

2022 Wyoming State Science Fair Award Results

Animal Science

Reece Woolwine, Fisher Mills & Keegan Nance (8th grade); Pinedale Middle School, Pinedale, WY; *“Canal Deer Cross?”*

Awards Received:

1st Place Jr. Category

UW Department of Mathematics & Statistics Junior Division 1st Place

Powder River Basin Resource Council Bill Barlow Memorial Youth in Conservation Award

Mini-Internship in Data Science hosted by WEST, Inc and funded by WY EPSCoR

(Alternate)

Annabelle Arnold (7th grade); Snowy Range Academy, Laramie, WY; *“Upstream or Downstream: Which Bugs are Frowning?”*

Awards Received:

2nd Place Jr. Category

UW Department of Mathematics & Statistics Jr. Division 2nd Place

Rocky Mountain Water Environment Association Junior Division 1st Place

UW Geological Museum 3D Printed Fossil

Laramie Rivers Conservation District Jr. Division 2nd Place

Kamia Runyan (8th grade); Big Piney Middle School, Big Piney, WY; *“The Effect of Music on Guinea Pig Eating Habits”*

Award Received:

3rd Place Jr. Category

Behavioral & Social Science Category

Eliz Hovhannisyan (7th grade); Snowy Range Academy, Laramie, WY; *“Fake or True, the Smiles Will Surprise You”*

Award Received:

1st Place Jr. Category

Arya Ghormley (6th grade); Lander Middle School, Lander, WY; *“Does Age Affect Reaction Time?”*

Award Received:

2nd Place Jr. Category

Toby Johnson (12th grade); Newcastle High School, Newcastle, WY; *“The Effects of Test Question Design on the Accuracy of Tests at Assessing Student Knowledge”*

Awards Received:

1st Place Sr. Category

American Psychological Association Award

WEST, Inc. Special Award in Environmental and Data Science

Makenzie Thomas (12th grade); Greybull High School, Greybull, WY; *“A Data Analysis of Meteorological Factors and Their Potential Impact on Serial Criminals”*

Award Received:

2nd Place Sr. Category

Rylee Peasley (11th grade); Greybull High School, Greybull, WY; *“Evaluating Potential Differences in Cognitive Performance When Listening to Western and Non-Western Music Styles”*

Award Received:

3rd Place Sr. Category

Biochemistry/Cellular & Molecular Biology Category

Zeferino Zuniga & Hays Espenschied (8th grade); Big Piney Middle School, Big Piney, WY; *“The Effect of Dry Aging on the Tenderness of Meat”*

Awards Received:

1st Place Jr. Category

ASM Materials Education Foundation Prize

US Metric System Award

Curtis Muecke (8th grade); Powell Middle School, Powell, WY; *“The Power of Plants”*

Award Received:

2nd Place Jr. Category

Biomedical & Health Science Category

Abdullah Khan (8th grade); McCormick Junior High School, Cheyenne, WY;
“Assistive Walking Device for the Mobility of Parkinson’s Patients”

Awards Received:

1st Place Jr. Category

Broadcom Coding with Commitment Award

UW INBRE Jr. Division Biomedical Science Award

National Center for Atmospheric Research/Computational & Informational Systems

Laboratory Junior Math/Computer Science Award

Rylee Young (12th grade); Rawlins High School, Rawlins, WY; *“What’s the Deal with Moisturizers: Which One Keeps Skin Hydrated?”*

Award Received:

1st Place Sr. Category

Alysha Mendenhall (11th grade); Riverside High School, Basin, WY; *“Possible Damage from Weight Program”*

Award Received:

2nd Place Sr. Category

Chemistry Category

Konrad Smith (6th grade); St. Anthony’s Tri-Parish Catholic School, Casper, WY;
“Chemical Analysis of Leaf Extracts Using Chromatography”

Award Received:

1st Place Jr. Category

Natylye Evans, Kaydence Guest & Maybrie Denison (8th grade); Big Piney Middle School, Big Piney, WY; *“The Chemistry of Cotton Candy: Analyzing the Effect of Sugar Type on Chemical Structure”*

Award Received:

2nd Place Jr. Category

Zaudan Wawhkyung (12th grade); East High School, Cheyenne, WY; “”

Award Received:

1st Place Sr. Category

Cody Stith (9th grade); Newcastle High School, Newcastle, WY; *“Physics of Melting Ice”*

Award Received:

2nd Place Sr. Category

Computer Sciences Category

Calvin Opps (7th grade); Powell Middle School, Powell, WY; *“AI in Sci”*

Awards Received:

1st Place Jr. Category

AIAA Junior Division 2nd Place

Jason Durrant (8th grade); Big Piney Middle School, Big Piney, WY; *“Dissecting a Computer”*

Awards Received:

2nd Place Jr. Division Category

National Center for Atmospheric Research/Computation & Informational Systems

Laboratory Junior Math/Computer Science Honorable Mention Award

Zoya Khan (10th grade); Cheyenne Central High School, Cheyenne, WY;
“Modeling Genetic Changes Associated with Alcohol Use Disorder”

Awards Received:

1st Place Sr. Division Category
Regeneron Biomedical Science Award
UW INBRE Sr. Division Biomedical Science Award
UW Department of Mathematics & Statistics Sr. Division 3rd Place
National Center for Atmospheric Research/Computational & Information Systems
Laboratory Senior Math/Computer Science Award

Padmalakshmi Ramesh (9th grade); Laramie High School, Laramie, WY;
*“Evaluating Machine Learning Methods for Modeling the Distribution of the Two Form Bumble Bee (*Bombus bifarius*) in Wyoming”*

Awards Received:

2nd Place Sr. Division Category
Wyoming NASA SpaceGrant Special Award
NASA Earth Systems Science Award
Powder River Basin Resource Council Bill Barlow Memorial Youth in Conservation Award
UW Department of Mathematics & Statistics Sr. Division 1st Place
WEST, Inc. Special Award in Environmental and Data Science
National Center for Atmospheric Research/Computational & Information Systems
Laboratory Senior Math/Computer Science Award

Sean Crockett & Lilyana Goraczkowski (9th grade); Pathfinder High School,
Lander WY; *“Agricultural Application of Automated Environmental Data
Collection”*

Awards Received:

3rd Place Sr. Division Category
Mini-Internship in Data Science hosted by WEST, Inc and funded by WY EPSCoR

Earth & Environmental Sciences Category

Katy Anderson & Shanti Junker (8th grade); Lander Middle School, Lander WY;
“Firing Up the Soil: Analyzing Soil Composition After a Wildfire”

Awards Received:

1st Place Jr. Division Category
UW Department of Mathematics & Statistics Jr. Division 3rd Place
Harry Vaughan Planetarium Runner-Up Award
Laramie Rivers Conservation District Jr. Division 1st Place
Mini-Internship hosted by UW Biogeochemistry Lab and funded by WY EPSCoR
Wyoming NASA SpaceGrant Special Award
Lesair Environmental Jr. Division Special Award
National Center for Atmospheric Research/Computational & Information Systems
Laboratory Junior Geoscience Award

Nathanel Brown (8th grade); Big Piney Middle School, Big Piney, WY; *“The Effect of Effluent Wastewater Conditions on Algae Growth”*

Awards Received:

2nd Place Jr. Division Category
Laramie Rivers Conservation District Jr. Division Honorable Mention
Rocky Mountain States Section Air & Waste Management Association Jr. Division Award
National Center for Atmospheric Research/Computational & Information Systems
Laboratory Junior Geoscience Award

Isabella Gallo (6th grade); Lander Middle School, Lander, WY; “??”

Award Received:

3rd Place Jr. Division Category

Christian Dennis (7th grade); Big Piney Middle School, Big Piney, WY; *“The Effect of August Monsoon Rains on the Snow Water Equivalent in the Upper Green”*

Award Received:

Rocky Mountain Water Environment Association Junior Division 2nd Place

Shelby Hoobler (9th grade); East High School, Cheyenne, WY; *“Variations of Soil Conductivity and pH following Indaziflam Herbicide Application to Control Cheatgrass”*

Awards Received:

1st Place Sr. Category
Laramie Rivers Conservation District Sr. Division Honorable Mention
UW Department of Mathematics & Statistics Sr. Division 2nd Place
WEST, Inc. Special Award in Environmental and Data Science
National Center for Atmospheric Research/Computational & Information Systems
Laboratory Senior Geoscience Award

