CoorsTek

DMRSEF DENVER METRO REGIONAL SCIENCE AND ENGINEERING FAIR

2022 Awards

Junior Category Awards

Behavioral & Social Sciences

1st Place: **Anesh Illango** *(William "Bill" Roberts School)*

2nd Place: **Claire Farrell** *(Good Shepherd Catholic School)*

3rd Place: **Kabir Srivastava** *(Challenge School)*

Biological Sciences

1st Place: **Dannica Ward** *(Challenge School)*

2nd Place: **Gryffin Lawrence** *(Friends School)*

Chemistry

1st Place: **Chloe McCrea** *(Christ the King Roman Catholic School)*

2nd Place: **Brigid Morin** *(Good Shepherd Catholic School)*

3rd Place: **Massaran Ciza** *(Christ the King Roman Catholic School)*

Earth and Environmental Sciences

1st Place: **Saahithi Kasa** *(Challenge School)*

2nd Place: **Chayse Rawsky** *(Friends School)*

3rd Place: **Mathangi Kurup** *(Challenge School)*

Engineering and Material Sciences

1st Place: **Aanshi Shah** *(Thunder Vista P-8)*

2nd Place: **Izzie Delhierro** *(Challenge School)*

3rd Place: **Ernest Kolesnikov & Toshiro Nagafuji** *(Fox Ridge Middle School, Logan School)*

Medicine and Health Sciences

1st Place: **Phoebe Donovan & Lola Green** *(Friends School)*

2nd Place: **Chloe Pennington** *(Friends School)*

3rd Place: **Avi Schatz-Devine, Phoenix Borten, & Tadan Helm** *(Friends School)*

Physics and Energy

1st Place: **Mary Fernandez** *(Good Shepherd Catholic School)*

2nd Place: **Julian Parker & Jaiden Hwang** *(Challenge School)*

3rd Place: **William Larkin** *(Good Shepherd Catholic School)*

Plant Sciences

1st Place: **Mirabel Wise** *(Christ the King Roman Catholic School)*

2nd Place: **Amanda Hoang** *(Christ the King Roman Catholic School)*

This is what a Scientist looks like

Senior Category Awards

Behavioral & Social Sciences

1st Place: **Siena Negron** *(Skyview Academy)*

2nd Place: **Tyler Sunahara** *(Skyview Academy)*

Biological Sciences

1st Place: **Emma Seliskar** *(Evergreen Senior High School)*

2nd Place: **Gabe Nowak** *(Skyview Academy)*

Earth and Environmental Sciences

1st Place: **Amanda Castillo-Lopez** *(Cherry Creek High School)*

2nd Place: **Shrreya Sethuramalingam** *(Cherry Creek High School)*

Physics, Chemistry, & Energy

1st Place: Wilson Moyer *(Lakewood High School)*

2nd Place: Anna Lucas *(Colorado Preparatory Academy)*

Computer Sciences & Mathematics

1st Place: **Adam Rolander** *(Prospect Ridge Academy)*

2nd Place: **Ethan Lou** *(Cherry Creek High School)*

3rd Place: **Zoe Messenger & Viravee Vashisht** *(Cherry Creek High School)*

Engineering and Material Sciences

1st Place: **Rhys Hanson** *(Conifer High School)*

2nd Place: **Samuel Law** *(Legacy High School)*

3rd Place: **Aryan Roy** *(Cherry Creek High School)*

Medicine and Health Sciences

1st Place: **Aditi Avinash** *(Rock Canyon High School)*

2nd Place: **Gitanjali Rao** *(STEM School Highlands Ranch)*

3rd Place: **Sarah Grube** *(Evergreen Senior High School)*

This is what a Scientist looks like

COORSTEK
MATERIALS SCIENCE AWARD

Amanda Castillo-Lopez

Cherry Creek High School

Reducing Grass Irrigation using Sugarcane Waste

Max Murphy

Skyview Academy

The Air Quality in the Denver Metro Area

Anesh Ilango

William "Bill" Roberts School

The Army Within Ourselves!

