effects of Ultraviolet Radiation on Planaria</i>	
Cherry Creek Challenge School	Denver

**Third Place**

Jonathan Haerr	7th grade
<i>Dead in the Water</i>	
The Classical Academy	Colorado Springs

**Fourth Place**

Vanessa Haggans	8th grade
<i>Can I Drink It?: Backcountry Water Quality in Boulder County and Its Safety for Runners</i>	
Summit Charter Middle School	Boulder

**Honorable Mention**

Jordan Elder	7th grade
McKenzy Howerton	7th grade
<i>Got Dirt? Coagulation Experimentation</i>	
Dolores Middle School	Dolores

**Honorable Mention**

Dylan Duskocil	8th grade
<i>Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation</i>	
Bayfield Middle School	Bayfield

**Honorable Mention**

Claire McHenry	8th grade
<i>Water Stabilization</i>	
Knowledge Quest Academy	Milliken

**Honorable Mention**

Lacey Niccoli	8th grade
<i>Denatured: The Effects of pH on Germination</i>	
Liberty School	Joes

**Honorable Mention**

Katelynn Salmon	8th grade
<i>Effect of Microbeads on Daphnia Heart Rate</i>	
Monument Academy	Monument

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**Senior Division  
Environmental Sciences**

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**First Place**

Hannah Hartung 12th grade  
*Effects of Parasites from Long Term Invasive Fish on Native Amphibians in the California Bay Area*  
Fairview High School Boulder

**Second Place**

Casey Shaw 9th grade  
*Arrested Development: Glyphosate-Based Herbicides on the Embryonic Development of Zebra Danios*  
Liberty School Joes

**Third Place**

Michelle Kummel 9th grade  
*A Spoonful of Sugar Helps the Nitrate Go Down: Denitrification in Wetland Soil*  
Palmer High School Colorado Springs

**Fourth Place**

Parker Revers 11th grade  
*Transmission of Ichthyophthirius Multifiliis in Aquatic Environment Dependent on Varying Temperature*  
Cherry Creek High School Greenwood Village

**Honorable Mention**

Anne Cox 12th grade  
*Modeled and Observed Coupling of Climate Change on Aedes aegypti*  
Nederland Middle/Senior High School Nederland

**Honorable Mention**

Hannah Fischer 10th grade  
*Pharmacoenvironmentology: Developing a Baseline for PPCP Contaminant Levels at the MVNWR*  
Sierra Grande Jr/Sr High School Blanca

**Honorable Mention**

Emma Scholz 12th grade  
*Geographical Correlation Maps of Malaria Hemoglobin SS Disease Allele Frequency and Eco. of Ethiopia*  
Sterling High School Sterling

**Honorable Mention**

Colby Self 9th grade  
*How Did the Papoose Fire Affect the Timber Volume on the Rio Grande National Forest?*  
Monte Vista High School Monte Vista

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**Junior Division  
Mathematics & Computer Sciences**

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**First Place**

Jack Stade 8th grade  
*Modeling Parasitic Relations Using Computer Models*  
Nevin Platt Middle School Boulder

**Second Place**

Molly Nehring 8th grade  
*Genetic Algorithms: Solving Math Problems Using Ideas from Nature*  
Monte Vista Middle School Monte Vista

**Third Place**

Joshua Bennett 8th grade  
*Cracking the Code*  
Pueblo School for Arts and Sciences Pueblo

**Fourth Place**

Chase Cromwell 7th grade  
*Raspberry Pi Password Cracker*  
Lamar Middle School Lamar

**Honorable Mention**

Benjamin Ferraro 8th grade  
*The Ultimate Goal: How Angles and Placement Affect Goal Scoring Probability*  
American Academy Castle Pines

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**Senior Division  
Mathematics & Computer Sciences**

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**First Place**

Elliot Gorokhovsky 10th grade  
*A Novel Algorithm for Model Counting*  
Fairview High School Boulder

**Second Place**

Avi Swartz 10th grade  
Tyler Giallanza 10th grade  
Ian Johnson 12th grade  
*Developing a Class Scheduling Program with Minimum Conflicts for Large Schools*  
Cherry Creek High School Greenwood Village

**Third Place**

Eric Sun 11th grade  
*Measuring Aging Rates in the SardinIA Population Using Pattern Recognition*  
Pueblo West High School Pueblo West

**Fourth Place**

Robert Meikle 9th grade  
*Graphing Calculator Application*  
Sand Creek High School Colorado Springs

**Honorable Mention**

Andrew Barlow 12th grade  
Ryan Bennett 12th grade  
*Solar Mapping; Sunspot Variability and Irradiance*  
Monarch High School Louisville

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**Junior Division  
Medicine & Health**

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**First Place**

Sam Duarte 7th grade  
*Bagpipes and Earplugs: Should Great Highland Bagpipe Players Use Earplugs When Practicing?*  
Quest Academy Dacono

**Second Place**

Edwin Bodoni 8th grade  
*Dental Implants: The Healthier Alternative*  
Cherry Creek Challenge School Denver

**Third Place**

Maia Garby 8th grade  
*Honey and Glycerin: A Natural Antibacterial Agent*  
Summit Charter Middle School Boulder

**Fourth Place**

Laura Clark 7th grade  
*Paper Microfluidics: Medical Diagnostics for the Developing World*  
 St. Columba Catholic School Durango

**Honorable Mention**

Olivia Jacobsen 7th grade  
*Weapons of Mass Percussion*  
 The Classical Academy Colorado Springs

**Honorable Mention**

Kyrie Milliron 8th grade  
*To Vitamin D or Not To Vitamin D*  
 The Classical Academy Colorado Springs

**Honorable Mention**

Isla Anderson 7th grade  
*The Affects of Antibiotics and Antiseptics on Skin Staphylococcus Species*  
 Skinner Middle School Denver

**Honorable Mention**

Madeline Steinle 8th grade  
*The Effects of Aspartame on Cognitive Abilities*  
 Trinity Lutheran School Pueblo

**Honorable Mention**

Cody Robinson 8th grade  
*The Effects of Laser Therapy on Cell Regeneration*  
 Liberty School Joes

**Honorable Mention**

Brooke Younger 7th grade  
 Amy Weisensee 7th grade  
*An Energetic "Eggs"periment*  
 Limon Schools Limon

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**Senior Division  
 Medicine & Health**

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**First Place**

Jonathan Snedeker 12th grade  
*Combined Inhibition of Wee1 and Parp1/2 as a Novel Therapy for Acute Myeloid Leukemia*  
 Fairview High School Boulder

**Second Place**

Sirey Zhang 11th grade  
*Multiarray Data Analysis to Map the Cellular Interaction in a Mouse Model of Familial ALS*  
 Cherry Creek High School Greenwood Village

**Third Place**

Alison Weinberger 11th grade  
*Is Homeopathy More Than A Placebo? Assessing Homeopathic Principles Using A Fruit Fly Model*  
 Cherry Creek High School Greenwood Village

**Fourth Place**

Hari Sowrirajan 9th grade  
*Nanoparticle-Induced Macrophage Atherogenesis*  
 Cherry Creek High School Greenwood Village

**Honorable Mention**

Madeline Goosman 11th grade  
*Mandarin Tone Perception in Simulations of Electro-Acoustic and Cochlear-Implant Hearing*  
 Fairview High School Boulder

**Honorable Mention**

Jayden Durbin 12th grade  
*Vitamin D Stimulates the mRNA Expression of ACPP in LNCaP Cells*  
 Haxtun High School Haxtun

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**Junior Division  
 Microbiology**

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**First Place**

Taylor Dower 8th grade  
*Playground Bacterial Levels Comparison*  
 Turner Middle School Berthoud

**Second Place**

Madison Searles 7th grade  
*A Comparison of Antibacterial Hand Cleansing Solutions and Their Effectiveness on Killing Bacteria*  
 STEM Academy Highlands Ranch

**Third Place**

Camryn Haines 8th grade  
 Sophie Supernor 8th grade  
*Dirty Dollar*  
 Knowledge Quest Academy Milliken

**Fourth Place**

Dominique Bear 8th grade  
 Lilly Kinsella 8th grade  
*School Scare*  
 Knowledge Quest Academy Milliken

**Honorable Mention**

Nicholas Entin 8th grade  
*Bacterial Growth Inhibition*  
 Peak to Peak Charter School Lafayette

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**Senior Division  
 Microbiology**

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**First Place**

Logan Collins 12th grade  
*An RK2 Mediated Bacterial Conjugation Delivery System for Artificial Genes Coding for Antimicrobial Polypeptides: A Novel Synthetic Biology Approach to Antibiotic Resistance*  
 Fairview High School Boulder

**Second Place**

Rebecca Bloomfield 10th grade  
*Competence Dependent Chemotaxis and Genomic Repair in Acinetobacter baylyi*  
 Palmer High School Colorado Springs

**Third Place**

Anit Tyagi 9th grade  
*Diurnal Variation of E. coli in an Urban Stream*  
 Cherry Creek High School Greenwood Village



**Fourth Place**

Jordan Nahabetian 12th grade  
 Riley Scroeder 12th grade  
 Abby Timmermeyer 12th grade  
*Rocky Waters Filtration*  
 Sand Creek High School Colorado Springs

