

2023 Colorado Science and Engineering Fair

Grand Awards Press Release

Junior Division Best of CSEF Project

First Place

Aanshi Shah 8th grade
Make Some Noise! An Innovative Method to Produce Electricity Using Sound
 Thunder Vista P-8 School Broomfield

Second Place

Diya Mehta 8th grade
Environmental Effects on the Embryonic Development of Sea Urchins
 Flagstaff Academy Longmont

Third Place

Charlie Danko 8th grade
An Affordable Robot for Dangerous Factories
 Flagstaff Academy Longmont

Senior Division Best of CSEF Project

First Place

Margaret Arthur 11th grade
A Novel Phosphosite Localization Approach using Tandem Phosphoprotein Mass Spectra and Temporal Dilated Networks
 Fairview High School Boulder

Second Place

Aditi Avinash 11th grade
Model Validation and Preclinical Testing of Digestive Enzymes for Gluten Breakdown
 Rock Canyon High School Littleton

Third Place

Nathaniel Ellis 11th grade
MOON-OPOLY II: Employing Additive Manufacturing Technology for Lunar Construction with Waterless Concrete
 Durango High School Durango

Fourth Place

Carlos Ochoa-Marquez 12th grade
The Effect of Heavy Metal Toxicity on Solanum tuberosum, Cucurbita pepo, Medicago sativa, and Capsicum annuum Plants Inoculated with Mycorrhizae
 Monte Vista High School Monte Vista

Fifth Place

Marissa Martinez 12th grade
The Efficacy of Abiotic/Biotic Factors and Trap Design for Effective Capture of Invasive American Bullfrog
 Monte Vista High School Monte Vista

Junior Division Animal Sciences

First Place

Diya Mehta 8th grade
Environmental Effects on the Embryonic Development of Sea Urchins
 Flagstaff Academy Longmont

Second Place

Grace Marmorstein 8th grade
The Insect Repellent Properties of Nepetalactone
 Challenge School Denver

Third Place

Grace Jones 7th grade
I'm Not Yoking Around: Evaluating How the Food That Chickens Eat Affect The Width of The Egg Shell
 Wray Jr/Sr High School Wray

Honorable Mention

Ayra Memon 7th grade
Bioluminescence in Pyrocystis Fusiformis
 Crescent View Academy Aurora

Honorable Mention

Vivian Wolkow 6th grade
Does the Tail Remember What the Head Saw?
 North Middle School Colorado Springs

Senior Division Animal Sciences

First Place

Marissa Martinez 12th grade
The Efficacy of Abiotic/Biotic Factors and Trap Design for Effective Capture of Invasive American Bullfrog
 Monte Vista High Schoolg Monte Vista

Second Place

Zoey Montoya 10th grade
 Everett Ediger 11th grade
How Qualities of Soil Affect Where Aphonopelma Hentzi Burrows in the Colorado Grassland
 La Junta Jr/Sr High School La Junta

Third Place

Harrison Ruleman 12th grade
Do Snakes Avoid Certain Colors of Light?
 Evergreen High School Evergreen

Junior Division Behavioral & Social Sciences

First Place

Sunand Bhandaram 7th grade
Do Phones Amongst Middle Schoolers Affect Their Grades?
 Campus Middle School Greenwood Village

Second Place

Ryler Horansky 8th grade
 Liam Yee 8th grade
Does The Student-Teacher Ratio in Middle School Affect How Connected Students Feel To Their Teachers?
 Horizons K-8 School Boulder

Third Place

Samantha Goetz 6th grade
How Childproof Are Medication Bottles?
 St. Peter Catholic School Monument

2023 Colorado Science and Engineering Fair

Grand Awards Press Release

Honorable Mention

Ling-Ling Ryan 8th grade
How Do Gender and Age Affect the Legibility of Handwriting?
 Summit Middle Charter School Boulder

Senior Division Behavioral & Social Sciences

First Place

Elise Brodsky 12th grade
The Effects of Perpetrator Race and Gender on the Reliability of Eyewitness Accounts
 Nederland Middle-Senior High School Nederland

Second Place

Cadence Casey 9th grade
The Effects of Peer Pressure in Social Media
 SkyView Academy Highlands Ranch

Third Place

Evelyn Seevers 9th grade
Analyzing Data of Data Analysis of Analyzed Data About Exoplanets
 Conifer High School Conifer

Honorable Mention

Asia Alarid 11th grade
Neuron My Mind: Analysis of Different Brain Altering Substances on Student Performance
 Monte Vista High School Monte Vista

Junior Division Biomedical & Health Sciences

First Place

Emma Beeby 8th grade
The Effect of Stress on the Amount of Carbon Dioxide Exhaled
 Skinner Middle School Denver

Second Place

Kapil Bhandaram 7th grade
Is There A Relationship Between Meditation and Muscle Reaction Time?
 Campus Middle School Greenwood Village

Third Place

Lauren Gdanitz 8th grade
 Scarlett Paulson 8th grade
Applying Ionizing Radiation to DNA: Determining the Effectiveness of Different Protection Methods Against Ionizing Radiation
 Wray Jr/Sr High School Wray

Honorable Mention

Terra McClure 7th grade
Oh Snap!
 Rocky Ford Jr/Sr High School Rocky Ford

Senior Division Biomedical & Health Sciences

First Place

Aditi Avinash 11th grade
Model Validation and Preclinical Testing of Digestive Enzymes for Gluten Breakdown
 Rock Canyon High School Littleton

Second Place

Jessie Hsu 11th grade
Predicting Patient Disability in MS from MRI Brain Abnormalities Using Machine Learning
 Fairview High School Boulder

Third Place

Angelina Wang 10th grade
The Bowman-Birk Inhibitor: The Peptide with Potential Improvement for the Oral Delivery of Insulin
 Fairview High School Boulder

Junior Division Chemistry

First Place

Arath Carrazco 8th grade
Amount of Caffeine in Coffee
 Wiggins Middle School Wiggins

Second Place

Jocelyn Kramer 6th grade
The Exodus of Ca+: Does Container Material Affect Calcium Levels in Milk?
 Good Shepherd Catholic School Denver

Third Place

Tami Torgler 8th grade
May the Force Be with You
 Sargent Junior High School Monte Vista

Honorable Mention

River Wilson 6th grade
The Magnificent Mastication Mechanism
 Lamar Middle School Lamar

Honorable Mention

Maya Rokhlenko 7th grade
 Olive Spohn 7th grade
Water = Bad: Your Solution To Not Seeing in Rain
 Flagstaff Academy Longmont

Senior Division Chemistry

First Place

Augustus Miller 11th grade
Synthesizing Cellulose Acetate and Paper-Based Plastic from Cellulose Derivatives to Produce a Biodegradable 3D Printable Filament
 Monte Vista High School Monte Vista

2023 Colorado Science and Engineering Fair

Grand Awards Press Release

Second Place

Daniel Saeb 11th grade
Investigating How Hydrogel Connectivity Influence Their Mechanical Properties
 Boulder High School Boulder

Third Place

Victoria Balleau 12th grade
The Effectiveness and Toxicity of Various Chemicals When Removing Aerosol Oil-Based Spray Paints
 Evergreen High School Evergreen

Junior Division Earth & Environmental Sciences

First Place

Tyler Wise 8th grade
Does Crop Residue Affect Soil Water Retention
 Liberty School Joes

Second Place

Mathangi Kurup 8th grade
The Effect of Microalgae Grown in Different Concentrations of Liquid Carbon on Atmospheric CO2 Levels
 Challenge School Denver

Third Place

Kaycee Clark 7th grade
Putting Down Roots: The Study of How Poaceae Roots Affect Water Erosion
 Wray Jr/Sr High School Wray

