

2024 Colorado Science and Engineering Fair

Grand Awards Press Release

✓ = PPRSEF participant

Junior Division Best of CSEF Project

First Place

Finnley Reitz 6th grade
Sumac Shindig: An Investigation into Scarification
Alta Vista Charter School Lamar

Second Place

Carson Stone 8th grade
Connor Stone 6th grade
Shake Rattle and Roll - Washboard Phenomenon: The Effect of Wheel Velocity on a Roadbed
Brush Middle School Brush

Third Place

Cuinn Archer 8th grade
Automatic Water Vol. 2
Mancos Middle School Mancos

Senior Division Best of CSEF Project

First Place

Haydan Drullinger 10th grade
Is It Clogged? Productions of an Instrument to Detect Clogged Sprinkler Heads and Notify a Cellular Device
Liberty School Joes

✓ Second Place

Shrey Rohilla 11th grade
Waste to Watts: Converting Locally Sourced Organic Waste Material into Activated Carbon-Based Supercapacitors
The Classical Academy Colorado Springs

✓ Third Place

Naomi Kruse 10th grade
Paper for the Planet: Development of a Novel Paper Inoculated with Wildflower Seed and Carbon-Sequestering Fungi
Schullandheim Home School Colorado Springs

Fourth Place

Lydia Mekelburg 11th grade
Spatial Analysis of Deer Populations in Northeastern Colorado
Yuma High School Yuma

Fifth Place

Julia Gao & Om Vegesna 9th grade
G.L.O.W.: A Novel Hybrid Network Approach for Glioblastoma Localization Using Carcinogenic Oxidative Stress Biomarkers
Fairview High School Boulder

Junior Division Animal Sciences

First Place

Sienna Harden & Vivian Bozek 6th grade
We Got GOOD Milk!
St. Joseph's Catholic School Fort Collins

✓ Second Place

Vivian Wolkow 7th grade
Can Planaria Distinguish One Color from Another?
North Middle School Colorado Springs

Third Place

Jessa Wilson 7th grade
Equine Heart Rate
Wiggins Middle School Wiggins

Honorable Mention

Kellen McClure 6th grade
My Pogo Project
Jefferson Intermediate School Rocky Ford

Honorable Mention

Priya Mayjoy 8th grade
Monitoring Apis Mellifera Linnaeus for Winter Survival
Lamar Middle School Lamar

Senior Division Animal Sciences

First Place

Lydia Mekelburg 11th grade
Spatial Analysis of Deer Populations in Northeastern Colorado
Yuma High School Yuma

Second Place

Hansini Mudumala 11th grade
Aryana Havash 12th grade
The Effect of Microplastics on Neocaridina davidi
SkyView Academy Highlands Ranch

Third Place

Maggie Anderson 10th grade
Analysis of Expected Progeny Difference: Predictability in Beef Cattle
Yuma High School Yuma

Junior Division

Behavioral & Social Sciences

First Place

Asha Jeter Patel 8th grade
Conversation Topics
Sacred Heart of Jesus Catholic School Boulder

Second Place

Zoe Smith 7th grade
Journey to the Center of the Mind
Loveland Classical School Loveland

Third Place

Zadira McGee 8th grade
The Effects of Stimulants and Depressants on the Heart Rate of Daphnia
Summit Middle Charter School Boulder

Honorable Mention

Juliet Huckabay 7th grade
The Influence of Persuasive Language on Long Term Memory
Skinner Middle School Denver

Senior Division

Behavioral & Social Sciences

First Place

Kenedy Jiron-Baker 12th grade
Income and the Environment
Evergreen High School Evergreen

Second Place

Zoey Montoya 11th grade
Everett Ediger 12th grade
Determining Prosodic Patterns in the Speech of Online Science Communication
La Junta Jr/Sr High School La Junta

Third Place

Alexander Zhang 11th grade
Multi-Layer Structural Equation Modeling of Behavioral Traits and Entrepreneurial Interest
Fairview High School Boulder

Honorable Mention

Ethan Wang, Vincentius Aaron Chen, &
James Kerrane 12th grade
Liminal Spaces and the Uncanny Valley: An Interdisciplinary Virtual Reality and Psychology Experimental Research Design
Peak to Peak Charter School Lafayette

Junior Division

Biomedical & Health Sciences

First Place

Kapil Bhandaram 8th grade
What Model Performs the Best When Using Artificial Intelligence to Detect Pneumonia Using Chest Radiographs
Campus Middle School Englewood

Second Place

Maya Rokhlenko & Olive Spohn 8th grade
All Boxed Up: The Effects of Prescription Eyewear on Peripheral Vertigo
Flagstaff Academy Longmont

Third Place

Vedanth Raju 6th grade
Curcuza: A Nanogel Antibiotic Using Neem and Turmeric Nanoparticles to Help Tackle Antibiotic Resistance - A Global Health Threat
Aurora Quest K-8 School Aurora

Honorable Mention

Jade Howell 8th grade
Inheriting Blood Types
Ignacio Middle School Ignacio

Honorable Mention

Devon Mahorney 8th grade
A Spoonful of Sugar
West Grand Middle School Kremmling

Senior Division

Biomedical & Health Sciences

First Place

Julia Gao & Om Vesegna 9th grade
G.L.O.W.: A Novel Hybrid Network Approach for Glioblastoma Localization Using Carcinogenic Oxidative Stress Biomarkers
Fairview High School Boulder

Second Place

Ashley Acton 12th grade
The Effects of Caffeine on Stem Cells and Skeletal Muscle Regeneration
Fairview High School Boulder

✓ Third Place

Vanya Lavu 11th grade
*Healthy Gut! Healthy You!: Using *Dorotocephala Dactyliger* as a Model to Treat Gastrointestinal and Psychological Disorder with Novel Regenerative Enzymes*
The Classical Academy Colorado Springs

Honorable Mention

Logan Futrell 9th grade
Stabilizing Sugars: The Impacts of Food Choice on Glucose Levels During Athletic Performance
Monte Vista High School Monte Vista

Honorable Mention

Amy Xia 10th grade
Determining Whether the PTPN2 Gene Plays a Role in the Development of Type 1 Diabetes
Cherry Creek High School Greenwood Village

Honorable Mention

Garrett Rymer 11th grade
Windlass Tourniquets: Using Medical Instructions to Prepare for Massive Hemorrhage
Cherry Creek High School Greenwood Village

Junior Division Chemistry

First Place

Sophia Bronstein 8th grade
The Vanishing Palette: Comparing the Fading Rates of Different Oil-Based Paints
Summit Middle Charter School Boulder

Second Place

Tess Price 8th grade
Polymerization Using Alginate Spherification
Ken Caryl Middle School Littleton

Third Place

Varun Velmurugan 8th grade
Water Purification: A Solution for Fluoride Contamination
Campus Middle School Englewood

Honorable Mention

Marin Cantrell 8th grade
Toilet Talk
Cardinal Community Academy Keensburg

Senior Division Chemistry

First Place

Claire Huang 11th grade
Sophia Zhang 10th grade
Natural Eutectogels as a Novel Material for Green Wearable Electronics
Fairview High School Boulder

Second Place

Katherine Zheng 11th grade
Visible Light Photocatalytic Degradation of Congo Red Using LaFeO₃ Nanofibers
Fairview High School Boulder

Third Place

Helena Borsholm & Charlotte Harrington 12th grade
Tuning the Concentration of Active Sites on the Surface of Heterogeneous Catalysts Using Self-Assembled Monolayers
Monarch High School Louisville

Honorable Mention

Cole Randolph 12th grade
Calcium Carbonate Cooling Caps
Green Mountain High School Lakewood

Honorable Mention

Mariami Zhuzhunashvili 12th grade
Producing Biodiesel from Spent Coffee Grounds: Traditional vs. In situ Transesterification
Cherry Creek High School Greenwood Village

Junior Division Earth & Environmental Sciences

✓ First Place

Cameron Kempisty 7th grade
To Grow or Not to Grow: Testing Biomass-based Alternatives for a Greener World
Eagleview Middle School Colorado Springs

✓ Second Place

Elise Gavin 7th grade
Biodegradable or Not? Trial by Fire!
The Classical Academy Colorado Springs

Third Place

Kaycee Clark 8th grade
What Lies Beneath: A Study on the Effects of Grazing Intensities on the Nutrients in the Soil
Wray Junior High School Wray

✓ Honorable Mention

Lucia Montello 6th grade
Snow Force: Testing Which Avalanche Control Method Is Most Effective
Eagleview Middle School Colorado Springs

Honorable Mention

Colter Dennison 8th grade
Toxic Tributaries
Mancos Middle School Mancos

Senior Division Earth & Environmental Sciences

First Place

Zachariah Nagle 11th grade
Testing Pollution and Radioactivity Levels Near Suncor's Petrochemical Refinery in Commerce City, Colorado
Fairview High School Boulder

Second Place

Hannah Shelton 11th grade
Applied Mycology: Do Fungal Endophyte Communities Differ Between Western Spruce Budworm Infested Douglas Fir and Uninfested Douglas Fir?
Centauri High School La Jara