This is what a Scientist looks like

NATIONAL SECURITY AGENCY COLORADO AWARD

1st Place: Lilla Floody

Evergreen Senior High School

The Effects of RF

2nd Place: Rhys Hanson

Conifer High School

To Apogee and Beyond

3rd Place: Jason Chen

Cherry Creek High School

Detecting Political Bias in News Articles Using Machine Learning

This is what a Scientist looks like

Nugent Family Statistical Award

Aanshi Shah

Thunder Vista P-8

Wheel of Fortune: A Novel Approach to Prevent the Wastage of Water

Ernest Kolesnikov and Toahiro Nagafuji

Fox Ridge Middle School, Logan School

Biodegradable Plastics

This is what a Scientist looks like

CHERRY CREEK BASIN WATER QUALITY AUTHORITY AWARD

Mathangi Kurup

Challenge School

Phytoremediation of Lead Contaminated Soil Using Brassica Juncea

This is what a Scientist looks like

STORMWATER PERMITTEES FOR LOCAL AWARENESS OF STREAM HEALTH AWARD

Ernest Kolesnikov and Toahiro Nagafuji

Fox Ridge Middle School, Logan School

Biodegradable Plastics

This is what a Scientist looks like

CITY AND COUNTY OF DENVER STORMWATER EDUCATION AND OUTREACH AWARD

Samuel Calkin

Skinner Middle School

Sprayable Biosourced Flame Retardant Viable Alternative to Toxic PFAS Retardants

This is what a Scientist looks like

AURORA WATER AWARD

Bilen Dejene

Challenge School

Can Native Fast-Growing Surface Cover Plants Minimize the Impact of Rainfall Erosion?

This is what a Scientist looks like

COLORADO CHAPTER OF SOIL AND WATER CONSERVATION SOCIETY

Junior Awards

1st Place

Mathangi Kurup

Challenge School

Phytoremediation of Lead Contaminated Soil Using Brassica Juncea

2nd Place

Bilen Dejene

Challenge School

Can Native Fast-Growing Surface Cover Plants Minimize the Impact of Rainfall Erosion?

This is what a Scientist looks like

COLORADO CHAPTER OF SOIL AND WATER CONSERVATION SOCIETY

Senior Awards

1st Place

Amanda Castillo-Lopez

Cherry Creek High School

Water Conservation: Reducing Grass Irrigation by using Sugar Cane Bagasse as a Soil Amendment

2nd Place

Carly Philpott

Cherry Creek High School

Effect of Agricultural Pollutants on Tardigrade Populations

This is what a Scientist looks like

University of Colorado
Anschutz Medical Campus

ROCKY MOUNTAIN WATER ENVIRONMENT FEDERATION

Srinvas Arun

Cherry Creek High School

Using Geospatial Data to Predict Wildfire Susceptibility

This is what a Scientist looks like

University of Colorado
Anschutz Medical Campus

ROCKY MOUNTAIN SECTION OF THE AMERICAN WATER WORKS ASSOCIATION

Aanshi Shah

Thunder Vista P-8

Wheel of Fortune: A Novel Approach to Prevent the Wastage of Water

This is what a Scientist looks like

University of Colorado
Anschutz Medical Campus

ONE WORLD, ONE WATER AWARD
MSU Denver

Shreyya Setharamalingum

Cherry Creek High School

A New Water Generator: The Effects of Calcium Chloride and Silica Beads on Humidity Adsorption Rates

This is what a Scientist looks like

University of Colorado
Anschutz Medical Campus

SOUTH PLATTE RENEW INNOVATION IN WATER AND WASTEWARTER AWARD

Amanda Castillo-Lopez

Cherry Creek High School

Water Conservation: Reducing Grass Irrigation by using Sugar Cane Bagasse as a Soil Amendment

This is what a Scientist looks like

University of Colorado
Anschutz Medical Campus

CU SCIENCE DISCOVERY AWARD

Anesh Ilango

William "Bill" Roberts School

The Army Within Ourselves!

