

2021 Colorado Science and Engineering Fair Special Awards Press Release

Colorado Science & Engineering Fair

Elemer Bernath Memorial Technical Writing Award

Alexander Zhang 8th grade
certificate
Summit Middle Charter School Boulder
Carbon Capture: Refining the Process

Kelly Yang 8th grade
certificate
Summit Middle Charter School Boulder
*ABA-lanced Response: The Effect of External
Abscisic Acid on Plant Stress Conditions*

Angelina Wang 8th grade
\$100, certificate
Summit Middle Charter School Boulder
*Identification and Characterization of the Natural
Sweetener: Brazzein*

Poster Art Contest

Dorothy Berger 6th grade
\$100, certificate
Webber Middle School Fort Collins

Ralph Desch Memorial Technical Writing Award

Maria Alder 12th grade
Riley Carpenter 12th grade
certificate
Monarch High School Louisville
*Water Desalination: Crystallization of CaCO₃ Out
of Saline Solution onto Plastic Polymers*

Charlotte Gorgemans 12th grade
certificate
Boulder High School Boulder
*Modeling and Analysis of the Impact of Unhealthy
Food on the Honeybee Colony Health*

Margaret Mattson 12th grade
\$100, certificate
Fairview High School Boulder
*Compartmentalization in Lepidopteran
Development: Anterior Posterior Boundary
Location and Interaction in Genus Morpho*

Pioneers of Science

Dian Fossey Award

Dorothy Berger 6th grade
\$50, certificate, poster of pioneer scientist
Webber Middle School Fort Collins
Pet Stress Management with Music

James Patrick Allison Award

Chloe Lubbers 6th grade
\$50, certificate, poster of pioneer scientist
Alta Vista Charter School Lamar
Bad Breath Bacteria

John Bannister Goodenough Award

Kayla Etters 7th grade
\$50, certificate, poster of pioneer scientist
Vail Mountain School Vail
Glow with the Flow

Leon Festinger Award

Rachel Tilton 7th grade
\$50, certificate, poster of pioneer scientist
Casey Middle School Boulder
Psychology of Covid-19 Vaccine

Luther Burbank Award

Ellie Bruckbauer 6th grade
\$50, certificate, poster of pioneer scientist
Miller Middle School Durango
Project Plant Sitter

Mary Ainsworth Award

Durant Gilleland 6th grade
\$50, certificate, poster of pioneer scientist
Centauri Middle School La Jara
Does Practice Really Make Perfect

Phillip James Edwin Peebles Award

Micaela Ramirez 7th grade
\$50, certificate, poster of pioneer scientist
Ignacio Middle School Ignacio
*How Does Unnatural Light Pollution Affect the
Visibility of Stars?*

Steven Chu Award

Colten Vannest 7th grade
\$50, certificate, poster of pioneer scientist
Mancos Middle School Mancos
Rolling Rivers

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Special Awards Press Release

Military

United States Air Force *Air Force ROTC Award*

Tate Schrock	11th grade
certificate, over-the-shoulder sling pack, power bank charger, dog tag USB flash memory drive, dual USB car charger	
Arickaree School	Anton
<i>Autonomous Surveillance UAV</i>	
Ayan Vaishnav	9th 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
<i>Designing and Evaluating the Performance of Novel Airfoil Innovations Using SOLIDWORKS</i>	
Abby Klapp	11th grade
certificate, over-the-shoulder sling pack, power bank charger, dog tag USB flash memory drive, dual USB car charger	
Lewis-Palmer High School	Monument
<i>Spatial Ability in Pilots</i>	
Abigail Ross	10th grade
certificate, over-the-shoulder sling pack, power bank charger, dog tag USB flash memory drive, dual USB car charger	
Lamar High School	Lamar
<i>Detecting Flares (Part 3)</i>	

United States Navy & Marine Corps *Office of Naval Research Award*

Mia Sholes	7th grade
letter of congratulations, certificate, ONR medallion	
Miller Middle School	Durango
<i>Surviving in the Winter Slumber-Land</i>	
Kelly Yang	8th grade
letter of congratulations, certificate, ONR medallion	
Summit Middle Charter School	Boulder
<i>ABA-lanced Response: The Effect of External Abscisic Acid on Plant Stress Conditions</i>	
Stella Laird	8th grade
letter of congratulations, certificate, ONR medallion	
Southern Hills Middle School	Boulder
<i>Using Computer Vision Techniques to Count Jelly Beans</i>	

Samuel Calkin	6th grade
letter of congratulations, certificate, ONR medallion	
Skinner Middle School	Denver
<i>Biosourced Flame Retardant is a Viable Alternative to Toxic PFAS Retardant</i>	

Alden Kruse	12th grade
letter of congratulations, ONR medallion, certificate, ONR medallion, & \$50 gift card (response required from winner to process payment)	
Schullandheim Home School	Colorado Springs
<i>Something in the Water: Creating an Origami Microfluidic Device for Developing Communities</i>	

Emily Zhang	11th 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
<i>Fusing LiDAR and Camera Data for Advanced Context Recognition in Autonomous Navigation Sensory Systems Through Multidimensional Deep Neural Network Architectures</i>	

