

# 75th San Luis Valley Regional 1949 -- 2024 Science Fair, Inc.

2023 Annual Report

# **BOARD OF DIRECTORS**

BOO THOMAS, Blanca

DR. NEIL RIGSBEE, Alamosa

DR. SARAH NAZERI, Alamosa

ANDREW VALDEZ, Mosca



# The San Luis Valley Regional Science Fair

From start to finish, and at all levels of participation, the science fair experience is one not only of competition but also of camaraderie, creativity, cooperation, and education. This is the essence of the San Luis Valley Regional Science Fair.

Established in 1949, the San Luis Valley Regional Science Fair, Inc. is a private, non-profit organization, which holds a regional competition each year. More than 800 students from the San Luis Valley participate in Science Fair at their schools. The purpose of the fair is to stimulate student interest and encourage the students in science and engineering by recognition of their abilities and achievements.

In addition, receiving the rare opportunity to speak with working scientists, SLV Regional Science Fair students participate in three grade level divisions for the grand awards in a number of categories: Behavioral and Social Science, Biomedical Science, Botany, Chemistry, Consumer Science, Earth and Space Science, Engineering, Environmental Science, Mathematics and Computer Science, Physics and Zoology.

Participating in Science Fair is one of the few activities that expect students to integrate virtually all areas of their academic development. They use the library for literature reviews, history and research; the students execute experimentation and generally complete mathematical analysis; they write reports; they utilize artistic styles in the preparation of their presentation boards; and they are expected to orally present their projects to the judges. Awards are also given for technical writing, oratory skills, display, originality, and overall projects. Winning Junior and Senior division projects are awarded trips to the Colorado Science & Engineering Fair, which is held in Fort Collins, Colorado. In addition, the two senior division students with outstanding overall projects are awarded an all-expense paid trip to the Regeneron International Science & Engineering Fair. The regional fair was held as a virtual fair this past year. Our students participated in an in-person fair for both the Colorado State Science Fair and the International Fair. Although the International Fair was a hybrid with a number of students also participating virtually.

Many educational experiences are made available to students who participate in the San Luis Valley Regional Science Fair. Recent programs have included Science from CU; the Alamogordo Space Center; Mobil Ed Productions; Physics is Fun; the Denver Museum of Nature and Science; Visible Productions and Mike Mullane (Ret.), NASA Astronaut. Recently the program featured was "Bat Tales" in which students learned about the world's only flying mammals, about the diversity and natural history of these often misunderstood animals, and why bat conservation is important. Museum specimens gave students a close look at several species of bats native to Colorado.

The judges' interviews and the educational programs allow the students to interact with professional scientists and engineers and with each other. Many students have said that having the chance to meet and speak with their peers about their science projects is the most beneficial aspect of the SLV Regional Science Fair.

Scholarships from Adams State University and other organizations are also presented. Adams State University awards \$3,000 in scholarships for outstanding science fair participants who have a desire to further their education at ASU. The San Luis Valley Research Center – Colorado State University, Department of Horticulture and Landscape Architecture - offers a \$900 summer internship to a San Luis Valley student, in grades eight through twelve, who shows excellence in the field of potato research, from the Botany category. A family scholarship was established several years ago that is awarded to a graduating senior student that will be attending Colorado State University and majoring in a field of science.

The San Luis Valley Regional Science Fair is devoted to increasing the academic involvement and excellence between all fourth through twelfth grade students in our region. Student winners from each category are presented monetary awards. There are also many local and national awards that are presented to deserving student participants. With the help of our local sponsors and contributors, the San Luis Valley Regional Science Fair is able to present \$28,000 (either in monetary awards, scholarships, all-expense paid trips to the international fair or material awards) to the outstanding students of our region.

# Organization

The San Luis Valley Regional Science Fair would not be possible without the dedication and tremendous efforts of many committed individuals, as well as public and private organizations, school districts, Adams State University, government agencies, corporations, professional associations, and local businesses. These groups sustain the Fair through their financial and resource support, special awards, and most importantly, through providing dedicated volunteers to serve on the Fair's working committees and/or Board of Directors. Many of these businesses not only make monetary donations, but also allow their employees to serve as judges for the San Luis Valley Regional Science Fair. Prior to this regional event, some local school fairs are conducted throughout the region. Each of these fairs is supported by hardworking and dedicated educators at the local school level. Before a student's project is accepted at the Regional Fair, it requires the encouragement and support from individual teachers, science fair coordinators, and parents to help the student see their project from conception to the finished exhibit. The success of the San Luis Valley Regional Science Fair is dependent on all of these dedicated individuals.