Jose Atilano (12th grade); Greybull High School, Greybull, WY; *“A Low-Cost Device to Improve the Quality of Drinking Water: Utilization of Ultrasonic Transduction in Conjunction with Filtration”*

Awards Received:

2nd Place Sr. Category
AIAA Sr. Division 2nd Place
Rocky Mountain Water Environment Association Sr. Division 1st Place
Laramie Rivers Conservation District Sr. Division 1st Place
Wyoming Research Scholars Program Award
Wyoming NASA SpaceGrant Special Award
American Meteorological Society Award
National Center for Atmospheric Research/Computational & Information Systems
Laboratory Senior Geoscience Award

Tiernan Stanton (11th grade); Newcastle High School, Newcastle, WY; *“Wormin Around”*

Awards Received:

3rd Place Sr. Category
Rocky Mountain States Section Air & Waste Management Association Sr. Division Award

Riley Thomas (11th grade); Greybull High School, Greybull, WY; *“Perfluorinated Compounds and Their Possible Impact on Aquatic Food Chains: Considering the Potential Impacts of Fracking Fluids on Water Quality”*

Awards Received:

National Geographic Cultivating Empathy for the Earth Award
Rocky Mountain Water Environment Association Sr. Division 2nd Place
Laramie Rivers Conservation District Sr. Division 3rd Place
Mini-Internship hosted by UW Biogeochemistry Lab and funded by WY EPSCoR
Anne Wolff Memorial Science Award
Wyoming Energy Authority 1st Place Award
Ricoh Sustainable Development Award
National Center for Atmospheric Research/Computational & Information Systems
Laboratory Senior Geoscience Award

Caleb Brown & Preston Burton (9th grade); Pathfinder High School, Lander, WY;
“Aquaponics”

Award Received:

Lesair Environmental Sr. Division Special Award

Jonathan Mendenhall (9th grade); Riverside High School, Basin, WY; *“Carbon Dioxide Mitigation”*

Awards Received:

Wyoming Energy Authority 2nd Place Award
American Meteorological Society Award

Sydney O’Brien (12th grade); East High School, Cheyenne, WY; *“Decomposition of Polyurethane Using Oyster Mushrooms”*

Award Received:

Rocky Mountain States Section Air & Waste Management Association Sr. Division Award

Engineering Category

Charlie McGinley (6th grade); CY Middle School, Casper, WY; “*Magnet Spinning Fan*”

Awards Received:

1st Place Jr. Division Category
Lemelson Early Inventor Prize

Hayden Moeller (8th grade); Connections Academy, Gillette, WY; “*Sky Poney Crane*”

Award Received:

2nd Place Jr. Division Category

Thaddaeus Christensen (12th grade); C.H.I.L.D. Homeschool, Buford, WY; “*Snow Deltas*”

Awards Received:

1st Place Sr. Division Category
AIAA Senior Division 1st Place
Harry Vaughan Planetarium Top Award
NOAA Taking the Pulse of the Planet Award

Dakota Morgan & Robert Humes (11th grade); Newcastle High School, Newcastle, WY; “*Nozzle size vs. Thrust*”

Awards Received:

2nd Place Sr. Division Category
Yale Science & Engineering Award
Wyoming NASA SpaceGrant Special Award

Caleb Hoover (9th grade); Newcastle High School, Newcastle, WY; “*Transtibial Prosthetic Soccer Leg*”

Award Received:

3rd Place Sr. Division Category

Mathematics Category

Bryce Newman (6th grade); Lander Middle School, Lander, WY; *“Plants Using Fibonacci Branching Patterns Collect More Sunlight Than Plants Using Other Branching Patterns”*

Awards Received:

1st Place Jr. Division Category

Wyoming NASA SpaceGrant Special Award

National Center for Atmospheric Research/Computational & Information Systems

Laboratory Junior Math/Computer Science Award

Microbiology Category

Addalee Cunningham (8th grade); Big Piney Middle School, Big Piney, WY; *“The Antibacterial Properties of Different Bee Products”*

Award Received:

1st Place Jr. Division Category

Kaylie Julander (8th grade); Kemmerer Jr/Sr High School, Kemmerer, WY; *“Do Siblings Grow the Same Amount of Bacteria?”*

Award Received:

2nd Place Jr. Division Category

Tyler Searfoss (10th grade); Greybull High School, Greybull, WY; *“Assessing the Impact of Invasive Plants on Different Soil Microbes”*