Third Place

Elizabeth Vossler 11th grade
Detention Basin Systems: Mitigating Stormwater in Hampden Heights and Its Implications on Cherry Creek Water Quality
Denver School of the Arts Denver

Junior Division Energy

First Place

Rylen Ross 7th grade
Cooling for Solar
Monte Vista Middle School Monte Vista

Second Place

Madison Kirchhoff 8th grade
Can I Break the Law of Conservation of Energy by Making a Magnetic Motor Run on Magnetic Potential Energy
Craver Middle School Colorado City

Third Place

Paisley Wiersma 7th grade
Biomass to Biogas
Genoa-Hugo School Hugo

Senior Division Energy

✓ First Place

Shrey Rohilla 11th grade
Waste to Watts: Converting Locally Sourced Organic Waste Material into Activated Carbon-Based Supercapacitors
The Classical Academy Colorado Springs

✓ Second Place

Natalie Muro 10th grade
Effects of Mooring Systems on Submerged Point Absorber Wave Energy Converters
Palmer High School Colorado Springs

Third Place

Kelly Yang 11th grade
Enhancing Dry Cooling in Power Plants through High-Conductivity Thermal Ground Planes
Fairview High School Boulder

Honorable Mention

Anna Kumar 12th grade
Glucose Fuel Cells Made from Graphene Membranes
Fairview High School Boulder

Junior Division Engineering

First Place

Cuinn Archer 8th grade
Automatic Water Vol. 2
Mancos Middle School Mancos

Second Place

Vaughn Bankston 8th grade
Can You Truss-t the Truss?
Mancos Middle School Mancos

✓ Third Place

Laurel Amber Kent 6th grade
Cool Running: A Heat Stroke's Downfall - Using a Peltier Module to Prevent Heat Stroke
Eagleview Middle School Colorado Springs

Honorable Mention

Junyao Yin 8th grade
Aerodynamics and Downforce: The Leading Edge in Formula One Racing
Summit Middle Charter School Boulder

Honorable Mention

Tidus Overkill 8th grade
Cheap ROV
Genoa-Hugo School Hugo

Senior Division Engineering

First Place

Haydan Drullinger 10th grade
Is It Clogged? Productions of an Instrument to Detect Clogged Sprinkler Heads and Notify a Cellular Device
Liberty School Joes

Second Place

Ersel Serdar 11th grade
Bending Fire: A New Approach to Steer Rockets Using Electric Fields
Cherry Creek High School Greenwood Village

✓ Third Place

Geo Raguraman 12th grade
InvisiEye 2.0: A Compact, Modernized Solution to Aid the Blind and Visually Impaired
Discovery Canyon High School Colorado Springs

Honorable Mention

Denton Peil	12th grade
<i>Gutter Guardian: Gutter Cleaning Drone</i>	
Yuma High School	Yuma

Honorable Mention

Kenneth Zittel	12th grade
<i>Arc Drift</i>	
Central High School	Pueblo

Honorable Mention

Malcolm Smith	11th grade
<i>Unfurl: A Physical Reservoir Computing Algorithm for Deploying Complex Origami Structures</i>	
Niwot High School	Niwot

Junior Division Environmental Engineering

First Place

Anirudh Rao	6th grade
<i>An Early Tornado Warning System</i>	
STEM School	Highlands Ranch

Second Place

Miles Stelzer	8th grade
<i>Drone Fire Detection and Firefighting</i>	
Summit Middle Charter School	Boulder

Third Place

Andrew Kohler	8th grade
<i>Blade Types and Quantity vs. Blade Efficiency for Wind Turbines</i>	
Blessed Sacrament Catholic School	Denver

Honorable Mention

Ripley Goode	8th grade
<i>Wax: Not Cool Dude</i>	
Boulder Country Day School	Boulder

Senior Division Environmental Engineering

✓ First Place

Naomi Kruse	10th grade
<i>Paper for the Planet: Development of a Novel Paper Inoculated with Wildflower Seed and Carbon-Sequestering Fungi</i>	
Schullandheim Home School	Colorado Springs

Second Place

Will Thompson & Dmitriy Kazantsev	12th grade
<i>Sustainability That Grows on You</i>	
Centaurus High School	Lafayette

Third Place

Will Livingood	12th grade
<i>Monitoring Utilities for Wildfire Containment and Prevention</i>	
Green Mountain High School	Lakewood

Junior Division Mathematics & Computer Sciences

First Place

Ian Pfenning	8th grade
<i>AI Powered Pet Feeder</i>	
Flagstaff Academy	Longmont

Second Place

Lucy Brittain	7th grade
<i>Mosquito Bite: West Nile Fright</i>	
Creede Schools	Creede

Third Place

Ellery Kallal	8th grade
<i>MisinformAtIon: How AI Can Create Realistic Misinformation That Humans Read as Fact</i>	
Flagstaff Academy	Longmont

Senior Division Mathematics & Computer Sciences

First Place

Michael Gao	11th grade
<i>ADMM-FBA: Novel High-Level, Robustly Convergent Flux Balance Analysis Using Dual Anderson-ADMM</i>	
Fairview High School	Boulder

Second Place

Stella Laird	11th grade
<i>A Study of Numerical Machine Learning Approaches to Tennis Swing Analysis</i>	
Fairview High School	Boulder

Third Place

Elton Cao	12th grade
<i>National Ground-Level NO2 Predictions Via Satellite Imagery Driven Hybrid Neural Networks</i>	
Fairview High School	Boulder

Honorable Mention

Maria Sears	11th grade
<i>Help! I Need Somebody: An Assistive Device That Notifies Emergency Services Once a Fall Has Been Detected</i>	
Monte Vista High School	Monte Vista

Honorable Mention

Christina Abraham	11th grade
<i>Optimizing Sustainable Fisheries with Machine Learning: Analyzing Ecosystem-friendly Fishing in the Coral Triangle</i>	
Mountain Vista High School	Highlands Ranch

Junior Division

Micro & Molecular Biology

First Place

Espen Plotkin 8th grade
How Different Substances Effect the Zone of Inhibition of Bacteria
Vail Mountain School Vail

Second Place

Rylie Harmon 7th grade
Safe to Drink?
Sargent Junior High School Monte Vista

✓ **Third Place**

Julia Muro 7th grade
The Effect of Various Vinegar Rinse Concentrations on the Shelf Life of Strawberries
North Middle School Colorado Springs

Honorable Mention

Izzy Barter 8th grade
The Effect of Heat on Bacterial Evolution
Denver Jewish Day School Denver

Honorable Mention

Bella Maze 8th grade
Warehouse Worries
Sargent Junior High School Monte Vista

Honorable Mention

Ainsley Lehman & Jocelyn Demster 7th grade
Save Our Sandwiches
Firestone Charter Academy Firestone

Senior Division

Micro & Molecular Biology

First Place

Angelina Wang 11th grade
Toxin-like Microproteins: A Novel Approach to Unveil the Intricacies of Acetylcholine Receptors
Fairview High School Boulder

✓ **Second Place**

Ayush Vispute 9th grade
ProteinFlow: A Novel Biocomputational Approach to Discovering Bacteria with Applications to Global Issues Using Protein Sequence
Rampart High School Colorado Springs

Third Place

Armaan Gill 11th grade
Exploring the Antimicrobial Effects of Phenethyl Isothiocyanate
Lamar High School Lamar

Honorable Mention

Kyra Jordan 12th grade
The Measurement of Expelled Zooxanthellae Using Sensor and Data Fusion to Predict Heat Waves
Golden High School Golden

Honorable Mention

Zechariah Dille 10th grade
The Effects of Potential Antibiotics Against Antibiotic Bacteria
South High School Pueblo

Junior Division

Physics & Astronomy

First Place

Carson Stone 8th grade
Connor Stone 6th grade
Shake Rattle and Roll - Washboard Phenomenon: The Effect of Wheel Velocity on a Roadbed
Brush Middle School Brush

Second Place

Evelyn Lapp 7th grade
Refraction in Action
Brush Middle School Brush

Third Place

Lane Mattive 7th grade
Just Wingin' It
Sargent Junior High School Monte Vista

Honorable Mention

Brady Woods 6th grade
Getting Traction
Turner Middle School Berthoud

Honorable Mention

Jacob Kossler 8th grade
Seeing Radiation To Find Out How To Block It
Turner Middle School Berthoud

Senior Division

Physics & Astronomy

First Place

Tristan Cao 10th grade
Toward Realization of Novel Quantum Materials via Magneto-Synthesis
Stargate Charter School Thornton

Second Place

Elsie Thompson 10th grade
Does Tee Height Affect Driving Distance?
Limon School Limon

Third Place

Vikram Raju 9th grade
*A Novel Way to Significantly Improve TEM Efficiency by
Altering Hologram Interference*
Cherry Creek High School Greenwood Village

**Junior Division
Plant Sciences**

First Place

Finnley Reitz 6th grade
Sumac Shindig: An Investigation into Scarification
Alta Vista Charter School Lamar