To organize and stage the Fair every year requires a great effort by many people, but it also offers many personal challenges and rewards. To witness the level of achievement, pride, and excitement of these bright young people in their scientific endeavors is one of the rewards that all volunteers of the Fair share. It also speaks of the high level of students' aptitude and enthusiasm for science in the San Luis Valley.

# **Mission Statement**

The San Luis Valley Regional Science Fair is an organization that:

- Honors winners from local San Luis Valley school fairs at an annual Regional Science Fair
- Sends finalists from the Regional Science Fair to the Colorado Science and Engineering Fair (CSEF)
- Provides two overall winners at the Regional Science Fair with an all-expense paid trip to participate in the Intel International Science and Engineering Fair (ISEF)
- Encourages students to pursue careers in science, technology, mathematics, or engineering
- Provides a forum for developing academic skills, such as conducting an independent scientific investigation, writing a research paper, speaking, preparing an organized display, and becoming familiar with the scientific method.

The San Luis Valley Regional Science Fair supports local school fairs by:

- Providing a forum where local fairs can influence policies, rules, and by-laws of the San Luis
   Valley Regional Science Fair
- Providing rules and requirements for participation in all fairs Regional, State, and International.
- Coordinate mentors
- Provides judges and critique at local school fairs.

# Impact Statement

The following represent some of the impacts the San Luis Valley Regional Fair has had on the San Luis Valley:

- Awareness, appreciation, and recognition of the importance of science in our society, livelihoods, academic achievement and lifelong success
- An increased awareness of academic competition and the importance of science among Valley educators
- An increased quality of educational activities in all schools in the region
- An increased usage of libraries and the Internet
- An increased exposure to robotics, holography, pathology, space art, moon geology, and the scientific method to the general public.

\* \* \*

All these years later, I still love that butterfly logo as it symbolizes discovery, growth and change. Years later, I still follow the science fair (through the Valley Courier mostly) and actively participate as a judge at the Ohio State Science Day (Ohio's State Fair). Over the years, I have judged fairs in Texas and Massachusetts as I reside there. I have always been impressed that the SLV Regional Science Fair does a great job with the number of awards and acknowledgment it gives to its participants; our future. The quality and depth of work the students do is amazing. I feel fortunate to have been able to be a part of the SLV regional Science Fair; and again, the fair does an exceptional job of providing students with the opportunity to show that science is alive and done extremely well even in rural areas of the world.

Congratulations to all the participants and thank you to all the enthusiastic science teachers, volunteers and those who donate to keep this as a vital way of giving students the opportunity to challenge themselves to be curious about science and expand their ability to stretch their imagination. -Cliff Pearcy, Monte Vista High School Alumni

# Top Winners of the 2023 San Luis Valley Regional Science Fair

## **COLORADO AWARD WINNERS**

The following students were chosen to represent the San Luis Valley Regional Science Fair at the Colorado State Science Fair:

## **Senior Division**

Emilio Martinez – Alamosa High School Joseph Benavides-Monte Vista High School

Augustus Miller – Monte Vista High School Claire Seger-Monte High School

Marissa Martinez – Monte Vista High School
Valerie Goodland – Monte Vista High School
Carlos Ochoa-Marquez–Monte Vista High School
Asia Alard-Monte Vista High School

#### **Junior Division**

Sylvia Daugherty–Sargent Middle School

Makenzie Consaul-Sargent Middle School

Will Walker-Sargent Middle School

Durae Naranjo-Sargent Middle School

Tami Torgler-Sargent Middle School

Rhett Taylor-Centauri Middle School

Liam Griffin – Sargent Middle School

Jaylee Rodrigues- Sargent Middle School

Parker Mitchell- Sargent Middle School

Catherine Deacon-Sargent Middle School

Kenleigh Hathorn-Sargent Middle School

Jaelie Jaminet-Sanford Middle School

Kimberly & Kandace Pargin-Sargent Middle School

Rylen Ross & Zaiden Villagomez- Monte Vista Middle School

## Regeneron/ISEF WINNERS

The following two students were chosen to represent the San Luis Valley Regional Science Fair at the Intel International Science and Engineering Fair:

Claire Seger-Monte Vista High School Marissa Martinez – Monte Vista High School

## **Alternate Regeneron/ISEF WINNER**

Carlos Ochoa-Marquez-Monte Vista High School

# **Junior Observer Award**

Makenzie Consaul-Sargent Middle School

## TEACHER AWARDS

The following teachers were chosen to attend the Regeneron International Science and Engineering Fair:

Loree Harvey - Monte Vista High School

Terri Paulson- Sargent Middle School

## **SCHOOL AWARDS**

The following School Awards are based on the total tabulations of all

Grand Awards received by their students:

Small Elementary School

Large Elementary School

Sierra Grande Elementary

Bill Metz Elementary

Small Middle School

Sargent Middle School

Monte Vista Middle School

Small High School

Justice & Heritage Academy

Large High School

Monte Vista High School

## ASSIGNED WORKING COMMITTEE MEMBERS

Fair Director: Lucy Adams

The Fair Director is actively involved in all working committees hereto mentioned and is an exofficio member of the SLV Regional Science Fair Board of Directors.

Awards Ceremony: SLV Regional Science Fair Board of Directors

Joy DiCamillo

**Boo Thomas** 

Diana Jones

Regina Rice

Display and Safety: Dr. Curtis Crawford

Finance: SLV Regional Science Fair Board of Directors

Publishing: Joy DiCamillo

Registration: SLV Regional Science Fair Board of Directors

Regular Judging: Judge Coordinator

Room Setup: SLV Regional Science Fair Board of Directors

**ASU Facilities** 

Scientific Review Committee: Dr. Neil Rigsbee - Chair

Dr. Curtis Crawford

Dr. Jordan Ricard

Dr. Larry Sveum

Dr. Marty Jones

Dr. Tammy Gregg

Dr. Caitlin O'Conner

Taylor Rocha

Ms. Loree Harvey

Website Committee: Tayler Rocha

# Highlights of the San Luis Valley Regional

## Science Fair for 2023

2023! What a year it has been and is! The San Luis Valley Regional Science Fair had its 74th birthday. Our regional science fair is one of the oldest in the country! Thank goodness for the inspiration, wisdom and intuition that the Adams State professors and community people had so many years ago.

Four students were awarded the honor of attending the Regeneron ISEF, which was held in Dallas, Texas this past May. The ISEF fair was very different this year. There was a physical fair for the students that felt comfortable and that were vaccinated and there was also a small virtual fair held at the same time for those students that could not enter the United States or that they did not feel comfortable being in a huge arena.

The 2023 Regional Fair had a total of 212 students that participated this past spring. There were a total of 205 projects at the fair. Four public high schools, six public middle and four public elementary schools participated in the fair this past year. We also had several students from a private school that had participants in the elementary, middle and high school divisions and a couple of home school students.

Twenty-four junior and senior students were awarded the honor of representing the San Luis Valley Regional Science Fair at the Colorado State Science and Engineering Fair, which was held in April, 2023. The CSEF was held as a physical fair this past spring. Students, teachers and parents were all so pleased to be attending the State Fair in person once again. In the senior Grand Awards, there were seven place awards and eighteen special awards. At the Junior Division there was one place award and 10 special awards.

Also, one of our local teachers, Andrew Shelton from North Conejos School District was the recipient of Lockheed Martin Teacher of the Year Award. Andrew has been teaching for 16 years. He is now the Science Fair Coordinator for the district. He is very passionate about Science Fair. As one student wrote "Mr. Shelton is passionate not just about the scientific process but also his students." He is using the monetary award to purchase lab supplies so that students can work on projects at school and to purchase felt boards for projects. Great work Andrew!

The website, SLVRSF.org has material for our teachers, parents and students linked on it. There is also a registration form for our judges. Student registration for the 2024 fair will be available at a later date. One may also find the Board of Directors, the mission statement and history of SLVRSF on the website.

Additional support to the SLV Regional Science Fair can be found by visiting our website at:

#### SLVRSF.org

Another great year for the San Luis Valley Regional Science Fair!