Hudson Kruse	10th grade
letter of congratulations, ONR medallion, certificate, ONR medallion, & \$50 gift card (response required from winner to process payment)	
Schullandheim Home School	Colorado Springs
<i>Simulating Atomic Dynamics Using a 3D Graphics Engine</i>	

Organizational

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

Jai'Lee Keever-Espinoza	7th grade
\$50, certificate	
Pueblo Charter School for the Arts & Sciences	Pueblo
<i>Recycle Capsule</i>	
Alexander Zhang	8th grade
\$100, certificate	
Summit Middle Charter School	Boulder
<i>Carbon Capture: Refining the Process</i>	

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Rachel Christensen 12th grade
 \$50, certificate
 Evergreen High School Evergreen
The Environmental Effect on Aquatic Ecosystems of Run-Off from Wildfires Where Fire Retardant Slurry Was Used

Gitanjali Rao 10th grade
 \$100, certificate
 STEM School Highlands Ranch
Detection of C. parvum Transposons in Potable Water Using Genetically Engineered Bioelectric Sensors

Algae Foundation

Excellence in Algae-Related Research Award

Shrreya Sethuramalingam 8th grade
 \$200, plaque (being sent from organization), certificate
 Challenge School Denver
Chlorophyta and Lemnoideae Components Impacting the Contaminants of H2O

Cora Becker 12th grade
 Amanda Behmer 12th grade
 \$200, plaque (being sent from organization), certificate
 Evergreen High School Evergreen
A Peek into Plastic Pollution: The Effect of Irradiated PET Micro-plastic Leachate on Optical Culture Density of Chlamydomonas reinhardtii

American Association of University Women

AAUW CO Award for Women in STEM

Stella Laird 8th grade
 \$100, certificate
 Southern Hills Middle School Boulder
Using Computer Vision Techniques to Count Jelly Beans

Emma Peters 12th grade
 \$100, certificate
 Broomfield High School Broomfield
Change in Onset Potential of CO2 Electroreduction Using Gold

American Chemical Society, Colorado Section

ACS Awards

Haydan Drullinger 7th grade
 \$50, certificate
 Liberty School Joes
Keeping the Dust Out: Designing a Sealant

Alycia Martinez-Chavez 7th grade
 \$50, certificate
 Sargent Junior High School Monte Vista
How Does Pain Medication Affect Your Stomach?

Angelina Wang 8th grade
 \$150, certificate
 Summit Middle Charter School Boulder
Identification and Characterization of the Natural Sweetener: Brazzein

Maria Alder 12th grade
 Riley Carpenter 12th grade
 \$50, certificate
 Monarch High School Louisville
Water Desalination: Crystallization of CaCO3 Out of Saline Solution onto Plastic Polymers

Stephen Chen 11th grade
 \$50, certificate
 Fairview High School Boulder
Illuminating the Folding Dynamics of Bacteriorhodopsin: A Model Membrane Protein

Kevin Collins 12th grade
 Sydney George 12th grade
 \$150, certificate
 Evergreen High School Evergreen
Investigating the Impact of ALS-Associated Point Mutations on ErbB4's Proteolysis

American Institute of Aeronautics and Astronautics, Rocky Mountain Section

AIAA Prize

Lily Sobers 6th grade
 certificate, Arduino Kit & 1-year AIAA student membership
 Bear Creek Elementary School Monument
The Science of Spin: Mass and Inertia

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Angelina Wang 8th grade
certificate, Arduino Kit & 1-year AIAA student
membership
Summit Middle Charter School Boulder
*Identification and Characterization of the Natural
Sweetener: Brazzein*

Abigail Ross 10th grade
certificate, Arduino Kit & 1-year AIAA student
membership
Lamar High School Lamar
Detecting Flares (Part 3)

Connor Sehnert 11th grade
certificate, Arduino Kit & 1-year AIAA student
membership
Mancos High School Mancos
*Replicating Conditions of Asteroidal Water to
Understand How It Affects Water Quality*

American Institute of Chemical Engineers Rocky Mountain Section

Excellence in Chemical Engineering Award

Presley Wilson 8th grade
William Wilson 8th grade
\$75, certificate
Sangre de Cristo School Mosca
*Wildfire Debris Mitigation and Feasibility for Use
in Emergency Water Filtration Systems*

Angelina Wang 8th grade
\$100, certificate
Summit Middle Charter School Boulder
*Identification and Characterization of the Natural
Sweetener: Brazzein*

Arjun Batra 12th grade
\$75, certificate
Cherry Creek High School Greenwood Village
*Implementation of a Copper Catalyst for Methane
Hydrate Formation*

Sean Brooks 11th grade
\$100, certificate
Pine Creek High School Colorado Springs
*Separating Microplastics from Beach Sand Using a
Fluidized Air Bed*

American Institute of Professional Geologists Colorado Section

AIPG Certificate of Excellence in the Geosciences

Eva Norton 8th grade
\$75, certificate
West Grand Middle School Kremmling
Sediment Movement