Honorable Mention

Grace Xue 8th grade
Using C. elegans To Determine Toxicity of Marshall Fire
 Summit Middle Charter School Boulder

Honorable Mention

Varun Velmurugan 7th grade
Risk Assessment of Fluoride Contamination in Water: A Study Using Brine Shrimp Model
 Campus Middle School Greenwood Village

Senior Division Earth & Environmental Sciences

First Place

Jacob Ho 11th grade
How Abnormally Dry and Windy Were Days with Fires in Colorado's Front Range from 1984-2021? Towards Identifying Fire-Predictors for a Machine Learning Modeling System
 Fairview High School Boulder

Second Place

Minna Most 12th grade
 Teddy Blum 12th grade
Environmental Changes and the Effects of the SAM on Coccolithophores in the Southern Ocean
 Monarch High School Louisville

Third Place

Landon Hartman 12th grade
Economic Impacts of Wolf Populations on Livestock Ranching and Big Game Hunting in the Northern Rockies
 Evergreen High School Evergreen

Honorable Mention

Joshua Ho 11th grade
The Effects of Dissolved Organic Matter (DOM) on Emiliana Huxleyi
 Fairview High School Boulder

Honorable Mention

Cami Wolkow 9th grade
Isolation of Fungi Capable of Antibiotic Bioremediation
 Palmer High School Colorado Springs

Junior Division Energy

First Place

Aanshi Shah 8th grade
Make Some Noise! An Innovative Method to Produce Electricity Using Sound
 Thunder Vista P-8 School Broomfield

Second Place

Advait Jadhav 6th grade
Sweat It Out, The Green Way!
 Chinook Train Elementary School Colorado Springs

Third Place

Vikram Raju 8th grade
Energenius: Clean Energy on the GO
 Aurora Quest K-8 School Aurora

Honorable Mention

Euan Shorkey 8th grade
Embouchure Energy
 Colorado Early Colleges Fort Collins

Senior Division Energy

First Place

Natalie Muro 9th grade
Buoy Wave Energy Converters Capture of Ocean Wave Energy
 Palmer High School Colorado Springs

Second Place

Wilson Moyer 12th grade
Applying Machine Learning to Forecast Solar Production and Reduce Reliance on Fossil Fuels
 Lakewood High School Lakewood

Third Place

Shrey Rohilla 10th grade
Electrify Your Step - The Next Stride: Converting Foot Traffic into Renewable Energy Using Piezoelectric Transducers
 The Classical Academy Colorado Springs

2023 Colorado Science and Engineering Fair

Grand Awards Press Release

Honorable Mention

Keegan Gomez	12th grade
<i>Micro-renewable Energy</i>	
Centaurus High School	Lafayette

Junior Division Engineering

First Place

Charlie Danko	8th grade
<i>An Affordable Robot for Dangerous Factories</i>	
Flagstaff Academy	Longmont

Second Place

David "Bear" Kent V	8th grade
<i>The Super Speaker: Using Digital Signal Processing To Improve Low-Quality Speakers</i>	
Eagleview Middle School	Colorado Springs

Third Place

Cuinn Archer	7th grade
<i>Colorado Air Conditioning</i>	
Mancos Middle School	Mancos

Honorable Mention

Patrick Thomas	8th grade
<i>Volatus Veritas: The Examination of Aircraft Wing Shape According To Two Different Speed Variables</i>	
Home School	Delta

Honorable Mention

Morgan Drullinger	6th grade
<i>Combining TPU and PLA to Make a Better 3D Printer Filament</i>	
Liberty School	Joes

Senior Division Engineering

First Place

Nathaniel Ellis	11th grade
<i>MOON-OPOLY II: Employing Additive Manufacturing Technology for Lunar Construction with Waterless Concrete</i>	
Durango High School	Durango

Second Place

Rhys Hanson	12th grade
<i>The View From Above, Designing a High Power Rocket Glider to Expand Options for SAR, Mapping, and Military Applications</i>	
Conifer High School	Conifer

Third Place

Geo Raguraman	11th grade
<i>Regeneratus: An Adaptive, Regenerative Protection Suit for All Law Enforcement and Armed Personnel</i>	
Discovery Canyon High School	Colorado Springs

Honorable Mention

John Butler	9th grade
<i>Pecker Protector Egg Defender</i>	
West Grand High School	Kremmling

Honorable Mention

Kenneth Zittel	11th grade
<i>R.O.T. Slide</i>	
Central High School	Pueblo

Junior Division Environmental Engineering

First Place

Zoe Wang	8th grade
<i>Recycling by Zapping: Recyclability and Efficiency of Recycling Different Polyesters</i>	
Summit Middle Charter School	Boulder

Second Place

Toshiro Nagafuji	8th grade
<i>Alternatives to Sand in Concrete</i>	
The Logan School	Denver

Third Place

Theodore Chastang	8th grade
<i>Using Green Roofs to Absorb Floodwaters</i>	
Summit Middle Charter School	Boulder

Honorable Mention

Bode Monahan	6th grade
<i>Air Pollution Detection System</i>	
Liberty School	Joes

Senior Division Environmental Engineering

First Place

Ella Seevers	12th grade
Cole Gropp	12th grade
<i>Energy Efficient Cooling of Buildings in the Mountains</i>	
Conifer High School	Conifer

Second Place

Amrita Saini	11th grade
<i>Investigating Natural Hydrogels to Sustain Bioluminescent Algae for Sustainable Lighting and CO2 Removal</i>	
Peak to Peak Charter School	Lafayette

Third Place

Alexander Zhang	10th grade
Stella Laird	10th grade
<i>Reprint: Closed-Loop Materials Flow in Additive Manufacturing</i>	
Fairview High School	Boulder

Junior Division Mathematics & Computer Sciences

First Place

Liam Griffin	7th grade
<i>Running Low on Water: Formula for the Future</i>	
Sargent Junior High School	Monte Vista

Second Place

Helen Wan	8th grade
<i>Measuring the Particulate Matter in Air Quality with Raspberry Pi</i>	
Challenger Middle School	Colorado Springs

2023 Colorado Science and Engineering Fair

Grand Awards Press Release

Third Place

Lucca Tumbush 8th grade
 Seth Wilson 8th grade
Friend/Foe Light
 Eagleview Middle School Colorado Springs

Honorable Mention

Aidan McGuire 7th grade
How Does Background Clutter Affect Image Recognition
 St. Peter Catholic School Monument

Honorable Mention

Daniel Joshua 8th grade
*Pattern Detection $i+6/8*n$ Rubik's Cubes*
 Southern Hills Middle School Boulder

Senior Division Mathematics & Computer Sciences

First Place

Margaret Arthur 11th grade
A Novel Phosphosite Localization Approach using Tandem Phosphoprotein Mass Spectra and Temporal Dilated Networks
 Fairview High School Boulder

Second Place

Michael Gao 10th grade
Long Short-term Memory Recurrent Neural Networks as a Novel Strategy for Designing Targeted Antibiotic Treatments
 Fairview High School Boulder

Third Place

Liam Sweeney 12th grade
American Sign Language Translator
 Centaurus High School Lafayette

Junior Division Micro & Molecular Biology

First Place

Lilly Hirsch 7th grade
How Well Do Disinfectants Work?
 Foundations Academy Brighton

Second Place

Piper Reitz 7th grade
Inflection Reflection: An Inquiry on Antibiotic Resistance
 Lamar Middle School Lamar

Third Place

Trista Hartman 8th grade
Cleaning My School, One Bacterium At A Time
 Hi-Plains School Seibert

Honorable Mention

Makayla Milligan 8th grade
Does the Environment Matter?
 Cardinal Community Academy Keenesburg