This is what a Scientist looks like

OFFICE OF NAVAL RESEARCH SCIENCE AWARDS

Aditi Avinash
Rock Canyon High School
Quantitative Methods to Analyze the Synergism of Digestive Enzymes for Gluten Breakdown

Samuel Law
Legacy High School
The Optimization of the Sonic Fire Extinguisher using a Conical Collimator

Chloe Pennington
Friends School
TATAA, Celiac! A Proposed Model of Celiac DNA Isolation, Intervention, and Cure

Mathangi Kurup
Challenge School
Phytoremediation of Lead Contaminated Soil Using *Brassica Juncea*

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CIRES Climate Advocate Award

Srinivas Arun
Cherry Creek High School
Using Geospatial Data to Predict Wildfire Susceptibility

Saahithi Kasa
Challenge School
The Heat of the Matter: Increasing Relative Humidity with Soil Additives

Chayse Rawsky
Friends School
Ponder This: How Wildfire Smoke Affects the Growth and Health of Ponderosa Pine Trees

Max Murphy
Christ the King Roman Catholic School
The Air Quality in the Denver Metro Area

This is what a Scientist looks like

FERRARA FAMILY AWARD FOR SCIENTIFIC ADVANCEMENT OF SOCIAL & ENVIRONMENTAL JUSTICE

Alaynah Sheppard
Challenge School
Solitary Confinement: A Cure or a Crime?

Carly Philpott
Cherry Creek High School
Effects of Agricultural Pollutants on Tardigrade Populations

Gitanjali Rao
STEM School Highlands Ranch
Early Directional Diagnosis of Prescription Opioid Addiction Using μ Opioid Receptor

This is what a Scientist looks like

Denver Mensa Award

Kabir Srivastava

Challenge School

Guess How Many: How does age affect the Wisdom of the Crowd test?

Jason Chen

Cherry Creek High School

Detecting Political Bias In News Articles Using Machine Learning

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Colorado Assoc. of Science Teachers
TEACHER OF THE YEAR AWARD

Neely Clapp, PhD

Harmony Ridge P-8 School

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DENVER MUESAME OF NATURE AND SCIENCE TEACHER AWARD

Stephanie Seevers

Evergreen Senior High School

This is what a Scientist looks like

SOCIETY OF PETROLEUM ENGINEERS INNOVATION TO OVERCOME ADVERSITY AWARD

Samuel Calkin

Skinner Middle School

Sprayable Biosourced Flame Retardant Viable Alternative to Toxic PFAS Retardants

Meredith Overton

Golden High School

Simplified Home Canning System

This is what a Scientist looks like

CO/WY AMERICAN STATISTICAL ASSOCIATION AWARD

Anesh Ilango

William "Bill" Roberts School

The Army Within Ourselves!

Nathan Yang

Cherry Creek High School

Deconvoluting Idiopathic Pulmonary Fibrosis: DNA Methylation and Cell-Type Enrichment Analyses

This is what a Scientist looks like

College of Liberal Arts and Sciences
UNIVERSITY OF COLORADO **DENVER**

CU DENVER HEALTH AND BEHAVIORAL SCIENCE UNDERGRADUATE PROGRAM IN PUBLIC HEALTH AWARD

Siena Negron

Skyview Academy

Recognizing Media Misinformation Through Auditory Analysis

This is what a Scientist looks like

College of Liberal Arts and Sciences

UNIVERSITY OF COLORADO **DENVER**

OUTSTANDING NEUROSCIENCE RESEARCH CU ANSCHUTZ NEUROSCIENCE GRADUATE PROGRAM

Aryan Roy

Cherry Creek High School

A Novel Liquid Embolic Agent to Treat Brain Aneurysms

This is what a Scientist looks like

College of Liberal Arts and Sciences

UNIVERSITY OF COLORADO **DENVER**

OUTSTANDING NEUROSCIENCE RESEARCH CU ANSCHUTZ NEUROSCIENCE GRADUATE PROGRAM

Avienda Schatz-Devine, Tadan Helm, Phoenix Borten

Friends School

Go With the Flow

This is what a Scientist looks like

DENVER MUSEUM OF NATURE & SCIENCE

DMNS AWARD FOR OUTSTANDING SCIENCE COMMUNICATION

Aanshi Shah

Thunder Vista P-8

Wheel of Fortune: A Novel Approach to Prevent the Wastage of Water

Aditi Avinash

Rock Canyon High School

Quantitative Methods to Analyze the Synergism of Digestive Enzymes for Gluten Breakdown