**Honorable Mention**

Eileen Xia 10th grade  
*Phosphatidylinositol-3 Kinase p110a Isoform Inhibits*  
*Antibody Switch*  
 Cherry Creek High School Greenwood Village

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**Junior Division  
Physics**

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**First Place**

Brendan Gould 7th grade  
*Analyzing the Effects of Various Materials on a Magnetic Field*  
 The Classical Academy Colorado Springs

**Second Place**

John Quinn 8th grade  
*Wind, Wings, and Lift*  
 Summit Charter Middle School Boulder

**Third Place**

Connor Voss 8th grade  
*Loop the Loop: Rollercoaster Physics*  
 Beulah School of Natural Sciences Beulah

**Fourth Place**

Dylan Jessen 7th grade  
*The Effect of Voltage, Vacuum and Anode Material on Electron Acceleration*  
 American Academy Castle Pines

**Honorable Mention**

Adam Vagle 7th grade  
*Avoiding Armageddon*  
 Stanley British Primary School Denver

**Honorable Mention**

Jonathan Ballard 8th grade  
*Precision of an Ultrasonic Sensor*  
 Eaton Middle School Eaton

**Honorable Mention**

Asher Hogan 7th grade  
*Sound Trap*  
 The Classical Academy Colorado Springs

**Honorable Mention**

Paige Newman 7th grade  
*The Effect of Air Pressure on Different Brands of Duct Tape*  
 North Arvada Middle School Arvada

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**Senior Division  
Physics**

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**First Place**

Sam Scheeres 12th grade  
*Rigorous Constraints on Exchange for the 3-body Problem*  
 Fairview High School Boulder

**Second Place**

Haley Weinstein 11th grade  
*Analyzing Different Methods of Finding the Force at General Yield in Sub-sized Charpy Testing*  
 Fairview High School Boulder

**Third Place**

Daniel Sidman 9th grade  
*Radiant Heat 3 2 1 . . . Ignition*  
 Palmer High School Colorado Springs

**Fourth Place**

Emma Frantz 12th grade  
*Harnessing the Marangoni Effect*  
 Palmer High School Colorado Springs

**Honorable Mention**

Thomas Manuel 9th grade  
*Slow a Bullet To Save a Life*  
 Walsh Jr/Sr High School Walsh

**Honorable Mention**

Ben Sheffer 11th grade  
*The Effects of Electron Beam Dose on the Visible Spectroscopic Signatures of Thin C60 Films*  
 Eaglecrest High School Centennial

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**Junior Division  
Plant Sciences**

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**First Place**

Alicia Wu 8th grade  
*The Acidulous Truth About the Flora of Our Environment*  
 Summit Charter Middle School Boulder

**Second Place**

Sarah Duzenack 6th grade  
*A Comparison of Endomycorrhizae and Commercial Fertilizer on Bent and Blue Grass*  
 La Veta Jr/Sr High School La Veta

**Third Place**

Clay Kimberling 7th grade  
*Stop the Mold*  
 Sargent Jr/Sr High School Monte Vista

**Fourth Place**

Riley Ruff 7th grade  
*Battle of the Elements: Water vs. Earth*  
 North Arvada Middle School Arvada

**Honorable Mention**

Tyson Lichty 8th grade  
*All Hail! Hail Resistance?*  
 Liberty School Joes

**Honorable Mention**

Soneva Scott 7th grade  
*Aquaponic Growth Speed vs Soil Growth Speed*  
 STEM Academy Highlands Ranch

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**Senior Division  
Plant Sciences**

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**First Place**

Jessica Shand 10th grade  
*Analysis of Spermatophyte Divergence to Expedite  
Identification of Novel Drug Candidates*  
Discovery Canyon Campus Colorado Springs

**Second Place**

Mitchell Fosdick 10th grade  
*Phase III: Further Identification of Isolated Green Fuel  
Compounds.*  
Fowler High School Fowler

**Third Place**

Kaixin Cui 11th grade  
*Evolutionary Analysis of Cestrum in the Antilles Based on  
Phylogenetic Relationships and Time Axis*  
Fairview High School Boulder

**Fourth Place**

Shlok Rathi 9th grade  
*Antioxidant Activities in Colored Potato Tubers*  
Alamosa High School Alamosa

**Honorable Mention**

Abbey Brower 10th grade  
*Utilizing Crop Rotation for Nutrient Replacement*  
Sterling High School Sterling

# 2015 Colorado Science and Engineering Fair

## Special Awards Press Release

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### Colorado Science and Engineering Fair

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#### *Poster Art Contest Award*

Morgan Voss  
 \$100, certificate  
 Beulah School of Natural Sciences Beulah

#### *Ralph Desch Memorial Technical Writing Award*

Margaret Preigh 12th grade  
 \$100, certificate  
 Fairview High School Boulder  
*Pulsing Electromagnetic Radiation at 50/60Hz as a Pest  
 Repellant in Insects*

#### *Student Choice Award*

Kaybree Keating 8th grade  
 Emilee Wells 6th grade  
 Kaytlyn Keating 6th grade  
 \$100, trophy, certificate  
 Weldon Valley School Weldona  
*Zapped Electro-Culture: The Effect of Electricity on  
 Germination and Growth of Seedlings*

#### *Student Choice Award*

Stephen Parish 12th grade  
 \$100, trophy, certificate  
 Home School Colorado Springs  
*Cyber Automated Report Linker (C.A.R.L): Minimizing  
 Expansion of Catastrophic Cyber Infiltrations*

#### *Pioneers of Science - Ada Lovelace*

Avi Swartz 10th grade  
 Tyler Giallanza 10th grade  
 Ian Johnson 12th grade  
 \$50, certificate  
 Cherry Creek High School Greenwood Village  
*Developing a Class Scheduling Program with Minimum  
 Conflicts for Large Schools*

#### *Pioneers of Science - Barbara McClintock*

Emma Hackett 8th grade  
 \$50, certificate  
 St. Columba Catholic School Durango  
*Daily Dose*

#### *Pioneers of Science - Chien-Shiung Wu*

Paige Newman 7th grade  
 \$50, certificate  
 North Arvada Middle School Arvada  
*The Effect of Air Pressure on Different Brands of Duct Tape*

#### *Pioneers of Science - Elizabeth Blackwell*

Grace Varga 7th grade  
 \$50, certificate  
 American Academy Parker  
*Brush It or Buzz It: The Comparison of Rotating and Vibrating  
 Toothbrushes*

#### *Pioneers of Science - Hedy Lamarr*

Robin Bahrami 8th grade  
 \$50, certificate  
 Summit Charter Middle School Colorado Springs  
*The Soundasaurus: Digital Sound Analysis Using Signal  
 Processing Algorithms*

#### *Pioneers of Science - Jocelyn Bell Burnell*

William Highfill 6th grade  
 \$50, certificate  
 Corwin International Magnet Pueblo  
*Spoiled Rotten*

#### *Pioneers of Science - Lise Meitner*

Nicole Miller 7th grade  
 \$50, certificate  
 Ortega Middle School Alamosa  
*Blue Bottle Blues*

#### *Pioneers of Science - Margaret Mead*

Kale Hall 8th grade  
 \$50, certificate  
 Cortez Middle School Cortez  
*Put Me In, Coach*

#### *Pioneers of Science - Margaret Rossiter*

Orian Wagers 7th grade  
 \$50, certificate  
 Woodlin School Woodrow  
*Turn Down That Sound*

#### *Pioneers of Science - Maria Goeppert-Mayer*

Greg Watts 7th grade  
 \$50, certificate  
 Sargent Jr/Sr High School Monte Vista  
*Are All Pellets Created Equally?*

#### *Pioneers of Science - Nettie Stevens Award*

Jacob Wright 8th grade  
 \$50, certificate,  
 Walsh Jr/Sr High School Walsh  
*Wind in My Mane*

#### *Pioneers of Science - Rachel Louise Carson*

Katelynn Salmon 8th grade  
 \$50, certificate  
 Monument Academy Monument  
*Effect of Microbeads on Daphnia Heart Rate*

#### *Pioneers of Science - Rosalie Barrow Edge*

Cassandra Blew 8th grade  
 \$50, certificate  
 La Veta Jr/Sr High School La Veta  
*Beneath the Ashes: How to Reduce Flash Flooding Rates on  
 Hydrophobic Soil Layers After a Fire*

### *Pioneers of Science - Rosalind Franklin*

Jessica Fiala 8th grade  
\$50, certificate  
St. Columba Catholic School Durango  
*Disinfecting Power*

### *Pioneers of Science - Sally Ride*

Alexandra MacAskill 8th grade  
\$50, certificate, poster of pioneer scientist  
Holy Family Catholic School Grand Junction  
*Rock On!*

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## **Military**

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### **United States Air Force**

#### *US Air Force Award*

Michael Nichols 8th grade  
certificate, laptop backback, rotating flash drive, portable  
earbuds, 4-port hub  
Brush Middle School Brush  
*Predicting Aircraft Stealth with Light Waves*

Isabel Kahler 8th grade  
certificate, laptop backback, rotating flash drive, portable  
earbuds, 4-port hub  
Corwin International Magnet School Pueblo  
*Defying Gravity*