Keane Hammond 7th grade
\$150, certificate
Miller Middle School Durango
*The Drowning Machine: The Danger of Low Head
Dams*

Alden Kruse 12th grade
\$75, certificate
Schullandheim Home School Colorado Springs
*Something in the Water: Creating an Origami
Microfluidic Device for Developing Communities*

Maria Alder 12th grade
Riley Carpenter 12th grade
\$150 (each), certificate
Monarch High School Louisville
*Water Desalination: Crystallization of CaCO₃ Out
of Saline Solution onto Plastic Polymers*

American Meteorological Society Denver/Boulder Chapter

Award for Excellence in Atmospheric Science Research

Garret Drullinger 8th grade
\$50 gift card, certificate
Liberty School Joes
The Affects of Wildfires on Photosynthetic Rate

Maya Hunter 12th grade
\$50 gift card, certificate
Cherry Creek High School Greenwood Village
*COVID-19 Shutdowns and Air Quality: A
Demographic Analysis*

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

Kelly Yang 8th grade
\$200 (being sent from organization), certificate,
student membership in the American Statistical
Association, acknowledgement at chapter spring
meeting and on chapter website
Summit Middle Charter School Boulder
*ABA-lanced Response: The Effect of External
Abscisic Acid on Plant Stress Conditions*

Patrick Flores 11th grade
\$200 (being sent from organization), certificate,
student membership in the American Statistical
Association, acknowledgement at chapter spring
meeting and on chapter website
Hoehne Schools Hoehne
*A Comparison of Neodymium and Ferrite Maglev
Train Properties*

**American Vacuum Society
Rocky Mountain Chapter**

*Excellence in Physical Sciences & Engineering
Award*

Jesse James 7th grade
\$50; \$50 matching award to teacher/sponsor,
certificate
Manzanola Jr/Sr High School Manzanola
The Wright Wings

Keane Hammond 7th grade
\$100, \$100 matching award to teacher/sponsor,
certificate
Miller Middle School Durango
*The Drowning Machine: The Danger of Low Head
Dams*

Sean Brooks 11th grade
\$50; \$50 matching award to teacher/sponsor,
certificate
Pine Creek High School Colorado Springs
*Separating Microplastics from Beach Sand Using a
Fluidized Air Bed*

Nikhila Narayana 11th grade
\$100, \$100 matching award to teacher/sponsor,
certificate
Rock Canyon High School Highlands Ranch
*Catching the Sun: Harnessing Stokes Shift to
Increase Solar Cell Efficiency*

ASM International

ASM Materials Education Foundation Award

Tenzing Matt 6th grade
\$100, certificate
St. Columba Catholic School Durango
Preventing Rust

Maria Alder 12th grade
Riley Carpenter 12th grade
\$150, certificate
Monarch High School Louisville
*Water Desalination: Crystallization of CaCO₃ Out
of Saline Solution onto Plastic Polymers*

Broadcom Foundation

Broadcom Coding with Commitment Award

Stella Laird 8th grade
\$250 gift certificate; Raspberry Pi Foundation
Official RP 400 Personal Computer Kit; (being sent
from organization), certificate
Southern Hills Middle School Boulder
*Using Computer Vision Techniques to Count Jelly
Beans*

Colorado Association of Science Teachers

CAST Award

Emma Sewell 8th grade
\$100, certificate
Sargent Junior High School Monte Vista
Proteolytic Enzyme Power

Ellaree Rockey 8th grade
\$100, certificate
Sargent Junior High School Monte Vista
Nitrogen and Density Levels in Quinoa

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Maria Alder 12th grade
 Riley Carpenter 12th grade
 \$100, certificate
 Monarch High School Louisville
Water Desalination: Crystallization of CaCO₃ Out of Saline Solution onto Plastic Polymers

Aditi Avinash 9th grade
 \$100, certificate
 Rock Canyon High School Highlands Ranch
Breakdown of Gluten Proteins Using a Newly Identified Combination of Fruit Derived Enzymes to Alleviate Symptoms of Gluten Intolerance

Colorado BioScience Institute BioGENEius Challenge

Madison Hoffman 12th grade
 certificate, invitation to participate in virtual National & International BioGENEius Challenge during the BIO Digital Conference in June 2021 with the opportunity to win scholarships and other prizes (will be contacted by the organization)
 Limon Jr/Sr High School Limon
The Effects of Common Antibiotics on Escherichia Coli

Colorado Chemistry Teachers Association CCTA Chemistry Awards

Angelina Wang 8th grade
 \$150, certificate
 Summit Middle Charter School Boulder
Identification and Characterization of the Natural Sweetener: Brazzein

Maria Alder 12th grade
 Riley Carpenter 12th grade
 \$150, certificate
 Monarch High School Louisville
Water Desalination: Crystallization of CaCO₃ Out of Saline Solution onto Plastic Polymers

Colorado State University College of Agricultural Sciences

Innovations in the Science of Agriculture Award

Luci Bruchez 8th grade
 \$500, certificate
 West Grand Middle School Kremmling
What Color Is Most Appealing to Horses?