Awards Received:

1st Place Sr. Division Category

Genius Olympiad Nomination

Mini-Internship hosted by UW Biogeochemistry Lab and funded by WY EPSCoR
(Alternate)

Calixa Helphingstine, Zachary Funk, and Mackenzie Murray (11th grade); Rawlins High School, Rawlins, WY; *“What soap brand provides the best protection against streptococcus lactis?”*

Award Received:

2nd Place Sr. Division Category

Physics & Astronomy Category

Ethaney Frint (6th grade); Pioneer Park Elementary School, Cheyenne, WY; *“I Feel the Need, the Need for Speed!”*

Awards Received:

1st Place Jr. Division Category

AIAA Junior Division 1st Place

National Center for Atmospheric Research/Computational & Information Systems
Laboratory Junior Math/Computer Science Award

Plant Science Category

Makaila Merriam (7th grade); Carey Junior High School, Cheyenne, WY;
“Cheatgrass and its Affect on Soil Nutrients”

Awards Received:

1st Place Jr. Division Category

Laramie Rivers Conservation District Jr. Division 3rd Place

National Center for Atmospheric Research/Computational & Information Systems
Laboratory Junior Geoscience Science Award

Fisher Paes-Baretto (7th grade); Lander Middle School, Lander, WY; *“How Does CO₂ Affect Plant Growth?”*

Awards Received:

2nd Place Jr. Division Category

UW Geological Museum 3D Printed Fossil Award

National Center for Atmospheric Research/Computational & Information Systems
Laboratory Junior Geoscience Science Honorable Mention Award

Dylan Foster (7th grade); Big Piney Middle School, Big Piney, WY; *“The Effect of Different Music Types on Plant Growth”*

Award Received:

3rd Place Tie Jr. Division Category

Rylee Moats (7th grade); Lander Middle School, Lander, WY; *“Mushy Growth”*

Award Received:

3rd Place Tie Jr. Division Category

Asriyah Islam (9th grade); Laramie High School, Laramie, WY; *“Silicic Acid Affects Growth, Productivity, and Quality of Alfalfa: Greenhouse and Field Study, Year 3”*

Awards Received:

1st Place Sr. Division Category

Genius Olympiad Nomination

Laramie Rivers Conservation District Sr. Division 2nd Place

National Center for Atmospheric Research/Computational & Information Systems

Laboratory Senior Geoscience Award

Claire LeBeau & Parker Findley (9th grade); Pathfinder High School, Lander, WY;
“Temperature Effects on Radish Growth”

Award Received:

2nd Place Sr. Division Category

Miya Woody & Jarren Hurtado (9th grade); Pathfinder High School, Lander, WY;
“The Study of Different Lights on Radish Growth”

Award Received:

3rd Place Sr. Division Category

2022 Regeneron International Science & Engineering Fair Finalists from Wyoming:

Zoya Khan (10th grade); Cheyenne Central High School, Cheyenne, WY;
“Modeling Genetic Changes Associated with Alcohol Use Disorder”

Padmalakshmi Ramesh (9th grade); Laramie High School, Laramie, WY;
*“Evaluating Machine Learning Methods for Modeling the Distribution of the Two Form Bumble Bee (*Bombus bifarius*) in Wyoming”*

Jose Atilano (12th grade); Greybull High School, Greybull, WY; *“A Low-Cost Device to Improve the Quality of Drinking Water: Utilization of Ultrasonic Transduction in Conjunction with Filtration”*

2022 Regeneron International Science & Engineering Fair Alternate from Wyoming:

Toby Johnson (12th grade); Newcastle High School, Newcastle, WY; *“The Effects of Test Question Design on the Accuracy of Tests at Assessing Student Knowledge”*

2022 Broadcom MASTERS Nominees from Wyoming:

Addalee Cunningham (8th grade); Big Piney Middle School, Big Piney, WY; *“The Antibacterial Properties of Different Bee Products”*

Abdullah Khan (8th grade); McCormick Junior High School, Cheyenne, WY; *“Assistive Walking Device for the Mobility of Parkinson’s Patients”*

Bryce Newman (6th grade); Lander Middle School, Lander, WY; *“Plants Using Fibonacci Branching Patterns Collect More Sunlight Than Plants Using Other Branching Patterns”*