Second Place

Elaina Consaul 7th grade
Boost the Roots!
Sargent Junior High School Monte Vista

Third Place

Jossilyn Wagar 8th grade
*Rotten Project: How Effective Are Fungicides That
Prevent Post-Harvest Potato Rot?*
Sargent Junior High School Monte Vista

Honorable Mention

Gabe Carr & Jax Poss 7th grade
Does the Height of Grass Effect Its Growth?
Genoa-Hugo School Hugo

Honorable Mention

Andrew Dube 8th grade
The Effect of Acidification on the Health of Elodea
Aspen Middle School Aspen

**Senior Division
Plant Sciences**

First Place

Jordan Rockey 12th grade
*Effectiveness of Insect Management Practices on the
Spread of Potato Virus Y*
Monte Vista High School Monte Vista

Second Place

Siena Parr 11th grade
*The Effect of Gray Water on Soil Composition and
Growth of Phaseolus coccineus*
Dolores High School Dolores

Third Place

Amanda Castillo-Lopez & Caitlin Dong 12th grade
Biodegradation by Pleurotus Ostreatus
Cherry Creek High School Greenwood Village

Honorable Mention

Jann Angelli Bacolod 12th grade
*Wi-Fry: Detrimental Impacts of Wi-Fi Router Radiation
on Crop Seed Viability and Vigor*
Rocky Ford Jr/Sr High School Rocky Ford

Honorable Mention

Jaden DePue 9th grade
*Roots of Success: Investigating the Optimal Water
Conditions for Corn Root Growth*
Wray High School Wray

2024 Colorado Science and Engineering Fair

Special Awards Press Release

Colorado Science & Engineering Fair

Poster Art Contest

Amy Xia 10th grade
 \$100, certificate
 Cherry Creek High School Greenwood Village

Student Choice Award

✓ Julia Muro 7th grade
 \$100, certificate
 North Middle School Colorado Springs
The Effect of Various Vinegar Rinse Concentrations on the Shelf Life of Strawberries

Amy Zhang 9th grade
 \$100, certificate
 Lakewood High School Lakewood
Feel the Ball: Convert Ball Motion to Touch for Sport Audiences with Vision/Hearing Impairments

Elemer Bernath Memorial Technical Writing Award

Sophia Bronstein 8th grade
 certificate
 Summit Middle Charter School Boulder
The Vanishing Palette: Comparing the Fading Rates of Different Oil-Based Paints

Kaycee Clark 8th grade
 \$100, certificate
 Wray Junior High School Wray
What Lies Beneath: A Study on the Effects of Grazing Intensities on the Nutrients in the Soil

Ralph Desch Memorial Technical Writing Award

Kelly Yang 11th grade
 certificate
 Fairview High School Boulder
Enhancing Dry Cooling in Power Plants through High-Conductivity Thermal Ground Planes

Elton Cao 12th grade
 certificate
 Fairview High School Boulder
National Ground-Level NO2 Predictions Via Satellite Imagery Driven Hybrid Neural Networks

Julia Gao 9th grade
 Om Vegesna 9th grade
 \$100, certificate
 Fairview High School Boulder
G.L.O.W.: A Novel Hybrid Network Approach for Glioblastoma Localization Using Carcinogenic Oxidative Stress Biomarkers

Pioneers of Science

Dian Fossey Animal Sciences Award

Natalia Romero 7th grade
 \$50, certificate
 Justice & Heritage Academy Antonito
Attachment Issues

Mary Ainsworth Behavioral & Social Sciences Award

Asha Jeter Patel 8th grade
 \$50, certificate, poster of pioneer scientist
 Sacred Heart of Jesus Catholic School Boulder
Conversation Topics

Leon Festinger Behavioral & Social Sciences Award

Omar Manshad 6th grade
 \$50, certificate, poster of pioneer scientist
 West Ridge Academy Greeley
Beyond Pegs & Holes: Building an Improved Chessboard for Blind and Low Vision Chess Players

Elizabeth Helen Blackburn Biomedical & Health Sciences Award

Sunand Bhandaram 8th grade
 \$50, certificate
 Campus Middle School Englewood
Artificial Intelligence Assisted Deployment of Emergency Resources for Natural Disasters

John Goodenough Chemistry Award

Fallyn Gregersen 7th grade
 \$50, certificate, poster of pioneer scientist
 Wiggins Middle School Wiggins
Purifying Water with Activated Charcoal

Wangari Muta Maathai Earth & Environmental Sciences Award

Tejas Raman 8th grade
 \$50, certificate, poster of pioneer scientist
 Boulder Country Day School Boulder
Pattern-Based Seismology

Burt Ratan Energy Award

Neave Henschel 6th grade
 \$50, certificate, poster of pioneer scientist
 Hi-Plains School Seibert
Hold the Heat

Steven Chu Engineering Award

Morgan Drullinger 7th grade
\$50, certificate, poster of pioneer scientist
Liberty School Joes
Comparing the Accuracy of 3D Printed Airsoft BB's

George Tchobanoglous Environmental Engineering Award

Ripley Goode 8th grade
\$50, certificate, poster of pioneer scientist
Boulder Country Day School Boulder
Wax: Not Cool Dude

Jack Kilby Mathematics & Computer Sciences Award

Ian Pfenning 8th grade
\$50, certificate, poster of pioneer scientist
Flagstaff Academy Longmont
AI Powered Pet Feeder

James Patrick Allison Micro & Molecular Biology Award

Cynthia Stevens 8th grade
\$50, certificate, poster of pioneer scientist
Risley International Academy of Innovation Pueblo
Mouthwash vs. Bacteria

Donna Theo Strickland Physics & Astronomy Award

Emmett Wiedenheft 6th grade
\$50, certificate, poster of pioneer scientist
Southern Hills Middle School Boulder
The Change in Energy of Bouncing Balls

Luther Burbank Plant Sciences Award

Gabriel Ferguson 6th grade
\$50, certificate, poster of pioneer scientist
Craver Middle School Colorado City
Thriving Waters

Military

United States Air Force Reserve Officer Training Corps *Air Force ROTC Award*

MaKenna McCoy 6th grade
certificate, sling pack, power bank, USB flash memory drive, USB car charger
Alta Vista Charter School Lamar
A Safer Landing

Quinlan Childs 8th grade
certificate, sling pack, power bank, USB flash memory drive, USB car charger
Summit Middle Charter School Boulder
Dynamics of Flight: Testing Airplane Wings to Demonstrate Efficiency Using a Wind Tunnel

Emilio Martinez 11th grade
certificate, sling pack, power bank, USB flash memory drive, USB car charger
Alamosa High School Alamosa
F.A.L.L. (Falling Avionic Light Landing): Analysis of Control Surfaces Upon Atmospheric Re-entry

Tynan Lohman 8th grade
certificate, sling pack, power bank, USB flash memory drive, USB car charger
Liberty School Joes
Stealth Aircraft Aerodynamics

United States Navy & Marine Corps *Navy Science & Engineering Award*

✓ Laurel Amber Kent 6th grade
certificate, letter of congratulations, ONR medallion
Eagleview Middle School Colorado Springs
Cool Running: A Heat Stroke's Downfall - Using a Peltier Module to Prevent Heat Stroke

Anirudh Rao 6th grade
certificate, letter of congratulations, ONR medallion
STEM School Highlands Ranch
An Early Tornado Warning System

Cuinn Archer 8th grade
certificate, letter of congratulations, ONR medallion
Mancos Middle School Mancos
Automatic Water Vol. 2

Junyao Yin 8th grade
certificate, letter of congratulations, ONR medallion
Summit Middle Charter School Boulder
Aerodynamics and Downforce: The Leading Edge in Formula One Racing

Ersel Serdar 11th grade
certificate, letter of congratulations, ONR medallion, \$75 gift card
Cherry Creek High School Greenwood Village
Bending Fire: A New Approach to Steer Rockets Using Electric Fields

Haydan Drullinger 10th grade
certificate, letter of congratulations, ONR medallion, \$75 gift card
Liberty School Joes
Is It Clogged? Productions of an Instrument to Detect Clogged Sprinkler Heads and Notify a Cellular Device

Emilio Martinez 11th grade
 certificate, letter of congratulations, ONR medallion,
 \$75 gift card
 Alamosa High School Alamosa
*F.A.L.L. (Falling Avionic Light Landing): Analysis of
 Control Surfaces Upon Atmospheric Re-entry*

Organizational

Air & Waste Management Association, Rocky Mountain States Section *Air & Waste Management Award*

Paisley Wiersma 7th grade
 certificate, \$100
 Genoa-Hugo School Hugo
Biomass to Biogas

Taelynn Rojas 8th grade
 certificate, \$200
 Liberty School Joes
Using Microbes to Solve the Microplastic Problem

✓ Shrey Rohilla 11th grade
 certificate, \$100
 The Classical Academy Colorado Springs
*Waste to Watts: Converting Locally Sourced Organic
 Waste Material into Activated Carbon-Based
 Supercapacitors*

