STEM PATHWAYS FOR GIRLS

2025 Conference

Report

November 8th, 2025

STEM SANTA FE

Every Fall STEM Santa Fe hosts an annual STEM conference at Santa Fe Community College as part of their STEM Pathways for Girls Program for 5th-8th grade students. The conference inaugurates the year-long program bringing together female STEM professionals leading hands-on workshops and students with inquiring minds.

Participation was open to all genders this year but the conference is mainly targeted towards females due to their underrepresentation in STEM fields. The conference allows students to express their interest in STEM with other like-minded children and meet educators and professionals from our community.

STEM Pathways for Girls conference is all day and students participate in multiple workshops which allow them to delve into their interest in STEM and meet inspiring educators and professionals. Students experience new STEM concepts at the workshops and STEAM Fair giving a lot of students their first real experience in Science, Technology, Engineering or Math career pathways.

Process

We opened online registration and enrolled students on a first-come, first-served basis. The first 20 students to register were granted a special goodie bag as we were encouraging early registration. There was a small registration fee for the conference of $35 that was waived upon request on the registration form, no questions asked. 70% of the registered students requested a waiver of the registration fee.

Starting at 8:30 AM, parents checked-in their children in front of the Jemez room and then selected the workshops and group they preferred. Every two workshops were arranged in groups named after famous female STEM professionals. Once all the students were checked in and have selected their groups, the keynote address began at about 9 AM.

Once the keynote address was complete each group went to one of the six workshops. The workshops were repeated twice which were 75 minutes each. After the first workshop was complete, lunch was provided free to all participants, volunteers and staff. After lunch, the groups headed to their second workshop, then returned to the Jemez room for the STEAM fair.

At the STEAM Fair they met STEAM educators from all around New Mexico who all delved into multiple fields of studies, ranging from computer science, engineering, physics and more. Students filled out a conference survey and received a raffle ticket in return. Raffle prizes included STEM kits and STEM-inspired jewelry. Raffle drawing took place during the STEAM Fair and by 4 pm the children were picked up by their parents.

Results

We prepared for 150 students, 81 registered and 61 participated. Out of the 81 who registered, 41% of the students were Hispanic or Latino, 7% Native American, 38% were White and 93% of the attendees were females and 5% identified as non-binary.

Students completed a survey after every workshop and an overall conference survey to collect their comments and feedback.

We had full participation in the survey by the students that attended. 64% of respondents to the survey said they had never been to a STEM Santa Fe event. Only 5% indicated they do not plan on participating in another STEM Santa Fe program. The rating for the conference went from 1 signifying not enjoyed at all to 6 signifying enjoying it very much. The highest ranking was a 6 with 95% of the rankings being 4 or above and 79% being a 5 or a 6.

Conference Schedule for Students

9:00am - 9:30am: Check-In & Ice-Breaking Activities | Campus Center
9:30am - 10:30am: Welcome & Keynote Address | Jemez Rooms
10:30am - 11:45am: Workshop Session 1 | Assigned Classroom
11:45am - 12:45pm: Lunch and Group Photo | Campus Center
12:45pm - 2:00pm: Workshop Session 2 | Assigned Classroom
2:00pm - 4:00pm: Raffle & STEAM Fair | Jemez Rooms

Keynote Speaker

Dr. Eileen Ryan's keynote address was so inspiring that girls had so many questions afterwards. Dr. Ryan shared her personal experience on how she became interested in STEM and how it was to work and study in a field that is primarily dominated by males.

As the Director of the Magdalena Ridge Observatory with its 2.4-meter Telescope, Dr. Ryan manages its technical, financial, and operational activities, and leads the development of scientific and military initiatives. She is the Principal Investigator of a NASA-funded Near-Earth Objects (NEOs) follow-up program, together with Co-Investigator Dr. William Ryan. This project has been funded by NASA since 2008 to obtain high-precision astrometry of near-Earth asteroids and comets, and to derive physical characterization data such as spin rates and spectral composition, to better assess the potential danger to Earth from these objects.

The conference survey asked students the amount of interest they had in the keynote speech. The ratings went from 1 signifying boring to 6 signifying awesome. The highest ranking was a 5 with 85% of the rankings being 4 or above and 58% being a 5 or a 6.

Workshops
Six workshops were offered and participants were split into six groups led by group guides. Each group attended two different workshops spending an hour and fifteen minutes in each workshop giving them ample time to explore and learn.