At this time I would like to personally thank each and every one of you for supporting our valley students with their science discoveries, over the years and encourage you to continue these endeavors. Thank You Lucy Adams

When I decided to participate in the Science Fair for the first time last year as a freshman, I had no idea what was in store for me. Hearing that I had placed first in my category, and qualified for both State and International Science Fair during the Regional Science Fair I was ecstatic for what lay ahead. What stood out to me the most during the State Science Fair was, after judging day we were each left with an envelope with judges' comments on our projects. I was able to use these comments to improve my project for ISEF and therefore build my confidence on my familiarity with my project.

As qualifying for ISEF seemed to be an unattainable accomplishment to me, I was in shock that I had actually qualified for it. Lining up on judging day to present my project with hundreds of other students was one of the most nerve wracking experiences for me. I had done what I never dreamed attainable for myself. Presenting my project, and having in depth conversations with the judges was an experience I will never forget. Meeting students from across the world during the pin exchange was an exciting opportunity to expand my knowledge of science and to build lasting friendships with some of the students. Going forward in the next three years of high school, ISEF is serving as a huge motivation for me to reach for what is beyond in science.

Sincerely, Claire Seger, Monte Vista High School

\*\*\*

Science fair has been the main driving force for me, all through middle and high school science fair gave me the opportunity to come out of my shell and do research on things I was passionate about. Without science fair, my life would be a mess. I worked hard and did not give up as my chances of going to ISEF lowered and lowered every year. I was finally able to make it to ISEF in Dallas 2023, and that experience was absolutely magical! I made ever-lasting friendships and learned so much from strong women in STEM. It was science fair that pushed me to be the best and gave me the opportunity to get the Gates scholarship and be able to move away from home and go to college in Hawai'i!

Carlos Ochoa-Marquez Monte Vista High School

\*\*\*

In May of 2023 me and 3 other students (Claire, Carlos, and Marissa) made our way to the International Science and Engineering Fair in Dallas, Texas. We left that Saturday and came back the following Wednesday. Terri Paulson and the Monte Vista Science fair teacher went with us. This was a very memorable experience for me and definitely something I will strive to do in the future to be able to compete at that level. I was able to go this year because I won my regional science fair and got invited as the Colorado junior high kid.

While we were there, we explored the conference and looked at all the different projects, we also went to museums and the zoo and the aquarium, as well as shop and tour around Dallas. It was so cool in the opening ceremony to see all of the different countries that were there and that we were able to come together and share a similar interest in science. Working together and staying with young kids and high schoolers that are in science fair, will help better the future of our world.

Overall, this was an amazing experience and I am so thankful that I was able to go with some amazing people.

Makenzie Consaul Sargent Middle School

\*\*\*

# Notes from former ISEF participants

ISEF is always fantastic, but I think LA is definitely the best place. This year, I was super fortunate to be selected by SLVRSF and CSEF to go, my first time placing overall in the senior division at state. I think we had a really great group go this year, which made it even more fun (how is that possible?) One of my favorite parts was the Pin Exchange, where I met up with my friend Jade, who I met in Phoenix last year. She's from Australia, and it was so great to see her again! The newest and probably best thing of ISEF was free and non-crowded access to Universal Studios. From 7pm to midnight, our party wandered around wide-eyed and extremely happy. The Wizarding World of Harry Potter had just opened, and it was so amazing to see one of the best book series ever brought to life! The technology incorporated into the Hogwarts ride was unbelievable—it really and truly felt like you were flying! Another one of my favorites was the Jurassic Park ride, which on the third and final time of riding it, EVERYONE got soaked. Probably the most hilarious aspect of the trip was Sara and her lack of ability to feel public embarrassment. She brought along some tiny plastic hands that look like they were torn right out of a doll's arms, and never ceased to make people double take and laugh when she offered a high five.

Throughout the week, we visited many museums and other interesting places. We train hopped across LA to Chinatown, where it was neat to see a glimpse of a different culture. Interviews went well, and Public Day was a blast, meeting hundreds of kids interested in your project or just you in general. Although no one from the SLV won anything, Colorado overall did very well, with a good number of placers in various categories. After packing up our boards and saying goodbye to the convention center, everyone went off to change clothes. It was time to head to Santa Monica. The remainder of Friday was spent walking around Santa Monica Pier, swimming in the ocean, and having fun with close and newfound friends. I am so glad to have spent a week with Sara, Elora and Alyssa, as well as our fantastic sponsors, and I hope I'll be able to do it again in 2018!