Elton Cao 12th grade
 certificate, \$200
 Fairview High School Boulder
*National Ground-Level NO₂ Predictions Via Satellite
 Imagery Driven Hybrid Neural Networks*

American Association of University Women *AAUW Colorado Award for Women in STEM*

✓ Samantha Goetz 7th grade
 certificate, \$250
 St. Peter's Catholic School Monument
*Is There a Medication Bottle That Senior Citizens Can
 Open and Children Cannot?*

Amy Zhang 9th grade
 certificate, \$250
 Lakewood High School Lakewood
*Feel the Ball: Convert Ball Motion to Touch for Sport
 Audiences with Vision/Hearing Impairments*

American Institute of Chemical Engineers, Rocky Mountain Section *Excellence in Chemical Engineering Award*

Fallyn Gregersen 7th grade
 certificate, \$150
 Wiggins Middle School Wiggins
Purifying Water with Activated Charcoal

Tess Price 8th grade
 certificate, \$200
 Ken Caryl Middle School Littleton
Polymerization Using Alginate Spherification

Mariami Zhuzhunashvili 12th grade
 certificate, \$150
 Cherry Creek High School Greenwood Village
*Producing Biodiesel from Spent Coffee Grounds:
 Traditional vs. In situ Transesterification*

Anna Kumar 12th grade
 certificate, \$200
 Fairview High School Boulder
Glucose Fuel Cells Made from Graphene Membranes

American Statistical Association, Colorado/Wyoming Chapter *David Young Memorial Award*

✓ Cameron Kempisty 7th grade
 certificate, \$200, student membership in the ASA,
 acknowledgement at the chapter's spring meeting and on
 the chapter website
 Eagleview Middle School Colorado Springs
*To Grow or Not to Grow: Testing Biomass-based
 Alternatives for a Greener World*

Julia Gao 9th grade
 Om Vegesna 9th grade
 certificate, \$200, student membership in the ASA,
 acknowledgement at the chapter's spring meeting and on
 the chapter website
 Fairview High School Boulder
*G.L.O.W.: A Novel Hybrid Network Approach for
 Glioblastoma Localization Using Carcinogenic
 Oxidative Stress Biomarkers*

American Vacuum Society, Rocky Mountain Chapter *Excellence in Physical Sciences & Engineering Award*

Collin Richardson 7th grade
 certificate, \$100, matching award to teacher/sponsor
 Wiggins Middle School Wiggins
Which Fuel Is More Efficient?

Fallyn Gregersen 7th grade
 certificate, \$200, matching award teacher/sponsor
 Wiggins Middle School Wiggins
Purifying Water with Activated Charcoal

Helena Borsholm 12th grade
 Charlotte Harrington 12th grade
 certificate, \$100, matching award for teacher/sponsor
 Monarch High School Louisville
*Tuning the Concentration of Active Sites on the Surface
 of Heterogeneous Catalysts Using Self-Assembled
 Monolayers*

Ersel Serdar 11th grade
certificate, \$200, matching award for teacher/sponsor
Cherry Creek High School Greenwood Village
*Bending Fire: A New Approach to Steer Rockets Using
Electric Fields*

ASM International

ASM Materials Education Foundation Award

Kenneth Zittel 12th grade
certificate, \$100
Central High School Pueblo
Arc Drift

Karissa Freund 8th grade
certificate, \$150
Stratton School Stratton
The Corrosion of Steel

Broadcom Foundation

Broadcom Coding with Commitment Award

Tejas Raman 8th grade
certificate, \$250 gift certificate, Raspberry Pi Pico Kit
Boulder Country Day School Boulder
Pattern-Based Seismology

Colorado Biology Teachers Association

CBTA Best Biology Project Award

Finnley Reitz 6th grade
certificate, \$100
Alta Vista Charter School Lamar
Sumac Shindig: An Investigation into Scarification

Vedanth Raju 6th grade
certificate, \$150
Aurora Quest K-8 School Aurora
*Curcuza: A Nanogel Antibiotic Using Neem and Turmeric
Nanoparticles to Help Tackle Antibiotic Resistance - A
Global Health Threat*

Elizabeth Vossler 11th grade
certificate, \$150
Denver School of the Arts Denver
*Detention Basin Systems: Mitigating Stormwater in
Hampden Heights and Its Implications on Cherry Creek
Water Quality*

Amy Xia 10th grade
certificate, \$200
Cherry Creek High School Greenwood Village
*Determining Whether the PTPN2 Gene Plays a Role in
the Development of Type 1 Diabetes*

Colorado BioScience Institute

Future of Life Sciences Award

Jade Howell 8th grade
certificate, \$25
Ignacio Middle School Ignacio
Inheriting Blood Types

Angelina Wang 11th grade
certificate, \$75, feature in the Institute's "Success
Stories"
Fairview High School Boulder
*Toxin-like Microproteins: A Novel Approach to Unveil
the Intricacies of Acetylcholine Receptors*

Colorado Chemistry Teachers Association

CCTA Chemistry Award

Reuben Friedlander 7th grade
certificate, \$150
Denver Jewish Day School Denver
*Endothermic Chemical Reaction to Make a Colder More
Efficient and Affordable Ice Pack Making a Better More
Efficient and Cheaper Cold Pack*

Cole Randolph 12th grade
certificate, \$150
Green Mountain High School Lakewood
Calcium Carbonate Cooling Caps

Colorado Environmental Health Association

Environmental Health Award

Tymbri Priestley 7th grade
certificate, \$75
Mancos Middle School Mancos
*The Effects of Antibacterial Soap on Abilities to Kill
Bacteria*

Kenedy Jiron-Baker 12th grade
certificate, \$150, invitation to exhibit at the CEHA
Annual
Educational Conference (valued at \$400)
Evergreen High School Evergreen
Income and the Environment

Colorado Foundation for Agriculture

Jack Fenwick Award for Agricultural Science

Maya Calle 8th grade
certificate, \$50
Aspen Middle School Aspen
How Nitrites Affect the Growth of Algae

Jossilyn Wagar 8th grade
certificate, \$50
Sargent Junior High School Monte Vista
*Rotten Project: How Effective Are Fungicides That
Prevent Post-Harvest Potato Rot?*

Haydan Drullinger 10th grade
certificate, \$50
Liberty School Joes
*Is It Clogged? Productions of an Instrument to Detect
Clogged Sprinkler Heads and Notify a Cellular Device*

Maggie Anderson 10th grade
 certificate, \$50
 Yuma High School Yuma
*Analysis of Expected Progeny Difference: Predictability
 in Beef Cattle*

Colorado Medical Society
CMS Education Foundation Award

Maya Rokhlenko 8th grade
 Olive Spohn 8th grade
 certificate, \$100, invitation to the winners and their
 parents to exhibit at the CMS Annual Meeting and
 attend the Presidential Inaugural Dinner with a paid
 overnight stay
 Flagstaff Academy Longmont
*All Boxed Up: The Effects of Prescription Eyewear on
 Peripheral Vertigo*

Ashley Acton 12th grade
 certificate, \$100, invitation to the winners and their
 parents to exhibit at the CMS Annual Meeting and
 attend the Presidential Inaugural Dinner with a paid
 overnight stay
 Fairview High School Boulder
*The Effects of Caffeine on Stem Cells and Skeletal Muscle
 Regeneration*

Colorado Mineral Society
Best Earth Science-related Project

Kendyl Osborn 6th grade
 certificate, mineral specimen, book, \$35
 La Junta Intermediate School La Junta
Shells to Cells

Colorado Mycological Society
Excellence in Mycological Research Award

Amanda Castillo-Lopez 12th grade
 Caitlin Dong 12th grade
 certificate, \$25, society membership, signed copy of
 Vera Evenson's "Rocky Mountain Mushrooms" book
 Cherry Creek High School Greenwood Village
Biodegradation by Pleurotus Ostreatus

✓ Naomi Kruse 10th grade
 certificate, \$50, society membership, signed copy of
 Vera Evenson's "Rocky Mountain Mushrooms" book
 Schullandheim Home School Colorado Springs
*Paper for the Planet: Development of a Novel Paper
 Inoculated with Wildflower Seed and Carbon-
 Sequestering
 Fungi*

Hannah Shelton 11th grade
 certificate, \$100, society membership, signed copy of
 Vera Evenson's "Rocky Mountain Mushrooms" book
 Centauri High School La Jara
*Applied Mycology: Do Fungal Endophyte Communities
 Differ Between Western Spruce Budworm Infested
 Douglas Fir and Uninfested Douglas Fir?*

Colorado Native Plant Society
Colorado Native Plant Society Award

Finnley Reitz 6th grade
 certificate, \$100, 1-year membership to Colorado Native
 Plant Society, book on Colorado native plants
 Alta Vista Charter School Lamar
Sumac Shindig: An Investigation into Scarification
 Jordan Rockey 12th grade
 certificate, \$200, 1-year membership to Colorado Native
 Plant Society, book on Colorado native plants
 Monte Vista High School Monte Vista
*Effectiveness of Insect Management Practices on the
 Spread of Potato Virus Y*