Honorable Mention

Connor Knight 7th grade
Disinfecting with Boiling Water: Does It Make Objects Safe?
 Corwin International Magnet School Pueblo

Senior Division Micro & Molecular Biology

First Place

Kylie Berg 11th grade
Effect of Ionic Zinc Availability on the Replication of Human Mammary Epithelial Carcinoma Cells
 Fairview High School Boulder

Second Place

Vanya Lavu 10th grade
Am I Effective?
 The Classical Academy Colorado Springs

Third Place

Armaan Gill 10th grade
Confirming E. coli Transformations Using PCR Assay Tests and Electrophoresis
 Lamar High School Lamar

Honorable Mention

Max Montoya 9th grade
Terrific Tardigrades
 Ignacio High School Ignacio

Junior Division Physics & Astronomy

First Place

Lexi Oder 8th grade
How Does Asymmetry Affect Human Optics?
 Summit Middle Charter School Boulder

Second Place

Fischer Robbins 8th grade
The Affects of Ski Wax
 Summit Middle Charter School Boulder

Third Place

Hayden Forst 6th grade
From Ignition, Will Cotton, Wool or Polyester Burn the Longest?
 Dove Creek Middle School Dove Creek

Honorable Mention

Evelyn Lapp 6th grade
The Force Is Strong with This One
 Brush Middle School Brush

Senior Division Physics & Astronomy

First Place

Abigail Ross 12th grade
Detecting Flares (Part 5)
 Lamar High School Lamar

Second Place

Alexandra Flint 12th grade
Effect of Different Rover Wheel Materials on Triboelectric Charge of Lunar Simulant Dust Particles
 Peak to Peak Charter School Lafayette

2023 Colorado Science and Engineering Fair Grand Awards Press Release

Third Place

Parker Stone 12th grade
Bailey Link 12th grade
Performance of Pyramidal Airfoils in an Oscillating Wind Chamber
Brush High School Brush

Honorable Mention

Addison Mondragon 9th grade
Flourenheit: Does the Type of Flour Effect Its Flammability?
Monte Vista High School Monte Vista

Junior Division

Plant Sciences

First Place

Levi Goncharov 8th grade
Ascorbic Acid In Leaves As A Method of Determining Air Quality
Challenge School Denver

Second Place

Tessa Piñeiro 6th grade
Plentiful Waterful: Which Propagation Solution Helps Plants Grow?
Good Shepherd Catholic School Denver

Third Place

Shary Batiz 6th grade
Vita-Grow?
Alta Vista Charter School Lamar

Honorable Mention

Paisley Wiersma 6th grade
Ashlyn Mosher 6th grade
How Fast Does Corn Mold?
Genoa-Hugo School Hugo

Senior Division

Plant Sciences

First Place

Carlos Ochoa-Marquez 12th grade
The Effect of Heavy Metal Toxicity on Solanum tuberosum, Cucurbita pepo, Medicago sativa, and Capsicum annuum Plants Inoculated with Mycorrhizae
Monte Vista High School Monte Vista

Second Place

Naomi Kruse 9th grade
Finding Ferns: Defining the Microclimate That Enables Gametophyte Growth in the Santa Monica Mountains
Schullandheim Home School Colorado Springs

Third Place

Hannah Shelton 10th grade
Warning! High Fire Danger! Observing the Relationship between the Fuel Moisture Levels of Pinyon Pine and Sagebrush to Observed Precipitation Levels
Centauri High School La Jara

2023 Colorado Science and Engineering Fair Grand Awards Press Release

Saved By the Light

Colorado Science & Engineering Fair

Elemer Bernath Memorial Technical Writing Award

Mathangi Kurup 8th grade
certificate

Challenge School Denver
*The Effect of Microalgae Grown in Different Concentrations of
Liquid Carbon on Atmospheric CO2 Levels*

Grace Xue 8th grade
certificate

Summit Middle Charter School Boulder
Using C. elegans To Determine Toxicity of Marshall Fire

Kaycee Clark 7th grade
\$100, certificate

Wray Jr/Sr High School Wray
*Putting Down Roots: The Study of How Poaceae Roots Affect
Water Erosion*

Poster Art Contest

Zoey Montoya 10th grade
\$100, certificate

La Junta Jr/Sr High School La Junta

Ralph Desch Memorial Technical Writing Award

Margaret Arthur 11th grade
certificate

Fairview High School Boulder
*A Novel Phosphosite Localization Approach using Tandem
Phosphoprotein Mass Spectra and Temporal Dilated Networks*

Marissa Martinez 12th grade
certificate

Monte Vista High School Monte Vista
*The Efficacy of Abiotic/Biotic Factors and Trap Design for
Effective Capture of Invasive American Bullfrog*

Alexander Zhang 10th grade
Stella Laird 10th grade

\$100, certificate
Fairview High School Boulder
Reprint: Closed-Loop Materials Flow in Additive Manufacturing

Student Choice Award

Patrick Thomas 8th grade
\$100, certificate

Home School Delta
*Volatus Veritas: The Examination of Aircraft Wing Shape
According To Two Different Speed Variables*

John Butler 9th grade
\$100, certificate

West Grand High School Kremmling
Pecker Protector Egg Defender

Pioneers of Science

Burt Ratan

Chase Buron 7th grade
\$50, certificate, poster of pioneer scientist

Vail Mountain School Vail

2023 Colorado Science and Engineering Fair Special Awards Press Release

Dian Fossey

Vivian Wolkow 6th grade
\$50, certificate, poster of pioneer scientist
North Middle School Colorado Springs
Does the Tail Remember What the Head Saw?

Donna Theo Strickland

Lexi Oder 8th grade
\$50, certificate, poster of pioneer scientist
Summit Middle Charter School Boulder
How Does Asymmetry Affect Human Optics?

Elizabeth Helen Blackburn

Terra McClure 7th grade
\$50, certificate, poster of pioneer scientist
Rocky Ford Jr/Sr High School Rocky Ford
Oh Snap!

George Tchobanoglous

Bode Monahan 6th grade
\$50, certificate, poster of pioneer scientist
Liberty School Joes
Air Pollution Detection System

Jack Kilby

Berkely Ulibarri 8th grade
\$50, certificate, poster of pioneer scientist
St. John the Evangelist Catholic School Loveland
Using Probability To Model Radioisotope Dating

James Patrick Allison

Jaylee Rodriques 8th grade
\$50, certificate, poster of pioneer scientist
Sargent Junior High School Monte Vista
Rubby, Rub, Dub: What's in Your Tub?

John Goodenough

Jocelyn Kramer 6th grade
\$50, certificate, poster of pioneer scientist
Good Shepherd Catholic School Denver
The Exodus of Ca⁺: Does Container Material Affect Calcium Levels in Milk?

Leon Festinger

Eliana Feit 8th grade
\$50, certificate, poster of pioneer scientist
Summit Middle Charter School Boulder
Grip Strength: Increase Amount

Luther Burbank

Tenleigh Lorenzini 8th grade
\$50, certificate, poster of pioneer scientist
Wiggins Middle School Wiggins
Light IT grow

Mary Ainsworth

William Walker 8th grade
\$50, certificate, poster of pioneer scientist
Monte Vista Middle School Monte Vista
Is This for a Grade?

2023 Colorado Science and Engineering Fair Special Awards Press Release

Steven Chu

Durae Naranjo 8th grade
\$50, certificate, poster of pioneer scientist
Sargent Junior High School Monte Vista
What Are We Really Drinking?