Science fair was a little different last year because of COVID we weren't able to present in person which initially was kind of disappointing. However, I was able to learn how to present my project in a different way so I got a lot of experience with technology. My project was so much fun! I learned how to do arduino coding and applied that to a 3D model that I designed and printed at the high school. Since my project was engineering, I was able to problem solve in a lot of different ways and learned a lot from the things that didn't work like I'd expected. It was exciting to share everything I learned with the judges and it felt good to see my hard work pay off during the awards. My chin hit the floor when I was chosen for the International observer award! I never thought a 6th grader could get something like that so it felt really good. It was a very motivating experience and I am ready to continue my project this year!

# Jakoby Ross - Monte Vista Middle School 2021

\* \* \*

"Science Fair is one of those things that I person like me just can't shake- and that's a good thing. It has made an impact on me throughout my life, and it will, I hope, continue to do so. Being raised by a science teacher kick started my desire to explore that subject, though my true passion has always been history. She encouraged my siblings and I to test theories and find answers to basic questions. This transferred easily to developing projects throughout elementary, junior high, and high school. If you ask anyone who participated in Science Fair what they learned, they will usually give some version of the same things: excellent speaking and presenting skills, writing concise and correct scientific papers, learning and carrying out the scientific method, etc. All of these are very true. But for me, and the career path I chose, I also learned much more.

As with most veterinarians, I knew from a young age what my calling was. The steps for becoming one were fairly black and white: school, volunteering/working, college, veterinary school and career. What I didn't know was how impactful having participated in Science Fair was going to be on my career path. One of the first skills I unknowingly learned was communicating with and working alongside scientists and professionals. I discovered a world of professors, biologists, mathematicians, veterinarians, physicians, researchers, chemists, and more. These were opportunities I never would have gotten had it not been for science fair. I quickly became comfortable in their environs and when it came time to enter into a university setting, I gravitated easily towards that comfort zone. I found jobs, volunteer positions, mentors and colleagues that aided me greatly throughout my schooling. Another skill I learned was researching scientific papers and applying them to my needs. This was helpful for obvious reasons in college and veterinary school, but perhaps even more so in my career now, where I am confronted with some new and exciting challenge that requires research and reflection on a daily basis. I then have to apply my findings to my patients and, perhaps less excitingly, to that time-consuming, precise, and legal document: the medical record. The last benefit that I will note from having been a Science Fair student is the immediate and instinctual knowledge that CSU was the school for me. I was twelve years old when I made it to the Colorado State Science & Engineering Fair for the first time, and walking onto that campus, participating in the activities and meeting some professors made it crystal clear to me that I was home. I spent eight years at CSU, met my future husband (also, a Colorado State Science Fair alum) there, and enjoyed every minute. I believe it was that exposure to a campus far from home, and my comfort in the scientific realm that made a small town girl like me make such an easy and successful transition to undergraduate and professional school.

I can only hope that I can help at least one budding young scientist to realize a dream and a career that they will find as equally rewarding as I find mine. I know that the easiest way to achieve that is through Science Fair and its many wonderful benefits."

-Kayla Henderson, Sargent High School Graduate 2004, CSU Bachelor's in Equine Science and Business Administration 2008, CSU Professional Veterinary Medical School 2012, Employed at Alpine Veterinary 2012

#### 2023 Contributors

#### ALAMOSA

1st SouthWest Bank Ace Hardware Alamosa Dental Lab Alamosa Elks Lodge Alamosa Kiwanis Alamosa State Bank

Alpine Veterinary Hospital Alta Convenience

Arby's

Asphalt Construction Co. Bill and Denyse Herrmann Blanca Peak Dental Center Bob and Lois Kirkham

Bruce Mever

CFWC Women's Citizenship

Club

Colorado Chapter Soil and

Conservation

Colorado Realty & Land Colorado Rio Grande

**Headwater Restoration** 

**Davis Engineering** 

**DMRC** 

Dr. Daniel Avant

Dr. Frank and Pauline Moore Memorial

Dr. Frank Novotny

Dr. Kay and Jan Watkins

Dr. Larry and Carol Sveum

Dr. Marilyn Loser

Dr. Marty and Diana Jones

Dr. Ron Loser

Dr. Steve Schiffer

Duane and Lorelei Bussey

**Eunice Teyler** 

Husmann Plumbing

**IHOP** 

Integrated Land Services Jeni Jack-Goodwin & Greg

Goodwin

Jim Lester and Helen

Sigmond

Jim's Tire Store

Jody and Floyd Oaks

Kristi Mountain Sports

**KW Farms** 

Lucy Adams

Martinez & Assoc.