Workshop A: Everyone Can Code Drones!
Workshop B: Discover the Power of Isotopes, One Card at a time
Workshop C: Microbes: The Good, the Bad, and the Ugly
Workshop D: Pizza Party! A 3-Act Math task
Workshop F: Plants, Water and the Climate
Workshop G: Polymer Power

Everyone Can Code Drones!
Presented by: Kate Sallah

Kate Sallah is a science and computer science teacher at Santa Fe Indian School (SFIS). She has been an educator for 25 years and served in the Peace Corps in Gambia teaching science to children in a rural community.

Kate Sallah guided the students through multitudes of material ranging from coding to operating drones. The students learned how to code their drones to fly through a complex obstacle course and to safely land their drones in the correct area.

Discover the Power of Isotopes, One Card at a time
Presented by: Dr. Sarah Lu

Dr. Sarah Lu is a second-year postdoc at LANL where she uses microfluidics (a.k.a tiny plumbing) to improve chemistry processes. She completed her PhD in the UK and moved to the USA for her job in 2024.

In an interactive card game students used the science of radiation, decay and half-life to battle each other. Students who mastered knowledge and skills behind these sciences would have a substantial advantage over the other students

Microbes: The Good, the Bad, and the Ugly
Presented By: Dr. Jeri Timlin
Co-presenters: Kimberly Butler

Dr. Jeri Timlin is a distinguished member of the technical staff in the Molecular and Microbiology group at Sandia National Laboratories. She has a B.S. in Chemical Engineering and a Ph.D. in Analytical Chemistry. Her research sits at the interface of analytical chemistry, biology and engineering.

Students learned about microbes in the world around us in an interactive session. Students observed a variety of microbes under microscopes and learned how microbes infect mammalian cells. Students collaborated in small groups and conducted an experiment to count cells and understand the concepts behind antimicrobials and antibiotics.

Pizza Party! A 3-Act Math Task
Presented by: Lisa Jackson

Lisa Jackson earned her BS in finance and management from University of Virginia. She received her Master in Elementary Education, with a math specialist certification, from Marymount University. Ms. Jackson worked in Arlington, VA public schools for 20 years; 10 years as a classroom teacher and 10 years as a site-based Math Coach.

3-Act Math Tasks are real-world math problems that make math contextual, visual, and concrete. During the workshop participants watched a short video, generated questions about the situation and identified the information they would need to solve a problem. The workshop created curiosity and established an "intellectual need" for mathematics.

Plants, Water and the Climate
Presented by: Dr. Sanna Sevanto

Dr. Sanna Sevanto is an environmental physicist and leader of Landscape and Ecosystem Dynamics and Resilience team at Los Alamos National Laboratory with expertise in complex environmental and biological systems science.

Using tubes and water, students were able to see a real example of the speed water flows through different branches. Allowing them to learn in addition how trees shape rainfall and drought patterns and how they are essential to a balanced ecosystem and environment.

Polymer Power
Presented by: Leah Appelhans

Leah Appelhans is a staff member at Sandia National Laboratories, where she works on developing new polymer materials for additive manufacturing and other applications.

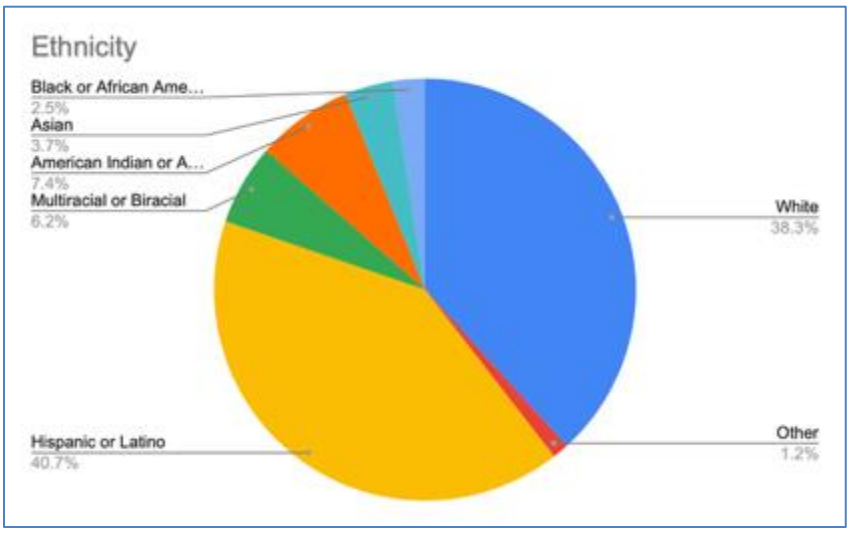
The workshop explored how the chemical structure of polymers impacts their physical properties by making polymers with different crosslink densities and testing their performance.