Wangari Muta Maathai

Adam Ouattara 7th grade
\$50, certificate, poster of pioneer scientist
La Junta Jr/Sr High School La Junta
Fires in the Comanche Grasslands

Military

United States Air Force Reserve Officer Training Corps

Air Force ROTC Award

Patrick Thomas 8th grade
certificate, over-the-shoulder sling pack, power bank charger,
dog tag USB flash memory drive, dual USB car charger
Home School Delta
*Volatus Veritas: The Examination of Aircraft Wing Shape
According To Two Different Speed Variables*

Kane Schrock 6th grade
certificate, over-the-shoulder sling pack, power bank charger,
dog tag USB flash memory drive, dual USB car charger
Arickaree School Anton
Wind Tunnel Tests of Airfoil Performance

Ersel Serdar 10th grade
certificate, over-the-shoulder sling pack, power bank charger,
dog tag USB flash memory drive, dual USB car charger
Cherry Creek High School Greenwood Village
*Designing A More Efficient Altitude Compensating Rocket
Nozzle*

Parker Stone 12th grade
Bailey Link 12th grade
certificate, over-the-shoulder sling pack, power bank charger,
dog tag USB flash memory drive, dual USB car charger
Brush High School Brush
*Performance of Pyramidal Airfoils in an Oscillating Wind
Chamber*

United States Navy & Marine Corps

Navy Science & Engineering Award

Kane Schrock 6th grade
letter of congratulations, certificate, ONR medallion
Arickaree School Anton
Wind Tunnel Tests of Airfoil Performance

Aidan McGuire 7th grade
letter of congratulations, certificate, ONR medallion
St. Peter Catholic School Monument
How Does Background Clutter Affect Image Recognition

Aanshi Shah 8th grade
letter of congratulations, certificate, ONR medallion
Thunder Vista P-8 School Broomfield
*Make Some Noise! An Innovative Method to Produce Electricity
Using Sound*

Vikram Raju 8th grade
same award
Aurora Quest K-8 School Aurora
Energenius: Clean Energy on the GO

Rhys Hanson 12th grade
letter of congratulations, ONR medallion, certificate, ONR
medallion, & \$50 gift card (response required from winner to
process payment)
Conifer High School Conifer
*The View From Above, Designing a High Power Rocket Glider
to Expand Options for SAR, Mapping, and Military Applications*

Ersel Serdar 10th grade
letter of congratulations, ONR medallion, certificate, ONR
medallion, & \$50 gift card (response required from winner to
process payment)
Cherry Creek High School Greenwood Village
*Designing A More Efficient Altitude Compensating Rocket
Nozzle*

Alexandra Flint 12th grade
letter of congratulations, ONR medallion, certificate, ONR
medallion, & \$50 gift card (response required from winner to
process payment)
Peak to Peak Charter School Lafayette
*Effect of Different Rover Wheel Materials on Triboelectric
Charge of Lunar Simulant Dust Particles*

Organizational

Air & Waste Management Association

Rocky Mountain States Section

Air & Waste Management Award

Juakin Sawatzky 8th grade
\$100, certificate
Liberty School Joes
Analysis of Mine Tailing Run-Off for Mine Tailings

Zoe Wang 8th grade
\$200, certificate
Summit Middle Charter School Boulder
*Recycling by Zapping: Recyclability and Efficiency of Recycling
Different Polyesters*

Siena Parr 10th grade
Samantha Abate 10th grade
\$100, certificate
Dolores High School Dolores
Radon in Rural Colorado: The Not So Noble Gas

Carlos Ochoa-Marquez 12th grade
\$200, certificate
Monte Vista High School Monte Vista
*The Effect of Heavy Metal Toxicity on Solanum tuberosum,
Cucurbita pepo, Medicago sativa, and Capsicum annum Plants
Inoculated with Mycorrhizae*

2023 Colorado Science and Engineering Fair Special Awards Press Release

American Association of University Women

AAUW CO Award for Women in STEM

Jocelyn Kramer 6th grade
\$100, certificate
Good Shepherd Catholic School Denver
The Exodus of Ca⁺: Does Container Material Affect Calcium Levels in Milk?

Cami Wolkow 9th grade
\$100, certificate
Palmer High School Colorado Springs
Isolation of Fungi Capable of Antibiotic Bioremediation

American Industrial Hygiene Association, Rocky Mountain Section

Excellence in Protection of Occupational Health and Safety

Varun Velmurugan 7th grade
\$150, certificate
Campus Middle School Greenwood Village
Risk Assessment of Fluoride Contamination in Water: A Study Using Brine Shrimp Model

Siena Parr 10th grade
Samantha Abate 10th grade
\$150, certificate
Dolores High School Dolores
Radon in Rural Colorado: The Not So Noble Gas

American Institute of Chemical Engineers, Rocky Mountain Section

Excellence in Chemical Engineering Award

Annthylea Bachicha 7th grade
\$150, certificate
Goodnight School Pueblo
To Filter or Not To Filter

Benjamin Bagelman 8th grade
Dominic Osterholt 8th grade
\$200, certificate
Friends School Boulder
Enchanted Sand: A Device To Turn Sand into a Fluidized Bed

Autumn Schulz 9th grade
\$150, certificate
Ignacio High School Ignacio
Presence of PFA's in Colorado Water

Ella Seevers 12th grade
Cole Gropp 12th grade
\$200, certificate
Conifer High School Conifer
Energy Efficient Cooling of Buildings in the Mountains

American Statistical Association Colorado/Wyoming Chapter

David Young Memorial Award

Parker Mitchell 7th grade
\$200, certificate, student membership in the American Statistical Association, acknowledgment at chapter spring meeting and on chapter web site

Sargent Junior High School Monte Vista
What Are You Breathing? Radon Levels in Schools

Angelina Wang 10th grade
same award

Fairview High School Boulder
The Bowman-Birk Inhibitor: The Peptide with Potential Improvement for the Oral Delivery of Insulin

American Vacuum Society Rocky Mountain Chapter

Excellence in Physical Sciences & Engineering Award

Aanshi Shah 8th grade
\$50, certificate, \$50 matching award to teacher/sponsor
Thunder Vista P-8 School Broomfield
Make Some Noise! An Innovative Method to Produce Electricity Using Sound

Toshiro Nagafuji 8th grade
\$100, certificate, \$100 matching award to teacher/sponsor
The Logan School Denver
Alternatives to Sand in Concrete

Nathaniel Ellis 11th grade
\$50, certificate, \$50 matching award to teacher/sponsor
Durango High School Durango
MOON-OPOLY II: Employing Additive Manufacturing Technology for Lunar Construction with Waterless Concrete

Kelly Yang 10th grade
\$100, certification, \$100 matching award to teacher/sponsor
Fairview High School Boulder
Skin PT: Pressure and Temperature Sensors for Electronic Skin

ASM International

ASM Materials Education Foundation Award

Ren Richards 7th grade
\$100, certificate
Hi-Plains School Seibert
Ice, Ice, Baby

Kate Guengerich 7th grade
\$150, certificate
Peak to Peak Charter School Lafayette
Infill Percentage and Strength to Weight Ratio of 3D Printed Parts

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Broadcom Foundation

Coding with Commitment Award

Helen Wan 8th grade
certificate, \$250 gift certificate, Raspberry Pi Pico kit
Challenger Middle School Colorado Springs
Measuring the Particulate Matter in Air Quality with Raspberry Pi

Colorado Biology Teachers Association

CBTA Best Biology Project Award

Vivian Wolkow 6th grade
\$100, certificate
North Middle School Colorado Springs
Does the Tail Remember What the Head Saw?