Devin Conn 6th grade  
certificate, laptop backback, rotating flash drive, portable  
earbuds, 4-port hub  
Corwin International Magnet School Pueblo  
*Sound Propagation Sensing in the Stratosphere*

Sam Cuthbertson 12th grade  
Jordan Hammer 12th grade  
John Elliott 12th grade  
certificate, messenger bag, card reader/writer, custom single  
speaker, beta adapter set  
Centaurus High School Lafayette  
*Phoenix Drone*

Shepherd Kruse 10th grade  
certificate, messenger bag, card reader/writer, custom single  
speaker, beta adapter set  
Home School Colorado Springs  
*Designing and Evaluating an Aerospike Rocket Engine for  
Increased Thrust*

### **United States Navy & Marine Corps**

#### *Office of Naval Research Award*

Emhyr Subramanian 7th grade  
certificate, medallion  
Cherry Creek Challenge School Denver  
*Potential Biodegradable Alternatives to Current  
Petroleum-Based Surfactants for Oil Spill Cleanup*

Dovvie Knowlton 7th grade  
certificate, medallion  
Fowler Junior High School Fowler  
*Got Doggy Drool*

Robin Bahrami 8th grade  
certificate, medallion  
Summit Charter Middle School Boulder  
*The Soundasaurus: Digital Sound Analysis Using Signal  
Processing Algorithms*

Avery Lin 7th grade  
certificate, medallion  
Stanley British Primary School Denver  
*War on Waves: A Study of Different Coastal Defenses and  
Their Effectiveness Against Tsunamis*

Cristian Granados 8th grade  
certificate, medallion  
North Middle School Colorado Springs  
*Put A Little Spring in Your Step*

Connor Voss 8th grade  
certificate, medallion  
Beulah School of Natural Sciences Beulah  
*Loop the Loop: Rollercoaster Physics*

Brendan Gould 7th grade  
certificate, medallion  
The Classical Academy Colorado Springs  
*Analyzing the Effects of Various Materials on a Magnetic Field*

Trevor Jordan 11th grade  
certificate, medallion, \$75 gift certificate  
Animas High School Durango  
*A Wing of the Future: Part II*

Logan Collins 12th grade  
certificate, medallion, \$75 gift certificate  
Fairview High School Boulder  
*An RK2 Mediated Bacterial Conjugation Delivery System for  
Artificial Genes Coding for Antimicrobial Polypeptides: A  
Novel Synthetic Biology Approach to Antibiotic Resistance*

Max Markuson DiPrince 9th grade  
certificate, medallion, \$75 gift certificate  
Central High School Pueblo  
*Windmill Efficiency: Using a 3D Printer to Engineer More  
Efficient Windmill Blades*

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## **Organizational**

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### **Air & Waste Management Association Rocky Mountain States Section**

Dylan Dorskocil 8th grade  
\$100  
Bayfield Middle school Bayfield  
*Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation*

Bridgit Hebner 7th grade  
\$100  
American Academy Parker  
*Clear as Mud: BPA Found in Water Bottles at Varying  
Temperatures*

Vanessa Haggans 8th grade  
\$50  
Summit Charter Middle School Boulder  
*Can I Drink It?: Backcountry Water Quality in Boulder County  
and Its Safety for Runners*

Ruggles 11th grade  
\$100  
Center High School Center  
*Can We Recycle That?*

Anne Cox 12th grade  
\$50  
Nederland Middle/Senior High Nederland  
*Modeled and Observed Coupling of Climate Change on Aedes aegypti*

Mitchell Fosdick 10th grade  
\$100  
Fowler High School Fowler  
*Phase III: Further Identification of Isolated Green Fuel Compounds.*

### **American Association of University Women**

#### *AAUW Award for Women in STEM*

Aubree Rybacki 6th grade  
\$100  
Alta Vista Charter School Lamar  
*Oh! It's OPI*

Mary Hood 11th grade  
\$100  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly*

### **American Chemical Society Colorado Local Section**

#### *ACS Colorado Local Section Award*

Shelly Steinert 11th grade  
certificate, \$25  
Sargent Jr/Sr High School Monte Vista  
*Determining Flame Retardancy of Maize Stover, Medicago Sativa, and Hordeum Vulgare Ash*

Connor McCauley 7th grade  
certificate, \$25  
Blessed Sacrament Catholic Denver  
*Vitamin C in Vegetables*

Rachelle Pierce 7th grade  
certificate, \$25  
Knowledge Quest Academy Milliken  
*Salt and Ice*

Madison Luczak 7th grade  
certificate, \$25  
Windsor Charter Academy Windsor  
*Do You Have To See It To Believe?*

Calista Law 7th grade  
certificate, \$100  
Boulder Country Day School Boulder  
*Eco-Plastics*

Sofia Antal 11th grade  
certificate, \$100  
Cherry Creek High School Greenwood Village  
*Growth and Testing of New Cocrystals, Part 2*

### **American Industrial Hygiene Association**

#### **Rocky Mountain Section**

#### *AIHA-RMS Excellence in Protection of Health & the Environment Award*

Sam Duarte 7th grade  
certificate  
Quest Academy Dacono  
*Bagpipes and Earplugs: Should Great Highland Bagpipe Players Use Earplugs When Practicing?*

Hari Sowrirajan 9th grade  
\$100  
Cherry Creek High School Greenwood Village  
*Nanoparticle-Induced Macrophage Atherogenesis*

### **American Institute of Aeronautics and Astronautics, Rocky Mountain Section**

#### *AIAA Rocky Mountain Section Award*

John Quinn 8th grade  
arduino kit, 1-year AIAA student membership  
Summit Charter Middle School Boulder  
*Wind, Wings, and Lift*

Devin Conn 6th grade  
arduino kit, 1-year AIAA student membership  
Corwin International Magnet Pueblo  
*Sound Propagation Sensing in the Stratosphere*

Shepherd Kruse 10th grade  
arduino kit, 1-year AIAA student membership  
Home School Colorado Springs  
*Designing and Evaluating an Aerospike Rocket Engine for Increased Thrust*

Derrick Zaroni 10th grade  
arduino kit, 1-year AIAA student membership  
Silverton Schools Silverton  
*Multi-Purpose Robo Glove*

### **American Institute of Chemical Engineers Rocky Mountain Section**

Finn Stowers 8th grade  
\$75  
St. Columba Catholic School Durango  
*Frac Fluid Friction: Does Sand Grain Size Affect the Viscosity of Hydraulic Fracturing Fluid?*

Jocelyn Sanchez 6th grade  
\$100  
Corwin International Magnet Pueblo  
*Candy Chromatography*

Liam Foster 9th grade  
\$75  
Animas High School Durango  
*Testing the Water: A Review of Various Acid Mine Drainage Remediation Options*

Sofia Antal 11th grade  
\$100  
Cherry Creek High School Greenwood Village  
*Growth and Testing of New Cocrystals, Part 2*

**American Institute of Professional Geologists  
Colorado Section**

*AIPG Certificate of Excellence in the Geosciences*

Joshua Miller 6th grade

\$100  
Skinner Middle School Denver

*What Type of Soil Best Supports a House During a Liquefaction Event?*

Dylan Duskocil 8th grade

\$200  
Bayfield Middle school Bayfield

*Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation*

Ivo Erben 11th grade

\$100  
Boulder High School Boulder

*The Effect of Climate on a Glacier's ELA and Ablation Gradient*

Hannah deKay 10th grade

Raelen Barr 10th grade  
\$200

Silverton Schools Silverton

*Investigating Innovative Tools and Techniques for Heavy Metal Mapping in Historic Mining District*

**American Meteorological Society**

*Outstanding Achievement in Atmospheric Sciences*

Elani Frantz 8th grade

Paige Lessig 8th grade  
certificate, gift certificate

North Middle School Colorado Springs

*What's the Weather Forecast in Space?*

Casey Zhang 11th grade

certificate, gift certificate  
Fairview High School Boulder

*The QBO and Solar Cycle Modulation in the Lower Atmosphere*

Jesse Zhang 12th grade

certificate, gift certificate  
Fairview High School Boulder

*Effect of the Atlantic Ocean on Sudden Stratospheric Warming*

**American Public Power Association**

**Demonstration of Energy Efficient Developments**

*DEED Energy & Efficiency Innovation Award*

Alia Kraxberger 8th grade

\$50  
Genoa-Hugo School Hugo

*Number of Blades vs. Efficiency*

Taylor Coons 12th grade

Dante Pacionek 12th grade  
\$75

Nederland Middle/Senior High Nederland

*The Ideal Energy Efficient Home: An Arduino Based Project*

*DEED Environmental Innovation Award*

Luke Rohlwing 8th grade

\$50  
American Academy Castle Pines

*Solar Cell Jenga: Increasing Energy Capacity with Stacked Photovoltaic Solar Panels*

Richard Mallory 11th grade

\$75  
The Classical Academy College Colorado Springs

*Hazardous Waste to Renewable Energy*

**American Statistical Association,  
Colorado/Wyoming Chapter**

*David Young Memorial Award*

Amelia Greene 8th grade

\$200, student membership in the American Statistical Association, acknowledgement at chapter spring meeting and on chapter web site