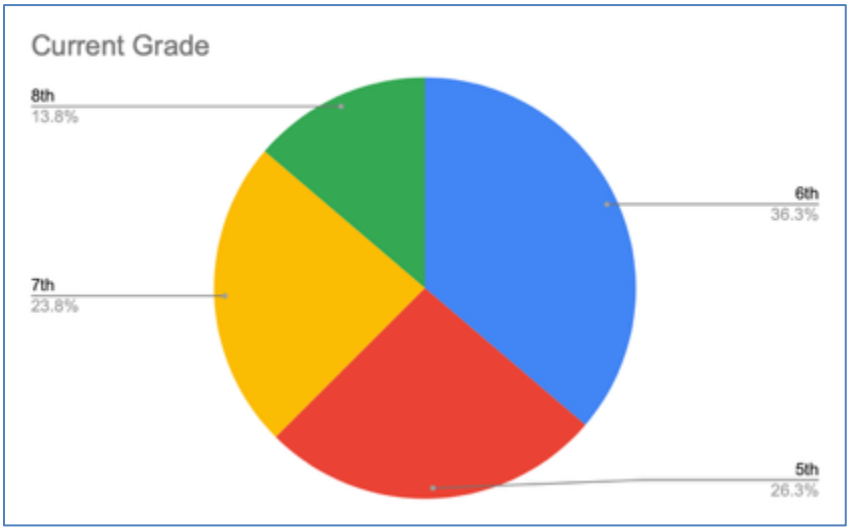
STEAM Fair Participants

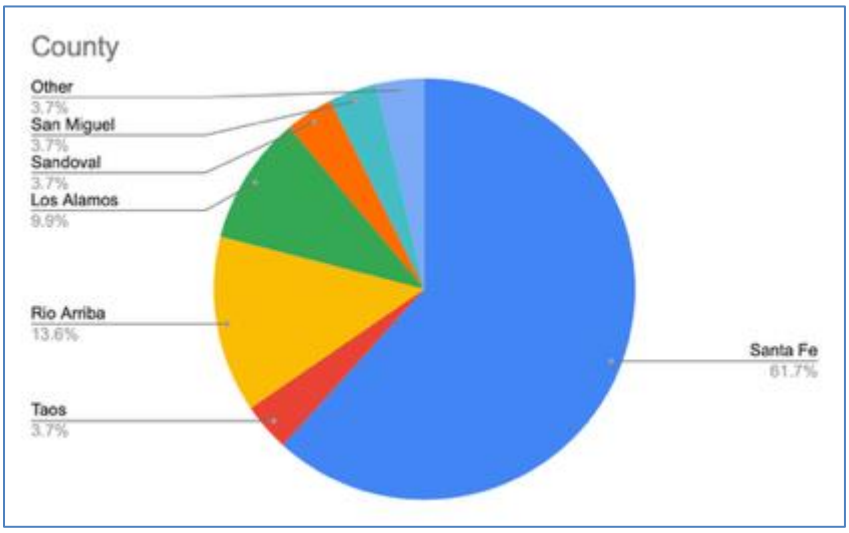
Susan Whilite- Shimoshi NM
Michelle Wingo- UNM Comprehensive Cancer Center
Kanah Waltman- Audubon Center & Sanctuary
Beverly Mars- Santa Fe Children's Museum
Marc Reynolds- Reunity Resources
Ashley Deummler- Northern New Mexico College
Heather Pierce - Northern New Mexico College
Brenda Linnel - Northern New Mexico College
Joann Mudge- National Center for Genome Resources
Hubert Van Hecke- Santa Fe Alliance for Science
Patricia Meyer- Supercomputing Challenge
Tana Morrow- Society of Women Engineers
Flori Martinez- New Mexico Office of Cybersecurity
Janice Badogen Patale- Espanola Gloveworks
Ondine Frauenglass- Santa Fe Community College Innovation Center

