

San Luis Valley Regional Science Fair, Inc. 2019 Annual Report

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# 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.

This year's winners were chosen from among 235 exhibits presented by 246 finalists. These finalists represented seven public school districts, home-schoolers from the San Luis Valley, and students from two private schools. More than 300 judges, including professional scientists, engineers, medical professionals, mathematicians, and advanced Adams State University students, interview the students and evaluate their projects before selecting the winners. In addition, there were also businesses, professional societies, and government agencies that provide their own representatives to help judge exhibits based on their criteria. These judges confer the Special Awards, including scholarships, summer internships, cash, medals, and scientific calculators, which represents an aspect of the bestowing organization. Over 1500 people attended the Awards Ceremony this year which was held in Plachy Hall gym at Adams State University.

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 Intel International Science & Engineering Fair. In 2019 the Intel International Fair was held in Phoenix, Arizona, where Colorado students competed with their peers from more than 85 countries, regions and territories to showcase their independent research projects.

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. Last year's program, "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, many 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.

\* \* \*

ISEF was truly the greatest time of my life. Being there, experiencing the sights, smells, meeting new people, being surrounded by my friends, and those that I would consider family, and being completely submerged in my passion; science, is something that I don't have words to describe. I cannot explain how grateful, and humbled I am to have been a part of an experience as phenomenal as that. Being there, with 1,800 finalist, from every corner of the world, and seeing just how amazing their work was, seeing just how passionate each and every one of those kids was about their projects gives me goosebumps. Even through the chaos of infinitely long lines, melting heat, and long road trips there and back, I am truly inspired by this experience, not only to work harder, but to follow my passion. As we can see from the brilliant minds that participated in Phoenix, passion changes the world, and I aim to change the world. I am truly lucky to have been able to be a part of something like that, and I wouldn't change it for anything in the world.

- Andres Villa, Monte Vista High School

# Top Winners of the 2019 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**

Molly Nehring - Monte Vista High School Amanda Avila - Monte Vista High School Sara Nehring - Monte Vista High School Matyson Jones - Monte Vista High School Gurleen Kaur - Alamosa High School Chinmay Jayanty - Sargent High School Trinady Gonzales - Monte Vista High School Alyssa Rawinski – Monte Vista High School Amber Michel – Monte Vista High School Camille Rawinski–Monte Vista High School Amada Quintana –Monte Vista High School Andres Villa – Monte Vista High School Ashlyn Rockey - Sargent High School

# **Junior Division**

Ada Pence - Centauri Middle School Maddison Miller - Monte Vista Middle School Tyler Kester - Sierra Grande Middle School Augustus Miller - Monte Vista Middle School Grayson Givens - Sargent Middle School Marissa Martinez – Monte Vista Middle School Erica Miller – Home School Middle School William Wilson–Sangre de Cristo Middle Presley Wilson- Sangre de Cristo Middle School Trenten Pasket – Sargent Middle School

#### **INTEL/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:

Amber Michel - Monte Vista High School

Alyssa Rawinski - Monte Vista High School

#### Alternate INTEL/ISEF WINNER

Molly Nehring - Monte Vista High School

# **Junior Observer Award**

Andres Villa - Monte Vista High School

#### TEACHER AWARDS

The following teacher was chosen to attend the Intel International Science and Engineering Fair:

Loree Harvey - Monte Vista High 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 Small Middle School Large Middle School Small High School Large High School Sierra Grande Elementary Bill Metz Elementary Sargent Middle School Monte Vista Middle School Sargent High School Monte Vista High School

## **WORKING COMMITTEE MEMBERS**

Fair Director: Lucy Adams

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

Awards Ceremony: SLV Regional Science Fair Board of Directors

Joy DiCamillo Judy Prester Tayler Rocha

Display and Safety: Dr. Curtis Crawford

Finance: SLV Regional Science Fair Board of Directors

Publishing: Joy DiCamillo and Judy Prester

Registration: SLV Regional Science Fair Board of Directors

Regular Judging: Diana Jones - Judge Coordinator

Room Setup: SLV Regional Science Fair Board of Directors

Monte Vista High School MESA/Science Club

**ASU Facilities** 

Scientific Review Committee: Dr. Larry Sveum - Chair

Curtis Crawford- DVM

Ms. Jody Oaks Devon Davey Dr. Marty Jones Ms. Loree Harvey

Website Committee: Julie Messick

Chad Chavez Tayler Rocha

My experience at ISEF 2019 was the best yet. Just being able to attend is incredible, but along the way I made so many new friends, learned about things that I didn't know existed, and had one of the best weeks ever. At ISEF 2018 I was shy and I stayed with the people I already knew. However, this year I went out on my own and made more friends than ever before. I still talk to some of these people every day as well. Not only did I make friends from all around the world, but I was able to reunite with friends from past ISEFs. On top of that, I learned so much in just one week. I was able to communicate and learn from many of the participants. Every project I saw was so inspiring and it really opened my mind to all the science around me. It was truly one of the best weeks of my life and I am beyond grateful to have gone. Thank you to everyone who encouraged me and made it possible for me to go.

-Camille Rawinski, Monte Vista High School

# Highlights of the San Luis Valley Regional Science Fair for 2019

2020 will be 71 years of Regional Science Fair in the San Luis Valley. What an honorable history of an organization!

Two students were awarded an all-expense paid trip to attend the Intel ISEF at Phoenix, Arizona this past spring. We also had a student who was chosen to represent Colorado State at Intel too! The fair was again successful, thanks to wonderful sponsorship that allowed a middle school student to attend the Intel International Science and Engineering Fair, as a student observer.

The 2019 Regional Fair had a total of 246 students that participate this past spring. This number breaks down to 113 males and 122 females attending fair. There were a total of 235 projects at the fair. Seven public high schools, 10 middle and 10 elementary schools participated in the fair this past year. Two private schools participated in the junior and elementary divisions this year also.