The Classical Academy Colorado Springs

*Happy, Sad, Curious, Scared: Which Are You? Children's Emotional Response to Musical Chords & Varied Images*

Michelle Kummel 9th grade

\$200, student membership in the American Statistical Association, acknowledgement at chapter spring meeting and on chapter web site

Palmer High School Colorado Springs

*A Spoonful of Sugar Helps the Nitrate Go Down: Denitrification in Wetland Soil*

**American Vacuum Society  
Rocky Mountain Chapter**

Dylan Jessen 7th grade

\$50, \$50 to teacher/sponsor  
American Academy Castle Pines

*The Effect of Voltage, Vacuum and Anode Material on Electron Acceleration*

Jordyn Hall 8th grade

\$100, \$100 to teacher/sponsor  
Peak to Peak Charter School Lafayette

*Temperamental Twisters*

Emma Frantz 12th grade

\$50, \$50 to teacher/sponsor  
Palmer High School Colorado Springs

*Harnessing the Marangoni Effect*

Sirisha Gudavalli 10th grade

\$100, \$100 to teacher/sponsor  
Fairview High School Boulder

*Chemical and Morphological Dependent Properties of Semiconductor Nanocrystals*

**American Water Works Association**

**Rocky Mountain Section & Rocky Mountain  
Water Environment Association**

Katelynn Salmon 8th grade

certificate, \$200  
Monument Academy Monument

*Effect of Microbeads on Daphnia Heart Rate*

Emhyr Subramanian certificate, \$400 Cherry Creek Challenge School <i>Potential Biodegradable Alternatives to Current Petroleum-Based Surfactants for Oil Spill Cleanup</i>	7th grade Denver
Hannah Fischer certificate, \$200 Sierra Grande Jr/Sr High School <i>Pharmacoenviromentology: Developing a Baseline for PPCP Contaminant Levels at the MVNWR</i>	10th grade Blanca
Liam Foster certificate, \$400 Animas High School <i>Testing the Water: A Review of Various Acid Mine Drainage Remediation Options</i>	9th grade Durango

### ASM International

#### ASM Materials Education Foundation Award

Haley Weinstein \$100 Fairview High School <i>Analyzing Different Methods of Finding the Force at General Yield in Sub-sized Charpy Testing</i>	11th grade Boulder
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Sirisha Gudavalli \$150 Fairview High School <i>Chemical and Morphological Dependent Properties of Semiconductor Nanocrystals</i>	10th grade Boulder
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### Colorado Association of Meat Processors

#### Meat Science/Food Safety Award

Kaitlyn Dumm certificate, \$70 Windsor High School <i>Leftovers to Livestock: Turning Human Food Waste into Livestock Feed with Consistent Nutrient Values</i>	10th grade Windsor
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### Colorado Association of Science Teachers

Grace Gulig \$75 Monument Academy <i>Keeping Soil in Its Place</i>	7th grade Monument
Madeline Steinle \$75 Trinity Lutheran School <i>The Effects of Aspartame on Cognitive Abilities</i>	8th grade Pueblo
Emma Scholz \$75 Sterling High School <i>Geographical Correlation Maps of Malaria Hemoglobin SS Disease Allele Frequency and Eco. of Ethiopia</i>	12th grade Sterling
Syree Gunnels \$75 Sargent Jr/Sr High School <i>Extraction of Health Benefiting Compounds in Colored Potato Tubers</i>	10th grade Monte Vista

### Colorado Biology Teachers' Association

#### CBTA Best Biology Project Award

Kathryn Kummel certificate, \$75 North Middle School <i>The Danger of Drinking Water: How Mountain Lions Affect Elk Behavior and Aspen Regeneration</i>	6th grade Colorado Springs
Logan Collins certificate, \$75 Fairview High School <i>An RK2 Mediated Bacterial Conjugation Delivery System for Artificial Genes Coding for Antimicrobial Polypeptides: A Novel Synthetic Biology Approach to Antibiotic Resistance</i>	12th grade Boulder

### Colorado BioScience Institute

#### BioGENEius Challenge

Jonathan Snedeker all-expense paid trip to compete at the US National competition held in Philadelphia, PA, June 2015 Fairview High School <i>Combined Inhibition of Wee1 and Parp1/2 as a Novel Therapy for Acute Myeloid Leukemia</i>	12th grade Boulder
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### Colorado Chemistry Teachers Association

#### CCTA Chemistry Award

Richard Mallory \$100 The Classical Academy College <i>Hazardous Waste to Renewable Energy</i>	11th grade Colorado Springs
Connor McCauley \$100 Blessed Sacrament Catholic <i>Vitamin C in Vegetables</i>	7th grade Denver

### Colorado Dental Association

Grace Varga \$50 gift card American Academy <i>Brush It or Buzz It: The Comparison of Rotating and Vibrating Toothbrushes</i>	7th grade Parker
Edwin Bodoni \$100 gift card Cherry Creek Challenge School <i>Dental Implants: The Healthier Alternative</i>	8th grade Denver
Dakota Cook \$50 gift card Walsh Jr/Sr High School <i>Dental Disintegration</i>	8th grade Walsh
Jenner Dunn Julia Mathews 2 \$50 gift cards Brush High School <i>The Effects of Citric and Phosphoric Acid on Tooth Enamel</i>	9th grade 9th grade Brush

## Colorado Division of Reclamation, Mining & Safety

### Outstanding Earth Science Award

Dylan Dorskocil 8th grade  
\$75  
Bayfield Middle school Bayfield  
*Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation*

Liam Foster 9th grade  
\$75  
Animas High School Durango  
*Testing the Water: A Review of Various Acid Mine Drainage Remediation Options*

## Colorado Environmental Health Association

Emhyr Subramanian 7th grade  
\$75, framed certificate  
Cherry Creek Challenge School Denver  
*Potential Biodegradable Alternatives to Current Petroleum-Based Surfactants for Oil Spill Cleanup*

Hannah Fischer 10th grade  
\$150, framed certificate, invitation to exhibit at the CEHA Annual Educational Conference  
Sierra Grande Jr/Sr High School Blanca  
*Pharmacoenvironmentology: Developing a Baseline for PPCP Contaminant Levels at the MVNWR*

## Colorado Foundation for Agriculture

### Agriculture in the Classroom Award

Dylan Dorskocil 8th grade  
\$50, certificate  
Bayfield Middle school Bayfield  
*Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation*

Lacey Niccoli 8th grade  
\$50, certificate  
Liberty School Joes  
*Denatured: The Effects of pH on Germination*

Syree Gunnels 10th grade  
\$50, certificate  
Sargent Jr/Sr High School Monte Vista  
*Extraction of Health Benefiting Compounds in Colored Potato Tubers*

Margaret Preigh 12th grade  
\$50, certificate  
Fairview High School Boulder  
*Pulsing Electromagnetic Radiation at 50/60Hz as a Pest Repellant in Insects*

## Colorado Geographic Alliance

### CGA Application of Geography Award

Kelsey Brethauer 7th grade  
\$100  
Windsor Charter Academy Windsor  
*Bad Beads*

Emma Scholz 12th grade  
\$100  
Sterling High School Sterling  
*Geographical Correlation Maps of Malaria Hemoglobin SS Disease Allele Frequency and Eco. of Ethiopia*

## Colorado Medical Society

### CMS Education Foundation Award

Jayden Durbin 12th grade  
\$100, invitation to the winners and their parents to exhibit at the Colorado Medical Society Annual Meeting and attendance at the Presidential Inaugural Dinner with a paid overnight stay  
Haxtun High School Haxtun  
*Vitamin D Stimulates the mRNA Expression of ACPP in LNCaP Cells*

Laura Clark 7th grade  
\$100, invitation to the winners and their parents to exhibit at the Colorado Medical Society Annual Meeting and attendance at the Presidential Inaugural Dinner with a paid overnight stay  
St. Columba Catholic School Durango  
*Paper Microfluidics: Medical Diagnostics for the Developing World*

## Colorado Mineral Society

### Best Earth Science Award

Max Warnock 7th grade  
\$35, mineral specimen, book, certificate  
Home School Fort Collins  
*Testing the Viking Sunstone Legend*

Cassandra Blew 8th grade  
\$50, mineral specimen, book, certificate  
La Veta Jr/Sr High School La Veta  
*Beneath the Ashes: How to Reduce Flash Flooding Rates on Hydrophobic Soil Layers After a Fire*

Wyatt Wiening 9th grade  
\$35, mineral specimen, book, certificate  
Trinidad High School Trinidad  
*Expanding Clays*

Hannah deKay 10th grade  
Raelen Barr 10th grade  
\$50, mineral specimen, book, certificate  
Silverton Schools Silverton  
*Investigating Innovative Tools and Techniques for Heavy Metal Mapping in Historic Mining District*

## Colorado Mycological Society

### Mycological Award

Dylan Dorskocil 8th grade  
\$50, CMS honorary membership certificate, signed copy of Vera Evenson's "Rocky Mountain Mushrooms" book (to be mailed)  
Bayfield Middle school Bayfield  
*Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation*

## Colorado Scientific Society

Dylan Dorskocil 8th grade  
\$50  
Bayfield Middle school Bayfield  
*Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation*