Grace Marmorstein 8th grade
\$150, certificate
Challenge School Denver
The Insect Repellent Properties of Nepetalactone

Marissa Martinez 12th grade
\$150, certificate
Monte Vista High School Monte Vista
The Efficacy of Abiotic/Biotic Factors and Trap Design for Effective Capture of Invasive American Bullfrog

Aditi Avinash 11th grade
\$200, certificate
Rock Canyon High School Littleton
Model Validation and Preclinical Testing of Digestive Enzymes for Gluten Breakdown

Colorado Bioscience Institute

Future of Life Sciences Award

Emma Beeby 8th grade
\$25, certificate
Skinner Middle School Denver
The Effect of Stress on the Amount of Carbon Dioxide Exhaled

Aditi Avinash 11th grade
\$75, certificate, student will be featured in the Institute's "Success Stories" in print, online, and on social media
Rock Canyon High School Littleton
Model Validation and Preclinical Testing of Digestive Enzymes for Gluten Breakdown

Colorado Chemistry Teachers Association

CCTA Chemistry Award

River Wilson 6th grade
\$150, certificate
Lamar Middle School Lamar
The Magnificent Mastication Mechanism

Victoria Balleau 12th grade
\$150, certificate
Evergreen High School Evergreen
The Effectiveness and Toxicity of Various Chemicals When Removing Aerosol Oil-Based Spray Paints

Colorado Environmental Health Association

Environmental Health Award

Parker Mitchell 7th grade
\$75, certificate
Sargent Junior High School Monte Vista
What Are You Breathing? Radon Levels in Schools

Autumn Schulz 9th grade
\$150, certificate, invitation to exhibit at the CEHA Annual Educational Conference (valued at \$400)
Ignacio High School Ignacio
Presence of PFA's in Colorado Water

Colorado Foundation for Agriculture

Jack Fenwick Award for Agricultural Science

Ayush Vispute 8th grade
\$50, certificate
Mountain Ridge Middle School Colorado Springs
Investigating Alternate Treatments of Acid Rain

Alora Dible 8th grade
same award
Liberty School Joes
Dust in the Wind: A Wind Erosion Analysis

Carlos Ochoa-Marquez 12th grade
same award
Monte Vista High School Monte Vista
The Effect of Heavy Metal Toxicity on Solanum tuberosum, Cucurbita pepo, Medicago sativa, and Capsicum annum Plants Inoculated with Mycorrhizae

Landon Hartman 12th grade
same award
Evergreen High School Evergreen
Economic Impacts of Wolf Populations on Livestock Ranching and Big Game Hunting in the Northern Rockies

Colorado Medical Society

CMS Educational Foundation Award

Kapil Bhandaram 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
Campus Middle School Greenwood Village
Is There A Relationship Between Meditation and Muscle Reaction Time?

Aditi Avinash 11th 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 Littleton
Model Validation and Preclinical Testing of Digestive Enzymes for Gluten Breakdown

2023 Colorado Science and Engineering Fair

Special Awards Press Release

Colorado Mineral Society

Best Earth Science Award

Karleigh Kinn 6th grade
\$35, mineral specimen, certificate, book
St. Columba Catholic School Durango
Meteor Impact 101

Alora Dible 8th grade
\$50, mineral specimen, certificate, book
Liberty School Joes
Dust in the Wind: A Wind Erosion Analysis

Colorado Mycological Society

Excellence in Mycological Research Award

Makenzie Consaul 8th grade
\$25, CMS membership, certificate, signed copy of Vera
Evenson's "Rocky Mountain Mushrooms"
Sargent Junior High School Monte Vista
The Power of Pantego?

Cami Wolkow 9th grade
\$50, CMS membership, certificate, signed copy of Vera
Evenson's "Rocky Mountain Mushrooms"
Palmer High School Colorado Springs
Isolation of Fungi Capable of Antibiotic Bioremediation

Carlos Ochoa-Marquez 12th grade
\$100, CMS membership, certificate, signed copy of Vera
Evenson's "Rocky Mountain Mushrooms"
Monte Vista High School Monte Vista
*The Effect of Heavy Metal Toxicity on Solanum tuberosum,
Cucurbita pepo, Medicago sativa, and Capsicum annuum Plants
Inoculated with Mycorrhizae*

Colorado Native Plant Society

Colorado Native Plant Society Award

Kaycee Clark 7th grade
\$100, certificate, 1-year membership to Colorado Native
Plant Society, book on Colorado native plants
Wray Jr/Sr High School Wray
*Putting Down Roots: The Study of How Poaceae Roots Affect
Water Erosion*

Carlos Ochoa-Marquez 12th grade
\$200, certificate, 1-year membership to Colorado Native
Plant Society, book on Colorado native plants
Monte Vista High School Monte Vista
*The Effect of Heavy Metal Toxicity on Solanum tuberosum,
Cucurbita pepo, Medicago sativa, and Capsicum annuum Plants
Inoculated with Mycorrhizae*

Colorado Section of the American Chemical Society

ACS Chemistry Award

Tymbri Priestley 6th grade
\$50, certificate
Mancos Middle School Mancos
Key Leavening Agents in Baking

Skyelyn Lefever 8th grade
same award
Peetz Jr/Sr High School Peetz
Gel Electrophoresis

Maya Rokhlenko 7th grade
Olive Spohn 7th grade
same award to each student
Flagstaff Academy Longmont
Water = Bad: Your Solution To Not Seeing in Rain

Emma Smith 6th grade
\$75, certificate
Mancos Middle School Mancos
Apple Rot Test
Jocelyn Kramer 6th grade
\$125, certificate
Good Shepherd Catholic School Denver
*The Exodus of Ca⁺: Does Container Material Affect Calcium
Levels in Milk?*

Arath Carrazco 8th grade
\$150, certificate
Wiggins Middle School Wiggins
Amount of Caffeine in Coffee

Natalie Tinoco 10th grade
\$50, certificate
Miami Yoder High School Rush
Cleaning Products and Their Effects on Household Surfaces

Victoria Balleau 12th grade
same award
Evergreen High School Evergreen
*The Effectiveness and Toxicity of Various Chemicals When
Removing Aerosol Oil-Based Spray Paints*

Emilio Martinez 10th grade
\$75, certificate
Alamosa High School Alamosa
Project SP-8 (Sabatier Process to Infinity)

Augustus Miller 11th grade
\$125, certificate
Monte Vista High School Monte Vista
*Synthesizing Cellulose Acetate and Paper-Based Plastic from
Cellulose Derivatives to Produce a Biodegradable 3D Printable
Filament*

Daniel Saeb 11th grade
\$150, certificate
Boulder High School Boulder
*Investigating How Hydrogel Connectivity Influence Their
Mechanical Properties*

Colorado State University College of Agricultural Sciences

Innovations in the Science of Agriculture Award

Ayush Vispute 8th grade
\$500, certificate
Mountain Ridge Middle School Colorado Springs
Investigating Alternate Treatments of Acid Rain

2023 Colorado Science and Engineering Fair

Special Awards Press Release

Grace Jones 7th grade
 \$500, certificate
 Wray Jr/Sr High School Wray
I'm Not Yoking Around : Evaluating How The Food That Chickens Eat Affect The Width of The Egg Shell

Valerie Goodland 11th grade
 \$500, certificate
 Monte Vista High School Monte Vista
You're Fired: An Analysis of Fire on Soil Sterilization and Hydrophobicity

Aditi Avinash 11th grade
 \$500, certificate
 Rock Canyon High School Littleton
Model Validation and Preclinical Testing of Digestive Enzymes for Gluten Breakdown

John Butler 9th grade
 \$500, certificate
 West Grand High School Kremmling
Pecker Protector Egg Defender

Colorado State University Colorado Natural Heritage Program CNHP Conservation Award

Kaycee Clark 7th grade
 pint glass, Wetlands of Colorado guidebook, certificate
 Wray Jr/Sr High School Wray
Putting Down Roots: The Study of How Poaceae Roots Affect Water Erosion