Ashlyn Rockey 11th grade
 \$500, certificate
 Sargent High School Monte Vista
Screening Quinoa Germplasm for Downy Mildew Resistance

Colorado State University Colorado Natural Heritage Program

Colorado Natural Heritage Program Conservation Award

Madison Miller 10th grade
 beverage container, hand lens, Wetlands of Colorado Guidebook, certificate
 Monte Vista High School Monte Vista
The Grass Is Always Greener: The Effectiveness of Exclosures on Ungulate Browsing in Riparian Areas

Camille Rawinski 11th grade
 pint glass, hand lens, Wetlands of Colorado Guidebook, certificate
 Monte Vista High School Monte Vista
Analyzing the Effects of Spruce Beetles on Aquatic Ecosystems through Macroinvertebrate and Water Quality Sampling in Conejos County, Colorado

Colorado State University Department of Chemistry Excellence in Chemistry Award

Izzy Adochio 7th grade
 \$100 (response required from winner to process payment), certificate
 Vail Mountain School Vail
Popped Perfection

Maria Alder 12th grade
 Riley Carpenter 12th grade
 \$100 (response required from winner to process payment), certificate
 Monarch High School Louisville
Water Desalination: Crystallization of CaCO₃ Out of Saline Solution onto Plastic Polymers

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

Mia Bennett 8th grade
\$100 (response required from winner to process
payment), certificate
Firestone Charter Academy Firestone
Which Poo Is for You?

Kelly Yang 8th grade
\$100 (response required from winner to process
payment), certificate
Summit Middle Charter School Boulder
*ABA-lanced Response: The Effect of External
Abscisic Acid on Plant Stress Conditions*

Cora Becker 12th grade
Amanda Behmer 12th grade
\$100 (response required from winner to process
payment), certificate
Evergreen High School Evergreen
*A Peek into Plastic Pollution: The Effect of
Irradiated PET Micro-plastic Leachate on Optical
Culture Density of Chlamydomonas reinhardtii*

Paige Beedy 12th grade
\$100 (response required from winner to process
payment), certificate
Limon Jr/Sr High School Limon
*Effectiveness of Different Rooting Stimulants on
Thaumatococcus bipinnatifidum, Zamioculcas
zamiifolia, and Saintpaulia spp*

Colorado State University, Energy Institute *Excellence in Energy Achievement Award*

Bryan Williams 9th grade
\$250, certificate
Hoehne Schools Hoehne
*Charging into the Future of Transportation: An In-
Depth Comparison of Electric and Combustion
Vehicles*

Colorado-Wyoming Society of American Foresters

Excellence in Forestry Research Award

Presley Wilson 8th grade
William Wilson 8th grade
\$200, certificate
Sangre de Cristo School Mosca
*Wildfire Debris Mitigation and Feasibility for Use
in Emergency Water Filtration Systems*

Rachel Christensen 12th grade
\$200, certificate
Evergreen High School Evergreen
*The Environmental Effect on Aquatic Ecosystems of
Run-Off from Wildfires Where Fire Retardant
Slurry Was Used*

Department of Commerce Boulder Laboratories *Award for Excellence in Science and Engineering*

Maria Silver 12th grade
plaque (being sent from organization), alternate for
summer internship, certificate
Broomfield High School Broomfield
*Quantifying Precipitation Undercatch in a Citizen
Scientist Weather Observation Network*

Maya Hunter 12th grade
plaque (being sent from organization), offer of
summer internship, certificate
Cherry Creek High School Greenwood Village
*COVID-19 Shutdowns and Air Quality: A
Demographic Analysis*

Geological Society of America

GSA Awards in Environmental Geology

Aidan Baar 7th grade
\$75 gift card, plaque, certificate
Liberty School Joes
Will Different Soil Types Effect Fertilizers?

Abigail Ross 10th grade
\$100 gift card, plaque, certificate
Lamar High School Lamar
Detecting Flares (Part 3)

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Maddie Fox 12th grade
 Annalie Haralson 12th grade
 Lauren Egaas 12th grade
 \$200 gift card (each), plaque, certificate
 Monarch High School Louisville
*Hidden Signals in Paleoclimate Records:
 Investigating the Importance of the Sun for Earth's
 Climate*

Gromko Family
Gerald Gromko Memorial Award

Alden Kruse 12th grade
 \$150, certificate
 Schullandheim Home School Colorado Springs
*Something in the Water: Creating an Origami
 Microfluidic Device for Developing Communities*

Institute of Electrical and Electronics Engineers
High Plains Section
IEEE Award

Rohan Mysore 8th grade
 \$100 cash card, certificate
 Flagstaff Charter Academy Longmont
Structural Safety Monitor

Siddharth Bharthulwar 12th grade
 \$150 cash card, certificate
 Fairview High School Boulder
*XRCT-Net: Development of a Novel Sparse-View
 Deep Learning Framework for Safer, Cheaper, and
 More Accessible CT Imaging*

Little Shop of Physics
Matthew McCausland Memorial Award

Stefan Zehnacker 8th grade
 science equipment/instrument, certificate
 Good Shepherd Catholic School Denver
Watch It Wash!

Daniel Joshua 6th grade
 science equipment/instrument, certificate
 Southern Hills Middle School Boulder
Mini Wind Tunnel

Bryan Williams 9th grade
 science equipment/instrument, certificate
 Hoehne Schools Hoehne
*Charging into the Future of Transportation: An In-
 Depth Comparison of Electric and Combustion
 Vehicles*
 Chandler Slowik 12th grade
 science equipment/instrument, certificate
 Golden High School Golden
Micro Hydroelectric Generator

Lockheed Martin
Lockheed Martin Aerospace Award

Ersel Serdar 7th grade
 \$150, certificate
 Challenge School Denver
*Dust Begone: Using Arduinos to Clean Mars Rover
 Solar Panels*

Tate Schrock 11th grade
 \$350, certificate
 Arickaree School Anton
Autonomous Surveillance UAV

National Centers for Environmental Information
NCEI Award of Scientific Achievement

Naomi Kruse 7th grade
 cash award from anonymous donor, certificate
 Schullandheim Home School Colorado Springs
*Knock Out! Bacterial Microflora as a Defense
 Against Tobacco Mosaic Virus in Phaseolus*

National Renewable Energy Laboratory
NREL Energy Award

Nikhila Narayana 11th grade
 \$100, certificate
 Rock Canyon High School Highlands Ranch
*Catching the Sun: Harnessing Stokes Shift to
 Increase Solar Cell Efficiency*

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Platte River Power Authority

PRPA Special Award for Energy Efficiency and Innovation

Shrey Rohilla 8th grade
\$100, certificate
The Classical Academy Colorado Springs
Battle of the Blades

Bryan Williams 9th grade
\$150, certificate
Hoehne Schools Hoehne
Charging into the Future of Transportation: An In-Depth Comparison of Electric and Combustion Vehicles

PRPA Special Award for Environmental Responsibility

Peyton Rhodes 8th grade
\$100, certificate
Firestone Charter Academy Firestone
What's on Your Roof?

Nikhila Narayana 11th grade
\$150, certificate
Rock Canyon High School Highlands Ranch
Catching the Sun: Harnessing Stokes Shift to Increase Solar Cell Efficiency

Regeneron

Regeneron Biomedical Science Award

Stephen Chen 11th grade
\$500 (response required from winner to process payment), certificate
Fairview High School Boulder
Illuminating the Folding Dynamics of Bacteriorhodopsin: A Model Membrane Protein

Rocky Mountain Association of Geologists

Excellence in Earth Science Award

Ronan Curnyn 8th grade
\$200, certificate
Vail Mountain School Vail
How the Size of Earthquakes Affects the Size of Tsunamis

Shrey Rohilla 8th grade
\$300, certificate
The Classical Academy Colorado Springs
Battle of the Blades

Alyson Gardner 11th grade
\$200, certificate
Yuma High School Yuma
Plug into Ponds: Roof Ponds and Their Effectiveness on a Home

Maddie Fox 12th grade
Annalie Haralson 12th grade
Lauren Egaas 12th grade
\$300, certificate
Monarch High School Louisville
Hidden Signals in Paleoclimate Records: Investigating the Importance of the Sun for Earth's Climate

Rocky Mountain Water Environment Association

Water Research Award

Presley Wilson 8th grade
William Wilson 8th grade
\$200, certificate
Sangre de Cristo School Mosca
Wildfire Debris Mitigation and Feasibility for Use in Emergency Water Filtration Systems

Louis Calkin 8th grade
\$400, certificate
Skinner Middle School Denver
Extended Use of Oil Phylic Hydrophobic Sponges in Stormwater Remediation Prove Effective and Economical

Maria Alder 12th grade
Riley Carpenter 12th grade
\$200, certificate
Monarch High School Louisville
Water Desalination: Crystallization of CaCO₃ Out of Saline Solution onto Plastic Polymers

Chandler Slowik 12th grade
\$400, certificate
Golden High School Golden
Micro Hydroelectric Generator

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SACNAS, Colorado State University Chapter *SACNAS CSU Rising Young Scientist Award*

Shrreya Sethuramalingam 8th grade
\$50, certificate
Challenge School Denver
*Chlorophyta and Lemnoideae Components
Impacting the Contaminants of H2O*

Kanshita Dam 8th grade
\$50, certificate
Challenge School Denver
*How Do Vibrations from Sound Waves Affect Plant
Growth?*

Marissa Martinez 10th grade
\$50, certificate
Monte Vista High School Monte Vista
*Traveling Trout: Viability of Trout Eggs Along the
Mainstream of the Geothermally Altered Alamosa
River Watershed*

Amrita Saini 9th grade
\$50, certificate
Peak to Peak Charter School Lafayette
*Analyzing the Most Effective Cotton Species for
More Sustainable Absorbent Products and Textiles*

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

Aidan Baar 7th grade
\$100, certificate
Liberty School Joes
Will Different Soil Types Effect Fertilizers?