Antonio Campos 8th grade  
\$75  
Cherry Creek Challenge School Denver  
*Why Is Venice Sinking?*



Liam Foster 9th grade  
\$75  
Animas High School Durango  
*Testing the Water: A Review of Various Acid Mine Drainage Remediation Options*

Hannah deKay 10th grade  
Raelen Barr 10th grade  
\$100  
Silverton Schools Silverton  
*Investigating Innovative Tools and Techniques for Heavy Metal Mapping in Historic Mining District*

**Colorado State University  
College of Agricultural Sciences**

*Innovations in the Science of Agriculture Award*  
Calista Law 7th grade  
\$500  
Boulder Country Day School Boulder  
*Eco-Plastics*  
Mitchell Fosdick 10th grade  
\$500  
Fowler High School Fowler  
*Phase III: Further Identification of Isolated Green Fuel Compounds.*

**Colorado State University  
Dept. of Biochemistry & Molecular Biology**  
Jonathan Snedeker 12th grade  
certificate, \$100  
Fairview High School Boulder  
*Combined Inhibition of Wee1 and Parp1/2 as a Novel Therapy for Acute Myeloid Leukemia*

**Colorado State University  
Dept. of Chemistry**  
Nicole Miller 7th grade  
certificate, \$100  
Ortega Middle School Alamosa  
*Blue Bottle Blues*  
Richard Mallory 11th grade  
certificate, \$100  
The Classical Academy College Colorado Springs  
*Hazardous Waste to Renewable Energy*

**Colorado State University  
Dept. of Horticulture & Landscape Architecture**  
Sarah Duzenack 6th grade  
\$100  
La Veta Jr/Sr High School La Veta  
*A Comparison of Endomycorrhizae and Commercial Fertilizer on Bent and Blue Grass*  
Alicia Wu 8th grade  
\$100  
Summit Charter Middle School Boulder  
*The Acidulous Truth About the Flora of Our Environment*

Kaixin Cui 11th grade  
\$100  
Fairview High School Boulder  
*Evolutionary Analysis of Cestrum in the Antilles Based on Phylogenetic Relationships and Time Axis*

Syree Gunnels 10th grade  
\$100  
Sargent Jr/Sr High School Monte Vista  
*Extraction of Health Benefiting Compounds in Colored Potato Tubers*

**Colorado State University  
Energy Institute  
Energy Achievement Award**

Kelsey Lindbloom 11th grade  
certificate, \$500, invitation to present at the Spark! Experience Energy: Colorado on the Cutting Edge of Energy Innovation event on April 15, 2015  
Salida High School Salida  
*Fueling the Future Phase 4: Constructing an Aqueous Vehicle Powered by a Microbial Fuel Cell*

**Colorado State University  
School of Biomedical Engineering  
Excellence in Biomedical Engineering Award**  
Jonathan Snedeker 12th grade  
certificate, gift bag  
Fairview High School Boulder  
*Combined Inhibition of Wee1 and Parp1/2 as a Novel Therapy for Acute Myeloid Leukemia*

Jayden Durbin 12th grade  
certificate, gift bag  
Haxtun High School Haxtun  
*Vitamin D Stimulates the mRNA Expression of ACPP in LNCaP Cells*

Logan Collins 12th grade  
certificate, gift bag, \$50 gift bag  
Fairview High School Boulder  
*An RK2 Mediated Bacterial Conjugation Delivery System for Artificial Genes Coding for Antimicrobial Polypeptides: A Novel Synthetic Biology Approach to Antibiotic Resistance*

**Colorado Veterinary Medical Association  
Veterinary Science Award**  
Jacob Wright 8th grade  
\$50 from CVMA, \$50 from CVMA Auxiliary, certificate  
Walsh Jr/Sr High School Walsh  
*Wind in My Mane*  
Haleigh Prosser 9th grade  
\$50 from CVMA, \$50 from CVMA Auxiliary, certificate  
Wiley School Wiley  
*Cowcium: Effects of Calcium Citrate in Cattle Fed Wet Distillers' Grains Rations*

## Colorado's Touchstone Energy Cooperatives

### *The Colorado EnergyWise Award*

Noah Rainer	8th grade
Megan Harmon	8th grade
\$250	
Cortez Middle School	Cortez
<i>Harvesting the Sun</i>	
Taylor Coons	12th grade
Dante Pasioneck	12th grade
\$250	
Nederland Middle/Senior High	Nederland
<i>The Ideal Energy Efficient Home: An Arduino Based Project</i>	

## Colorado-Wyoming Society of American Foresters

### *Society of American Foresters Excellence in Forestry Research Award*

Lexy Riggo-Guadagnoli	7th grade
\$100	
La Veta Jr/Sr High School	La Veta
<i>Investigating and Antimicrobial Properties of Abies concolor on Staphylococcus aureus and Streptococcus</i>	
Isaac Jordan	9th grade
\$100	
Animas High School	Durango
<i>Save the World, Bomb the Forest</i>	

## Comstock Family

### *Heather Comstock Memorial Award*

Logan Collins	12th grade
\$300	
Fairview High School	Boulder
<i>An RK2 Mediated Bacterial Conjugation Delivery System for Artificial Genes Coding for Antimicrobial Polypeptides: A Novel Synthetic Biology Approach to Antibiotic Resistance</i>	

## Constant Family

### *Constant Family Award for Excellence in Computer Science*

Molly Nehring	8th grade
\$100, certificate, 8 Gb flash drive	
Monte Vista Middle School	Monte Vista
<i>Genetic Algorithms: Solving Math Problems Using Ideas from Nature</i>	
Avi Swartz	10th grade
Tyler Giallanza	10th grade
Ian Johnson	12th grade
\$150, certificate, 16 Gb flash drive	
Cherry Creek High School	Greenwood Village
<i>Developing a Class Scheduling Program with Minimum Conflicts for Large Schools</i>	

## Eppler Family

### *Eppler Family Award*

Victoria Dunivan	8th grade
microprocessor kit & digital multimeter (value \$100)	
Walsh Jr/Sr High School	Walsh
<i>Dealing with Diabetes</i>	

Cristian Granados	8th grade
microprocessor kit & digital multimeter (value \$100)	
North Middle School	Colorado Springs
<i>Put A Little Spring in Your Step</i>	

## Fort Collins Conservation District

Steven Smith	7th grade
plaque, \$50	
The Classical Academy	Colorado Springs
<i>Best Mulch for the Money</i>	
Isaac Jordan	9th grade
plaque, \$50	
Animas High School	Durango
<i>Save the World, Bomb the Forest</i>	

## Frank Armbruster Foundation

### *Armbruster Memorial Award*

Jamison White	8th grade
\$100	
Blevins Middle School	Fort Collins
<i>Flight Made Simple</i>	

## Geological Society of America

### *GSA Awards in Environmental Geology*

Jordyn Hall	8th grade
plaque, GSA membership, 2015 GSA calendar, GSA photo scale	
Peak to Peak Charter School	Lafayette
<i>Temperamental Twisters</i>	
Isaac Jordan	9th grade
plaque, GSA membership, 2015 GASA calendar, GSA photo scale, Rite in the Rain spiral notebook, Rite in the Rain all weather pen	
Animas High School	Durango
<i>Save the World, Bomb the Forest</i>	

### *GSA Awards in Environmental Geology*

Ivo Erben	11th grade
plaque, GSA membership, 2015 GSA calendar, GSA photo scale, The Geoscientists Handbook, Rite in the Rain spiral notebook, Rite in the Rain all weather pen	
Boulder High School	Boulder
<i>The Effect of Climate on a Glacier's ELA and Ablation Gradient</i>	

## Gromko Family

### *Gerald Gromko Memorial Award*

Shepherd Kruse	10th grade
\$150	
Home School	Colorado Springs
<i>Designing and Evaluating an Aerospike Rocket Engine for Increased Thrust</i>	

## Human Factors and Ergonomics Society

### *Rocky Mountain Chapter*

Mary Hood	11th grade
\$100	
Sargent Jr/Sr High School	Monte Vista
<i>SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly</i>	

**Institute of Electrical & Electronics Engineers  
High Plains Section**

Cristian Granados 8th grade  
SparkFun Inventor's Kit, invitation to an IEEE meeting  
North Middle School Colorado Springs  
*Put A Little Spring in Your Step*

Mary Hood 11th grade  
SprakFun Inventor's Kit, Raspberry Pi 2 Computer, invitation  
to an IEEE meeting  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the  
Fall Susceptibility of the Elderly*

**Little Shop of Physics**

*Matthew McCausland Memorial Award*

Jordyn Hall 8th grade  
science "stuff" (value \$100)  
Peak to Peak Charter School Lafayette  
*Temperamental Twisters*

Nate Stryker 8th grade  
science "stuff" (value \$100)  
Columbine Middle School Montrose  
*Household Hydraulics*

**Lockheed Martin**

Noah Rainer 8th grade  
Megan Harmon 8th grade  
\$50  
Cortez Middle School Cortez  
*Harvesting the Sun*

Ben Sheffer 11th grade  
\$100  
Eaglecrest High School Centennial  
*The Effects of Electron Beam Dose on the Visible Spectroscopic  
Signatures of Thin C60 Films*

**National Centers for Environmental Information**

*NCEI Award of Scientific Achievement*

Avery Lin 7th grade  
\$50 money order, certificate  
Stanley British Primary School Denver  
*War on Waves: A Study of Different Coastal Defenses and  
Their Effectiveness Against Tsunamis*

**Rocky Mountain Association of Geologists**

Antonio Campos 8th grade  
cash award  
Cherry Creek Challenge School Denver  
*Why Is Venice Sinking?*

Max Warnock 7th grade  
cash award  
Home School Fort Collins  
*Testing the Viking Sunstone Legend*

Ivo Erben 11th grade  
cash award  
Boulder High School Boulder  
*The Effect of Climate on a Glacier's ELA and Ablation  
Gradient*

**SACNAS, Colorado State University Chapter**

*SACNAS CSU - Rising Young Scientist Award*

Anu Khanna 11th grade  
\$50  
Cherry Creek High School Greenwood Village  
*The Effects of an Ecological Stress on Generations of Plants*

Maia Drugmand 8th grade  
\$50  
Peak to Peak Charter School Lafayette  
*Dirty Energy*

Amy Hong 9th grade  
\$50  
Sand Creek High School Colorado Springs  
*The Effects of Ammonia on Plant Growth*

Advaita Singh 8th grade  
\$50  
Cherry Creek Challenge School Denver  
*Effects of Ultraviolet Radiation on Planaria*

**Science Toy Magic, LLC**

*Science Toy Magic Classroom Demonstration  
Award*

John Quinn 8th grade  
\$100  
Summit Charter Middle School Boulder  
*Wind, Wings, and Lift*

*Award*  
Mark Lenczycki 8th grade  
\$50  
Blevins Middle School Fort Collins  
*My Prosthetic Arm Extension*

**Society for Mining, Metallurgy, and Exploration  
Colorado Section**

Steven Smith 7th grade  
plaque, \$100  
The Classical Academy Colorado Springs  
*Best Mulch for the Money*

Dylan Daskocil 8th grade  
plaque, \$200  
Bayfield Middle school Bayfield  
*Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation*

Cassidy Plane 10th grade  
plaque, \$200  
Sargent Jr/Sr High School Monte Vista  
*More or Less*

Hannah deKay 10th grade  
Raelen Barr 10th grade  
plaque, \$400  
Silverton Schools Silverton  
*Investigating Innovative Tools and Techniques for Heavy Metal  
Mapping in Historic Mining District*

**Society of Manufacturing Engineers  
Colorado Chapter 354**

*Andy Keller Memorial Award*

Ryan Tseng 10th grade  
\$100, recognition by local chapter  
Fairview High School Boulder  
*The Pursuit of Sharpness: A Study on Composition and  
Geometry of Cutting Instruments*

Ian Wilkins 12th grade  
\$150, recognition by local chapter  
Fairview High School Boulder  
*Optimizing 3D CAD Scanning Algorithms Through  
Multi-Sensor Data Input*

Trevor Jordan 11th grade  
\$200, recognition by local chapter  
Animas High School Durango  
*A Wing of the Future: Part II*

**Society of Women Engineers  
Rocky Mountain Section**

Isabel Kahler 8th grade  
\$75  
Corwin International Magnet Pueblo  
*Defying Gravity*

Robin Bahrami 8th grade  
\$100  
Summit Charter Middle School Boulder  
*The Soundasaurus: Digital Sound Analysis Using Signal  
Processing Algorithms*

Haley Weinstein 11th grade  
\$75  
Fairview High School Boulder  
*Analyzing Different Methods of Finding the Force at General  
Yield in Sub-sized Charpy Testing*

Mary Hood 11th grade  
\$100  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the  
Fall Susceptibility of the Elderly*

**Soil & Water Conservation Society  
Colorado Chapter**

Katie McCall 8th grade  
certificate, \$100  
Walsh Jr/Sr High School Walsh  
*Natural Fertilizing: Observing Wheat Growth with Different  
Manure*

Cassidy Plane 10th grade  
certificate, \$100  
Sargent Jr/Sr High School Monte Vista  
*More or Less*

**SPIE: The International Society for Optics and  
Photonics**

*SPIE Optics and Photonics Science Fair Award*

Luke Rohlwing 8th grade  
\$50  
American Academy Castle Pines  
*Solar Cell Jenga: Increasing Energy Capacity with Stacked  
Photovoltaic Solar Panels*

Max Warnock 7th grade  
\$100  
Home School Fort Collins  
*Testing the Viking Sunstone Legend*

Sara Nehring 6th grade  
\$150  
Monte Vista Middle School Monte Vista  
*The Moon Is So Bright: Do You Need Sunglasses at Night?*

Sirisha Gudavalli 10th grade  
\$100  
Fairview High School Boulder  
*Chemical and Morphological Dependent Properties of  
Semiconductor Nanocrystals*

Ian Wilkins 12th grade  
\$150  
Fairview High School Boulder  
*Optimizing 3D CAD Scanning Algorithms Through  
Multi-Sensor Data Input*

Ben Sheffer 11th grade  
\$250  
Eaglecrest High School Centennial  
*The Effects of Electron Beam Dose on the Visible Spectroscopic  
Signatures of Thin C60 Films*

**The Aquaponic Source**

*The Aquaponic Source's Innovation in Aquaponics  
Award*

Makayla Windholz 8th grade  
Aquaponics aquaponic growing system (\$150 value)  
Imagine Charter School Firestone  
*Growing with Aquaponics vs. Hydroponics*

**The Inventor's Roundtable**

*Inventors' Roundtable Award*

Mary Hood 11th grade  
\$100, free patent search (value \$499)  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the  
Fall Susceptibility of the Elderly*

**Trout Unlimited**

*Trout Unlimited Conservation Award*

Tara Suppes 12th grade  
\$75  
Delta High School Delta  
*Analysis on Stream Temperature Variation*

Katelynn Salmon 8th grade  
\$125  
Monument Academy Monument  
*Effect of Microbeads on Daphnia Heart Rate*

Hannah Fischer 10th grade  
\$200  
Sierra Grande Jr/Sr High School Blanca  
*Pharmacoenvironmentology: Developing a Baseline for PPCP  
Contaminant Levels at the MVNWR*

**United States Department of Commerce**  
*Department of Commerce Award for Excellence in  
Science and Engineering*

Stephen Parish 12th grade  
alternate for the opportunity for summer employment with the  
Department of Commerce  
Home School Colorado Springs  
*Cyber Automated Report Linker (C.A.R.L): Minimizing  
Expansion of Catastrophic Cyber Infiltrations*

Ian Wilkins 12th grade  
the opportunity for summer employment with the Department  
of Commerce with the possibility for future continuing  
employment  
Fairview High School Boulder  
*Optimizing 3D CAD Scanning Algorithms Through  
Multi-Sensor Data Input*

**United States Geological Survey**  
*USGS Excellence in Geological or Water Research  
Award*

Joshua Miller 6th grade  
reference book, mineral specimen  
Skinner Middle School Denver  
*What Type of Soil Best Supports a House During a Liquefaction  
Event?*

Michelle Kummel 9th grade  
reference book, mineral specimen  
Palmer High School Colorado Springs  
*A Spoonful of Sugar Helps the Nitrate Go Down:  
Denitrification in Wetland Soil*

**University of Colorado, Denver**

*Medical Scientist Training Program Award*

Laura Clark 7th grade  
\$50  
St. Columba Catholic School Durango  
*Paper Microfluidics: Medical Diagnostics for the Developing  
World*

Casey Shaw 9th grade  
\$50  
Liberty School Joes  
*Arrested Development: Glyphosate-Based Herbicides on the  
Embryonic Development of Zebra Danios*

**University of Northern Colorado**

*MAST Institute Award*

Jack Stade 8th grade  
\$50  
Nevin Platt Middle School Boulder  
*Modeling Parasitic Relations Using Computer Models*

Kevyn Kelso 10th grade  
\$50  
The Classical Academy Colorado Springs  
*Automatic Trombone Tuner*

**Vaughan Web Works, LLC**

*Glissmann Family Award for Best Use of Computer  
Program Development*

Molly Nehring 8th grade  
\$50

Monte Vista Middle School Monte Vista  
*Genetic Algorithms: Solving Math Problems Using Ideas from  
Nature*

Stephen Parish 12th grade  
\$100  
Home School Colorado Springs  
*Cyber Automated Report Linker (C.A.R.L): Minimizing  
Expansion of Catastrophic Cyber Infiltrations*

**Wojtaszek Family**

*Paul Wojtaszek Memorial Award*

Jayden Durbin 12th grade  
\$300  
Haxtun High School Haxtun  
*Vitamin D Stimulates the mRNA Expression of ACPP in LNCaP  
Cells*

**Women in Physics**

**Colorado State University Chapter**

*Promising Young Woman in Science Award*

Isabel Kahler 8th grade  
\$50  
Corwin International Magnet Pueblo  
*Defying Gravity*

**Zonta Club of Boulder County**

*Amelia Earhart Award*

Elani Frantz 8th grade  
Paige Lessig 8th grade  
certificate, \$100  
North Middle School Colorado Springs  
*What's the Weather Forecast in Space?*

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**Scholarships**

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**Adams State University**

*Adams State University Scholarships*

Merritt Singley 11th grade  
ASU scholarship valued as the equivalent to one-year resident  
tuition and fees (~\$8,500)

Brush High School Brush  
*The Influence of Omega-3 Fatty Acids on Lipid Microdomains  
Obtained from Bovine Luteal Cells*

Sarena Wells 12th grade  
ASU scholarship valued as the equivalent to one-year resident  
tuition and fees (~\$8,500)  
Fort Morgan High School Fort Morgan  
*Frustration Responses: An Analysis of Dispositional Learning*

Shelly Steinert 11th grade  
ASU scholarship valued as the equivalent to one-year resident  
tuition and fees (~\$8,500)

Sargent Jr/Sr High School Monte Vista  
*Determining Flame Retardancy of Maize Stover, Medicago  
Sativa, and Hordeum Vulgare Ash*

Wyatt Wiening 9th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Trinidad High School Trinidad  
*Expanding Clays*

Kelsey Lindbloom 11th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Salida High School Salida  
*Fueling the Future Phase 4: Constructing an Aqueous Vehicle Powered by a Microbial Fuel Cell*

Brandon Navratil 11th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Animas High School Durango  
*Portable Conductivity Probe*

Jessalyn Bay-Voit 10th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Durango High School Durango  
*Fire Ready OR Not?*

Derrick Zanoni 10th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Silverton Schools Silverton  
*Multi-Purpose Robo Glove*

Collin Leonard 10th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Springfield Jr/Sr High School Springfield  
*Gatorade's Effect on Heart Rate*

Rebecca Bloomfield 10th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Palmer High School Colorado Springs  
*Competence Dependent Chemotaxis and Genomic Repair in Acinetobacter baylyi*

Gabriella Tolan 11th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Brush High School Brush  
*Vertical Motion to Rotational Movement of a Rectangular Wing*

Joel Wagner 10th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Arickaree School Anton  
*Effects of Water Contaminants on Plants*

Aubrey Wells 10th grade  
Kaitlin Wells 9th grade  
ASU scholarship valued as the equivalent to one-year resident tuition and fees (~\$8,500)  
Fort Morgan High School Fort Morgan  
*Electromagnetic Spectrum: Absorption Measurements and Their Applications to Energy Analysis*

## Colorado School of Mines *Mines CSEF Scholarship*

Trevor Jordan 11th grade  
\$1,000 CMS scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)  
Animas High School Durango  
*A Wing of the Future: Part II*

Madeline Goosman 11th grade  
\$1,000 CMS scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)  
Fairview High School Boulder  
*Mandarin Tone Perception in Simulations of Electro-Acoustic and Cochlear-Implant Hearing*

Haley Weinstein 11th grade  
\$1,000 CMS scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)  
Fairview High School Boulder  
*Analyzing Different Methods of Finding the Force at General Yield in Sub-sized Charpy Testing*

Mary Hood 11th grade  
\$1,000 CMS scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly*

Brandon Navratil 11th grade  
\$1,000 CMS scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)  
Animas High School Durango  
*Portable Conductivity Probe*

Hannah Langford 11th grade  
Molly Dickinson 11th grade  
\$1,000 CMS scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)  
Animas High School Durango  
*The Effects of Technology on Teenagers' Sleep Patterns*

Emily Zislis 11th grade  
\$1,000 CMS scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)  
Cherry Creek High School Greenwood Village  
*The Effect of Genetically Modified Soybean Consumption on Mouse Weight*

## Colorado State University *College of Natural Sciences Scholarship*

Mary Hood 11th grade  
\$1,000 renewable scholarship to attend CSU  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly*

Logan Collins 12th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*An RK2 Mediated Bacterial Conjugation Delivery System for Artificial Genes Coding for Antimicrobial Polypeptides: A Novel Synthetic Biology Approach to Antibiotic Resistance*

Elliot Gorokhovsky 10th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*A Novel Algorithm for Model Counting*

Sam Scheeres 12th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*Rigorous Constraints on Exchange for the 3-body Problem*

#### *Colorado State University Scholarship*

Margaret Preigh 12th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*Pulsing Electromagnetic Radiation at 50/60Hz as a Pest Repellant in Insects*

Serena Rusk 11th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*An Analysis of Risk Factors for Developing Low Body Satisfaction in Adolescents*

Sirisha Gudavalli 10th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*Chemical and Morphological Dependent Properties of Semiconductor Nanocrystals*

Jesse Zhang 12th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*Effect of the Atlantic Ocean on Sudden Stratospheric Warming*

Trevor Jordan 11th grade  
\$1,000 renewable scholarship to attend CSU  
Animas High School Durango  
*A Wing of the Future: Part II*

Mary Hood 11th grade  
\$1,000 renewable scholarship to attend CSU  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly*

Hannah Hartung 12th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*Effects of Parasites from Long Term Invasive Fish on Native Amphibians in the California Bay Area*

Elliot Gorokhovsky 10th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*A Novel Algorithm for Model Counting*

Jonathan Snedeker 12th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*Combined Inhibition of Wee1 and Parp1/2 as a Novel Therapy for Acute Myeloid Leukemia*

Sam Scheeres 12th grade  
\$1,000 renewable scholarship to attend CSU  
Fairview High School Boulder  
*Rigorous Constraints on Exchange for the 3-body Problem*

Jessica Shand 10th grade  
\$1,000 renewable scholarship to attend CSU  
Discovery Canyon Campus Colorado Springs  
*Analysis of Spermatophyte Divergence to Expedite Identification of Novel Drug Candidates*

#### **Colorado State University, Pueblo**

##### *Colorado State University, Pueblo Scholarship*

Kelsey Lindbloom 11th grade  
\$1,000 scholarship to attend CSU, Pueblo  
Salida High School Salida  
*Fueling the Future Phase 4: Constructing an Aqueous Vehicle Powered by a Microbial Fuel Cell*

#### **University of Colorado, Boulder**

##### *College of Engineering and Applied Sciences Scholarships*

Molly Nehring 8th grade  
4-year \$500 scholarship  
Monte Vista Middle School Monte Vista  
*Genetic Algorithms: Solving Math Problems Using Ideas from Nature*

Michelle Kummel 9th grade  
4-year \$500 scholarship  
Palmer High School Colorado Springs  
*A Spoonful of Sugar Helps the Nitrate Go Down: Denitrification in Wetland Soil*

Sirisha Gudavalli 10th grade  
4-year \$500 scholarship  
Fairview High School Boulder  
*Chemical and Morphological Dependent Properties of Semiconductor Nanocrystals*

Mary Hood 11th grade  
4-year \$500 scholarship  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly*

Haley Weinstein 11th grade  
4-year \$500 scholarship  
Fairview High School Boulder  
*Analyzing Different Methods of Finding the Force at General Yield in Sub-sized Charpy Testing*

Madeline Goosman 11th grade  
4-year \$500 scholarship  
Fairview High School Boulder  
*Mandarin Tone Perception in Simulations of Electro-Acoustic and Cochlear-Implant Hearing*

Shelly Steinert 11th grade  
4-year \$500 scholarship  
Sargent Jr/Sr High School Monte Vista  
*Determining Flame Retardancy of Maize Stover, Medicago Sativa, and Hordeum Vulgare Ash*

Areefa Rahman 11th grade  
4-year \$500 scholarship  
Cherry Creek High School Greenwood Village  
*Saving the World with One Feather at a Time: The Amalgamation of Polymers using Chicken Feathers*

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**SSP**

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**American Psychological Association**

*Achievement in Research in Psychological Science*  
Caroline Jennings 8th grade  
certificate  
The Classical Academy Colorado Springs  
*Ask Me Twice*  
Serena Rusk 11th grade  
certificate  
Fairview High School Boulder  
*An Analysis of Risk Factors for Developing Low Body  
Satisfaction in Adolescents*

**Arizona State University****Walton Sustainability Solutions Initiatives***ASU Walton Sustainability Solutions Award*

Liam Foster 9th grade  
certificate, entry for Grand Prize of a trip to Arizona for the  
2016 Sustainability Solutions Festival (entries must be mailed  
by May 1, 2015 to be eligible)  
Animas High School Durango  
*Testing the Water: A Review of Various Acid Mine Drainage  
Remediation Options*  
Hannah Fischer 10th grade  
certificate, entry for Grand Prize of a trip to Arizona for the  
2016 Sustainability Solutions Festival (entries must be mailed  
by May 1, 2015 to be eligible)  
Sierra Grande Jr/Sr High School Blanca  
*Pharmacoenvironmentology: Developing a Baseline for PPCP  
Contaminant Levels at the MVNWR*

Casey Shaw 9th grade  
certificate, entry for Grand Prize of a trip to Arizona for the  
2016 Sustainability Solutions Festival (entries must be mailed  
by May 1, 2015 to be eligible)  
Liberty School Joes  
*Arrested Development: Glyphosate-Based Herbicides on the  
Embryonic Development of Zebra Danios*