Motz Law Firm

Oscars Restaurant

Papa Murphys

Pat and Ann Stanford

Right Carpet

Rio Grande Water

Conservation District

Rock Creek Family Medicine San Luis Valley Brewing

Company

San Luis Valley STEAM Shop

Sherwin-Williams

Sky High Hospitality Valley

SLV Behavioral Health Group,

Inc.

**SLV Builders** 

**SLV Building Components** 

SLV Ecosystem Council

SLV Federal Bank

SLV Health

SLV Principals Assoc

SLV Trout Unlimited

**SLV Water Conservancy** 

District

**SLV Water Conservation** 

District

Susan and Jeff Storm

Upper Arkansas Valley

Wildfire Foundation

Valley Educators Credit Union

Valley Electric

Vendola Plumbing and

Heating

# BLANCA / FT. GARLAND

Mike & Eleanor Velasquez

Fort Market

James and Wendy Fischer Louis Bacon'sTrinchera

Blanca Foundation

Three S Ranch

Trinchera Ranch

#### CENTER

Aspen Produce LLC Biel Crop Consulting

Center CD

Center Kiwanis

Central Pump

Farm Service

**Gunbarrel Station** 

Southern Colorado Farms

Willy and Karen Hoffner

## CREEDE

Broken Arrow Property Management LLC

Broken Arrow Ranch & Land

Co

# **DEL NORTE/SOUTH FORK**

Del Norte Bank

Linda Owslev

Rio Grande Headwaters Land

South Fork Kiwanis

Wolf Creek Ski Area

#### LA JARA / ANTONITO

Imerys Perlite USA, Inc. Cactus Hill Ag Consulting Dr. Pence and Family

#### **MONTE VISTA**

C & L Container

Colorado Potato Administrative Committee

Dirk Oden

Dr. David and Vonda Holm

Farm Credit of Southern

Colorado

Farm Fresh Direct

Farming Technology Corp Friends of National Refuges

Gary and Jerene Wilkinson

ITC Jason and Kathy Lorenz

John and Lisa Rawinski

Mathias Concrete Inc.

Matt and Jenny Nehring

Mile High Prep Report

Monte Glass Shop

Monte Vista Coop

Monte Vista Elks Lodge Monte Vista Rotary Club

Nathan Davidson

Notes and Numbers

Poole Chemical Inc

**RG** Bank

Rick Haslar

Rierson Farms LLC

Rio Grande CD

Rio Grande Watershed

Conservation/ Education Inc.

(RGWCEI)

Rob and Grace Davidson Robert Shanahan

Ski Hi Stampede

SLV Quality Concrete LLC

SLV Rural Elec. Coop. Sunflower Bank

The Legacy of Monte Vista

Tyler and Erin Keck Wenta Nip & Sanitizing

Wilbur Ellis

Williams Family Chiropractic,

P.C.

## MOSCA / HOOPER/MOFFAT

Orient Land Trust Andrew Valdez

Colorado Gators

Friends of the Dunes

Great Sand Dunes Lodge Great Sand Dunes Swimming

John and Bonnie White

Mosca Pit Stop

Mosca/Hooper CD

## SAGUACHE

Abeyta & Abeyta Trucking

LLC American Legion Post 110

## SAN LUIS

Costilla CD

## SANFORD

Jeanne Reed

## **SARGENT**

Clay & Gina Mitchell Computer Lab Consulting,

LLC

Hi-Land Potato Co

Jason Romero Memorial

Lyle and Liz Hood

Michelle and Andrew Roepke

Mrs. Patricia Kaiser

River R. Ranch

Sargent School PTO Steve and Karla Van Treese

# In Kind Contributions

**ASU Facilities** 

ASU Police Dept Monte Vista High School

**O&V** Printing **Texas Instruments**