Shrreya Sethuramalingam 8th grade
\$300, certificate
Challenge School Denver
*Chlorophyta and Lemnoideae Components
Impacting the Contaminants of H2O*

Sean Brooks 11th grade
\$200, certificate
Pine Creek High School Colorado Springs
*Separating Microplastics from Beach Sand Using a
Fluidized Air Bed*

Alden Kruse 12th grade
\$400, certificate
Schullandheim Home School Colorado Springs
*Something in the Water: Creating an Origami
Microfluidic Device for Developing Communities*

Society of Women Engineers Rocky Mountain Section *SWE Award*

Teagan Archer 8th grade
\$75, certificate
Mancos Middle School Mancos
Alternative Hearing Aid

Presley Wilson 8th grade
William Wilson 8th grade
\$100, certificate
Sangre de Cristo School Mosca
*Wildfire Debris Mitigation and Feasibility for Use
in Emergency Water Filtration Systems*

Emily Lai 12th grade
Bryne Knowles 12th grade
\$75, certificate
Cherry Creek High School Greenwood Village
*Dam Break Modeling on the Cherry Creek
Reservoir to Predict Potential Flood Impacts*

Urianna Acosta 10th grade
\$100, certificate
Monte Vista High School Monte Vista
*Bionic Bytes . . . A Voice-Activated Robotic Device
Designed to Assist Physically Challenged People
with Mealtime*

Soil & Water Conservation Society Colorado Chapter

Natural Resource Conservation Award

Julian Lochte Bono 6th grade
\$100, certificate
St. Columba Catholic School Durango
*What Type of Soil Will Prevent Erosion from
Happening?*

Madison Miller 10th grade
\$100, certificate
Monte Vista High School Monte Vista
*The Grass Is Always Greener: The Effectiveness of
Exclosures on Ungulate Browsing in Riparian
Areas*

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SPIE-the international society for optics and photonics

SPIE Optics and Photonics Award

Owen Cruz-Abrams 7th grade
\$50, certificate
Vail Mountain School Vail
A Stem Over the Rainbow

Julian Kramer 8th grade
\$100, certificate
Good Shepherd Catholic School Denver
Don't UV Burning Me: A Comparative Study of Synthetic Versus Mineral Sunscreens

Chloe Beers 10th grade
Leilani Devine-Miller 10th grade
\$150, certificate
Compass Community Fort Collins
Collaborative School
Biomimicry and Bioluminescence

Arcadia Haskell 12th grade
\$100, certificate
Broomfield High School Broomfield
Effect of Phase Angle on Reflectance of Lunar Pyroclastic Domes

Emily Zhang 11th grade
\$150, certificate
Cherry Creek High School Greenwood Village
Fusing LiDAR and Camera Data for Advanced Context Recognition in Autonomous Navigation Sensory Systems Through Multidimensional Deep Neural Network Architectures

Nikhila Narayana 11th grade
\$250, certificate
Rock Canyon High School Highlands Ranch
Catching the Sun: Harnessing Stokes Shift to Increase Solar Cell Efficiency

State of Colorado Division of Reclamation, Mining & Safety

DRMS Outstanding Science Exhibit

Aidan Baar 7th grade
\$75, certificate
Liberty School Joes
Will Different Soil Types Effect Fertilizers?

Santiago Castillo 12th grade
\$75, certificate
Cherry Creek High School Greenwood Village
Influence of Mars's Gravity and Seismicity on Mining Waste Dumps Facilities

Trout Unlimited

Trout Unlimited River Conservation Award

Rachel Christensen 12th grade
\$75, certificate
Evergreen High School Evergreen
The Environmental Effect on Aquatic Ecosystems of Run-Off from Wildfires Where Fire Retardant Slurry Was Used

Marissa Martinez 10th grade
\$125, certificate
Monte Vista High School Monte Vista
Traveling Trout: Viability of Trout Eggs Along the Mainstream of the Geothermally Altered Alamosa River Watershed

Camille Rawinski 11th grade
\$200, certificate
Monte Vista High School Monte Vista
Analyzing the Effects of Spruce Beetles on Aquatic Ecosystems through Macroinvertebrate and Water Quality Sampling in Conejos County, Colorado

Wilkins Family

Young Entrepreneur's Award

Liam Bois 6th grade
\$500, certificate
St. Joseph Catholic School Fort Collins
Not So Silent Sonar

Tyler Burt 12th grade
\$500, certificate
Wheat Ridge High School Wheat Ridge
A Novel Mask Insert to Reduce Habitual Particle Transmission

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Wojtaszek Family

Paul Wojtaszek Memorial Award

Rohini Kompella 10th grade
\$200, certificate (the winning student(s) are asked to send a letter of appreciation to Mary Wojtaszek, Paul's mother)
Cherry Creek High School Greenwood Village
Quantitative Methods for Anti-glaucoma Drug Concentration-Response Relationships in the Human Eye: Single Bimatoprost Slow-Release System for Six-month Glaucoma Therapy

Zonta Club of Boulder County

Amelia Earhart Award

Stella Laird 8th grade
\$100, certificate
Southern Hills Middle School Boulder
Using Computer Vision Techniques to Count Jelly Beans

