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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 Gorokhovsky, 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 <a href="https://www.csef.colostate.edu">www.csef.colostate.edu</a>.

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

# Junior Division Best CSEF Project

**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

Senior Division
Best CSEF Project

**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 Gorokhovsky 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

Junior Division Animal Sciences

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

Heartrate of Daphnia

Liberty School Joes

Senior Division Animal Sciences

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

Junior Division Behavioral & Social Sciences

**First Place** 

Caroline Jennings 8th grade

Ask Me Twice

The Classical Academy Colorado Springs

Second Place		Honorable Mention	
Elora Smith	8th grade	Johanna Mackay	10th grade
The Sweet Smell of You	5 to 8 to 5	Bryanna Davis	10th grade
Sargent Jr/Sr High School	Monte Vista	Shooting Accuracy of an Individual Within Varying	
Third Place		Temperatures	
Grace Abraham	8th grade	Edison High School	Yoder
The Bunny Effect	our grade	Honorable Mention	
Aspen Middle School	Aspen	Kaleb Mora	11th grade
•	1	Angela Nelson	11th grade
Fourth Place Clara Foisie	8th grade	Bryan Adams-Colon	11th grade
Books or Nooks?	our grade	How Fast Are You?	
The Classical Academy	Colorado Springs	Central High School	Pueblo
•	coloida spinigs	Junior Division	
Honorable Mention	741 1-		
Evelyn Bodoni Whatever It Takes	7th grade	Chemistry	
Cherry Creek Challenge School	Denver	First Place	7th anda
	Benver	Emhyr Subramanian Potential Biodegradable Alternatives to Current	7th grade
Honorable Mention		Petroleum-Based Surfactants for Oil Spill Cleanup	
Amelia Greene	8th grade	Cherry Creek Challenge School	Denver
Happy, Sad, Curious, Scared: Which Al			2011,01
Emotional Response to Musical Chords The Classical Academy	Colorado Springs	Second Place	741 1
•	Colorado Springs	Calista Law <i>Eco-Plastics</i>	7th grade
Honorable Mention		Boulder Country Day School	Boulder
Mia Cravitz	8th grade	·	Doulder
Jane Doherty	8th grade	Third Place	<b>5.1</b> 1
What Engenders A Leader? Stanley British Primary School	Denver	Nicole Miller	7th grade
•	Benver	Blue Bottle Blues Ortega Middle School	Alamosa
Honorable Mention			Alailiosa
Meredith Neid	7th grade	Fourth Place	
C F 1'			
Grace Fuselier	7th grade	Nethaniel Kiraly	7th grade
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**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

> **Junior Division Earth & Space Sciences**

**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

> **Senior Division Earth & Space Sciences**

**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

11th grade Ivo Erben

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

Gradient

Boulder High School Boulder

> **Junior Division Energy & Transportation**

**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 Monte Vista Middle School

**Fourth Place** 

Kendrick Castillo 8th grade

Isn't Electricity "Grevt"

Notre Dame Catholic School Denver

**Honorable Mention** 

Joe Haase 6th grade

Easy Breezy

Eads Middle School Eads

> **Senior Division Energy & Transportation**

**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** 11th grade Austin Katzer Cameron Van Vleet 11th grade 11th grade Noah Haswell Is Biodiesel Really Green? Paonia Jr/Sr High School Paonia **Junior Division Engineering** First Place

Cristian Granados 8th grade

Put A Little Spring in Your Step

North Middle School Colorado Springs

**Second Place** 

Pranav Subramanian Ultrasonic-Based Optics Utilized for the Blind and Visually *Impaired* 

Campus Middle School Greenwood Village

**Third Place** 

Ethan Gearhart 8th grade The Great Color Sort: Developing an Arduino Based Laundry Sorter

Sargent Jr/Sr High School Monte Vista

**Fourth Place** 

Cole Palmer 7th grade

Catch E'm If You Can

The Classical Academy Colorado Springs

**Honorable Mention** 

Finn Stowers 8th grade Frac Fluid Friction: Does Sand Grain Size Affect the Viscosity of Hydraulic Fracturing Fluid?

St. Columba Catholic School Durango

**Honorable Mention** 

6th grade Devin Conn

Sound Propagation Sensing in the Stratosphere

Corwin International Magnet School Pueblo

**Honorable Mention** 

Scott Prieve 6th grade Let It Flow: What Rate Will Different Volumes of Water Travel

Down Different Shaped Channels?

North Middle School Colorado Springs

## **Senior Division Engineering**

**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** 

Ian Wilkins 12th grade

Optimizing 3D CAD Scanning Algorithms Through

Multi-Sensor Data Input

Fairview High School Boulder Third Place

Kevyn Kelso 10th grade

Automatic Trombone Tuner

The Classical Academy Colorado Springs

**Fourth Place** 

Leighton Burt 10th grade Life Saving Locating: Developing Autonomous Avalanche

Rescue

Sargent Jr/Sr High School Monte Vista

**Honorable Mention** 

9th grade Isaac Jordan

Save the World, Bomb the Forest

Animas High School Durango

# **Junior Division Environmental Sciences**

**First Place** 

Avery Lin 7th grade War on Waves: A Study of Different Coastal Defenses and

Their Effectiveness Against Tsunamis

Stanley British Primary School Denver

Second Place

Advaita Singh 8th grade

Effects of Ultraviolet Radiation on Planaria

Cherry Creek Challenge School Denver

**Third Place** 

Jonathan Haerr 7th grade

Dead in the Water

The Classical Academy Colorado Springs

**Fourth Place** 

Vanessa Haggans 8th grade Can I Drink It?: Backcountry Water Quality in Boulder County

and Its Safety for Runners

Summit Charter Middle School Boulder

**Honorable Mention** 

Jordan Elder 7th grade McKenzy Howerton 7th grade

Got Dirt? Coagulation Experimentation

Dolores Middle School Dolores

**Honorable Mention** 

Dylan Doskocil 8th grade Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation Bayfield Middle School Bayfield

**Honorable Mention** 

Claire McHenry 8th grade

Water Stabilization

Knowledge Quest Academy Milliken

**Honorable Mention** 

Lacey Niccoli 8th grade

Denatured: The Effects of pH on Germination

Liberty School Joes

**Honorable Mention** 

Katelynn Salmon 8th grade

Effect of Microbeads on Daphnia Heart Rate

Monument Academy Monument

# **Senior Division Environmental Sciences**

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

Nederland Middle/Senior High School Nederland

**Honorable Mention** 

Hannah Fischer 10th grade

Pharmacoenviromentology: 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

Junior Division

Mathematics & Computer Sciences

**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

Senior Division Mathematics & Computer Sciences

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

Junior Division
Medicine & Health

**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 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

# Senior Division Medicine & Health

**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

Haxtun High School Haxtun

Junior Division Microbiology

**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

Senior Division Microbiology

**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

> **Junior Division Physics**

First Place

Brendan Gould 7th grade

Analyzing the Effects of Various Materials on a Magnetic

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

**Senior Division** 

**Physics** 

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

> **Junior Division Plant Sciences**

**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** 

8th grade Tyson Lichty

All Hail! Hail Resistance?

Liberty School Joes

**Honorable Mention** 

Soneva Scott 7th grade

Aquaponic Growth Speed vs Soil Growth Speed

STEM Academy Highlands Ranch

# **Senior Division Plant Sciences**

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

 ${\it Phase~III: Further~Identification~of~Isolated~Green~Fuel}$ 

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**

# Colorado Science and Engineering Fair

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

10th grade Avi Swartz Tyler Giallanza 10th grade 12th grade Ian Johnson

\$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

The Effect of Air Pressure on Different Brands of Duct Tape

Pioneers of Science - Elizabeth Blackwell

Grace Varga 7th grade

\$50, certificate

American Academy

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!

# **Military**

#### **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

7th grade Avery Lin

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

7th grade Brendan Gould

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

# **Organizational**

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

Dylan Doskocil 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

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

Increasea Inrusi

Derrick Zanoni 10th grade

arduino kit, 1-year AIAA student membership

Silverton Schools Silverton

Multi-Purpose Robo Glove

# American Institute of Chemical Engineers Rocky Mountain Section

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 Doskocil 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 Pasionek 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 7th grade certificate, \$400

Cherry Creek Challenge School

Potential Biodegradable Alternatives to Current

Petroleum-Based Surfactants for Oil Spill Cleanup

Hannah Fischer 10th grade

certificate, \$200

Sierra Grande Jr/Sr High School Blanca

Pharmacoenviromentology: Developing a Baseline for PPCP

Contaminant Levels at the MVNWR

Liam Foster 9th grade

certificate, \$400

Animas High School Durango

Testing the Water: A Review of Various Acid Mine Drainage Remediation Options

#### **ASM International**

ASM Materials Education Foundation Award

Haley Weinstein 11th grade \$100

Fairview High School

Boulder

Analyzing Different Methods of Finding the Force at General

Analyzing Different Methods of Finding the Force at General Yield in Sub-sized Charpy Testing

Sirisha Gudavalli 10th grade

\$150

Fairview High School Boulder

Chemical and Morphological Dependent Properties of Semiconductor Nanocrystals

#### **Colorado Association of Meat Processors**

Meat Science/Food Safety Award

Kaitlyn Dumm 10th grade

certificate, \$70

Windsor High School Windsor

Leftovers to Livestock: Turning Human Food Waste into Livestock Feed with Consistent Nutrient Values

**Colorado Association of Science Teachers** 

Grace Gulig 7th grade

\$75

Monument Academy Monument

Keeping Soil in Its Place

Madeline Steinle 8th grade

\$75

Trinity Lutheran School Pueblo

The Effects of Aspartame on Cognitive Abilities

Emma Scholz 12th grade

\$75

Sterling High School Sterling

Geographical Correlation Maps of Malaria Hemoglobin SS

Disease Allele Frequency and Eco. of Ethiopia

Syree Gunnels 10th grade

\$75

Sargent Jr/Sr High School Monte Vista

Extraction of Health Benefiting Compounds in Colored Potato Tubers

Denver

# **Colorado Biology Teachers' Association**

CBTA Best Biology Project Award

Kathryn Kummel 6th grade certificate, \$75

North Middle School Colorado Springs The Danger of Drinking Water: How Mountain Lions Affect Elk Behavior and Aspen Regeneration

Logan Collins 12th grade

certificate, \$75

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 BioScience Institute

BioGENEius Challenge

Jonathan Snedeker 12th grade all-expense paid trip to compete at the US National competition held in Philadelphia, PA, June 2015

Fairview High School Boulder Combined Inhibition of Wee1 and Parp1/2 as a Novel Therapy for Acute Myeloid Leukemia

# **Colorado Chemistry Teachers Association**

CCTA Chemistry Award

Richard Mallory 11th grade \$100

The Classical Academy College

Hazardous Waste to Renewable Energy

Connor McCauley

7th grade

Colorado Springs

\$100

Blessed Sacrament Catholic Denver

Vitamin C in Vegetables

#### Colorado Dental Association

Grace Varga 7th grade

\$50 gift card

American Academy Parker
Brush It or Buzz It: The Comparison of Rotating and Vibrating
Toothbrushes

Edwin Bodoni 8th grade

\$100 gift card

Cherry Creek Challenge School Denver

Dental Implants: The Healthier Alternative

Dakota Cook 8th grade

\$50 gift card

Walsh Jr/Sr High School Walsh

Dental Disintegration

Jenner Dunn 9th grade
Julia Mathews 9th grade

2 \$50 gift cards

Brush High School Brush

The Effects of Citric and Phosphoric Acid on Tooth Enamel

# Colorado Division of Reclamation, Mining & **Safety**

Outstanding Earth Science Award

Dylan Doskocil 8th grade

\$75

Bayfield Middle school Bavfield 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 \$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

Pharmacoenviromentology: Developing a Baseline for PPCP

Contaminant Levels at the MVNWR

**Colorado Foundation for Agriculture** 

Agriculture in the Classroom Award

Dylan Doskocil 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

Javden 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

World

7th grade

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

#### **Colorado Mineral Society**

Best Earth Science Award

Max Warnock 7th grade \$35, mineral specimen, book, certificate

Fort Collins Home School

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

10th grade Hannah deKay 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 Doskocil 8th grade \$50, CMS honorary membership certificate, signed copy of Vera Evenson's "Rocky Mountain Mushrooms" book (to be mailed)

Bayfield Middle school Biochar and Fungus to the Rescue: Acid Mine Soil Reclamation

**Colorado Scientific Society** 

Dylan Doskocil 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 \$100 6th grade

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 Weel and Parp1/2 as a Novel Therapy

for Acute Myeloid Leukemia

Joi Acute Myetota Leukemia

Jayden Durbin 12th grade

certificate, gift bag

Haxtun High School Haxtun

Vitamin D Stimulates the mRNA Expression of ACPP in LNCaP Cells

Cens

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

Harvesting the Sun

Taylor Coons 12th grade
Dante Pasionek 12th grade

\$250 Nederland Middle/Senior High

Nederland

The Ideal Energy Efficient Home: An Arduino Based Project

#### 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 Investigating and Antimicrobial Properties of Abies concolor

on Staphylococcus aureus and Streptococcus

Isaac Jordan 9th grade

\$100

Animas High School Durango

Save the World, Bomb the Forest

#### **Comstock Family**

Heather Comstock Memorial Award

Logan Collins 12th grade

\$300

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

#### **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

Genetic Algorithms: Solving Math Problems Using Ideas from

Nature

Avi Swartz 10th grade
Tyler Giallanza 10th grade
Ian Johnson 12th grade

\$150, certificate, 16 Gb flash drive

Cherry Creek High School Greenwood Village

Developing a Class Scheduling Program with Minimum

Conflicts for Large Schools

#### **Eppler Family**

Eppler Family Award

Victoria Dunivan 8th grade

microprocessor kit & digital multimeter (value \$100)

Walsh Jr/Sr High School Walsh

Dealing with Diabetes

Cristian Granados 8th grade

microprocessor kit & digital multimeter (value \$100)

North Middle School Colorado Springs

Put A Little Spring in Your Step

#### **Fort Collins Conservation District**

Steven Smith 7th grade

plaque, \$50

The Classical Academy Colorado Springs

Best Mulch for the Money

Isaac Jordan 9th grade

plaque, \$50

Animas High School Durango

Save the World, Bomb the Forest

#### **Frank Armbruster Foundation**

Armbruster Memorial Award

Jamison White 8th grade

\$100

Blevins Middle School Fort Collins

Flight Made Simple

# **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

Temperamental Twisters

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

Save the World, Bomb the Forest

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

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

#### **Gromko Family**

Gerald Gromko Memorial Award

Shepherd Kruse 10th grade

\$150

Home School Colorado Springs
Designing and Evaluating an Aerospike Rocket Engine for

Increased Thrust

## Human Factors and Ergonomics Society Rocky Mountain Chapter

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

## 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 Doskocil 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

Aquaponicals aquaponic growing system (\$150 value)

Imagine Charter School Firestone

Growing with Aquaponics vs. Hydroponics

The Inventor's Roundtable

Inventors' Roundtable Award

Mary Hood

\$100, free patent search (value \$499)

Sargent Jr/Sr High School Monte Vista

11th grade

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 Pharmacoenviromentology: 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

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 Monte Vista Middle School 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?

# **Scholarships**

# **Adams State University**

Adams State University Scholarships

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

Brush High School

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 ( $\sim$ \$8,500)

Fort Morgan High School Fort Morgan

Frustration Responses: An Analysis of Dispositional Learning

Shelly Steinert

ASU scholarship valued as the equivalent to one-year resident tuition and fees ( $\sim$ \$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 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 ( $\sim$ \$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 ( $\sim$ \$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 Vertical Motion to Rotational Movement of a Rectangular

Wing

Joel Wagner ASU scholarship valued as the equivalent to one-year resident tuition and fees ( $\sim$ \$8.500)

Arickaree School Anton

Effects of Water Contaminants on Plants

10th grade Aubrey Wells 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 CSM 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 CSM 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 \$1,000 CSM 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 CSM scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)

Monte Vista Sargent Jr/Sr High School SMART Cane: A Technology Integrated Device to Reduce the Fall Susceptibility of the Elderly

Brandon Navratil \$1,000 CSM scholarship, renewable for up to 3 additional years for use toward an undergraduate degree)

Durango

Animas High School

Portable Conductivity Probe

Hannah Langford 11th grade Molly Dickinson 11th grade \$1,000 CSM 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 CSM 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

10th grade Jessica Shand 10th grade Elliot Gorokhovsky \$1,000 renewable scholarship to attend CSU \$1,000 renewable scholarship to attend CSU Fairview High School Boulder Discovery Canyon Campus Colorado Springs A Novel Algorithm for Model Counting Analysis of Spermatophyte Divergence to Expedite Identification of Novel Drug Candidates Sam Scheeres 12th grade \$1,000 renewable scholarship to attend CSU Colorado State University, Pueblo Fairview High School Boulder Colorado State University, Pueblo Scholarship Rigorous Constraints on Exchange for the 3-body Problem Kelsey Lindbloom 11th grade \$1,000 scholarship to attend CSU, Pueblo Colorado State University Scholarship Salida High School Salida Margaret Preigh 12th grade Fueling the Future Phase 4: Constructing an Aqueous Vehicle \$1,000 renewable scholarship to attend CSU Powered by a Microbial Fuel Cell Fairview High School Boulder Pulsing Electromagnetic Radiation at 50/60Hz as a Pest University of Colorado, Boulder Repellant in Insects College of Engineering and Applied Sciences Serena Rusk 11th grade **Scholarships** \$1,000 renewable scholarship to attend CSU Molly Nehring 8th grade Fairview High School Boulder 4-year \$500 scholarship An Analysis of Risk Factors for Developing Low Body Monte Vista Middle School Monte Vista Satisfaction in Adolescents Genetic Algorithms: Solving Math Problems Using Ideas from Nature Sirisha Gudavalli 10th grade \$1,000 renewable scholarship to attend CSU Michelle Kummel 9th grade Fairview High School Boulder 4-year \$500 scholarship Chemical and Morphological Dependent Properties of Palmer High School Colorado Springs Semiconductor Nanocrystals A Spoonful of Sugar Helps the Nitrate Go Down: Denitrification in Wetland Soil Jesse Zhang 12th grade \$1,000 renewable scholarship to attend CSU Sirisha Gudavalli 10th grade Fairview High School Boulder 4-year \$500 scholarship Effect of the Atlantic Ocean on Sudden Stratospheric Warming Fairview High School Boulder Chemical and Morphological Dependent Properties of Trevor Jordan 11th grade Semiconductor Nanocrystals \$1,000 renewable scholarship to attend CSU Animas High School Durango Mary Hood 11th grade A Wing of the Future: Part II 4-year \$500 scholarship Sargent Jr/Sr High School Monte Vista Mary Hood 11th grade SMART Cane: A Technology Integrated Device to Reduce the \$1,000 renewable scholarship to attend CSU Fall Susceptibility of the Elderly Sargent Jr/Sr High School Monte Vista SMART Cane: A Technology Integrated Device to Reduce the Haley Weinstein 11th grade Fall Susceptibility of the Elderly 4-year \$500 scholarship Fairview High School Boulder Hannah Hartung 12th grade Analyzing Different Methods of Finding the Force at General \$1,000 renewable scholarship to attend CSU Yield in Sub-sized Charpy Testing Fairview High School Boulder Effects of Parasites from Long Term Invasive Fish on Native Madeline Goosman 11th grade Amphibians in the California Bay Area 4-year \$500 scholarship Fairview High School Boulder Elliot Gorokhovsky 10th grade Mandarin Tone Perception in Simulations of Electro-Acoustic \$1,000 renewable scholarship to attend CSU and Cochlear-Implant Hearing Fairview High School Boulder A Novel Algorithm for Model Counting Shelly Steinert 11th grade 4-year \$500 scholarship Jonathan Snedeker 12th grade Sargent Jr/Sr High School Monte Vista \$1,000 renewable scholarship to attend CSU Determining Flame Retardancy of Maize Stover, Medicago Fairview High School Boulder Sativa, and Hordeum Vulgare Ash Combined Inhibition of Weel and Parp1/2 as a Novel Therapy for Acute Myeloid Leukemia Areefa Rahman 11th grade 4-year \$500 scholarship Sam Scheeres 12th grade Cherry Creek High School Greenwood Village \$1,000 renewable scholarship to attend CSU Saving the World with One Feather at a Time: The Fairview High School Boulder Amalgamation of Polymers using Chicken Feathers

Rigorous Constraints on Exchange for the 3-body Problem

#### **SSP**

#### **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 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

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 Pharmacoenviromentology: Developing a Baseline for PPCP Contaminant Levels at the MVNWR

Casey Shaw 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 Arrested Development: Glyphosate-Based Herbicides on the

Embryonic Development of Zebra Danios

Hannah deKay 10th grade 10th grade Raelen Barr 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

7th grade Calista Law 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 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

certificate, nomination to the 2015 Broadcom MASTERS

8th grade

Denver

Players Use Earplugs When Practicing?

Dental Implants: The Healthier Alternative

Cherry Creek Challenge School

Edwin Bodoni

competition

certificate, nomination to the 2015 Broadcom MASTERS competition Turner Middle School Playground Bacterial Levels Comparison Madison Searles 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 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 certificate, nomination to the 2015 Broadcom MASTERS competition Summit Charter Middle School Wind, Wings, and Lift Alicia Wu certificate, nomination to the 2015 Broadcom MASTERS competition Summit Charter Middle School The Acidulous Truth About the Flora of Our Environment Sarah Duzenack certificate, nomination to the 2015 Broadcom MASTERS competition La Veta Jr/Sr High School A Comparison of Endomycorrhizae and Commercial Fertilizer on Bent and Blue Grass **Intel Corporation** Excellence in Computer Science Award Robert Meikle certificate, \$200 (to be mailed) Sand Creek High School Colorado Springs Graphing Calculator Application Stephen Parish 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 certificate Frontier Academy Creating Permutations for Actions on Young Tableaux, Year 2 Elliot Gorokhovsky certificate Fairview High School A Novel Algorithm for Model Counting

Taylor Dower

8th grade

Berthoud

7th grade

7th grade

8th grade

Boulder

8th grade

Boulder

6th grade

La Veta

9th grade

12th grade

12th grade

10th grade

Boulder

Greeley

# 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 Weel and Part 1/2 as a Nevel Thoragon

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

Pharmacoenviromentology: 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

#### **Teacher**

#### **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