**Colorado Section of the American Chemical
 Society**
ACS Chemistry Award

Sophia Bronstein 8th grade
 certificate, \$50
 Summit Middle Charter School Boulder
*The Vanishing Palette: Comparing the Fading Rates of
 Different Oil-Based Paints*

Marin Cantrell 8th grade
 certificate, \$50
 Cardinal Community Academy Keensburg
Toilet Talk

Tess Price 8th grade
 certificate, \$75
 Ken Caryl Middle School Littleton
Polymerization Using Alginate Spherification

Varun Velmurugan 8th grade
 certificate, \$125
 Campus Middle School Englewood
*Water Purification: A Solution for Fluoride
 Contamination*

Tyson Montague 8th grade
 certificate, \$150
 Centauri Middle School La Jara
Orange Juice: The Sunshine in Your Cup

Mariami Zhuzhunashvili 12th grade
 certificate, \$50
 Cherry Creek High School Greenwood Village
*Producing Biodiesel from Spent Coffee Grounds:
 Traditional vs. In situ Transesterification*

Cole Randolph certificate, \$75	12th grade
Green Mountain High School <i>Calcium Carbonate Cooling Caps</i>	Lakewood
Katherine Zheng certificate, \$125	11th grade
Fairview High School <i>Visible Light Photocatalytic Degradation of Congo Red Using LaFeO₃ Nanofibers</i>	Boulder
Claire Huang certificate, \$300	11th grade
Sophia Zhang certificate, \$300	10th grade
Fairview High School <i>Natural Eutectogels as a Novel Material for Green Wearable Electronics</i>	Boulder

**Colorado State University
College of Agricultural Sciences**

Innovations in the Science of Agriculture Award

✓ Julia Muro certificate, \$500	7th grade
North Middle School <i>The Effect of Various Vinegar Rinse Concentrations on the Shelf Life of Strawberries</i>	Colorado Springs
Kendyl Osborn certificate, \$500	6th grade
La Junta Intermediate School <i>Shells to Cells</i>	La Junta
Asha Thompson certificate, \$500	10th grade
Limon School <i>Rain, Rain, Don't Go Away</i>	Limon
✓ Jessa Book certificate, \$500	10th grade
Miami-Yoder High School <i>Strength of EMF Waves Radiating from High Powered Electric Lines</i>	Rush
Siena Parr certificate, \$500	11th grade
Dolores High School <i>The Effect of Gray Water on Soil Composition and Growth of Phaseolus coccineus</i>	Dolores

**Colorado State University
Colorado Natural Heritage Program**

Colorado Natural Heritage Program Conservation Award

Jessie Stong certificate, pint glass, Wetlands of Colorado guidebook	12th grade
Green Mountain High School <i>Botanic Panic at Welchester Tree Grant Park</i>	Lakewood

**Colorado State University
Department of Agricultural Biology**
Agricultural Biology Award

Elaina Consaul certificate, \$100	7th grade
Sargent Junior High School <i>Boost the Roots!</i>	Monte Vista
✓ Cameron Kempisty certificate, \$100	7th grade
Eagleview Middle School <i>To Grow or Not to Grow: Testing Biomass-based Alternatives for a Greener World</i>	Colorado Springs
Jordan Rockey certificate, \$100	12th grade
Monte Vista High School <i>Effectiveness of Insect Management Practices on the Spread of Potato Virus Y</i>	Monte Vista
Jaden DePue certificate, \$100	9th grade
Wray High School <i>Roots of Success: Investigating the Optimal Water Conditions for Corn Root Growth</i>	Wray

**Colorado State University
Department of Chemistry**
Excellence in Chemistry Award

Marin Cantrell certificate, \$75	8th grade
Cardinal Community Academy <i>Toilet Talk</i>	Keensburg
Eli Harrison certificate, \$125	6th grade
Home School <i>The Effect of the Amount of Sugar in Kombucha Leather</i>	Erie
✓ Katelyn Marquez certificate, \$75	10th grade
Miami-Yoder High School <i>Effects of Acids on Alloy Metals of Costume Jewelry: A Way to Improve Appearance</i>	Rush
Helena Borsholm certificate, \$125	12th grade
Charlotte Harrington certificate, \$125	12th grade
Monarch High School <i>Tuning the Concentration of Active Sites on the Surface of Heterogeneous Catalysts Using Self-Assembled Monolayers</i>	Louisville

Colorado State University
Department of Horticulture & Landscape
Architecture

Excellence in Horticulture Award

Ashton Power 6th grade
 certificate, \$100

Heritage Heights Academy Aurora
The Impact of Stem Length and Humidity on
Transpiration of Flowers

Jossilyn Wagar 8th grade
 certificate, \$100

Sargent Junior High School Monte Vista
Rotten Project: How Effective Are Fungicides That
Prevent Post-Harvest Potato Rot?

Jordan Rockey 12th grade
 certificate, \$100

Monte Vista High School Monte Vista
Effectiveness of Insect Management Practices on the
Spread of Potato Virus Y

Jessie Stong 12th grade
 certificate, \$100

Green Mountain High School Lakewood
Botanic Panic at Welchester Tree Grant Park

Colorado State University, Energy Institute

Excellence in Energy Achievement Award

✓ Natalie Muro 10th grade
 certificate, \$250

Palmer High School Colorado Springs
Effects of Mooring Systems on Submerged Point Absorber
Wave Energy Converters

Colorado's Electric Cooperatives

The Colorado EnergyWise Award

Neave Henschel 6th grade
 certificate, \$75

Hi-Plains School Seibert
Hold the Heat

Rylen Ross 7th grade
 certificate, \$175

Monte Vista Middle School Monte Vista
Cooling for Solar

✓ Natalie Muro 10th grade
 certificate, \$75

Palmer High School Colorado Springs
Effects of Mooring Systems on Submerged Point Absorber
Wave Energy Converters

✓ Shrey Rohilla 11th grade
 certificate, &175

The Classical Academy Colorado Springs
Waste to Watts: Converting Locally Sourced Organic
Waste Material into Activated Carbon-Based
Supercapacitors

Colorado-Wyoming Society of American
Foresters

Excellence in Forestry Award

Miles Stelzer 8th grade
 certificate, \$200

Summit Middle Charter School Boulder
Drone Fire Detection and Firefighting

Aspen Fisher 12th grade
 certificate, \$200

Evergreen High School Evergreen
Comparing Pygmy Nuthatch Population Size Between
Thinned and Unthinned Forests

Department of Commerce Boulder Laboratories

Award for Excellence in Science and Engineering

Hannah McClintock 12th grade
 certificate, alternate for summer internship at the DOC
 labs in Boulder

Strasberg High School Strasburg
The Effects of Recycled Calcium Hydroxide on the
Average Growth and Mortality Rate of an Ecosystem
Affected by Ocean Acidification

Elton Cao 12th grade
 certificate, summer internship offer at the DOC labs in
 Boulder

Fairview High School Boulder
National Ground-Level NO2 Predictions Via Satellite
Imagery Driven Hybrid Neural Networks

Gromko Family

Gerald Gromko Memorial Award

Ersel Serdar 11th grade
 certificate, \$250

Cherry Creek High School Greenwood Village
Bending Fire: A New Approach to Steer Rockets Using
Electric Fields

Institute of Electrical and Electronics Engineers

High Plains Section

IEEE Award

Anirudh Rao 6th grade
 certificate, \$125 Amazon gift card

STEM School Highlands Ranch
An Early Tornado Warning System

✓ Shrey Rohilla 11th grade
 certificate, \$175 Amazon gift card
 The Classical Academy Colorado Springs
*Waste to Watts: Converting Locally Sourced Organic
 Waste Material into Activated Carbon-Based
 Supercapacitors*

Little Shop of Physics
Matthew McCausland Memorial Award

Pake VanderLinden 6th grade
 certificate, science equipment/instruments
 West Grand Middle School Kremmling
Using Mechanical Advantage to Lift

Ansley Martin 7th grade
 certificate, science equipment/instruments
 Challenge School Denver
Making a Leather Substitute Out of Kombucha SCOBY

Madison Kirchhoff 8th grade
 certificate, science equipment/instruments
 Craver Middle School Colorado City
*Can I Break the Law of Conservation of Energy by
 Making a Magnetic Motor Run on Magnetic Potential
 Energy*

Zachary Carr 10th grade
 certificate, science equipment/instruments
 Limon School Limon
The Simulation of Gravity Waves

Teagan Archer 11th grade
 certificate, science equipment/instruments
 Mancos High School Mancos
The Perfect Pan II

✓ Natalie Muro 10th grade
 certificate, science equipment/instruments
 Palmer High School Colorado Springs
*Effects of Mooring Systems on Submerged Point Absorber
 Wave Energy Converters*

Lockheed Martin
Lockheed Martin Aerospace Award

Quinlan Childs 8th grade
 certificate, \$150
 Summit Middle Charter School Boulder
*Dynamics of Flight: Testing Airplane Wings to
 Demonstrate Efficiency Using a Wind Tunnel*

Ersel Serdar 11th grade
 certificate, \$350
 Cherry Creek High School Greenwood Village
*Bending Fire: A New Approach to Steer Rockets Using
 Electric Fields*

Matt Hannifin - CO2/Greenhouse Gas Reduction
CO2 & Greenhouse Gas Reduction Award

Priya Mayjoy 8th grade
 certificate, \$50
 Lamar Middle School Lamar
*Monitoring Apis Mellifera Linnaeus for Winter
 Survival*

Hayden Forst 7th grade
 certificate, \$100
 Dove Creek Middle School Dove Creek
How Does a Cow's Digestive System Work?