Landon Hartman 12th grade
 pint glass, Wetlands of Colorado guidebook, certificate
 Evergreen High School Evergreen
Economic Impacts of Wolf Populations on Livestock Ranching and Big Game Hunting in the Northern Rockies

Colorado State University Department of Agricultural Biology Agricultural Biology Award

Grace Marmorstein 8th grade
 \$100, certificate
 Challenge School Denver
The Insect Repellent Properties of Nepetalactone

Tyler Wise 8th grade
 \$100, certificate
 Liberty School Joes
Does Crop Residue Affect Soil Water Retention

Naomi Kruse 9th grade
 \$100, certificate
 Schullandheim Home School Colorado Springs
Finding Ferns: Defining the Microclimate That Enables Gametophyte Growth in the Santa Monica Mountains

Zoey Montoya 10th grade
 Everett Ediger 11th grade
 \$100, certificate
 La Junta Jr/Sr High School La Junta
How Qualities of Soil Affect Where Aphonopelma Hentzi Burrows in the Colorado Grassland

Colorado State University Department of Chemistry Excellence in Chemistry Award

Gwendolyn Hohl 7th grade
 Joe White 7th grade
 \$150, certificate
 Genoa-Hugo School Hugo
Does pH Affect How Fast Water Freezes?

Ainsley Soleta 12th grade
 Luke Ferguson 12th grade
 \$150, certificate
 Brush High School Brush
Tensile Strength of Nylon 6, 10

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

Levi Goncharov 8th grade
 \$100, certificate
 Challenge School Denver
Ascorbic Acid In Leaves As A Method of Determining Air Quality

Theodore Chastang 8th grade
 \$100, certificate
 Summit Middle Charter School Boulder
Using Green Roofs to Absorb Floodwaters

Naomi Kruse 9th grade
 \$100, certificate
 Schullandheim Home School Colorado Springs
Finding Ferns: Defining the Microclimate That Enables Gametophyte Growth in the Santa Monica Mountains

Carlos Ochoa-Marquez 12th grade
 \$100, certificate
 Monte Vista High School Monte Vista
The Effect of Heavy Metal Toxicity on Solanum tuberosum, Cucurbita pepo, Medicago sativa, and Capsicum annum Plants Inoculated with Mycorrhizae

Colorado State University, Energy Institute Excellence in Energy Achievement Award

Wilson Moyer 12th grade
 \$250, certificate
 Lakewood High School Lakewood
Applying Machine Learning to Forecast Solar Production and Reduce Reliance on Fossil Fuels

2023 Colorado Science and Engineering Fair

Special Awards Press Release

Colorado Veterinary Medical Association

Veterinary Science Award

Vivian Wolkow 6th grade
 \$100, certificate
 North Middle School Colorado Springs
Does the Tail Remember What the Head Saw?

Veterinary Science Award

Harrison Ruleman 12th grade
 \$100, certificate
 Evergreen High School Evergreen
Do Snakes Avoid Certain Colors of Light?

Colorado-Wyoming Society of American Foresters

Excellence in Forestry Research Award

Adam Ouattara 7th grade
 \$200, certificate
 La Junta Jr/Sr High School La Junta
Fires in the Comanche Grasslands

Excellence in Forestry Research Award

Valerie Goodland 11th grade
 same award
 Monte Vista High School Monte Vista
You're Fired: An Analysis of Fire on Soil Sterilization and Hydrophobicity

Gromko Family

Gerald Gromko Memorial Award

Ersel Serdar 10th grade
 \$250, certificate
 Cherry Creek High School Greenwood Village
Designing A More Efficient Altitude Compensating Rocket Nozzle

Institute of Electrical and Electronics Engineers, High Plains Section

IEEE Award

Charlie Danko 8th grade
 \$125 cash card, certificate
 Flagstaff Academy Longmont
An Affordable Robot for Dangerous Factories

IEEE Award

Margaret Arthur 11th grade
 \$175 cash card, certificate
 Fairview High School Boulder
A Novel Phosphosite Localization Approach using Tandem Phosphoprotein Mass Spectra and Temporal Dilated Networks

Lemelson Foundation

Lemelson Early Inventor Prize

Justin Bendixson 8th grade
 Myles Marhofer 8th grade
 \$100 (response required from winner to process), certificate
 Pueblo School for Arts & Science- Pueblo
 Fulton Heights
Driver Safety Tech

Little Shop of Physics

Matthew McCausland Memorial Award

Rhett Taylor 8th grade
 science equipment/instruments
 Centauri Middle School La Jara
Battle of the Tape: Which Tape Has the Strongest Tensile and Adhesive Strength?

Matthew McCausland Memorial Award

Kane Schrock 6th grade
 science equipment/instruments
 Arickaree School Anton
Wind Tunnel Tests of Airfoil Performance

Matthew McCausland Memorial Award

Aanshi Shah 8th grade
 science equipment/instruments
 Thunder Vista P-8 School Broomfield
Make Some Noise! An Innovative Method to Produce Electricity Using Sound

Matthew McCausland Memorial Award

Parker Stone 12th grade
 Bailey Link 12th grade
 science equipment/instruments
 Brush High School Brush
Performance of Pyramidal Airfoils in an Oscillating Wind Chamber

Matthew McCausland Memorial Award

Keegan Gomez 12th grade
 science equipment/instruments
 Centaurus High School Lafayette
Micro-renewable Energy

Lockheed Martin

Lockheed Martin Aerospace Award

Vikram Raju 8th grade
 \$150, certificate
 Aurora Quest K-8 School Aurora
Energenius: Clean Energy on the GO

Lockheed Martin Aerospace Award

Nathaniel Ellis 11th grade
 \$350, certificate
 Durango High School Durango
MOON-OPOLY II: Employing Additive Manufacturing Technology for Lunar Construction with Waterless Concrete

Morrow Family

Dental & Forensics Award

Elise Brodsky 12th grade
 Nederland Middle-Senior High School Nederland
The Effects of Perpetrator Race and Gender on the Reliability of Eyewitness Accounts

Dental & Forensics Award

River Wilson 6th grade
 Lamar Middle School Lamar
The Magnificent Mastication Mechanism

2023 Colorado Science and Engineering Fair

Special Awards Press Release

Dental & Forensics Award

Terra McClure 7th grade
Rocky Ford Jr/Sr High School Rocky Ford
Oh Snap!

National Centers for Environmental Information

NCEI Award of Scientific Achievement

Alora Dible 8th grade
cash award provided by an anonymous donor, certificate
Liberty School Joes
Dust in the Wind: A Wind Erosion Analysis

National Geographic Society

That's Geography! Cultivating Empathy for the Earth Award

Minna Most 12th grade
Teddy Blum 12th grade
\$100 (response required from winner to process), certificate
Monarch High School Louisville
Environmental Changes and the Effects of the SAM on Cocolithophores in the Southern Ocean

Platte River Power Authority

PRPA's Special Award for Energy Efficiency & Innovation

Vikram Raju 8th grade
\$200, certificate
Aurora Quest K-8 School Aurora
Energenius: Clean Energy on the GO

PRPA's Special Award for Energy Efficiency & Innovation

Alex Mwangi Wachira 10th grade
\$300, certificate
Central High School Pueblo
Self-Powered Electric Cars

PRPA's Special Award for Environmental Responsibility

Helen Wan 8th grade
\$200, certificate
Challenger Middle School Colorado Springs
Measuring the Particulate Matter in Air Quality with Raspberry Pi

PRPA's Special Award for Environmental Responsibility

Keegan Gomez 12th grade
\$300, certificate
Centaurus High School Lafayette
Micro-renewable Energy