Scholarships

Adams State University

Adams State University Porter Scholarships

Zoe Wallerstedt 12th grade
ASU Porter Scholarships valued at \$5,000
Miami-Yoder School Rush
Cartoon Classics for Stress Reduction

Camille Rawinski 11th grade
ASU Porter Scholarships valued at \$5,000
Monte Vista High School Monte Vista
Analyzing the Effects of Spruce Beetles on Aquatic Ecosystems through Macroinvertebrate and Water Quality Sampling in Conejos County, Colorado

Chinmay Jayanty 11th grade
ASU Porter Scholarships valued at \$5,000
Sargent High School Monte Vista
Synthesizing Renewable Energy from Water Using Sunlight

Morgan Holien 11th grade
ASU Porter Scholarships valued at \$5,000
Monarch High School Louisville
An Intuitive Approach to the Perimeter of an Ellipse

Ria Jansun 12th grade
ASU Porter Scholarships valued at \$5,000
Peak to Peak Charter School Lafayette
Designing an Internal Whiplight Mechanism in a Prosthetic Hand

Colorado School of Mines

Colorado School of Mines CSEF Scholarships

Stephen Chen 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
Illuminating the Folding Dynamics of Bacteriorhodopsin: A Model Membrane Protein

Connor Sehnert 11th grade
\$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
Mancos High School Mancos
Replicating Conditions of Asteroidal Water to Understand How It Affects Water Quality

Chinmay Jayanty 11th grade
\$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
Sargent High School Monte Vista
Synthesizing Renewable Energy from Water Using Sunlight

Nikhila Narayana 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 Highlands Ranch
Catching the Sun: Harnessing Stokes Shift to Increase Solar Cell Efficiency

Sean Brooks 11th grade
\$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
Pine Creek High School Colorado Springs
Separating Microplastics from Beach Sand Using a Fluidized Air Bed

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Morgan Holien 11th grade
\$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
Monarch High School Louisville
An Intuitive Approach to the Perimeter of an Ellipse

Julia Warnock 11th grade
\$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
Poudre Global Academy Fort Collins
Experimenting with the Radiative Cooling Effect to Generate Electricity from the Night Sky

Abbas Shaikh 11th grade
\$1,000 Mines scholarship, renewable for up to 3 additional years for use towards an undergraduate degree at CSM
Cherry Creek High School Greenwood Village
A Deep Learning Framework for Automated Brain Tumor Segmentation and Survival Prediction Using Multimodal MRI Scans

Society for Science

American Psychological Association

Outstanding Achievement in Psychological Sciences Award

Aysia Mathews 7th grade
certificate
Mancos Middle School Mancos
Teen Mental Health

Fatima Duran 11th grade
certificate
Yuma High School Yuma
Binaural Beats and Their Influence on Task Productivity

Association for Women Geoscientists

Outstanding Achievement in Geosciences Award

Berkley Ulibarri 6th grade
certificate
St. John the Evangelist Catholic School Loveland
Earth's Layers Under Pressure

Shae Withington 12th grade
certificate
Genoa-Hugo School Hugo
Ocean Acidification

Broadcom Foundation

Broadcom MASTERS Nomination

Dorothy Berger 6th grade
nomination to enter the 2021 Broadcom MASTERS competition for middle school students
Webber Middle School Fort Collins
Pet Stress Management with Music

Mahi Mehta 8th grade
Shriya Sriram 8th grade
nomination to enter the 2021 Broadcom MASTERS competition for middle school students
Challenge School Denver
Testing the Effect of Age and Gender on Body Image Perception

Chloe Sebek 8th grade
nomination to enter the 2021 Broadcom MASTERS competition for middle school students
Sacred Heart of Jesus Catholic School Boulder
The Effect of Essential Oil on Ascorbic Acid Decay in Citrus Juice

Ronan Curnyn 8th grade
nomination to enter the 2021 Broadcom MASTERS competition for middle school students
Vail Mountain School Vail
How the Size of Earthquakes Affects the Size of Tsunamis

Shrey Rohilla 8th grade
nomination to enter the 2021 Broadcom MASTERS competition for middle school students
The Classical Academy Colorado Springs
Battle of the Blades

Rohan Mysore 8th grade
nomination to enter the 2021 Broadcom MASTERS competition for middle school students
Flagstaff Charter Academy Longmont
Structural Safety Monitor

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Naomi Kruse 7th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Schullandheim Home School Colorado Springs
*Knock Out! Bacterial Microflora as a Defense
Against Tobacco Mosaic Virus in Phaseolus*

Stella Laird 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Southern Hills Middle School Boulder
*Using Computer Vision Techniques to Count Jelly
Beans*

Julian Kramer 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Good Shepherd Catholic School Denver
*Don't UV Burning Me: A Comparative Study of
Synthetic Versus Mineral Sunscreens*

Armaan Gill 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Lamar Middle School Lamar
*Transformations of E. coli with Plasmid DNA,
Calcium Chloride, Ampicillin, and Arabinose Sugar*

Lily Sobers 6th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Bear Creek Elementary School Monument
The Science of Spin: Mass and Inertia

Kelly Yang 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Summit Middle Charter School Boulder
*ABA-lanced Response: The Effect of External
Abscisic Acid on Plant Stress Conditions*

Luci Bruchez 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
West Grand Middle School Kremmling
What Color Is Most Appealing to Horses?