This is what a Scientist looks like

DMRSEF SPIRIT OF SCIENCE AWARD

Junior Award:

Ana Gundrum

Skinner Middle School

Clothing vs. Strive Score

Senior Award:

Sarah Grube

Evergreen Senior High School

The Role that Differentially Expressed Genes Play on the Variable Phenotype of Klinefelter Syndrome

This is what a Scientist looks like

Student T-Shirt Design Contest Winner

Christina Abraham

Skyview Academy

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CU Denver EUReCA! Award

Office of Undergraduate
Research & Creative Activities
UNIVERSITY OF COLORADO **DENVER**

Ersel Serder

Cherry Creek High School

Revamping the Wheel: Designing an Entrapment Resistant Mars Rover Wheel

Savanna Raley

Evergreen Senior High School

A Forensic Study of Decay on Buried and Unburied Chicken Carcasses in Cold Weather Climates

This is what a Scientist looks like

DMRSEF STUDENT CHOICE AWARD:
Junior Division

Isabelle Delhierro

Challenge School

How can the energy created from a solenoid engine be used to create electricity to power things such as a light or a jump rope?

Chayse Rawsky

Friends School

Ponder This - How Wildfire Smoke Affects the Growth and Health of Ponderosa Pine Trees

This is what a Scientist looks like

DMRSEF STUDENT CHOICE AWARD: Senior Division

Anna Lucas

Colorado Preparatory Academy

How Half the Water in your Toilet Flush Could Power your Home

Amanda Castillo-Lopez

Cherry Creek High School

Water Conservation: Reducing Grass Irrigation by using Sugar Cane Bagasse as a Soil Amendment

This is what a Scientist looks like

ISEF SPECIAL AWARDS

- *American Meteorological Society Award* – **Wilson Moyer, Caitlin Dong**
- *American Psychological Association Award* – **Tyler Sunahara**
- *ASM Materials Education Foundation* – **Aryan Roy**
- *Association for Women Geoscientists Award* – **Bilen Dejene**
- *Mu Alpha Theta Award* – **Ethan Lou**
- *NASA Earth System Science Award* – **Mathangi Kurup**
- *National Oceanic and Atmospheric Administration Award* – **Srinivas Arun**
- National Geographic Society Award – **Srinivas Arun**
- *Ricoh USA, Inc. Award* - **Wilson Moyer**
- *Society for In-Vitro Biology Award* – **Ella Seevers**
- *U.S. Agency for International Development (USAID) Award* – **Amanda Castillo-Lopez**
- *U.S. Metric Association Award* – **Lilla Floody**
- U.S. Stockholm Junior Water Prize – **Shrreya Sethuramalingam, Anna Lucas, Amanda Castillo-Lopez**
- U.S. Air Force Outstanding Science Fair Project – **Aanshi Shah**
- *Yale Science & Engineering Association Award* – **Mikael Miao**

BEST IN FAIR- JUNIOR DIVISION

1st Place

Aanshi Shah

Thunder Vista P-8

2nd Place

Saahithi Kasa

Challenge School

3rd Place

Chayse Rawsky

Friends School

Honorable Mention

Chloe McCrea

Christ the King Roman Catholic School

This is what a Scientist looks like

BEST IN FAIR- SENIOR DIVISION

1st Place

Aditi Avinash

Rock Canyon High School

2nd Place

Adam Rolander

Prospect Ridge Academy

3rd Place

Wilson Moyer

Lakewood High School

1st Alternate

Emma Seliskar

Evergreen Senior High School

2nd Alternate

Ethan Lou

Cherry Creek High School

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DMRSEF

Congratulations to all 186 participating students!

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