Regeneron

Regeneron Biomedical Science Award

Margaret Arthur 11th grade
certificate, \$375 (response required from winner to process payment)
Fairview High School Boulder
A Novel Phosphosite Localization Approach using Tandem Phosphoprotein Mass Spectra and Temporal Dilated Networks

Rocky Mountain Association of Geologists

Excellence in Earth Sciences Award

Sylvia Daugherty 8th grade
\$200, certificate
Sargent Junior High School Monte Vista
Fuels of the Future

Excellence in Earth Sciences Award

Keegan Gomez 12th grade
\$200, certificate
Centaurus High School Lafayette
Micro-renewable Energy

Excellence in Earth Sciences Award

Siena Parr 10th grade
Samantha Abate 10th grade
\$200, certificate
Dolores High School Dolores
Radon in Rural Colorado: The Not So Noble Gas

Excellence in Earth Sciences Award

Wilson Moyer 12th grade
\$400, certificate
Lakewood High School Lakewood
Applying Machine Learning to Forecast Solar Production and Reduce Reliance on Fossil Fuels

Rocky Mountain Water Environment Association

Water Research Award

Ren Richards 7th grade
\$50, certificate
Hi-Plains School Seibert
Ice, Ice, Baby

Water Research Award

Cassius Middlemist 7th grade
Carson Stone 7th grade
\$75, certificate
Brush Middle School Brush
Retain the Rain

Water Research Award

Autumn Schulz 9th grade
\$75, certificate
Ignacio High School Ignacio
Presence of PFA's in Colorado Water

Science Toy Magic, LLC

Chemistry CO2 & Greenhouse Gas Reduction Award

Vikram Raju 8th grade
\$50, certificate
Aurora Quest K-8 School Aurora
Energenius: Clean Energy on the GO

Chemistry CO2 & Greenhouse Gas Reduction Award

Sylvia Daugherty 8th grade
\$100, certificate
Sargent Junior High School Monte Vista
Fuels of the Future

2023 Colorado Science and Engineering Fair

Special Awards Press Release

Chemistry CO₂ & Greenhouse Gas Reduction Award

Wilson Moyer 12th grade
 \$50, certificate
 Lakewood High School Lakewood

Applying Machine Learning to Forecast Solar Production and Reduce Reliance on Fossil Fuels

Chemistry CO₂ & Greenhouse Gas Reduction Award

Amrita Saini 11th grade
 \$100, certificate
 Peak to Peak Charter School Lafayette

Investigating Natural Hydrogels to Sustain Bioluminescent Algae for Sustainable Lighting and CO₂ Removal

Physics Classroom Demonstration Award

Evelyn Lapp 6th grade
 \$50, certificate
 Brush Middle School Brush

The Force Is Strong with This One

Physics Classroom Demonstration Award

Kane Schrock 6th grade
 \$100, certificate
 Arickaree School Anton

Wind Tunnel Tests of Airfoil Performance

Physics Classroom Demonstration Award

Natalie Muro 9th grade
 \$50, certificate
 Palmer High School Colorado Springs

Buoy Wave Energy Converters Capture of Ocean Wave Energy

Physics Classroom Demonstration Award

Parker Stone 12th grade
 Bailey Link 12th grade
 \$100, certificate

Brush High School Brush
Performance of Pyramidal Airfoils in an Oscillating Wind Chamber

Physics CO₂ & Greenhouse Gas Reduction Award

Sylvia Daugherty 8th grade
 \$50, certificate
 Sargent Junior High School Monte Vista

Fuels of the Future

Physics CO₂ & Greenhouse Gas Reduction Award

Aanshi Shah 8th grade
 \$100, certificate
 Thunder Vista P-8 School Broomfield

Make Some Noise! An Innovative Method to Produce Electricity Using Sound

Physics CO₂ & Greenhouse Gas Reduction Award

Natalie Muro 9th grade
 \$50, certificate
 Palmer High School Colorado Springs

Buoy Wave Energy Converters Capture of Ocean Wave Energy

Physics CO₂ & Greenhouse Gas Reduction Award

Keegan Gomez 12th grade
 \$100, certificate
 Centaurus High School Lafayette

Micro-renewable Energy

Plant Sciences CO₂ & Greenhouse Gas Reduction Award

Pason Dible 6th grade
 \$50, certificate
 Liberty School Joes

The Effect of Organic Fertilizer on Corn

Plant Sciences CO₂ & Greenhouse Gas Reduction Award

Teagan Bruchez 8th grade
 \$100, certificate
 West Grand Middle School Kremmling

Grass Matters!

Plant Sciences CO₂ & Greenhouse Gas Reduction Award

Hannah Shelton 10th grade
 \$50, certificate
 Centauri High School La Jara

Warning! High Fire Danger! Observing the Relationship between the Fuel Moisture Levels of Pinyon Pine and Sagebrush to Observed Precipitation Levels

Plant Sciences CO₂ & Greenhouse Gas Reduction Award

Carlos Ochoa-Marquez 12th grade
 \$100, certificate
 Monte Vista High School Monte Vista

The Effect of Heavy Metal Toxicity on Solanum tuberosum, Cucurbita pepo, Medicago sativa, and Capsicum annuum Plants Inoculated with Mycorrhizae

Society for Mining, Metallurgy & Exploration, Colorado Section

Award for Excellence in Mineral Science & Engineering

Toshiro Nagafuji 8th grade
 \$200, plaque
 The Logan School Denver

Alternatives to Sand in Concrete

Award for Excellence in Mineral Science & Engineering

Kaycee Clark 7th grade
 \$300, plaque
 Wray Jr/Sr High School Wray

Putting Down Roots: The Study of How Poaceae Roots Affect Water Erosion

Award for Excellence in Mineral Science & Engineering

Siena Parr 10th grade
 Samantha Abate 10th grade
 \$300, plaque
 Dolores High School Dolores

Radon in Rural Colorado: The Not So Noble Gas

2023 Colorado Science and Engineering Fair

Special Awards Press Release

Award for Excellence in Mineral Science & Engineering

Carlos Ochoa-Marquez 12th grade
\$500, plaque
Monte Vista High School Monte Vista
The Effect of Heavy Metal Toxicity on Solanum tuberosum, Cucurbita pepo, Medicago sativa, and Capsicum annuum Plants Inoculated with Mycorrhizae

Society of Manufacturing Engineers, Colorado Chapter 354

Andy Keller Memorial Award

Charlie Danko 8th grade
\$200, certificate, recognition by the local chapter
Flagstaff Academy Longmont
An Affordable Robot for Dangerous Factories

Andy Keller Memorial Award

Wilson Moyer 12th grade
\$100, certificate, recognition by the local chapter
Lakewood High School Lakewood
Applying Machine Learning to Forecast Solar Production and Reduce Reliance on Fossil Fuels

Andy Keller Memorial Award

Alexander Zhang 10th grade
Stella Laird 10th grade
\$150, certificate, recognition by the local chapter
Fairview High School Boulder
Reprint: Closed-Loop Materials Flow in Additive Manufacturing

Society of Women Engineers, Rocky Mountain Section

SWE Award

Kaycee Clark 7th grade
\$75, certificate
Wray Jr/Sr High School Wray
Putting Down Roots: The Study of How Poaceae Roots Affect Water Erosion

SWE Award

Aanshi Shah 8th grade
\$100, certificate
Thunder Vista P-8 School Broomfield
Make Some Noise! An Innovative Method to Produce Electricity Using Sound

SWE Award

Natalie Muro 9th grade
\$75, certificate
Palmer High School Colorado Springs
Buoy Wave Energy Converters Capture of Ocean Wave Energy