Maggie Anderson 10th grade
 certificate, \$50
 Yuma High School Yuma
*Analysis of Expected Progeny Difference:
 Predictability in Beef Cattle*

Robert Horner 10th grade
 certificate, \$100
 Monte Vista High School Monte Vista
Fin-Tastic Harmony: Aquaponics with Betta

Kenedy Jiron-Baker 12th grade
 certificate, \$300
 Evergreen High School Evergreen
Income and the Environment

Claire Seger 11th grade
 certificate, \$300
 Monte Vista High School Monte Vista
*An Analysis of Spaceflight-Induced Osteopenia and
 Muscular Atrophy Over Extended Zero Gravity
 Missions*

Azucena Perez 6th grade
 certificate, \$50
 Lamar Middle School Lamar
Corrosion Conundrum

Humza Asif Memon 6th grade
 certificate, \$100
 Crescent View Academy Aurora
From Batter to Biofuel: Exploring Microbial Magic

Claire Huang 11th grade
 Sophia Zhang 10th grade
 certificate, \$50
 Fairview High School Boulder
*Natural Eutectogels as a Novel Material for Green
 Wearable Electronics*

Mariami Zhuzhunashvili certificate, \$100 Cherry Creek High School <i>Producing Biodiesel from Spent Coffee Grounds: Traditional vs. In situ Transesterification</i>	12th grade Greenwood Village	Christina Abraham certificate, \$100 Mountain Vista High School <i>Optimizing Sustainable Fisheries with Machine Learning: Analyzing Ecosystem-friendly Fishing in the Coral Triangle</i>	11th grade Highlands Ranch
✓ Cameron Kempisty certificate, \$150 Eagleview Middle School <i>To Grow or Not to Grow: Testing Biomass-based Alternatives for a Greener World</i>	7th grade Colorado Springs	Elton Cao certificate, \$200 Fairview High School <i>National Ground-Level NO2 Predictions Via Satellite Imagery Driven Hybrid Neural Networks</i>	12th grade Boulder
Miles Rutledge certificate, \$150 Yuma High School <i>Comparison of Canola, Sunflower, Soybean and Used Fryer Biodiesels on Their Engine and Emission Properties</i>	11th grade Yuma	✓ Julia Muro certificate, \$150 North Middle School <i>The Effect of Various Vinegar Rinse Concentrations on the Shelf Life of Strawberries</i>	7th grade Colorado Springs
Paisley Wiersma certificate, \$300 Genoa-Hugo School <i>Biomass to Biogas</i>	7th grade Hugo	✓ Ayush Vispute certificate, \$150 Rampart High School <i>ProteinFlow: A Novel Biocomputational Approach to Discovering Bacteria with Applications to Global Issues Using Protein Sequence</i>	9th grade Colorado Springs
Ansley Martin certificate, \$150 Challenge School <i>Making a Leather Substitute Out of Kombucha SCOBY</i>	7th grade Denver	Sydney Curtis certificate, \$150 Sargent Junior High School <i>Sail Your Ship to Positivity: A Comparison of Sail Shape and Material</i>	7th grade Monte Vista
Haydan Drullinger certificate, \$50 Liberty School <i>Is It Clogged? Productions of an Instrument to Detect Clogged Sprinkler Heads and Notify a Cellular Device</i>	10th grade Joes	Alexander Diener certificate, \$150 Fairview High School <i>An Analysis of the Coronal Temperature Spike using Solar Spectroscopy</i>	11th grade Boulder
Ruolin Hai certificate, \$100 Campion Academy <i>HarvestSpectra: An Enhanced Crop Spectral Analysis Using a Novel Vertical Take-off Fixed Wing Structure for Precision Agriculture</i>	11th grade Loveland	Quorra Benally certificate, \$50 Mancos Middle School <i>Bombs Away</i>	6th grade Mancos
Galileo Hannigan certificate, \$100 Centaurus High School <i>Theat's So F.I.R.E.! The Forefront in Inferno Research Equipment</i>	12th grade Lafayette	Andrew Dube certificate, \$100 Aspen Middle School <i>The Effect of Acidification on the Health of Elodea</i>	8th grade Aspen
✓ Naomi Kruse certificate, \$200 Schullandheim Home School <i>Paper for the Planet: Development of a Novel Paper Inoculated with Wildflower Seed and Carbon-Sequestering Fungi</i>	10th grade Colorado Springs	Jessie Stong certificate, \$50 Green Mountain High School <i>Botanic Panic at Welchester Tree Grant Park</i>	12th grade Lakewood

Abby Mirsky 12th grade
 Dylan Greco 12th grade
 Sasha Trask 12th grade
 certificate, \$100
 Centaurus High School Lafayette
Sustainable Synergy: The Greenhouse Revolution Towards Self Sufficiency

Morrow Family
Dental & Forensics Award

Kinleigh Hathorn 8th grade
 certificate, \$50
 Sargent Junior High School Monte Vista
Return from the Brink: The Effect of Slurry on the Natural Environment

Varun Velmurugan 8th grade
 certificate, \$100
 Campus Middle School Englewood
Water Purification: A Solution for Fluoride Contamination

Hayden Eubanks 10th grade
 certificate, \$50
 West Grand High School Kremmling
Real vs Fake Blood Splatter

Destiny Cornelius 11th grade
 certificate, \$100
 Plainview School Sheridan Lake
Slobbers and Saliva

National Centers for Environmental Information
NCEI Award for Scientific Achievement

✓ Lucia Montello 6th grade
 certificate, cash award from anonymous donor
 Eagleview Middle School Colorado Springs
Snow Force: Testing Which Avalanche Control Method Is Most Effective

National Security Agency
NSA Special Award

Anirudh Rao 6th grade
 certificate, 3D pen with stencils
 STEM School Highlands Ranch
An Early Tornado Warning System

Ellery Kallal 8th grade
 certificate, wooden models
 Flagstaff Academy Longmont
Misinformation: How AI Can Create Realistic Misinformation That Humans Read as Fact

Bode Monahan 7th grade
 certificate, digital microscope with LCD display
 Liberty School Joes
Learning the Lie: Coding a Machine Learning Algorithm to Analyze Brain Activity for Lie Detection

✓ Natalie Muro 10th grade
 certificate, wooden models
 Palmer High School Colorado Springs
Effects of Mooring Systems on Submerged Point Absorber Wave Energy Converters

Amy Zhang 9th grade
 certificate, AI puppy and digital microscope with LCD
 Lakewood High School Lakewood
Feel the Ball: Convert Ball Motion to Touch for Sport Audiences with Vision/Hearing Impairments

Pablo Becerra 12th grade
 certificate, 3D printer
 Yuma High School Yuma
Use of Artificial Intelligence for Cancer Diagnosis

Platte River Power Authority
PRPA Special Award for Energy Efficiency and Innovation

Rylen Ross 7th grade
 certificate, \$200
 Monte Vista Middle School Monte Vista
Cooling for Solar

Kelly Yang 11th grade
 certificate, \$300
 Fairview High School Boulder
Enhancing Dry Cooling in Power Plants through High-Conductivity Thermal Ground Planes

PRPA Special Award for Environmental Responsibility

Benjamin Knight 6th grade
 certificate, \$200
 Corwin International Magnet School Pueblo
Keeping Cool: What Is the Best House Color to Save on Air Conditioning

Alex Nuzzo 11th grade
 certificate, \$300
 South High School Pueblo
Which Windmill Blade Type Works Best?