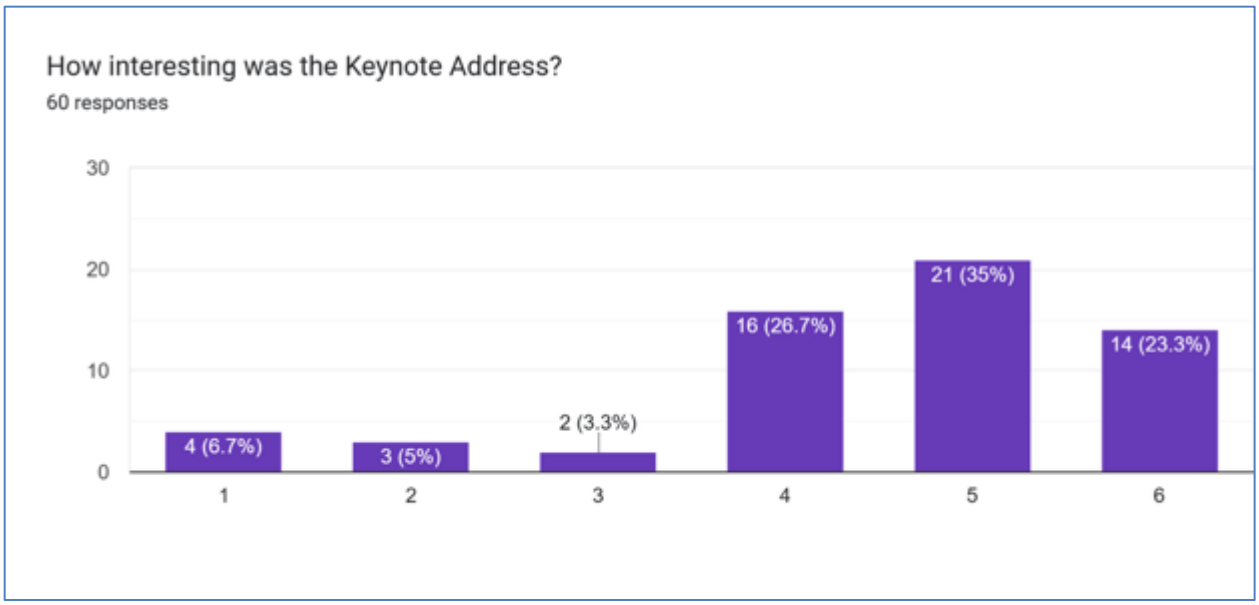
Number of Participating Students by school

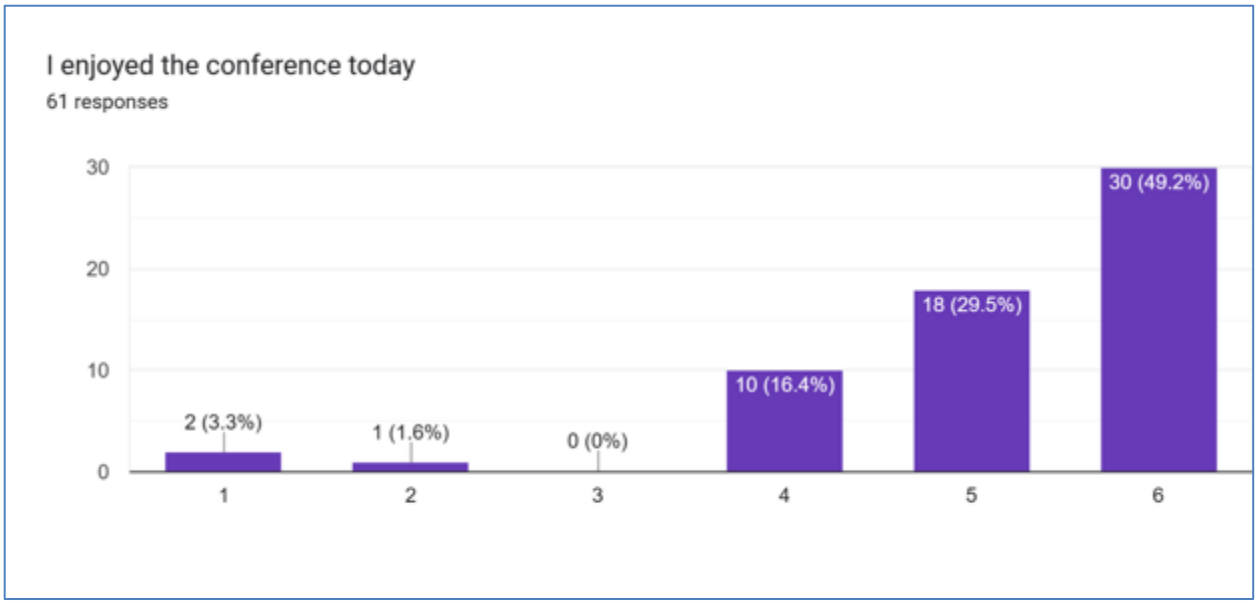
Acequia Madre Elementary	2
Amy Biehl Community School	2
Anansi Charter School	1
Aspen Community School	1
Atalaya Elementary School	2
Carlos F. Vigil Middle School	1
Carlos Gilbert Elementary	2
Cesar Chávez elementary school	1
Chamisa Elementary	5
Coronado Middle School	3
ETS Fairview	1
El Camino Real Academy	1
El Dorado Community School	3
Enchanted Hills Elementary	1
Homeschool	3
Los Alamos Middle School	3
McCurdy Charter School	3
Milagro Middle School	1
Monte Del Sol	1
Mountain Elementary	1
NM Connects Academy	1
Nava Elementary	2
Ojo Caliente Elementary	1
Ortiz Middle School	2
Pecos Cyber Academy	1
Penasco Middle School	1
Pinon Elementary	1
Pojoaque Intermediate School	1
San Idelfonso Day School	1
Santa Fe Girls' School	7
Santa Fe Indian School	1
Santa Fe Prep	2
Santa Fe School for the Arts and Sciences	6
Santo Domingo School	2
School of Dreams Academy	1
Socorro Middle School	1
St. Michaels	1
Taos Middle School	1
Thrive	1
Turquoise Trail Charter School	2
Valley elementary school	1
Wood Gormley Elementary School	6


Ethnicity
Black or African Ame...
2.5%
Asian
3.7%
American Indian or A...
7.4%
Multiracial or Biracial
6.2%
White
38.3%
Other
1.2%
Hispanic or Latino
40.7%


Current Grade
8th
13.8%
6th
36.3%
7th
23.8%
5th
26.3%


County
Other
3.7%
San Miguel
3.7%
Sandoval
3.7%
Los Alamos
9.9%
Rio Arriba
13.6%
Santa Fe
61.7%
Taos
3.7%





Words from Students (unedited):

What motivated you to attend this conference?

"my curiosity"
"I LOVE SCIENCE!"
"My Friends and just learning more about S.T.E.M."
"I wanted to learn new things about coding"

What surprised you today?

"how many girls my age were also interested"
"That we learned about Mary Anning, one of my idols"
"Water can move through cut off branches"
"that I might become a microbioligest"
"How fun learning about germs was"

What is one topic/sentence you will share with your friends and family about the conference?

"how you guys made learning fun."
"I had a lot of fun!"
"I loved it at the STEM conference. BRING ME TO ANOTHER."
"All girls should go, so fun!"
"How fun drones was"

Anything you'd like to share? Comments, suggestions, etc.?

"Next year I would like to learn about urban planning, enginearing and sustainability."
"This classes are amazing."
"MORE CODING!"

The STEM Pathways for Girls Conference is a huge endeavor and dozens of people assisted in every aspect of the conference to make it successful. We would like to thank everyone who contributed to the conference either through volunteering or through financial support.

Big Thank You to the Planning Committee that mainly consisted of volunteers working together:

Lina Germann - Conference Chair
Jean McLarty - Volunteer Coordinator
Hope Cahill - Group Guides Coordinator
Eve Gasarch - Logistics Coordinator
Jessica Brinegar - Workshops Coordinator
Chelsea Neil - Registration and STEAM Fair Coordinator
JC Ramirez - Marketing Coordinator
Saleh Faidi - Conference Intern

Volunteers:

We had 45 volunteers, including 17 were high school students, but not including the planning committee, the workshop presenters, or the STEAM Fair exhibitors! Volunteers were split between shifts and each contributed immensely to the success of the conference. We couldn't do it without them!

A massive thank you to all the contributors who donated to the conference to make it possible. Thank you to the Santa Fe Community College for hosting the conference. Thank you to the Santa Fe Community College cafeteria staff for providing breakfast for the volunteers and lunch for the students and volunteers.

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SATURDAY, NOVEMBER 8, 2025

STEM SANTA FE IS GRATEFUL TO ITS PARTNERS AND DONORS WHO SHARE THE MISSION ALL YEAR LONG.

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TRIAD National Security, LLC

Los Alamos National Laboratory

Santa Fe Community Foundation

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Host

SFCC Santa Fe Community College