Hannah deKay 10th grade  
Raelen Barr 10th grade  
certificate, entry for Grand Prize of a trip to Arizona for the  
2016 Sustainability Solutions Festival (entries must be mailed  
by May 1, 2015 to be eligible)  
Silverton Schools Silverton  
*Investigating Innovative Tools and Techniques for Heavy Metal  
Mapping in Historic Mining District*

**ASM Materials Education Foundation***Most Outstanding Exhibit in Materials Science*

Emhyr Subramanian 7th grade  
certificate, medallion (to be mailed)  
Cherry Creek Challenge School Denver  
*Potential Biodegradable Alternatives to Current  
Petroleum-Based Surfactants for Oil Spill Cleanup*  
Sirisha Gudavalli 10th grade  
certificate, medallion (to be mailed)  
Fairview High School Boulder  
*Chemical and Morphological Dependent Properties of  
Semiconductor Nanocrystals*

**Association for Women Geoscientists***Student Awards for Geoscience Excellence*

Jordyn Hall 8th grade  
certificate  
Peak to Peak Charter School Lafayette  
*Temperamental Twisters*  
MaKayla Hofner 9th grade  
certificate  
Woodlin School Woodrow  
*A Gas More Toxic: A Study of Radon in Households*

**Broadcom MASTERS***National Middle School Science & Engineering Fair  
Competition Nomination*

Kathryn Kummel 6th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
North Middle School Colorado Springs  
*The Danger of Drinking Water: How Mountain Lions Affect Elk  
Behavior and Aspen Regeneration*  
Felix Channiago 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
West Jefferson Middle School Conifer  
*The Effect of Temperature on Hunting Response Time of  
Female Habronattus Jumping Spiders*  
Caroline Jennings 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
The Classical Academy Colorado Springs  
*Ask Me Twice*  
Elora Smith 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Sargent Jr/Sr High School Monte Vista  
*The Sweet Smell of You*  
Emhyr Subramanian 7th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
ompetition  
Cherry Creek Challenge School Denver  
*Potential Biodegradable Alternatives to Current  
Petroleum-Based Surfactants for Oil Spill Cleanup*  
Calista Law 7th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Boulder Country Day School Boulder  
*Eco-Plastics*  
Sara Nehring 6th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Monte Vista Middle School Monte Vista  
*The Moon Is So Bright: Do You Need Sunglasses at Night?*  
Max Warnock 7th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Home School Fort Collins  
*Testing the Viking Sunstone Legend*



Mark Bloomfield 7th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Holmes Middle School Colorado Springs  
*Blow Out: Scaling Down Compressed Air Energy Storage for  
Household Use*

Maia Drugmand 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Peak to Peak Charter School Lafayette  
*Dirty Energy*

Cristian Granados 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
North Middle School Colorado Springs  
*Put A Little Spring in Your Step*

Pranav Subramanian 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Campus Middle School Greenwood Village  
*Ultrasonic-Based Optics Utilized for the Blind and Visually  
Impaired*

Avery Lin 7th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Stanley British Primary School Denver  
*War on Waves: A Study of Different Coastal Defenses and  
Their Effectiveness Against Tsunamis*

Advaita Singh 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Cherry Creek Challenge School Denver  
*Effects of Ultraviolet Radiation on Planaria*

Jack Stade 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Nevin Platt Middle School Boulder  
*Modeling Parasitic Relations Using Computer Models*

Molly Nehring 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Monte Vista Middle School Monte Vista  
*Genetic Algorithms: Solving Math Problems Using Ideas from  
Nature*

Sam Duarte 7th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Quest Academy Dacono  
*Bagpipes and Earplugs: Should Great Highland Bagpipe  
Players Use Earplugs When Practicing?*

Edwin Bodoni 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Cherry Creek Challenge School Denver  
*Dental Implants: The Healthier Alternative*

Taylor Dower 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Turner Middle School Berthoud  
*Playground Bacterial Levels Comparison*

Madison Searles 7th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
STEM Academy Highlands Ranch  
*A Comparison of Antibacterial Hand Cleansing Solutions and  
Their Effectiveness on Killing Bacteria*

Brendan Gould 7th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
The Classical Academy Colorado Springs  
*Analyzing the Effects of Various Materials on a Magnetic Field*

John Quinn 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Summit Charter Middle School Boulder  
*Wind, Wings, and Lift*

Alicia Wu 8th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
Summit Charter Middle School Boulder  
*The Acidulous Truth About the Flora of Our Environment*

Sarah Duzenack 6th grade  
certificate, nomination to the 2015 Broadcom MASTERS  
competition  
La Veta Jr/Sr High School La Veta  
*A Comparison of Endomycorrhizae and Commercial Fertilizer  
on Bent and Blue Grass*

### **Intel Corporation**

#### *Excellence in Computer Science Award*

Robert Meikle 9th grade  
certificate, \$200 (to be mailed)  
Sand Creek High School Colorado Springs  
*Graphing Calculator Application*

Stephen Parish 12th grade  
certificate, \$200 (to be mailed)  
Home School Colorado Springs  
*Cyber Automated Report Linker (C.A.R.L): Minimizing  
Expansion of Catastrophic Cyber Infiltrations*

### **Mu Alpha Theta**

#### *Mu Alpha Theta Award*

Jennifer Jones 12th grade  
certificate  
Frontier Academy Greeley  
*Creating Permutations for Actions on Young Tableaux, Year 2*

Elliot Gorokhovskiy 10th grade  
certificate  
Fairview High School Boulder  
*A Novel Algorithm for Model Counting*

## National Oceanic and Atmospheric Administration

### *Taking the Pulse of the Planet Award*

Emhyr Subramanian 7th grade  
certificate, medallion  
Cherry Creek Challenge School Denver  
*Potential Biodegradable Alternatives to Current Petroleum-Based Surfactants for Oil Spill Cleanup*

Jesse Zhang 12th grade  
certificate, medallion  
Fairview High School Boulder  
*Effect of the Atlantic Ocean on Sudden Stratospheric Warming*

## Ricoh Americas Corporation

### *Ricoh Sustainability Development Award*

Juan Sanchez 8th grade  
certificate  
Pueblo School for Arts and Sciences Pueblo  
*What the Frack!*

Hannah deKay 10th grade  
Raelen Barr 10th grade  
certificate  
Silverton Schools Silverton  
*Investigating Innovative Tools and Techniques for Heavy Metal Mapping in Historic Mining District*

## Society for In Vitro Biology

### *Outstanding Achievement for Ability and Creativity in In Vitro Biology Award*

Merritt Singley 11th grade  
certificate  
Brush High School Brush  
*The Influence of Omega-3 Fatty Acids on Lipid Microdomains Obtained from Bovine Luteal Cells*

Eileen Xia 10th grade  
certificate  
Cherry Creek High School Greenwood Village  
*Phosphatidylinositol-3 Kinase p110a Isoform Inhibits Antibody Switch*

## United States Metric Association

### *US Metric Association Award*

Connor Voss 8th grade  
certificate  
Beulah School of Natural Sciences Beulah  
*Loop the Loop: Rollercoaster Physics*

Jonathan Snedeker 12th grade  
certificate  
Fairview High School Boulder  
*Combined Inhibition of Wee1 and Parp1/2 as a Novel Therapy for Acute Myeloid Leukemia*

## United States Public Health Service

### *Surgeon General's Special Science Award*

Madeline Steinle 8th grade  
certificate  
Trinity Lutheran School Pueblo  
*The Effects of Aspartame on Cognitive Abilities*

Charles Rey 11th grade  
certificate  
Fairview High School Boulder  
*The Effects of Exercise on Short Term and Long Term Memory*

## Water Environment Association

### *Stockholm Junior Water Prize Award*

Hannah Fischer 10th grade  
certificate, nomination to the SJWP state competition  
Sierra Grande Jr/Sr High School Blanca  
*Pharmacoenvironmentology: Developing a Baseline for PPCP Contaminant Levels at the MVNWR*

Liam Foster 9th grade  
certificate, nomination to the SJWP state competition  
Animas High School Durango  
*Testing the Water: A Review of Various Acid Mine Drainage Remediation Options*

## Yale Science & Engineering Association

### *Yale Science & Engineering Association Award*

Haley Weinstein 11th grade  
certificate, pewter medallion (to be mailed)  
Fairview High School Boulder  
*Analyzing Different Methods of Finding the Force at General Yield in Sub-sized Charpy Testing*

Mary Hood 11th grade  
certificate, pewter medallion (to be mailed)  
Sargent Jr/Sr High School Monte Vista  
*SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly*

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## Teacher

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### Lockheed Martin

#### *CSEF Teacher of the Year Award*

Diego Martinez  
\$3,000 grant, plaque  
Center High School Center

### SparkFun Electronics

#### *SparkFun's Thank You to Educators Award*

Pat Keeling  
SparkFun Inventor's Kit (\$99 value)  
La Veta Jr/Sr High School La Veta

Linda Niccoli  
SparkFun Inventor's Kit (\$99 value)  
Liberty School Joes

Dr. Paul Strode  
SparkFun Inventor's Kit (\$99 value)  
Fairview High School Boulder

John Wiley  
SparkFun Inventor's Kit (\$99 value)  
Cherry Creek Challenge School Denver

Diego Martinez  
SparkFun Inventor's Kit (\$99 value)  
Center High School Center