Rocky Mountain Association of Geologists
Excellence in Earth Science Award

Ansley DePue 7th grade
 certificate, \$200
 Wray Junior High School Wray
Republican Ripples: Investigating Water of the Republican River

Tejas Raman 8th grade
 certificate, \$400
 Boulder Country Day School Boulder
Pattern-Based Seismology

Elizabeth Vossler 11th grade
certificate, \$400
Denver School of the Arts
*Detention Basin Systems: Mitigating Stormwater in
Hampden Heights and Its Implications on Cherry Creek
Water Quality*

**Rocky Mountain Water Environment
Association**
Water Research Award

Marin Cantrell 8th grade
certificate, \$50
Cardinal Community Academy Keensburg
Toilet Talk

Taelynn Rojas 8th grade
certificate, \$75
Liberty School Joes
Using Microbes to Solve the Microplastic Problem

Augustus Miller 12th grade
certificate, \$50
Monte Vista High School Monte Vista
*Synthesizing Cellulose Acetate-Polyurethane for the
Removal of Heavy Metal Ions from Water via Adsorption*

Elizabeth Vossler 11th grade
certificate, \$75
Denver School of the Arts Denver
*Detention Basin Systems: Mitigating Stormwater in
Hampden Heights and Its Implications on Cherry Creek
Water Quality*

Science Toy Magic
Physics Classroom Demonstration Award

Quinlan Childs 8th grade
certificate, \$150
Summit Middle Charter School Boulder
*Dynamics of Flight: Testing Airplane Wings to
Demonstrate Efficiency Using a Wind Tunnel*

Lucia Nuel 11th grade
certificate, \$150
Fairview High School Boulder
*Using Entanglement Entropy to Make a Solid Substance
Out of Staples*

**Society for Mining, Metallurgy, and Exploration
Colorado Section**
*Award for Excellence in Mineral Science &
Engineering*

Gwendolyn Hohl 8th grade
plaque, \$200
Genoa-Hugo School Hugo
Does pH Affect the Rate of Corrosion on Steel

Ansley DePue 7th grade
plaque, \$200
Wray Junior High School Wray
*Republican Ripples: Investigating Water of the
Republican River*

Kinleigh Hathorn 8th grade
plaque, \$200
Sargent Junior High School Monte Vista
*Return from the Brink: The Effect of Slurry on the Natural
Environment*

Juakin Sawatzky 9th grade
plaque, \$300
Liberty School Joes
*The Effects of the Run-Off from Mine Tailings on Daphnia
Magna*

**Society of Manufacturing Engineers
Colorado Chapter 354**
Andy Keller Memorial Award

Cuinn Archer 8th grade
certificate, \$100, recognition by local chapter
Mancos Middle School Mancos
Automatic Water Vol. 2

Tidus Overkill 8th grade
certificate, \$150, recognition by the local chapter
Genoa-Hugo School Hugo
Cheap ROV

✓ Natalie Muro 10th grade
certificate, \$200, recognition by the local chapter
Palmer High School Colorado Springs
*Effects of Mooring Systems on Submerged Point
Absorber Wave Energy Converters*

**Society of Women Engineers
Rocky Mountain Section**
SWE Award

✓ Lucia Montello 6th grade
certificate, \$75
Eagleview Middle School Colorado Springs
*Snow Force: Testing Which Avalanche Control Method Is
Most Effective*

✓ Laurel Amber Kent 6th grade
certificate, \$100
Eagleview Middle School Colorado Springs
*Cool Running: A Heat Stroke's Downfall - Using a Peltier
Module to Prevent Heat Stroke*

Maria Sears 11th grade
certificate, \$75
Monte Vista High School Monte Vista
*Help! I Need Somebody: An Assistive Device That
Notifies Emergency Services Once a Fall Has Been
Detected*

✓ Natalie Muro 10th grade
certificate, \$100
Palmer High School Colorado Springs
*Effects of Mooring Systems on Submerged Point Absorber
Wave Energy Converters*

Soil & Water Conservation Society
Natural Resource Conservation Award

✓ Cameron Kempisty 7th grade
certificate, \$100
Eagleview Middle School Colorado Springs
*To Grow or Not to Grow: Testing Biomass-based
Alternatives for a Greener World*

Valerie Goodland 12th grade
certificate, \$100
Monte Vista High School Monte Vista
*Hidden Fragments: Isolating and Detecting
Microplastics in Rivers and Municipal Water Supplies*

**State of Colorado: Division of Reclamation,
Mining & Safety**
DRMS Outstanding Science Exhibit Award

Colter Dennison 8th grade
certificate, gift bag, \$100
Mancos Middle School Mancos
Toxic Tributaries

Augustus Miller 12th grade
certificate, gift bag, \$100
Monte Vista High School Monte Vista
*Synthesizing Cellulose Acetate-Polyurethane for the
Removal of Heavy Metal Ions from Water via Adsorption*

STEMgirls, LLC
STEMgirls Middle School Rising Star Award

Layla Mitchell 7th grade
certificate, \$100
Mancos Middle School Mancos
Serving Under Pressure

The Sara Volz Family
Best Contribution to Fundamental Science

Michael Gao 11th grade
certificate, \$300
Fairview High School Boulder
*ADMM-FBA: Novel High-Level, Robustly Convergent
Flux Balance Analysis Using Dual Anderson-ADMM*

Angelina Wang 11th grade
certificate, \$300
Fairview High School Boulder
*Toxin-like Microproteins: A Novel Approach to Unveil
the Intricacies of Acetylcholine Receptors*

The Warnock Family
Warnock Family Award

Ashley Acton 12th grade
certificate, \$100
Fairview High School Boulder
*The Effects of Caffeine on Stem Cells and Skeletal Muscle
Regeneration*

Tristan Cao 10th grade
certificate, \$100
Stargate Charter School Thornton
*Toward Realization of Novel Quantum Materials via
Magneto-Synthesis*

Trout Unlimited
Trout Unlimited River Conservation Award

Anya Wieder 11th grade
Taryn McDermid 12th grade
certificate, \$75
St. Vrain Valley Innovation Center Longmont
*Application of eDNA and qPCR Techniques for Detecting
Northern Redbelly Dace in Aquatic Environments*

Ansley DePue 7th grade
certificate, \$125
Wray Junior High School Wray
*Republican Ripples: Investigating Water of the
Republican River*

Colter Dennison 8th grade
certificate, \$200
Mancos Middle School Mancos
Toxic Tributaries

Wilkins Family
Young Entrepreneur's Award

Haydan Drullinger 10th grade
certificate, \$750
Liberty School Joes
*Is It Clogged? Productions of an Instrument to Detect
Clogged Sprinkler Heads and Notify a Cellular Device*

Wojtaszek Family
Paul Wojtaszek Award

Maria Horn 12th grade
certificate, \$500
Yuma High School Yuma
*Sorry, I Didn't See You: Testing the Effects of
Photosensitive Medications on Crystallin Alpha to Study
the Development of Cataracts*

Zonta Club of Boulder County
Amelia Earhart Award

MaKenna McCoy 6th grade
certificate, \$100
Alta Vista Charter School Lamar
A Safer Landing

Scholarships

Colorado School of Mines

Colorado School of Mines CSEF Scholarships

- ✓ Vanya Lavu 11th grade
certificate, \$1,000 scholarship, renewable for up to 3
additional years for use towards an undergraduate degree
at CSM
The Classical Academy Colorado Springs
*Healthy Gut! Healthy You!: Using *Dorotocephala*
Dactyligieria as a Model to Treat Gastrointestinal and
Psychological Disorder with Novel Regenerative
*Enzymes**
- Katherine Zheng 11th grade
certificate, \$1,000 scholarship, renewable for up to 3
additional years for use towards an undergraduate degree
at CSM
Fairview High School Boulder
*Visible Light Photocatalytic Degradation of Congo Red
Using LaFeO3 Nanofibers*
- Zachariah Nagle 11th grade
certificate, \$1,000 scholarship, renewable for up to 3
additional years for use towards an undergraduate degree
at CSM
Fairview High School Boulder
*Testing Pollution and Radioactivity Levels Near Suncor's
Petrochemical Refinery in Commerce City, Colorado*
- ✓ Shrey Rohilla 11th grade
certificate, \$1,000 scholarship, renewable for up to 3
additional years for use towards an undergraduate degree
at CSM
The Classical Academy Colorado Springs
*Waste to Watts: Converting Locally Sourced Organic
Waste Material into Activated Carbon-Based
Supercapacitors*
- Ersel Serdar 11th grade
certificate, \$1,000 scholarship, renewable for up to 3
additional years for use towards an undergraduate degree
at CSM
Cherry Creek High School Greenwood Village
*Bending Fire: A New Approach to Steer Rockets Using
Electric Fields*
- Stella Laird 11th grade
certificate, \$1,000 scholarship, renewable for up to 3
additional years for use towards an undergraduate degree
at CSM
Fairview High School Boulder
*A Study of Numerical Machine Learning Approaches to
Tennis Swing Analysis*

Michael Gao 11th grade
certificate, \$1,000 scholarship, renewable for up to 3
additional years for use towards an undergraduate degree
at CSM

Fairview High School Boulder
*ADMM-FBA: Novel High-Level, Robustly Convergent
Flux Balance Analysis Using Dual Anderson-ADMM*

Claire Huang 11th grade
certificate, \$1,000 scholarship, renewable for up to 3
additional years for use towards an undergraduate degree
at CSM

Fairview High School Boulder
*Natural Eutectogels as a Novel Material for Green
Wearable Electronics*

Colorado State University

College of Agricultural Sciences

Excellence in Agricultural Innovation Scholarship

Maggie Anderson 10th grade
certificate, \$1,000 scholarship for the 1st semester of
attendance at CSU while enrolled in a College of Ag
Sciences major
Yuma High School Yuma
*Analysis of Expected Progeny Difference: Predictability
in Beef Cattle*

