"Thank you Expanding Your Horizons for the wonderful experience. You showed me many really great things. I even saw my own DNA! It was stringy and clear. You could see through it."

Expanding Your Horizons Workshop
February 15, 2018
Santa Fe, NM
Final Report

by

Jan Frigo, *EYH Chair*
Kari Sentz, Laurie Waters

Contents

1 What is EYH?

The Expanding Your Horizons Network is a non-profit membership organization of educators, scientists, mathematicians, engineers, parents, community leaders, and government and corporate representatives. Our mission is to encourage young women to pursue science, technology, engineering, and mathematics (STEM) careers. