



Colorado Science and Engineering Fair

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2018 Colorado Science and Engineering Fair Award Winners

Fort Collins, CO (April 6, 2018) – This year’s Colorado Science and Engineering Fair (CSEF) was held April 5-7, 2018. 325 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 450 individual awards were presented at the awards ceremony. Attached is the list of winners.

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

1st Place: Isaac Jordan from Southwest Colorado eSchool for the project *Applications of Graphene Nano Flake Powder Composites*.

2nd Place: Edwin Bodoni from Cherry Creek High School for the project *Bruxism: A Novel Diagnostic Approach*.

3rd Place: Anand Chundi from SkyView Academy for the project *Identifying Downstream Targets of HCFC1: A Gene Linked to Severe Neurological Disease*.

4th Place: Alyssa Rawinski from Monte Vista High School for the project *Mealworms . . . A Potential Solution to the Global Plastic Problem*.

5th Place: Casey Shaw from Liberty School for the project *An Analysis of Compositional Characteristics of Two Distinct Fossil Butte Member Localities*.

The CSEF also presented the Lockheed Martin Teacher of the Year Award to Terri Paulson from Sargent Jr/Sr High School in Monte Vista, CO.

Special thanks goes to all of the contributors and sponsors of the 2018 CSEF for their financial and in-kind support of Colorado’s future scientists. This year’s top sponsors (\$2,500 or more) included State University, Intel Foundation, Verizon Wireless, US Department of Commerce/NOAA, Lockheed Martin, Colorado Dental Association, Society of Petroleum Engineers.

For a complete list of all of the 2018 CSEF participants, sponsors, Colorado’s Intel ISEF delegates and other CSEF details, please visit the CSEF website at www.csef.colostate.edu.

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 63 years.

2018 Colorado Science and Engineering Fair

Grand Awards Press Release

Junior Division Best CSEF Project

First Place

Gitanjali Rao 7th grade
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors
 STEM School Highlands Ranch Highlands Ranch

Second Place

Chloe Haerr 7th grade
Stress Test
 The Classical Academy Colorado Springs

Third Place

Julia Warnock 8th grade
Structural Geology of the Fountain Formation in Lory State Park
 Poudre Global Academy Fort Collins

Senior Division Best CSEF Project

First Place

Isaac Jordan 12th grade
A Novel Approach for Sensing Seismic Events: Applications of Graphene Nano Flake Powder Composites
 Southwest Colorado eSchool Durango

Second Place

Edwin Bodoni 11th grade
Bruxism: A Novel Diagnostic Approach
 Cherry Creek High School Greenwood Village

Third Place

Anand Chundi 10th grade
Identifying Downstream Targets of HCFC1: A Gene Linked to Severe Neurological Disease
 SkyView Academy Highlands Ranch

Fourth Place

Alyssa Rawinski 11th grade
Mealworms . . . A Potential Solution to the Global Plastic Problem
 Monte Vista High School Monte Vista

Fifth Place

Casey Shaw 12th grade
An Analysis of Compositional Characteristics of Two Distinct Fossil Butte Member Localities
 Liberty School Joes

Junior Division Animal Sciences

First Place

Natalie Aerni 7th grade
The Uses of Darkling Mealworms in Plastic Degradation
 Frontier Academy Secondary School Greeley

Second Place

Camille Rawinski 8th grade
I'm Sensing Bias: Does Poor Conformation in Quarter Horses Affect Certain Senses?
 Monte Vista Middle School Monte Vista

Third Place

Madison Cabot 8th grade
Beyond the Boots
 Imagine Charter School Firestone

Fourth Place

Lilly Figueroa 7th grade
He? She? Is It a Matter of Degree?
 Mancos Middle School Mancos

Honorable Mention

Marley Eisman 8th grade
Put One Paw in Front of the Other
 Coal Creek Canyon K-8 School Golden

Honorable Mention

Cash Walker 7th grade
Suffocating Shrimps?
 Orchard Mesa Middle School Grand Junction

Senior Division Animal Sciences

First Place

Alyssa Rawinski 11th grade
Mealworms . . . A Potential Solution to the Global Plastic Problem
 Monte Vista High School Monte Vista

Second Place

Olivia Fross 11th grade
Analysis of Demographic Variation Reflected by Colony Size in Cliff Swallows
 Fairview High School Boulder

Third Place

Emma Perkins 11th grade
Identifying Causes of Ectoparasite Presence on the American Pika (Ochotona princeps)
 Boulder High School Boulder

Fourth Place

Matthew Buckman & Dylan Drew 10th grade
The Effects of Substrate Architecture on L. vannamei
 Sky View Academy Highlands Ranch

Honorable Mention

Kylie Kay Franklin 12th grade
Walk It Out
 Campo Schools Campo

Junior Division Behavioral & Social Sciences

First Place

Chloe Haerr 7th grade
Stress Test
 The Classical Academy Colorado Springs

Second Place

Brakelle Westphal 7th grade
Cell Phones and Anxiety
 Springfield Jr/Sr High School Springfield

2018 Colorado Science and Engineering Fair

Grand Awards Press Release

Third Place

Kaleigh Schanker 8th grade
Have You Been Persuaded?
 Turner Middle School Berthoud

Fourth Place

Anna Dery 8th grade
Middle School in Middle Age
 Holy Family Catholic School Grand Junction

Honorable Mention

Elizabeth Koenck & Aveline Hwang 8th grade
2+8≠10
 Challenge School Denver

Honorable Mention

Lana Kitchen 8th grade
How Does Social Media Affect the Grades of Students?
 Roncalli STEM Academy Pueblo

Honorable Mention

Marissa Martinez 7th grade
Can I Go to the Bathroom?
 Monte Vista Middle School Monte Vista

Honorable Mention

Kate Kaczmarek 8th grade
The Effect of Classical Music Tempo on Competitive Run Times
 The Classical Academy Colorado Springs

Honorable Mention

Negha Sethuramalingam 8th grade
How Do Others Expressing Emotions Affect How You Feel?
 Challenge School Denver

Senior Division Behavioral & Social Sciences

First Place

Aylin Kahraman 10th grade
The Impact of Education on Student Athletes Regarding Concussions
 Cherry Creek High School Greenwood Village

Second Place

Theo Bayard de Volo & Luke Barnocky 12th grade
Examining Whether Agency and Anthropomorphism Interact in an Environmental Risk Setting
 Monarch High School Louisville

Third Place

Dylan Cantrell 12th grade
The Role of Economic Variable in Election Outcomes: A Global Analysis
 Nederland Middle/Senior High School Nederland

Fourth Place

Andres Villa 9th grade
Virtual Illness: Can Virtual Reality Cause Motion Sickness?
 Monte Vista High School Monte Vista

Honorable Mention

Iliana Castillo 9th grade
Remember Me?
 West Grand High School Kremmling

Junior Division Chemistry & Biochemistry

First Place

Gitanjali Rao 7th grade
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors
 STEM School Highlands Ranch Highlands Ranch

Second Place

Ethan Wurman 8th grade
Electrolysis of Salt Water Solutions
 Summit Charter Middle School Boulder

Third Place

Radhika Gupta 7th grade
Analyzing the Effectiveness of Various Whiteboard Cleaners
 The Classical Academy Colorado Springs

Fourth Place

Levi Tichi 8th grade
Fluorocarbon to Eco-Friendly
 St. Columba Catholic School Durango

Honorable Mention

James Mars & Tyler Barnes 8th grade
Let's Get Fired Up!
 Ignacio Middle School Ignacio

Honorable Mention

Maddisun Ellithorpe & Josh Sawyer 8th grade
Hemp . . . A Hot Topic
 Sargent Jr/Sr High School Monte Vista

Honorable Mention

Hailey Green 6th grade
The Effect of Salt on the Rate of Ice Melting
 Stanley British Primary School Denver

Senior Division Chemistry & Biochemistry

First Place

Stephanie Zhang 12th grade
Developing a Novel Inhibitor for Cdc14 in the Fungus Aspergillus niger
 Fairview High School Boulder

Second Place

Katelynn Salmon 11th grade
Synthesis of Acetylene-Perfluorinatedpyridine Monomer and Click-Mediated Polymerization
 Palmer Ridge High School Monument

Third Place

Max Warnock 10th grade
UV-Vis Analysis of Silver Nanoparticles Released from Odor Control Clothing, Part II
 Poudre Global Academy Fort Collins

2018 Colorado Science and Engineering Fair

Grand Awards Press Release

Fourth Place

Jan Gradon 11th grade
The Chemiluminescence of Bleaches Induced by Luminol: A Study of Glows Over Periods Time
 Fairview High School Boulder

Honorable Mention

Rollin Leavitt 12th grade
Investigation of Transcription Factor Preferences of Bacterial Receptors
 Animas High School Durango

Junior Division Earth & Space Sciences

First Place

Julia Warnock 8th grade
Structural Geology of the Fountain Formation in Lory State Park
 Poudre Global Academy Fort Collins

Second Place

Ashlyn Rockey 8th grade
Flow or No: Will You Grow? Water Deficit of Quinoa
 Sargent Jr/Sr High School Monte Vista

Third Place

Haiyan Wang 8th grade
Plant Growth in Varied Soil Type and Air Pressure
 Summit Charter Middle School Boulder

Fourth Place

Serenity Foutz 7th grade
Plants vs. Water: A Battle of Soil Erosion
 Bayfield Middle School Bayfield

Senior Division Earth & Space Sciences

First Place

Casey Shaw 12th grade
An Analysis of Compositional Characteristics of Two Distinct Fossil Butte Member Localities
 Liberty School Joes

Second Place

Sarah Tang 10th grade
Measuring Exoplanetary Radii Using Transit Photometry
 Fairview High School Boulder

Third Place

Kathryn Kummel 9th grade
 Michelle Kummel 12th grade
Using 3D Drone-based Digital Models to Investigate the Fluvial Geomorphology of an Eroding Arroyo
 Palmer High School Colorado Springs

Fourth Place

Natalie Keller & Melanie Gong 10th grade
The Reduction of Perchlorate in Mars Regolith Using Hydrogen Gas to Produce Chloride and Water
 Cherry Creek High School Greenwood Village

Junior Division Energy

First Place

Mohamed Ibrahim 8th grade
Influencing Electricity Output of MFCs Using Electron Acceptors
 Wiggins Middle/High School Wiggins

Second Place

Nikhila Narayana 8th grade
Let It Shine: Altering the Wavelength of Bioluminescent Light to Power a Photovoltaic Cell
 Rocky Heights Middle School Highlands Ranch

Third Place

Maxwell Benedict 6th grade
The Effect of Vane Pitch on Turbine Efficiency
 Grant Beacon Middle School Denver

Fourth Place

Jared Ingmire 7th grade
3D Solar
 Imagine Charter School Firestone

Honorable Mention

Joshua Vu 7th grade
Maximizing Efficiency When Generating Clean Energy
 The Classical Academy Colorado Springs

Honorable Mention

Liliana Petrecca 6th grade
Help for Hurricane Victims: Creating Fresh Water Using Solar Power
 Webber Middle School Fort Collins

Senior Division Energy

First Place

Kevin Yang 10th grade
Design of a Novel Energy-Saving Radiative Cooling Bilayer Paint for Space Cooling
 Fairview High School Boulder

Second Place

Sophia Markuson DiPrince 11th grade
Anaerobic Digestion of Food Waste Part 3: Comparing Different Conductors in the Production of Food Waste Generated Electricity
 Central High School Pueblo

Third Place

Rithwik Mylavarapu 10th grade
Leveraging Satellite Imagery to Map Road Surface Conditions
 Fairview High School Boulder

Fourth Place

Mark Bloomfield 10th grade
Heating Up: Using Phase Change Materials as a Thermal Battery
 Coronado High School Colorado Springs

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Grand Awards Press Release

Junior Division Engineering

First Place

Dylan Sellers 8th grade
A Boat Built for Kicks: Using the Flutter Kick for Propulsion
 Walt Clark Middle School Loveland

Second Place

Neil Sury 7th grade
Enhancing Gecko Adhesive Technology Using Micro Filter Nano Moulding and Carbon Nano-tubes
 Challenge School Denver

Third Place

Tate Schrock 8th grade
Electronic Automated Product Dispensing
 Arickaree School Anton

Fourth Place

Nicholas Huber 8th grade
Stirling Engines: Harnessing and Utilizing Heat Energy
 St. Columba Catholic School Durango

Honorable Mention

Gregory Mackintosh 8th grade
BioLine: The Biodegradable Fishing Line
 Good Shepherd Catholic School Denver

Honorable Mention

Anna Sundheim 7th grade
Use It or Lose It: Using Human Waste in Adobe Construction
 St. John the Evangelist Catholic School Loveland

Honorable Mention

Gabriel Wu 8th grade
Magnificent Mounted Magnetic Bearings
 The Classical Academy Colorado Springs

Honorable Mention

Austin Cantor 7th grade
It's All in the Movement
 The Classical Academy Colorado Springs

Senior Division Engineering

First Place

Isaac Jordan 12th grade
A Novel Approach for Sensing Seismic Events: Applications of Graphene Nano Flake Powder Composites
 Southwest Colorado eSchool Durango

Second Place

Krithik Ramesh 10th grade
Suppression of Aeroelastic Instabilities in HR Wing Structures Using Principal Component Analysis
 Cherry Creek High School Greenwood Village

Third Place

Alyssa Keirn 10th grade
Solar Powered Decontaminator Design and Testing
 Rocky Mountain High School Fort Collins

Fourth Place

Jenna Salvat 11th grade
Synthesis and Characterization of a NiO-ZnO Semiconductor Junction for an Electromechanical Effect
 Coronado High School Colorado Springs

Honorable Mention

Chase Cromwell 10th grade
Stampede Arm II
 Lamar High School Lamar

Honorable Mention

John Quinn 11th grade
Restoration of Manipulated Serial Numbers Using Electron Backscatter Diffraction
 Fairview High School Boulder

Honorable Mention

Marissa Jordan 9th grade
A Helping Hand: A Softer Side of Robots, Part II
 Southwest Colorado eSchool Durango

Honorable Mention

Maximilian Shen 11th grade
Harvesting Water from Air with Solar Power for Underdeveloped Areas
 Fairview High School Boulder

Honorable Mention

Jayden Edson 11th grade
 Jonathan Belcher 11th grade
 James Rindt 12th grade
Underwater Invaders
 West Grand High School Kremmling

Honorable Mention

Will Brown 12th grade
Supporting the Future: Design and Creation of an Air-Evacuated Maglev Tunnel
 Fairview High School Boulder

Junior Division Environmental Sciences

First Place

Ethan Gavin 7th grade
A Bug's Death: A Study of Diatomaceous Earth and Pesticides
 The Classical Academy Colorado Springs

Second Place

Alexander Pabst Krammer 8th grade
Lawnmower for Plastic: Removing Plastic from Sand on Beaches
 Summit Charter Middle School Boulder

Third Place

Sirinya Frankel 8th grade
The Effect of Impermeable Surfaces on Soil Biodiversity
 Challenge School Denver

Fourth Place

Raymos Castillo 7th grade
What Eco Friendly Insulation Is the Best?
 Frontier Academy Secondary School Greeley

2018 Colorado Science and Engineering Fair

Grand Awards Press Release

Honorable Mention

Mikailah Feinman 8th grade
Produced Gas Well Water: Can It Be Repurposed for Agricultural Use? Year 2
 Primero Jr/Sr High School Weston

Honorable Mention

Juno Gregg 8th grade
The Effect of Salt on the Translucent Quality of Water
 Skinner Middle School Denver

Honorable Mention

Alex Huerta 8th grade
To Aerate or Not to Aerate. That Is the Question?
 The Classical Academy Colorado Springs

Senior Division Environmental Sciences

First Place

Delaney Yehle 11th grade
 Dana Coe 12th grade
 Loren Rylander 11th grade
Assessing Goat Browsing as a Form of Wildfire Mitigation and Its Environmental Impacts
 Rock Canyon High School Highlands Ranch

Second Place

Amber Michel 11th grade
The Alamosa River Watershed: A Proving Ground for Natural Selection
 Monte Vista High School Monte Vista

Third Place

MaryAnn Ho 11th grade
The Evaluation of the Resuspension of Cyanobacterial Toxins into the Water Column in Eight Lakes
 Fairview High School Boulder

Fourth Place

Isabelle Rusk & Emika Brown 11th grade
Distinguishing Microbial Communities in Low Elevation Ponderosa Pine Forests After Prescribed and Natural Burns
 Fairview High School Boulder

Honorable Mention

Emma Stone & Reiley Leake 9th grade
Roots for the Road
 Brush High School Brush

Junior Division Mathematics & Computer Sciences

First Place

Edward Wawrzynek 8th grade
A Novel Approach to Authorship Attribution Using Word Vectors and Stylistic Features
 Summit Charter Middle School Boulder

Second Place

Peter Wilson 8th grade
Postal Pods
 The Classical Academy Colorado Springs

Third Place

Shreyas Sriram 8th grade
Using Artificial Intelligence and Raspberry Pi to Monitor and Conserve Household Water Usage
 Challenge School Denver

Fourth Place

Gryphon Patlin 8th grade
Drop Notice
 The Classical Academy Colorado Springs

Honorable Mention

Ethan Chapman 8th grade
NASA HUNCH: ISS Location App
 Challenge School Denver

Senior Division Mathematics & Computer Sciences

First Place

Austen Mazenko 10th grade
Characterization of Certain Non-Homogeneous Meta-Fibonacci Sequences
 Cherry Creek High School Greenwood Village

Second Place

Siddarth Ijju 10th grade
Autonomous Anomaly Detection and Classification Using Neural Networks
 Cherry Creek High School Greenwood Village

Third Place

Sara Nehring 9th grade
Small World Networks: I Know Someone You Know, But You Don't Know It and Neither Do I
 Monte Vista High School Monte Vista

Fourth Place

Bill Ray 12th grade
Learning to Play Hammurabi
 Peak to Peak Charter School Lafayette

Junior Division Medicine & Health

First Place

Maya Monks & Ella Sharp 8th grade
Medical Cushioning Using Slime
 Stanley British Primary School Denver

Second Place

Georgia Hartley 8th grade
Mind the Gape: The Effect of Tension on the Gaping of Sutures
 Challenge School Denver

Third Place

Kelly Clingan 8th grade
Can We Prevent Concussions in Sports and Chronic Traumatic Encephalopathy in Later Life?
 Walt Clark Middle School Loveland

Fourth Place

Trista Barnett 7th grade
Now You See Me . . . Now You Don't
 Dove Creek Middle School Dove Creek

2018 Colorado Science and Engineering Fair

Grand Awards Press Release

Honorable Mention

Nathaniel Vercammen 6th grade
How Flatworms Are Affected by Magnetic Fields
 Flagstaff Charter Academy Longmont

Honorable Mention

Ava Connelly 6th grade
Warmth without the Womb
 Monument Charter Academy Monument

Honorable Mention

Marin Masters 8th grade
Back Off Bacteria
 The Classical Academy Colorado Springs

Honorable Mention

Parker Steckel 7th grade
How Fresh Is That Egg?
 Eaton Middle School Eaton

Senior Division Medicine & Health

First Place

Edwin Bodoni 11th grade
Bruxism: A Novel Diagnostic Approach
 Cherry Creek High School Greenwood Village

Second Place

Isani Singh 12th grade
Investigating the Developmental Requirements of Sex Chromosome Genes Affected in Turner Syndrome
 Cherry Creek High School Greenwood Village

Third Place

Spoorthy Reddy 11th grade
Determining the Role of Ferroptosis in Parthenolide and Its Analog Mediated Cell Death in AML
 Fairview High School Boulder

Fourth Place

Cody Robinson 11th grade
The Effect of Ketoacidosis on the Breath: A Cost-Efficient Way to Monitor Ketones
 Yuma High School Yuma

Junior Division Microbiology & Molecular Biology

First Place

W. Hall Matthews 8th grade
Algistatic Effects of Retail Barley Products on the Cyanobacteria, Anabaena, in Freshwater
 Homeschool Bellvue

Second Place

Esha Sury 8th grade
Synergizing Antibiotics with Phage K and Prophylactic Nanosilver: Manipulating Resistance
 Challenge School Denver

Third Place

Faith Roberts 7th grade
Mold Massacre
 The Classical Academy Colorado Springs

Fourth Place

Gracey Hening 6th grade
Antibiotic Resistance: The World's Most Dangerous Threat to Effective Healthcare
 St. Columba Catholic School Durango

Honorable Mention

Aryan Gandhi & Peyton Streu 7th grade
Blooming Algae
 Aspen Ridge Prep School Erie

Honorable Mention

Ellinor Davenport 7th grade
Persistent & Resistant
 Miller Middle School Durango

Senior Division Microbiology & Molecular Biology

First Place

Anand Chundi 10th grade
Identifying Downstream Targets of HCFC1: A Gene Linked to Severe Neurological Disease
 SkyView Academy Highlands Ranch

Second Place

Isla Anderson 10th grade
Anthropogenic Induction of Antibiotic Resistance by Sulfamethoxazole
 Denver North High School Denver

Third Place

Peyton Leyendecker 10th grade
Optimizing the Ratios of Manuka Honey to Adhesive in an Antibacterial Surgical Adhesive
 SkyView Academy Highlands Ranch

Fourth Place

Navami Manangi 12th grade
Calcite Production in Cyanobacteria
 Peak to Peak Charter School Lafayette

Honorable Mention

Evelyn Bodoni & Nicole Hankovsky 10th grade
Novel Strategies for Detecting and Treating Podocyte Injury in Diabetic Nephropathy
 Cherry Creek High School Greenwood Village

Junior Division Physics

First Place

Matthew Anderson 8th grade
Redesigning Ventilation to Minimize Airborne Pathogen Transmission in Multiple-Bed Hospital Wards
 Challenge School Denver

Second Place

Parker Stone Myer Wickham 7th grade
Why No WiFi
 Brush Middle School Brush

Third Place

Joshua Snyder 7th grade
Ready, Aim, Fire!
 The Classical Academy Colorado Springs

2018 Colorado Science and Engineering Fair

Grand Awards Press Release

Fourth Place

Connor Provencher 8th grade
Field of Dreams
 Vail Mountain School Vail

Honorable Mention

James Tindle & Zoe Wagner 6th grade
Under Pressure
 Boulder Country Day School Boulder

Honorable Mention

Zachary Isley 8th grade
*Quantum Entanglement of Photons Via Spontaneous
 Parametric Down Conversion in a KD*P Crystal*
 Turner Middle School Berthoud

Honorable Mention

Kjersti Moritz 7th grade
Up Up and Away
 Vail Mountain School Vail

Honorable Mention

Kooper Grinstead 8th grade
Veggie Tales
 Rocky Ford Jr/Sr High School Rocky Ford

Senior Division Physics

First Place

Kyra Slovacek 12th grade
*Diurnal Variation and Duration of Meteors Usable for Radio
 Communications*
 Monarch High School Louisville

Second Place

Molly Nehring 11th grade
*Far Out! Analyzing NASA's Kepler Space Telescope Data
 Using the Transit-Timing Variation Method to Discover
 Additional Exoplanets in Planetary Systems*
 Monte Vista High School Monte Vista

Third Place

Jasmine DeMeyer 11th grade
*Totally Tubular: Calculating the End Correction to Find the
 Wavelength of a Wave in an Open Tube*
 Greeley West High School Greeley

Fourth Place

Fionna Kopp 12th grade
*Voltage-Potential Profiles of Glow Discharges Using an
 Emissive Probe*
 Boulder High School Boulder

Honorable Mention

Cameron Eldridge, Patrick James &
 Tyler Woodbrey 12th grade
Inductive Power Transfer
 Roosevelt High School Johnstown

Honorable Mention

Drake Ludgate & Nathaniel Miner 11th grade
Analysis of Various Wing Structures for Hovering Capacity
 Brush High School Brush

Junior Division Plant Sciences

First Place

Blake Bowshot 7th grade
Nature's Magnificent Medicine: Aloe Vera
 The Classical Academy Colorado Springs

Second Place

Ainsley Crist 8th grade
How Acidic Mine Drainage Affects Plant Growth
 Peak to Peak Charter School Lafayette

Third Place

Kamryn Holland 8th grade
All of a Spudden . . .
 Sargent Jr/Sr High School Monte Vista

Fourth Place

Chance Jurkiewicz 8th grade
To Pot or Not
 The Classical Academy Colorado Springs

Honorable Mention

Christopher Custer 8th grade
*Roots of Steel: Nutrient Absorption in Soil vs. Hydroponic
 Plants*
 Challenge School Denver

Honorable Mention

Chloe Rojas 7th grade
*How Do Different Nutrients in Water Affect the Growth Rate of
 a Pea Plant?*
 Walt Clark Middle School Loveland

Senior Division Plant Sciences

First Place

Vanessa Haggans 11th grade
*The Effect of Nutrient Availability on Plant Communities in the
 Alpine Tundra*
 Fairview High School Boulder

Second Place

Jaret Lichty 9th grade
Leaching of Nitrates in Different Soils
 Liberty School Joes

Third Place

Paige Beedy 9th grade
*Fungicidal and Nutrient Application Impact on Wheat
 Germination*
 Limon Schools Limon

Fourth Place

Calyn Ashe 10th grade
Heredity of Plant Albinism
 Hoehne Jr/Sr High School Hoehne

Honorable Mention

Emily Soder & Swami Velamala 12th grade
Plant-Powered Homeostatic Habitat
 Centaurus High School Lafayette

2018 Colorado Science and Engineering Fair

Special Awards Press Release

CSEF

Poster Art Contest

Angel Castillo 10th grade
 \$100, certificate
 West Grand High School Kremmling

Student Choice Award

Kelly Clingan 8th grade
 \$100, trophy, certificate
 Walt Clark Middle School Loveland
Can We Prevent Concussions in Sports and Chronic Traumatic Encephalopathy in Later Life?

Stephanie Zhang 12th grade
 \$100, trophy, certificate
 Fairview High School Boulder
Developing a Novel Inhibitor for Cdc14 in the Fungus Aspergillus niger

Elemér Bernath Technical Writing Award

Matthew Anderson 8th grade
 \$100, certificate
 Challenge School Denver
Redesigning Ventilation to Minimize Airborne Pathogen Transmission in Multiple-Bed Hospital Wards

Ralph Desch Technical Writing Award

Stephanie Zhang 12th grade
 \$100, certificate
 Fairview High School Boulder
Developing a Novel Inhibitor for Cdc14 in the Fungus Aspergillus niger

Pioneers of Science

Alan Turing

Chance Hill 7th grade
 \$50, certificate, poster of pioneer scientist
 Walt Clark Middle School Loveland
Combating Pick Pockets of the Future

Chien-Shiung Wu

Caleb Siegling 7th grade
 \$50, certificate, poster of pioneer scientist
 Fort Morgan Middle School Fort Morgan
Antibubbles and Surface Tension

Christa McAuliffe Award

Joshua Vu 7th grade
 \$50, certificate, poster of pioneer scientist
 The Classical Academy Colorado Springs
Maximizing Efficiency When Generating Clean Energy

Edwin Hubble Award

Serenity Foutz 7th grade
 \$50, certificate, poster of pioneer scientist
 Bayfield Middle School Bayfield
Plants vs. Water: A Battle of Soil Erosion

G. V. Black Award

Georgia Hartley 8th grade
 \$50, certificate, poster of pioneer scientist
 Challenge School Denver
Mind the Gape: The Effect of Tension on the Gaping of Sutures

Gifford Pinchot Award

Amber Gilmore 8th grade
 \$50, certificate, poster of pioneer scientist
 Lamar Middle School Lamar
Purifying the Arkansas

Grace Hopper

Barrett Aronson 6th grade
 \$50, certificate, poster of pioneer scientist
 St. Columba Catholic School Durango
What Is Wrong with My WiFi Signal??

Hedy Lamarr Award

Braden Wedel 8th grade
 \$50, certificate, poster of pioneer scientist
 Stratton Schools Stratton
The Effect of Sand/Gravel Ratio on the Strength of Concrete

John Dalton Award

Pearl Soundron 8th grade
 \$50, certificate, poster of pioneer scientist
 Classical Conversations Monument
Ions Can't Fly

Lise Meitner Award

Madison Tajchman 8th grade
 \$50, certificate, poster of pioneer scientist
 Imagine Charter School Firestone
Water U Drinkin' ?!

Louis Pasteur Award

Lucian Grinnan 8th grade
 \$50, certificate, poster of pioneer scientist
 Sacred Heart Academy Burlington
Best Thing Since Sliced Bread!

Luther Burbank Award

Victoria Arellano 6th grade
 \$50, certificate, poster of pioneer scientist
 Heaton Middle School Pueblo
It's Lit

Margaret Mead Award

Grace Farrell 6th grade
 \$50, certificate, poster of pioneer scientist
 Good Shepherd Catholic School Denver
Bare Your Teeth!

Sigmund Freud Award

Josie Gundry 8th grade
 \$50, certificate, poster of pioneer scientist
 St. Columba Catholic School Durango
Back Up Dude

2018 Colorado Science and Engineering Fair

Special Awards Press Release

Temple Grandin Award

Cash Walker 7th grade
 \$50, certificate, poster of pioneer scientist
 Orchard Mesa Middle School Grand Junction
Suffocating Shrimps?

Military

United States Air Force

Air Force ROTC Award

Siddarth Ijju 10th grade
 certificate, over-the-shoulder sling pack, power bank charger,
 dog tag USB flash drive, dual USB car charger
 Cherry Creek High School Greenwood Village
*Autonomous Anomaly Detection and Classification Using
 Neural Networks*

Ellie Clark 8th grade
 certificate, over-the-shoulder sling pack, power bank charger,
 dog tag USB flash drive, dual USB car charger
 St. Columba Catholic School Durango
*Smart Fabric- Microelectronic Properties of Textiles Coated
 with Carbon Nanotubes*

United States Navy & Marine Corps

Office of Naval Research Award

Julia Warnock 8th grade
 certificate
 Poudre Global Academy Fort Collins
*Structural Geology of the Fountain Formation in Lory State
 Park*

Edward Wawrzynek 8th grade
 certificate
 Summit Charter Middle School Boulder
*A Novel Approach to Authorship Attribution Using Word
 Vectors and Stylistic Features*

Zachary Isley 8th grade
 certificate
 Turner Middle School Berthoud
*Quantum Entanglement of Photons Via Spontaneous
 Parametric Down Conversion in a KD*P Crystal*

Nathaniel Ellis 6th grade
 certificate
 Escalante Middle School Durango
*Electromagnetic Pulses (EMPs): Solar Flares, Radioactive
 Winds, and the End to Our Digital World!*

Aaliyah Garcia 11th grade
 certificate, \$75 gift certificate
 Center High School Center
Wildland Firefighter Defense System: Phase III

Jason Foutz 10th grade
 certificate, \$75 gift certificate
 Ignacio High School Ignacio
Efficiency of a Hydrogen/Oxygen Gas Generator

Molly Nehring 11th grade
 certificate, \$75 gift certificate
 Monte Vista High School Monte Vista
*Far Out! Analyzing NASA's Kepler Space Telescope Data
 Using the Transit-Timing Variation Method to Discover
 Additional Exoplanets in Planetary Systems*

Organizational

Air & Waste Management Association

Air & Waste Management Award

Madison Miller 7th grade
 \$50
 Monte Vista Middle School Monte Vista
Well, Well, Well, What Do We Have Here?

Alexander Pabst Krammer 8th grade
 \$100
 Summit Charter Middle School Boulder
*Lawnmower for Plastic: Removing Plastic from Sand on
 Beaches*

Matyson Jones 9th grade
 \$50
 Monte Vista High School Monte Vista
*Global Storming? Is Climate Change Intensifying the Number
 and Duration of Tropical Storms and Hurricanes?*

Robert Vanderschaaff & Brei-Lynne Nelson 12th grade
 \$100
 Roosevelt High School Johnstown
The Effects of Ice Melts on Water pH

American Association of University Women

AAUW Award for Women in STEM

Gitanjali Rao 7th grade
 \$100
 STEM School Highlands Ranch Highlands Ranch
*Detection of Chemical Contaminants in Water Using Carbon
 Nanotube Sensors*

Katelynn Salmon 11th grade
 \$100
 Palmer Ridge High School Monument
*Synthesis of Acetylene-Perfluorinatedpyridine Monomer and
 Click-Mediated Polymerization*

American Chemical Society

ACS's Excellence in Chemistry Award

Radhika Gupta 7th grade
 \$50, certificate
 The Classical Academy Colorado Springs
Analyzing the Effectiveness of Various Whiteboard Cleaners

Levi Tichi 8th grade
 \$50, certificate
 St. Columba Catholic School Durango
Fluorocarbon to Eco-Friendly

Ethan Wurman 8th grade
 \$50, certificate
 Summit Charter Middle School Boulder
Electrolysis of Salt Water Solutions

2018 Colorado Science and Engineering Fair

Special Awards Press Release

Isabella Garcia 7th grade
 \$50, certificate
 The Classical Academy Colorado Springs
Certified Cookie Monster Approved

Gitanjali Rao 7th grade
 \$150, certificate
 STEM School Highlands Ranch Highlands Ranch
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors

Katelynn Salmon 11th grade
 \$50, certificate
 Palmer Ridge High School Monument
Synthesis of Acetylene-Perfluorinatedpyridine Monomer and Click-Mediated Polymerization

Jan Gradon 11th grade
 \$50, certificate
 Fairview High School Boulder
The Chemiluminescence of Bleaches Induced by Luminol: A Study of Glows Over Periods Time

Logan Klein 11th grade
 \$50, certificate
 Yuma High School Yuma
How Magnesium Almost Lost World War Two: Environmental Effects on Magnesium

Max Warnock 10th grade
 \$50, certificate
 Poudre Global Academy Fort Collins
UV-Vis Analysis of Silver Nanoparticles Released from Odor Control Clothing, Part II

Rollin Leavitt 12th grade
 \$150, certificate
 Animas High School Durango
Investigation of Transcription Factor Preferences of Bacterial Receptors

American Industrial Hygiene Association Excellence in Protection of Occupational Health and Safety Award

Gitanjali Rao 7th grade
 \$50
 STEM School Highlands Ranch Highlands Ranch
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors

Matthew Anderson 8th grade
 \$50
 Challenge School Denver
Redesigning Ventilation to Minimize Airborne Pathogen Transmission in Multiple-Bed Hospital Wards

Nicholas Foster 7th grade
 \$50
 The Classical Academy Colorado Springs
Robotic Exoskeleton

James Mars & Tyler Barnes 8th grade
 \$50
 Ignacio Middle School Ignacio
Let's Get Fired Up!

Aaliyah Garcia 11th grade
 \$50
 Center High School Center
Wildland Firefighter Defense System: Phase III

American Institute of Aeronautics & Astronautics AIAA Prize

Morgan Cragin 6th grade
 certificate, Arduino kit, 1 year AIAA student membership
 Liberty Middle School Aurora
Starring Materials

Kjersti Moritz 7th grade
 certificate, Arduino kit, 1 year AIAA student membership
 Vail Mountain School Vail
Up Up and Away

Krithik Ramesh 10th grade
 certificate, Arduino kit, 1 year AIAA student membership
 Cherry Creek High School Greenwood Village
Suppression of Aeroelastic Instabilities in HR Wing Structures Using Principal Component Analysis

Chase Cromwell 10th grade
 certificate, Arduino kit, 1 year AIAA student membership
 Lamar High School Lamar
Stampede Arm II

American Institute of Chemical Engineers Excellence in Chemical Engineering Award

Kooper Grinstead 8th grade
 \$75
 Rocky Ford Jr/Sr High School Rocky Ford
Veggie Tales

Liliana Petrecca 6th grade
 \$100
 Webber Middle School Fort Collins
Help for Hurricane Victims: Creating Fresh Water Using Solar Power

Emma Stone & Reiley Leake 9th grade
 \$75
 Brush High School Brush
Roots for the Road

Logan Klein 11th grade
 \$100
 Yuma High School Yuma
How Magnesium Almost Lost World War Two: Environmental Effects on Magnesium

American Institute of Professional Geologists AIPG Certificate of Excellence in the Geosciences

Haiyan Wang 8th grade
 \$50
 Summit Charter Middle School Boulder
Plant Growth in Varied Soil Type and Air Pressure

2018 Colorado Science and Engineering Fair

Special Awards Press Release

Gitanjali Rao 7th grade
 \$100
 STEM School Highlands Ranch Highlands Ranch
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors

Casey Shaw 12th grade
 \$50
 Liberty School Joes
An Analysis of Compositional Characteristics of Two Distinct Fossil Butte Member Localities

Isaac Jordan 12th grade
 \$100
 Southwest Colorado eSchool Durango
A Novel Approach for Sensing Seismic Events: Applications of Graphene Nano Flake Powder Composites

American Meteorological Society

Award for Excellence in Atmospheric Science Research

Alexander Pabst Krammer 8th grade
 gift certificate, certificate
 Summit Charter Middle School Boulder
Lawnmower for Plastic: Removing Plastic from Sand on Beaches

Amber Michel 11th grade
 gift certificate, certificate
 Monte Vista High School Monte Vista
The Alamosa River Watershed: A Proving Ground for Natural Selection

American Statistical Association

David Young Memorial Award

Abby Klapp 8th grade
 \$200, student membership in the ASA, acknowledgement at chapter spring meeting and on chapter web site
 Monument Charter Academy Monument
Surviving a Drought

Vanessa Haggans 11th grade
 \$200, student membership in the ASA, acknowledgement at chapter spring meeting and on chapter web site
 Fairview High School Boulder
The Effect of Nutrient Availability on Plant Communities in the Alpine Tundra

American Vacuum Society

Excellence in Physical Sciences & Engineering Award

Gregory Mackintosh 8th grade
 \$50, \$50 matching award to teacher/sponsor
 Good Shepherd Catholic School Denver
BioLine: The Biodegradable Fishing Line

Gitanjali Rao 7th grade
 \$100, \$100 matching award to teacher/sponsor
 STEM School Highlands Ranch Highlands Ranch
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors

Isaac Jordan 12th grade

\$50, \$50 matching award to teacher/sponsor
 Southwest Colorado eSchool Durango
A Novel Approach for Sensing Seismic Events: Applications of Graphene Nano Flake Powder Composites

Fionna Kopp 12th grade
 \$100, \$100 matching award to teacher/sponsor
 Boulder High School Boulder
Voltage-Potential Profiles of Glow Discharges Using an Emissive Probe

ASM International

ASM Materials Education Foundation Award

John Quinn 11th grade
 \$100
 Fairview High School Boulder
Restoration of Manipulated Serial Numbers Using Electron Backscatter Diffraction

Adrienne Jones 12th grade
 \$150
 Trinidad High School Trinidad
Varies Crystals Responding to Environmental Audio Variables

Biomedical Engineering Society, Colorado State University Chapter

Excellence in Biomedical Engineering Award

Ellie Clark 8th grade
 bluetooth speaker, formal invitation to a BMES event, bumper sticker, CSU School of Biomedical Engineering gift bag
 St. Columba Catholic School Durango
Smart Fabric- Microelectronic Properties of Textiles Coated with Carbon Nanotubes

Maya Monks & Ella Sharp 8th grade
 bluetooth speaker, formal invitation to a BMES event, bumper sticker, CSU School of Biomedical Engineering gift bag
 Stanley British Primary School Denver
Medical Cushioning Using Slime

Luke Nielsen 7th grade
 bluetooth speaker, formal invitation to a BMES event, bumper sticker, CSU School of Biomedical Engineering gift bag
 The Classical Academy Colorado Springs
Still Sitting?

Colorado Association of Meat Processors

Excellence in Meat Science & Food Safety Award

Tristin Niccoli 9th grade
 \$80, certificate
 Arickaree School Anton
Will They Survive?

Colorado Association of Science Teachers

CAST Award

Analisa Vega 6th grade
 \$100
 Dolores Elementary School Dolores
Over the Counter Medications vs. Herbal Remedies: Which Is More Potent?

2018 Colorado Science and Engineering Fair

Special Awards Press Release

Radhika Gupta 7th grade
\$100

The Classical Academy Colorado Springs
Analyzing the Effectiveness of Various Whiteboard Cleaners

Dylan Cantrell 12th grade
\$100

Nederland Middle/Senior High Nederland
The Role of Economic Variable in Election Outcomes: A Global Analysis

Logan Klein 11th grade
\$100

Yuma High School Yuma
How Magnesium Almost Lost World War Two: Environmental Effects on Magnesium

Colorado Biology Teachers' Association

CBTA Best Biology Project Award

Kamryn Holland 8th grade
certificate, \$50

Sargent Jr/Sr High School Monte Vista
All of a Spudden . . .

Esha Sury 8th grade
certificate, \$100

Challenge School Denver
Synergizing Antibiotics with Phage K and Prophylactic Nanosilver: Manipulating Resistance

Vanessa Haggans 11th grade
certificate, \$50

Fairview High School Boulder
The Effect of Nutrient Availability on Plant Communities in the Alpine Tundra

Delaney Yehle 11th grade
Dana Coe 12th grade

Loren Rylander 11th grade
certificate, \$100

Rock Canyon High School Highlands Ranch
Assessing Goat Browsing as a Form of Wildfire Mitigation and Its Environmental Impacts

Colorado BioScience Institute

BioGENEius Challenge

Isani Singh 12th grade
all expense paid trip to compete at the international competition held in Boston, MA June 2018 during the International BIO Convention

Cherry Creek High School Greenwood Village
Investigating the Developmental Requirements of Sex Chromosome Genes Affected in Turner Syndrome

Colorado Chemistry Teachers Association

CCTA Chemistry Award

Maddisun Ellithorpe & Josh Sawyer 8th grade
\$100

Sargent Jr/Sr High School Monte Vista
Hemp . . . A Hot Topic

Tyson Schneider 10th grade
\$100

Arickaree School Anton
Acidtastic

Colorado Dental Association

CDA Excellence in Oral Health Award

Edwin Bodoni 11th grade
\$100

Cherry Creek High School Greenwood Village
Bruxism: A Novel Diagnostic Approach

Colorado Division of Reclamation, Mining & Safety

Outstanding Earth Science Award

Julia Warnock 8th grade
\$75

Poudre Global Academy Fort Collins
Structural Geology of the Fountain Formation in Lory State Park

2018 Colorado Science and Engineering Fair

Special Awards Press Release

Vanessa Haggans 11th grade
 \$75
 Fairview High School Boulder
The Effect of Nutrient Availability on Plant Communities in the Alpine Tundra

Colorado Environmental Health Association Environmental Health Award

Natalie Aerni 7th grade
 \$75, framed certificate
 Frontier Academy Secondary School Greeley
The Uses of Darkling Mealworms in Plastic Degradation

Max Warnock 10th grade
 \$150, framed certificate, invitation to exhibit at the CEHA
 Annual Education Conference (valued at \$400)
 Poudre Global Academy Fort Collins
UV-Vis Analysis of Silver Nanoparticles Released from Odor Control Clothing, Part II

Colorado Foundation for Agriculture

Jack Fenwick Award for Agricultural Science

Madison Cabot 8th grade
 certificate, \$50
 Imagine Charter School Firestone
Beyond the Boots

Kamryn Holland 8th grade
 certificate, \$50
 Sargent Jr/Sr High School Monte Vista
All of a Spudden . . .

Sydnee Roth 11th grade
 certificate, \$50
 Liberty School Joes
Pack on the Protein

Jaret Lichty 9th grade
 certificate, \$50
 Liberty School Joes
Leaching of Nitrates in Different Soils

Colorado Geographic Alliance

Application of Geography Award

Madison Miller 7th grade
 \$100
 Monte Vista Middle School Monte Vista
Well, Well, Well, What Do We Have Here?

Rithwik Mylavaram 10th grade
 \$100
 Fairview High School Boulder
Leveraging Satellite Imagery to Map Road Surface Conditions

Colorado Medical Society

CMS Education Foundation Award

Trista Barnett 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
 Dove Creek Middle School Dove Creek
Now You See Me . . . Now You Don't

Jayendra Chauhan 10th grade
 Grace Nunnelee 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
 Rock Canyon High School Lone Tree
 Ridgeview Classical Schools Fort Collins
*Characterization and In Vitro Differentiation of Myeloid
 Derived Suppressor Cells*

Colorado Mineral Society

Best Earth Science Award

Madison Miller 7th grade
 certificate, \$35, mineral specimen, book
 Monte Vista Middle School Monte Vista
Well, Well, Well, What Do We Have Here?

Julia Warnock 8th grade
 certificate, \$50, mineral specimen, book
 Poudre Global Academy Fort Collins
*Structural Geology of the Fountain Formation in Lory State
 Park*

Casey Shaw 12th grade
 certificate, \$35, mineral specimen, book
 Liberty School Joes
*An Analysis of Compositional Characteristics of Two Distinct
 Fossil Butte Member Localities*

Isaac Jordan 12th grade
 certificate, \$50, mineral specimen, book
 Southwest Colorado eSchool Durango
*A Novel Approach for Sensing Seismic Events: Applications of
 Graphene Nano Flake Powder Composites*

Colorado Mycological Society

Excellence in Mycological Research Award

Faith Roberts 7th grade
 \$100, CMS membership for 2018, certificate, signed copy of
 Vera Evenson's "Rocky Mountain Mushrooms"
 The Classical Academy Colorado Springs
Mold Massacre

Colorado Native Plant Society

Native Plants Award

Sophie Scholl 8th grade
 \$50
 Skinner Middle School Denver
*The Oleophilic Ability of Botanicals in Cleaning Oil from
 Water*

Emma Stone & Reiley Leake 9th grade
 \$50
 Brush High School Brush
Roots for the Road

Colorado Scientific Society

Excellence in Geology Award

Serenity Foutz 7th grade
 \$50
 Bayfield Middle School Bayfield
Plants vs. Water: A Battle of Soil Erosion

2018 Colorado Science and Engineering Fair

Special Awards Press Release

Julia Warnock 8th grade
 \$75
 Poudre Global Academy Fort Collins
Structural Geology of the Fountain Formation in Lory State Park

Casey Shaw 12th grade
 \$75
 Liberty School Joes
An Analysis of Compositional Characteristics of Two Distinct Fossil Butte Member Localities

Rain Orsi 10th grade
 \$100
 Rocky Mountain High School Fort Collins
Shaken: A Statistical Analysis on Induced Seismicity

Colorado State University, College of Agricultural Sciences

Innovations in the Science of Agriculture Award
 Joslyn King 8th grade
 \$500
 Arickaree School Anton
Cornstalk Feed Value: Triple Stacked vs. Single Stacked

Matthew Buckman & Dylan Drew 10th grade
 \$500
 Sky View Academy Highlands Ranch
*The Effects of Substrate Architecture on *L. vannamei**

Colorado State University, Dept. of Biochemistry & Molecular Biology Excellence in Biochemistry & Molecular Biology Award

Stephanie Zhang 12th grade
 \$100, certificate
 Fairview High School Boulder
*Developing a Novel Inhibitor for Cdc14 in the Fungus *Aspergillus niger**

Colorado State University, Department of Chemistry Excellence in Chemistry Award

Gitanjali Rao 7th grade
 certificate, \$100
 STEM School Highlands Ranch Highlands Ranch
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors

Jan Gradon 11th grade
 certificate, \$100
 Fairview High School Boulder
The Chemiluminescence of Bleaches Induced by Luminol: A Study of Glows Over Periods Time

Colorado State University, Dept. of Horticulture & Landscape Architecture Excellence in Horticulture Award

Kamryn Holland 8th grade
 \$100
 Sargent Jr/Sr High School Monte Vista
All of a Spudden . . .

Ainsley Crist 8th grade
 \$100
 Peak to Peak Charter School Lafayette
How Acidic Mine Drainage Affects Plant Growth

Vanessa Haggans 11th grade
 \$100
 Fairview High School Boulder
The Effect of Nutrient Availability on Plant Communities in the Alpine Tundra

Andrew Tokar & Maya Hegde 11th grade
 \$100
 Cherry Creek High School Greenwood Village
Assessing the Viability of Household Food Scraps as an Alternative to Traditional Fertilizer

Colorado State University, Energy Institute Energy Achievement Award

Mark Bloomfield 10th grade
 \$250, certificate
 Coronado High School Colorado Springs
Heating Up: Using Phase Change Materials as a Thermal Battery

Colorado Veterinary Medical Association Veterinary Science Award

Lilly Figueroa 7th grade
 \$100, certificate
 Mancos Middle School Mancos
He? She? Is It a Matter of Degree?

Tristin Niccoli 9th grade
 \$100, certificate
 Arickaree School Anton
Will They Survive?

Colorado's Touchstone Energy Cooperative The Colorado EnergyWise Award

Nikhila Narayana 8th grade
 \$250
 Rocky Heights Middle School Highlands Ranch
Let It Shine: Altering the Wavelength of Bioluminescent Light to Power a Photovoltaic Cell

Kevin Yang 10th grade
 \$250
 Fairview High School Boulder
Design of a Novel Energy-Saving Radiative Cooling Bilayer Paint for Space Cooling

2018 Colorado Science and Engineering Fair Special Awards Press Release

Colorado-Wyoming Society of American Foresters

Excellence in Forestry Research Award

Owen Doherty 6th grade
\$200
Branson School Branson
*Burn Baby Burn: The Effect of Wood Type on Heat Produced in
a Wood Burning Stove*

Isabelle Rusk & Emika Brown 11th grade
\$200
Fairview High School Boulder
*Distinguishing Microbial Communities in Low Elevation
Ponderosa Pine Forests After Prescribed and Natural Burns*

Comstock Family

Heather Comstock Memorial Award

Gracey Hening 6th grade
\$200, certificate
St. Columba Catholic School Durango
*Antibiotic Resistance: The World's Most Dangerous Threat to
Effective Healthcare*

Eppler Family

Eppler Family Award

Elizabeth Petersen 7th grade
microprocessor kit & digital multimeter (valued at \$100)
Flagstaff Charter Academy Longmont
Electricity from Heat

Nicholas Foster 7th grade
microprocessor kit & digital multimeter (valued at \$100)
The Classical Academy Colorado Springs
Robotic Exoskeleton

Tate Schrock 8th grade
\$100
Arickaree School Anton
Electronic Automated Product Dispensing

Fort Collins Conservation District

Conservation District Award

Abby Klapp 8th grade
\$50, plaque
Monument Charter Academy Monument
Surviving a Drought

Delaney Yehle 11th grade
Dana Coe 12th grade
Loren Rylander 11th grade
\$100, plaque
Rock Canyon High School Highlands Ranch
*Assessing Goat Browsing as a Form of Wildfire Mitigation and
Its Environmental Impacts*

Frank Armbruster Foundation

Armbruster Memorial Award

Peter Wilson 8th grade
\$100
The Classical Academy Colorado Springs
Postal Pods

Geological Society of America

GSA Awards in Environmental Geology

Amber Michel 11th grade
plaque, certificate, \$50 gift card, various GSA memorabilia
Monte Vista High School Monte Vista
*The Alamosa River Watershed: A Proving Ground for Natural
Selection*

Kathryn Kummel 9th grade
Michelle Kummel 12th grade
plaque, certificate, \$75 gift card, various GSA memorabilia
Palmer High School Colorado Springs
*Using 3D Drone-based Digital Models to Investigate the
Fluvial Geomorphology of an Eroding Arroyo*

Gitanjali Rao 7th grade
plaque, certificate, \$100 gift card, various GSA memorabilia
STEM School Highlands Ranch Highlands Ranch
*Detection of Chemical Contaminants in Water Using Carbon
Nanotube Sensors*

Gromko Family

Gerald Gromko Memorial Award

Krithik Ramesh 10th grade
\$150
Cherry Creek High School Greenwood Village
*Suppression of Aeroelastic Instabilities in HR Wing Structures
Using Principal Component Analysis*

Human Factors and Ergonomics Society

Excellence in Human Factors & Ergonomics Award

Allison Rose 8th grade
\$100
The Classical Academy Colorado Springs
Maxime Lingura

Institute of Electrical and Electronics Engineers

IEEE Award

Tate Schrock 8th grade
\$100 cash card
Arickaree School Anton
Electronic Automated Product Dispensing

Alyssa Keirn 10th grade
\$150 cash card
Rocky Mountain High School Fort Collins
Solar Powered Decontaminator Design and Testing

Koppa Research, LLC

Koppa Research's Einstein Award for Achievements in Modern Physics

Zachary Isley 8th grade
certificate, \$100
Turner Middle School Berthoud
*Quantum Entanglement of Photons Via Spontaneous
Parametric Down Conversion in a KD*P Crystal*

2018 Colorado Science and Engineering Fair Special Awards Press Release

Kyra Slovacek 12th grade
certificate, \$100
Monarch High School Louisville
Diurnal Variation and Duration of Meteors Usable for Radio Communications

Little Shop of Physics

Matthew McCausland Memorial Award

Liliana Petrecca 6th grade
science equipment/instruments
Webber Middle School Fort Collins
Help for Hurricane Victims: Creating Fresh Water Using Solar Power

Gregory Mackintosh 8th grade
science equipment/instruments
Good Shepherd Catholic School Denver
BioLine: The Biodegradable Fishing Line

Emma Schmit 9th grade
science equipment/instruments
SkyView Academy Highlands Ranch
The Effects of Magnetism and Algae on Voltage on Tin Oxide Plates

Laila Buchler & Rahcel Fasbender 12th grade
science equipment/instruments
Centaurus High School Lafayette
Altered Halter

Lockheed Martin

Ethan Chapman 8th grade
\$50
Challenge School Denver
NASA HUNCH: ISS Location App

Krithik Ramesh 10th grade
\$150
Cherry Creek High School Greenwood Village
Suppression of Aeroelastic Instabilities in HR Wing Structures Using Principal Component Analysis

National Centers for Environmental Information

NCEI Award of Scientific Achievement

Julia Warnock 8th grade
certificate, \$100 from an anonymous donor
Poudre Global Academy Fort Collins
Structural Geology of the Fountain Formation in Lory State Park

National Renewable Energy Laboratory

NREL Energy Award

Max Markuson DiPrince 12th grade
\$100
Central High School Pueblo
Windmill Efficiency Part 3: Testing the Magnetic Flux of Magnetostrictive Solenoids to Optimize Oscillatory Energy Production

2018 Colorado Science and Engineering Fair

Special Awards Press Release

Platte River Power Authority

Platte River Power Authority Special Award for Energy Innovation and Efficiency

Joshua Vu 7th grade
\$100
The Classical Academy Colorado Springs
Maximizing Efficiency When Generating Clean Energy

Scott Clousing & Daniel Orbidan 11th grade
\$150
SkyView Academy Highlands Ranch
*Use of Monte Carlo Methods to Evaluate the Viability of
Hydroelectric Dams*

Platte River Power Authority Special Award for Environmental Responsibility

Mikailah Feinman 8th grade
\$100
Primero Jr/Sr High School Weston
*Produced Gas Well Water: Can It Be Repurposed for
Agricultural Use? Year 2*

Alyssa Keirn 10th grade
\$150
Rocky Mountain High School Fort Collins
Solar Powered Decontaminator Design and Testing

Rocky Mountain Association of Geologists

Excellence in Earth Science Award

Stella Addis 8th grade
\$125
Vail Mountain School Vail
Salty Studies

Julia Warnock 8th grade
\$250
Poudre Global Academy Fort Collins
*Structural Geology of the Fountain Formation in Lory State
Park*

Casey Shaw 12th grade
\$125
Liberty School Joes
*An Analysis of Compositional Characteristics of Two Distinct
Fossil Butte Member Localities*

Kathryn Kummel 9th grade
Michelle Kummel 12th grade
\$250 each
Palmer High School Colorado Springs
*Using 3D Drone-based Digital Models to Investigate the
Fluvial Geomorphology of an Eroding Arroyo*

Rocky Mountain Water Environment Association

Water Research Award

Norah Quirk 7th grade
\$200, certificate
The Classical Academy Colorado Springs

Gitanjali Rao 7th grade
\$400, certificate
STEM School Highlands Ranch Highlands Ranch
*Detection of Chemical Contaminants in Water Using Carbon
Nanotube Sensors*

Amber Michel 11th grade
\$200, certificate
Monte Vista High School Monte Vista
*The Alamosa River Watershed: A Proving Ground for Natural
Selection*

Isla Anderson 10th grade
\$400, certificate
Denver North High School Denver
*Anthropogenic Induction of Antibiotic Resistance by
Sulfamethoxazole*

SACNAS, Colorado State University Chapter

SACNAS CSU Rising Young Scientist Award

Arushi Munjal 8th grade
\$50
Challenge School Denver
*How Changes in Temperature Affect D. Melagonaster's
Reproduction, Survival, and Life Cycle*

Carlos Rayos 6th grade
\$50
Silverton Schools Silverton
Fruity Controller

Vicente Trevino 12th grade
\$50
Delta High School Delta
Healing Air Pollution with Hydrogen

Spoorthy Reddy 11th grade
\$50
Fairview High School Boulder
*Determining the Role of Ferroptosis in Parthenolide and Its
Analog Mediated Cell Death in AML*

Science Toy Magic, LLC

Physics Classroom Demonstration Award

Carlos Rayos 6th grade
\$50
Silverton Schools Silverton
Fruity Controller

Elizabeth Petersen 7th grade
\$100
Flagstaff Charter Academy Longmont
Electricity from Heat

Chase Cromwell 10th grade
\$50
Lamar High School Lamar
Stampede Arm II

2018 Colorado Science and Engineering Fair

Special Awards Press Release

Max Markuson DiPrince 12th grade
 \$100
 Central High School Pueblo
Windmill Efficiency Part 3: Testing the Magnetic Flux of Magnetostrictive Solenoids to Optimize Oscillatory Energy Production

Society for Mining, Metallurgy & Exploration Excellence in Mineral Science & Engineering Award

Miles Johnston 8th grade
 \$100, plaque
 The Classical Academy Colorado Springs
Don't Let Charging Up Run You Down: A Study on Portable Power

Gitanjali Rao 7th grade
 \$250, plaque
 STEM School Highlands Ranch Highlands Ranch
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors

Ainsley Crist 8th grade
 \$250, plaque
 Peak to Peak Charter School Lafayette
How Acidic Mine Drainage Affects Plant Growth

Sarah Bian 9th grade
 \$300, plaque
 Cherry Creek High School Greenwood Village
CO₂ Sequestration by Mineral Carbonation in Ambient Air: Wollastonite Ratio

Society of Women Engineers SWE Award

Allison Rose 8th grade
 \$75, certificate
 The Classical Academy Colorado Springs
Maxime Lingura

Gitanjali Rao 7th grade
 \$100, certificate
 STEM School Highlands Ranch Highlands Ranch
Detection of Chemical Contaminants in Water Using Carbon Nanotube Sensors

Emma Stone & Reiler Leake 9th grade
 \$75, certificate
 Brush High School Brush
Roots for the Road

Jenna Salvat 11th grade
 \$100, certificate
 Coronado High School Colorado Springs
Synthesis and Characterization of a NiO-ZnO Semiconductor Junction for an Electromechanical Effect

Soil & Water Conservation Society, Colorado Chapter

Natural Resource Conservation Award

Kit Bellefeuille 11th grade
 \$100, certificate
 Limon Schools Limon
Effectiveness of Cereal Rye as a Cover Crop to Alfalfa
 Kamryn Holland 8th grade
 \$100, certificate
 Sargent Jr/Sr High School Monte Vista
All of a Spudden . . .

The Inventors' Roundtable Inventors' Roundtable Award

Laila Buchler & Rachel Fasbender 12th grade
 \$100, free patent search (valued at \$499)
 Centaurus High School Lafayette
Altered Halter

Trout Unlimited

Trout Unlimited River Conservation Award

Ainsley Crist 8th grade
 \$75
 Peak to Peak Charter School Lafayette
How Acidic Mine Drainage Affects Plant Growth
 Keaton Fischer 10th grade
 \$125
 Sierra Grande Jr/Sr High School Blanca
Understanding the Rio Grande Cutthroat Trout Resiliency in the Trinchera and Ute Creek Watersheds
 Amber Michel 11th grade
 \$200
 Monte Vista High School Monte Vista
The Alamosa River Watershed: A Proving Ground for Natural Selection

United States Department of Commerce

Award for Excellence in Science and Engineering

Kyra Slovacek 12th grade
 plaque, \$200 from an anonymous donor
 Monarch High School Louisville
Diurnal Variation and Duration of Meteors Usable for Radio Communications

United States Geological Survey

USGS Excellence in Geological Research Award

Ainsley Crist 8th grade
 reference book, mineral specimen
 Peak to Peak Charter School Lafayette
How Acidic Mine Drainage Affects Plant Growth
 Rain Orsi 10th grade
 reference book, mineral specimen
 Rocky Mountain High School Fort Collins
Shaken: A Statistical Analysis on Induced Seismicity

2018 Colorado Science and Engineering Fair

Special Awards Press Release

University of Colorado, Denver

Medical Scientist Training Program Award

Nathaniel Vercammen	6th grade	
\$50		
Flagstaff Charter Academy	Longmont	
<i>How Flatworms Are Affected by Magnetic Fields</i>		
Rollin Leavitt	12th grade	
\$50		
Animas High School	Durango	
<i>Investigation of Transcription Factor Preferences of Bacterial Receptors</i>		

Van Gorp Family

Dan Van Gorp Memorial Award

Owen Beute	9th grade	
certificate, \$200		
The Vanguard School	Colorado Springs	
<i>Coliform Bacteria in Front Range Water</i>		

Vaughan Web Works

Software Program Use Award

Ethan Chapman	8th grade	
\$50		
Challenge School	Denver	
<i>NASA HUNCH: ISS Location App</i>		
Scott Clousing & Daniel Orbidan	11th grade	
\$100		
SkyView Academy	Highlands Ranch	
<i>Use of Monte Carlo Methods to Evaluate the Viability of Hydroelectric Dams</i>		

Wilkins Family

Young Entrepreneur's Award

Alyssa Keirn	10th grade	
\$500		
Rocky Mountain High School	Fort Collins	
<i>Solar Powered Decontaminator Design and Testing</i>		

Wojtaszek Family

Paul Wojtaszek Memorial Award

Spoorthy Reddy	11th grade	
certificate, \$200		
Fairview High School	Boulder	
<i>Determining the Role of Ferroptosis in Parthenolide and Its Analog Mediated Cell Death in AML</i>		

Women in Physics,

Colorado State University Chapter

Promising Young Woman in Science Award

Kiersten Super-Hill	8th grade	
certificate, science gift bag		
Notre Dame Parish School	Denver	
<i>Refraction Action</i>		

Zonta Club of Boulder County

Amelia Earhart Award

LilyRae Martinez	6th grade	
letter, \$100		
Heaton Middle School	Pueblo	
<i>Rocketology: Lift Off</i>		
Kjersti Moritz	7th grade	
letter, \$100		
Vail Mountain School	Vail	
<i>Up Up and Away</i>		

Scholarships

Adams State University

Adams State University Porter Scholarships

Katelynn Salmon	11th grade	
conditional scholarship to Adams State University valued at \$5,000, with potential of renewal		
Palmer Ridge High School	Monument	
<i>Synthesis of Acetylene-Perfluorinatedpyridine Monomer and Click-Mediated Polymerization</i>		
Adrienne Jones	12th grade	
conditional scholarship to Adams State University valued at \$5,000, with potential of renewal		
Trinidad High School	Trinidad	
<i>Varies Crystals Responding to Environmental Audio Variables</i>		
Adam Vasquez	11th grade	
conditional scholarship to Adams State University valued at \$5,000, with potential of renewal		
Eagle Valley High School	Gypsum	
<i>Dye Sensitized Solar Cell</i>		
Amber Michel	11th grade	
conditional scholarship to Adams State University valued at \$5,000, with potential of renewal		
Monte Vista High School	Monte Vista	
<i>The Alamosa River Watershed: A Proving Ground for Natural Selection</i>		
Tyson Lichty	11th grade	
conditional scholarship to Adams State University valued at \$5,000, with potential of renewal		
Liberty School	Joel	
<i>To Add or Not to Add: Possible Relations Between Nitrogen Fixing Bacteria and Nitrogen Fertilizers</i>		
Stephen McDonald	11th grade	
conditional scholarship to Adams State University valued at \$5,000, with potential of renewal		
Central High School	Pueblo	
<i>Does Sample Size Affect Studies Done on Populations with Various Communities of Different Sizes?</i>		
Kit Bellefeuille	11th grade	
conditional scholarship to Adams State University valued at \$5,000, with potential of renewal		
Limon Schools	Limon	
<i>Effectiveness of Cereal Rye as a Cover Crop to Alfalfa</i>		

2018 Colorado Science and Engineering Fair Special Awards Press Release

Colorado State University, Fort Collins *Colorado State University, Fort Collins Scholarships*

Aylin Kahraman 10th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Cherry Creek High School Greenwood Village
The Impact of Education on Student Athletes Regarding Concussions

Stephanie Zhang 12th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Fairview High School Boulder
Developing a Novel Inhibitor for Cdc14 in the Fungus Aspergillus niger

Casey Shaw 12th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Liberty School Joes
An Analysis of Compositional Characteristics of Two Distinct Fossil Butte Member Localities

Kevin Yang 10th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Fairview High School Boulder
Design of a Novel Energy-Saving Radiative Cooling Bilayer Paint for Space Cooling

Isaac Jordan 12th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Southwest Colorado eSchool Durango
A Novel Approach for Sensing Seismic Events: Applications of Graphene Nano Flake Powder Composites

Delaney Yehle 11th grade
Dana Coe 12th grade
Loren Rylander 11th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Rock Canyon High School Highlands Ranch
Assessing Goat Browsing as a Form of Wildfire Mitigation and Its Environmental Impacts

Austen Mazenko 10th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Cherry Creek High School Greenwood Village
Characterization of Certain Non-Homogeneous Meta-Fibonacci Sequences

Edwin Bodoni 11th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Cherry Creek High School Greenwood Village
Bruxism: A Novel Diagnostic Approach

Anand Chundi 10th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
SkyView Academy Highlands Ranch
Identifying Downstream Targets of HCFC1: A Gene Linked to Severe Neurological Disease

Kyra Slovacek 12th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Monarch High School Louisville
Diurnal Variation and Duration of Meteors Usable for Radio Communications

Vanessa Haggans 11th grade
\$1,000 scholarship to attend CSU, renewable for up to 3 additional years
Fairview High School Boulder
The Effect of Nutrient Availability on Plant Communities in the Alpine Tundra

Colorado State University, Pueblo

Colorado State University, Pueblo Scholarship

Isaac Jordan 12th grade
\$1,000 renewable scholarship to attend Colorado State University, Pueblo
Southwest Colorado eSchool Durango
A Novel Approach for Sensing Seismic Events: Applications of Graphene Nano Flake Powder Composites

SSP

American Psychological Association

Outstanding Achievement in Psychological Sciences Award

Chloe Haerr 7th grade
certificate
The Classical Academy Colorado Springs
Stress Test

Aylin Kahraman 10th grade
certificate
Cherry Creek High School Greenwood Village
The Impact of Education on Student Athletes Regarding Concussions

Broadcom

Broadcom MASTERS Nomination

Natalie Aerni 7th grade
nomination to enter the 2018 Broadcom MASTERS competition for middle school students
Frontier Academy Secondary School Greeley
The Uses of Darkling Mealworms in Plastic Degradation

Chloe Haerr 7th grade
nomination to enter the 2018 Broadcom MASTERS competition for middle school students
The Classical Academy Colorado Springs
Stress Test