SWE Award

Ella Seevers 12th grade
Cole Gropp 12th grade
\$100, certificate
Conifer High School Conifer
Energy Efficient Cooling of Buildings in the Mountains

Soil & Water Conservation Society, Colorado Chapter

Natural Resources Conservation Award

Kaycee Clark 7th grade
\$100, certificate
Wray Jr/Sr High School Wray
Putting Down Roots: The Study of How Poaceae Roots Affect Water Erosion

Natural Resources Conservation Award

Landon Hartman 12th grade
same award
Evergreen High School Evergreen
Economic Impacts of Wolf Populations on Livestock Ranching and Big Game Hunting in the Northern Rockies

State of Colorado - Division of Reclamation, Mining and Safety

DRMS Outstanding Science Exhibit Award

Juakin Sawatzky 8th grade
\$75, certificate, gift bag
Liberty School Joes
Analysis of Mine Tailing Run-Off for Mine Tailings

DRMS Outstanding Science Exhibit Award

Carlos Ochoa-Marquez 12th grade
\$75, certificate, gift bag
Monte Vista High School Monte Vista
The Effect of Heavy Metal Toxicity on Solanum tuberosum, Cucurbita pepo, Medicago sativa, and Capsicum annuum Plants Inoculated with Mycorrhizae

STEMGirls, LLC

STEMGirls Middle School Rising Star Award

Emma Beeby 8th grade
\$100, certificate
Skinner Middle School Denver
The Effect of Stress on the Amount of Carbon Dioxide Exhaled

The Biophysical Society

The Biophysical Society Award

Kylie Berg 11th grade
cash award, certificate
Fairview High School Boulder
Effect of Ionic Zinc Availability on the Replication of Human Mammary Epithelial Carcinoma Cells

The Sara Volz Family

Best Contribution to Fundamental Science Award

Margaret Arthur 11th grade
\$300, certificate
Fairview High School Boulder
A Novel Phosphosite Localization Approach using Tandem Phosphoprotein Mass Spectra and Temporal Dilated Networks

Best Contribution to Fundamental Science Award

Abigail Ross 12th grade
\$300, certificate
Lamar High School Lamar
Detecting Flares (Part 5)

2023 Colorado Science and Engineering Fair

Special Awards Press Release

Trout Unlimited

TU River Conservation Award

Brandon Stup 12th grade
 \$75, certificate
 Evergreen High School Evergreen
Mimicking Invasive Crayfish Feeding Behavior with the Northern Crayfish

TU River Conservation Award

Lilly Figueroa 12th grade
 \$125, certificate
 Mancos High School Mancos
Environmental DNA Testing of Rural Aquatic Ecosystems for the Presence of Fish as Bioindicators

TU River Conservation Award

Kaycee Clark 7th grade
 \$200, certificate
 Wray Jr/Sr High School Wray
Putting Down Roots: The Study of How Poaceae Roots Affect Water Erosion

Wilkins Family

Young Entrepreneur's Award

Ella Seevers 12th grade
 Cole Gropp 12th grade
 \$750, certificate
 Conifer High School Conifer
Energy Efficient Cooling of Buildings in the Mountains

Wojtaszek Family

Paul Wojtaszek Memorial Award

Aditi Avinash 11th grade
 \$200, certificate
 Rock Canyon High School Littleton
Model Validation and Preclinical Testing of Digestive Enzymes for Gluten Breakdown

Zonta Club

Amelia Earhart Award

Kate Guengerich 7th grade
 \$100, certificate
 Peak to Peak Charter School Lafayette
Infill Percentage and Strength to Weight Ratio of 3D Printed Parts

Scholarships

Colorado School of Mines

Colorado School of Mines CSEF Scholarship

Aditi Avinash 11th grade
 \$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
 Rock Canyon High School Littleton
Model Validation and Preclinical Testing of Digestive Enzymes for Gluten Breakdown

Colorado School of Mines CSEF Scholarship

Augustus Miller 11th grade
 \$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
 Monte Vista High School Monte Vista
Synthesizing Cellulose Acetate and Paper-Based Plastic from Cellulose Derivatives to Produce a Biodegradable 3D Printable Filament

Colorado School of Mines CSEF Scholarship

Jacob Ho 11th grade
 \$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
 Fairview High School Boulder
How Abnormally Dry and Windy Were Days with Fires in Colorado's Front Range from 1984-2021? Towards Identifying Fire-Predictors for a Machine Learning Modeling System

Colorado School of Mines CSEF Scholarship

Jessie Hsu 11th grade
 \$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
 Fairview High School Boulder
Predicting Patient Disability in MS from MRI Brain Abnormalities Using Machine Learning

Colorado School of Mines CSEF Scholarship

Nathaniel Ellis 11th grade
 \$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
 Durango High School Durango
MOON-OPOLY II: Employing Additive Manufacturing Technology for Lunar Construction with Waterless Concrete

Colorado School of Mines CSEF Scholarship

Amrita Saini 11th grade
 \$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
 Peak to Peak Charter School Lafayette
Investigating Natural Hydrogels to Sustain Bioluminescent Algae for Sustainable Lighting and CO2 Removal

Colorado School of Mines CSEF Scholarship

Margaret Arthur 11th grade
 \$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
 Fairview High School Boulder
A Novel Phosphosite Localization Approach using Tandem Phosphoprotein Mass Spectra and Temporal Dilated Networks

Colorado School of Mines CSEF Scholarship

Daniel Saeb 11th grade
 \$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
 Boulder High School Boulder
Investigating How Hydrogel Connectivity Influence Their Mechanical Properties

2023 Colorado Science and Engineering Fair Special Awards Press Release

United States Metric Association

Outstanding Achievement in the Use of the International System Award

Jocelyn Kramer 6th grade
certificate, membership in the US Metric Association
Good Shepherd Catholic School Denver
*The Exodus of Ca+: Does Container Material Affect
Calcium Levels in Milk?*

Outstanding Achievement in the Use of the International System Award

Ainsley Soleta 12th grade
Luke Ferguson 12th grade
certificate, membership in the US Metric Association
Brush High School Brush
Tensile Strength of Nylon 6, 10

Water Environment Federation

Stockholm Junior Water Prize

Tyler Wise 8th grade
certificate
Liberty School Joes
Does Crop Residue Affect Soil Water Retention

Stockholm Junior Water Prize

Liam Griffin 7th grade
same award
Sargent Junior High School Monte Vista
Running Low on Water: Formula for the Future

Stockholm Junior Water Prize

Juakin Sawatzky 8th grade
same award
Liberty School Joes
Analysis of Mine Tailing Run-Off for Mine Tailings

Yale Science & Engineering Association

Outstanding Achievement in Science & Engineering Award

Augustus Miller 11th grade
certificate, medallion (response required from winner to
process)
Monte Vista High School Monte Vista
*Synthesizing Cellulose Acetate and Paper-Based Plastic
from Cellulose Derivatives to Produce a Biodegradable 3D
Printable Filament*

Teacher

Colorado Association of Science Teachers

CAST Teacher Award

Terri Paulson
\$150, certificate, 1-year free CAST membership
Sargent Jr/Sr High School Monte Vista

CAST Teacher Award

Amy Melby
same award
Yuma High School Yuma

Colorado Science & Engineering Fair

Doug Steward Memorial Award

Andrew Shelton
\$75, certificate
Centauri Middle School La Jara

Doug Steward Memorial Award

Eric Halingstad
\$75, certificate
Conifer High School Conifer

Doug Steward Memorial Award

Dave Hopcia
\$75, certificate
Dolores High School Dolores

Lockheed Martin

CSEF Teacher of the Year Award

Andrew Shelton
\$3,000 grant to use for their school's science fair program,
certificate
Centauri Middle School La Jara