Jordan Rockey 12th grade
certificate, \$1,000 scholarship for the 1st semester of
attendance at CSU while enrolled in a College of Ag
Sciences major
Monte Vista High School Monte Vista
*Effectiveness of Insect Management Practices on the
Spread of Potato Virus Y*

Matt Hannifin

Reduction of CO₂ & Greenhouse Gases Scholarship

Alexander Diener 11th grade
certificate, \$5,000 non-renewable scholarship
Fairview High School Boulder
*An Analysis of the Coronal Temperature Spike using
Solar Spectroscopy*

Society

American Psychological Association

APA Achievement in Research in Psychological Science Award

- ✓ Samantha Goetz 7th grade
certificate, 1-year affiliate student membership in the
APA
St. Peter's Catholic School Monument
*Is There a Medication Bottle That Senior Citizens Can
Open and Children Cannot?*

✓

Madelynn Sellers 9th grade
certificate, 1-year affiliate student membership in the
APA
Green Mountain High School Lakewood
*How Does How Much Sleep You Get Affect Your Short
Term Memory?*

Association for Women Geoscientists
AWG Excellence in the Geosciences Award

Taelynn Rojas 8th grade
certificate, honorary AWG membership
Liberty School Joes
Using Microbes to Solve the Microplastic Problem

Ria Rajasekharan 9th grade
certificate, honorary AWG membership
Fossil Ridge High School Fort Collins
*Anthropogenic Impacts on Rainfall: A Data Science
Approach*

Lemelson Foundation
Lemelson Early Inventor Prize

Parker Mitchell 8th grade
\$100 (response required from winner to process),
certificate
Sargent Junior High School Monte Vista
Lure Launcher

NASA
NASA Earth System Science Award

Madison Kirchhoff 8th grade
certificate
Craver Middle School Colorado City
*Can I Break the Law of Conservation of Energy by
Making a Magnetic Motor Run on Magnetic Potential
Energy*

Claire Seger 11th grade
certificate
Monte Vista High School Monte Vista
*An Analysis of Spaceflight-Induced Osteopenia and
Muscular Atrophy Over Extended Zero Gravity Missions*

**National Oceanic and Atmospheric
Administration**
Taking the Pulse of the Planet Award

Taelynn Rojas 8th grade
certificate
Liberty School Joes
Using Microbes to Solve the Microplastic Problem
Ria Rajasekharan 9th grade
certificate
Fossil Ridge High School Fort Collins
*Anthropogenic Impacts on Rainfall: A Data Science
Approach*

Regeneron
Regeneron Biomedical Science Award

✓ Naomi Kruse 10th grade
certificate, \$375 (response required from winner to
process payment)
Schullandheim Home School Colorado Springs
*Paper for the Planet: Development of a Novel Paper
Inoculated with Wildflower Seed and Carbon-
Sequestering Fungi*

Ricoh
Ricoh Sustainable Development Award

✓ Cameron Kempisty 7th grade
certificate
Eagleview Middle School Colorado Springs
*To Grow or Not to Grow: Testing Biomass-based
Alternatives for a Greener World*

Abby Mirsky 12th grade
Dylan Greco 12th grade
Sasha Trask 12th grade
certificate
Centaurus High School Lafayette
*Sustainable Synergy: The Greenhouse Revolution
Towards Self Sufficiency*

Society for In Vitro Biology
Outstanding Achievement in In Vitro Biology Award

Claire Seger 11th grade
certificate, membership in the Society, recognition in
Society's newsletter and on website
Monte Vista High School Monte Vista
*An Analysis of Spaceflight-Induced Osteopenia and
Muscular Atrophy Over Extended Zero Gravity Missions*
Angelina Wang 11th grade
certificate, membership in the Society, recognition in
Society's newsletter and on website
Fairview High School Boulder
*Toxin-like Microproteins: A Novel Approach to Unveil
the Intricacies of Acetylcholine Receptors*

**United States Agency for International
Development**
USAID Science Champion Award

Ayra Asif Memon 8th grade
certificate, invitation to participate in a virtual
conversation with USAID leaders in summer 2024
Crescent View Academy Aurora
*From Bioluminescence to Global Warming: Unveiling the
Glow*

Valerie Goodland 12th grade
certificate, invitation to participate in a virtual
conversation with USAID leaders in summer 2024
Monte Vista High School Monte Vista
*Hidden Fragments: Isolating and Detecting
Microplastics in Rivers and Municipal Water Supplies*

United States Metric Association
*Outstanding Achievement in the Use of the
International System Award*

Quinlan Childs 8th grade
certificate, membership in the US Metric Association
Summit Middle Charter School Boulder
*Dynamics of Flight: Testing Airplane Wings to
Demonstrate Efficiency Using a Wind Tunnel*

Jaden DePue 9th grade
certificate, membership in the US Metric Association
Wray High School Wray
*Roots of Success: Investigating the Optimal Water
Conditions for Corn Root Growth*

Yale Science & Engineering Association
*Outstanding Achievement in Science & Engineering
Award*

Ruolin Hai 11th grade
certificate, E-book (response required from winner to be
processed)
Campion Academy Loveland
*HarvestSpectra: An Enhanced Crop Spectral Analysis
Using a Novel Vertical Take-off Fixed Wing Structure for
Precision Agriculture*

Society for Science
Thermo Fisher Junior Innovators Challenge

Sienna Harden 6th grade
Vivian Bozek 6th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
St. Joseph's Catholic School Fort Collins
We Got GOOD Milk!

Asha Jeter Patel 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Sacred Heart of Jesus Catholic School Boulder
Conversation Topics

Kapil Bhandaram 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Campus Middle School Englewood
*What Model Performs the Best When Using Artificial
Intelligence to Detect Pneumonia Using Chest
Radiographs*

Sophia Bronstein 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Summit Middle Charter School Boulder
*The Vanishing Palette: Comparing the Fading Rates of
Different Oil-Based Paints*

✓ Cameron Kempisty 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Eagleview Middle School Colorado Springs
*To Grow or Not to Grow: Testing Biomass-based
Alternatives for a Greener World*

Rylen Ross 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Monte Vista Middle School Monte Vista
Cooling for Solar

Cuinn Archer 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Mancos Middle School Mancos
Automatic Water Vol. 2

Anirudh Rao 6th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
STEM School Highlands Ranch
An Early Tornado Warning System

Ian Pfenning 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Flagstaff Academy Longmont
AI Powered Pet Feeder

Espen Plotkin 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Vail Mountain School Vail
*How Different Substances Effect the Zone of Inhibition of
Bacteria*

Carson Stone 8th grade
Connor Stone 6th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Brush Middle School Brush
*Shake Rattle and Roll - Washboard Phenomenon: The
Effect of Wheel Velocity on a Roadbed*

Finnley Reitz 6th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Alta Vista Charter School Lamar
Sumac Shindig: An Investigation into Scarification

- ✓ Vivian Wolkow 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
North Middle School Colorado Springs
Can Planaria Distinguish One Color from Another?
- Zoe Smith 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Loveland Classical School Loveland
Journey to the Center of the Mind
- Maya Rokhlenko 8th grade
Olive Spohn 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Flagstaff Academy Longmont
*All Boxed Up: The Effects of Prescription Eyewear on
Peripheral Vertigo*
- Tess Price 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Ken Caryl Middle School Littleton
Polymerization Using Alginate Spherification
- ✓ Elise Gavin 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
The Classical Academy Colorado Springs
Biodegradable or Not? Trial by Fire!
- Madison Kirchhoff 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Craver Middle School Colorado City
*Can I Break the Law of Conservation of Energy by
Making a Magnetic Motor Run on Magnetic Potential
Energy*
- Vaughn Bankston 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Mancos Middle School Mancos
Can You Truss-t the Truss?
- Miles Stelzer 8th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Summit Middle Charter School Boulder
Drone Fire Detection and Firefighting
- Lucy Brittain 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Creede Schools Creede
Mosquito Bite: West Nile Fright

Rylie Harmon 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Sargent Junior High School Monte Vista
Safe to Drink?

Evelyn Lapp 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Brush Middle School Brush
Refraction in Action

Elaina Consaul 7th grade
certificate, nomination to enter the 2024 Junior
Innovators Challenge (deadline is June 12, 2024)
Sargent Junior High School Monte Vista
Boost the Roots!

Teacher

Colorado Association of Science Teachers *CAST Teacher Award*

Brady Archer
certificate, \$150, one-year free membership in CAST
Mancos Middle School Mancos

Loree' Harvey
certificate, \$150, one-year free membership in CAST
Monte Vista High School Monte Vista

Colorado Science & Engineering Fair *Doug Steward Memorial Teacher Award*

Allison Hellman
certificate, \$275
South High School Pueblo

✓ Angie Grimes
certificate, \$275
Miami-Yoder School Rush

Brady Archer
certificate, \$275
Mancos Middle School Mancos

Lockheed Martin *CSEF Teacher of the Year Award*

✓ Angie Grimes
certificate, \$3,000 grant to the school to support student
research facilitated by them and/or to fund programs in
their district that would best enhance instruction in the
sciences and engineering
Miami-Yoder School Rush