Nora May 6th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
St. Columba Catholic School Durango
*Collective and Swarm Intelligence: Are Many
People Really Smarter Than a Few?*

Tenzing Matt 6th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
St. Columba Catholic School Durango
Preventing Rust

Berkley Ulibarri 6th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
St. John the Evangelist Catholic School Loveland
Earth's Layers Under Pressure

Peyton Rhodes 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Firestone Charter Academy Firestone
What's on Your Roof?

Stefan Zehnacker 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Good Shepherd Catholic School Denver
Watch It Wash!

Alexander Zhang 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Summit Middle Charter School Boulder
Carbon Capture: Refining the Process

Tianyi Evans Gu 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Summit Middle Charter School Boulder
*Using Natural Language Processing to Analyze and
Improve Communication Skills*

Mila Vigil 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Challenge School Denver
*Brain Waves and Parkinson's Disease: An Early
Detection?*

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Chloe Lubbers 6th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Alta Vista Charter School Lamar
Bad Breath Bacteria

Ayush Vispute 6th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Mountain Ridge Middle School Colorado Springs
Stretch It!

Kanshita Dam 8th grade
nomination to enter the 2021 Broadcom MASTERS
competition for middle school students
Challenge School Denver
*How Do Vibrations from Sound Waves Affect Plant
Growth?*

Lemelson Foundation

Lemelson Early Inventor Award

Jai'Lee Keever-Espinoza 7th grade
\$100 (response required from winner to process
payment), certificate
Pueblo Charter School for the
Arts & Sciences Pueblo
Recycle Capsule

Mu Alpha Theta

Outstanding Achievement in Mathematics

Roshan Klein-Seetharaman 12th grade
Jacob Ellis 12th grade
certificate
Golden High School Golden
*Evolution of Multi-Step Traits in Different Social
Structures*

Morgan Holien 11th grade
certificate
Monarch High School Louisville
An Intuitive Approach to the Perimeter of an Ellipse

NASA

NASA Earth System Science Award

Ronan Curnyn 8th grade
certificate
Vail Mountain School Vail
*How the Size of Earthquakes Affects the Size of
Tsunamis*

Maddie Fox 12th grade
Annalie Haralson 12th grade
Lauren Egaas 12th grade
certificate
Monarch High School Louisville
*Hidden Signals in Paleoclimate Records:
Investigating the Importance of the Sun for Earth's
Climate*

National Oceanic and Atmospheric Administration

Taking the Pulse of the Planet Award

Chloe Pennington 7th grade
certificate
Friends Middle School Boulder
*Would You Drink That?! The Relationship Between
the Type of Batch Test and the Amount of PFAS
Parts Per Trillion*

Maya Hunter 12th grade
certificate
Cherry Creek High School Greenwood Village
*COVID-19 Shutdowns and Air Quality: A
Demographic Analysis*

Ricoh USA

Ricoh Sustainability Development Award

Kabir Srivastava 7th grade
certificate
Challenge School Denver
No More Royal Oil
Amrita Saini 9th grade
certificate
Peak to Peak Charter School Lafayette
*Analyzing the Most Effective Cotton Species for
More Sustainable Absorbent Products and Textiles*

United States Agency for International Development

USAID Science Champion Award

Lakshmi Thanikasalam 6th grade
certificate
Flagstaff Charter Academy Longmont
*Single and Multi Layer Water Filtering Apparatus
with Commonly Available Materials*

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Alden Kruse 12th grade
certificate
Schullandheim Home School Colorado Springs
*Something in the Water: Creating an Origami
Microfluidic Device for Developing Communities*

Kevin Nugent
certificate, \$75
Friends School Boulder

John Wiley
certificate, \$75
Challenge School Denver

United States Metric Association

*Outstanding Achievement in the Use of the
International System Award*

Lily Sobers 6th grade
certificate
Bear Creek Elementary School Monument
The Science of Spin: Mass and Inertia

Lockheed Martin
Lockheed Martin Teacher of the Year Award
Emmylou Harmon
grant, certificate, plaque
West Grand High School Kremmling

Arjun Batra 12th grade
certificate
Cherry Creek High School Greenwood Village
*Implementation of a Copper Catalyst for Methane
Hydrate Formation*

Yale Science & Engineering Association

*Outstanding Achievement in Science & Engineering
Award*

Emily Zhang 11th grade
certificate, medallion (response required from
winner to process)
Cherry Creek High School Greenwood Village
*Fusing LiDAR and Camera Data for Advanced
Context Recognition in Autonomous Navigation
Sensory Systems Through Multidimensional Deep
Neural Network Architectures*

Teacher

Colorado Science & Engineering Fair

Doug Steward Memorial Award

Katharine Ellis
certificate, \$75
Monarch High School Louisville

Emmylou Harmon
certificate, \$75
West Grand High School Kremmling

Tami Kruse
certificate, \$75
Schullandheim Home School Colorado Springs