Twenty three junior and high students were awarded the honor of attending the Colorado State Science and Engineering Fair which was held in Ft Collins, at Colorado State University, April 13, 2019. In the senior Grand Awards, two first place, 2 second place, 3 third and 1 honorable mention awards were received by our students. At the junior high level, we had a student get second place for best of CSEF projects, two first place and one second place award was handed out.

11 of our students placed in the grand awards. There were 28 different special awards which were given in the form of scholarships to different colleges and other monetary awards.

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 2020 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.

New contributors and visitors to the site are able to view information on how to donate/contribute to the fair. Additional support to the SLV Regional Science Fair can be given by using GoodSearch, GoodShop, Razoo and AmazonSmiles. Links may be found by visiting our website at:

**SLVRSF.org** 

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



ISEF 2019 in Phoenix, Arizona was an incredible experience. I have been fortunate enough to have attended ISEF before as an observer. This year was very special to me because I had honor of attending through the Colorado State Science Fair. There are so many great experiences at ISEF including the pin exchange where I got to meet people from around the country and around the world. My favorite part of my ISEF experience was interview day. Its nerve racking to meet your judges that are professionals in the field of study, but they are super nice people that just want to learn about your project, and they understand that you are the expert on your project not them. Even though the pin exchange's goal is to get everybody to meet each other, I found that I got to meet and talk to people more on interview day.

Everyone from Colorado got to have shirts that we all wore for the opening ceremony which was really cool. And of course, it was great when we had a Coloradoan win the top prize at ISEF. Seeing what all these intelligent people can do makes you feel like you can do anything. It is truly an honor to represent the San Luis Valley at the International Science Fair and we are super luck to have this opportunity not lonely do research on something that we love, but to be able to present it to get recognized for our work.

-Sara Nehring, Monte Vista High School

To compete at International Science and Engineering Fair (ISEF) for a second year in a row was a dream come true. It was truly the most amazing, fun, busy and nerve-wracking week I have had. The opportunity to compete at this level happens for few people, but having the chance to compete two years in a row was a dream come true. Lining up to walk into the competition room makes emotions amplify. I was nervous, excited, and ready to tell the judges about how great my research was. Aside from myself, it is amazing to hear about other people's work, projects and ideas for the overall improvement within our world. ISEF is a place for some of the smartest students compete and share their ideas and thinking about it now is truly baffling.

Aside from competition, one of my favorite things is the pin exchange. The pin exchange is one of the first nights you can see and meet people from different cultures around the nation and globe. A night that is always fun is the student mixer where people dance, play games, sing, and talk. It's always interesting and funny to see students dance, especially if they have never been exposed to American music or in such a large group. By the end of the week last year I couldn't wait to start thinking about my next project, sadly that was my last year of competing but it opened doors for my future within college and possibly a career. ISEF is life changing because it can grab your attention in topics and ideas you may have never heard or possibly wondered.

-Amber Michel, Monte Vista High School

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

# 2019 Contributors

**ALAMOSA** 1<sup>st</sup> SouthWest Bank Ace Hardware AGRO Engineering Alamosa Dental Lab Alamosa Elks Lodge Alamosa Kiwanis Alamosa Optimist Club Alamosa Rotary Alamosa State Bank Arby's

Alpine Veterinary Hospital AS&F Members **Asphalt Construction** Bill & Denyse Herrmann Bill Clark Truck Lines **Biophysical Society** Blanca Peak Dental Center Bob & Lois Kirkham Bruce Mever

CFWC Woman's Citizenship Club

Chaparral Tires Chapter DP P.E.O. City Market Colorado Field Institute Colorado Open Lands

Colorado Realty & Land Colorado Rio Grande Headwater

Restoration Colorado Sports

Cottonwood Dental Davis Engineering Dr. Daniel Avant

Dr. Ed & Lucy Adams Dr. Frank and Mrs. Moore Memorial

Dr. Frank Novotny

Dr. Kav Watkins Dr. Larry & Carol Sveum

Dr. and Mrs. Konishi Dr. Marilyn Loser

Dr. Marty & Diana Jones

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Kristi Mountain Sports K W Farms

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SLV Behavioral Health Group **SLV Brewing Company** 

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Soil & Water Conservation, Colorado Chapter Steve Schiffer, DDS

Tom & Charlotte Bobicki

The Bridge

Upper Arkansas Valley Wildfire Foundation

Valley Courier

Valley Educators Credit Union

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#### BLANCA / FT. GARLAND

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#### **DEL NORTE**

Del Norte Bank Del Norte Napa Auto Parts **DMRC** Jack's Market Kristi Mountain Sports Linda Owsley

#### Denver

Walter and Frances Goodman Johnson Foundation

#### LA JARA / MANASSA

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Monte Glass Shop Monte Vista Coop Monte Vista Elks Monte Vista Rotary

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The Legacy of Monte Vista Tom & Donna Templeton

Top Value Walter S. Fullwood, CPA

Waste Management
Wenta Nip & Sanitizing Wilber Ellis

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American Legion Post 110 Fenton Pottery Saguache Crescent

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#### SARGENT

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#### **SOUTH FORK**

Rainbow Grocery South Fork Kiwanis

#### **In Kind Contributions**

**ASU Facilities ASU Maintenance** ASU Security Office Aspen Homes City Market Coca-Cola Courtney Butler Domino's Pizza Joy Di Camillo Judy Prester KBS Enterprises **KGIW KSLV** Marty & Diana Jones MESA/Science of Monte Vista High School O & V Printing Pepsi Cola SLV BOCES

Public Texas Instruments Wolf Creek Ski Area

Society for the Science & the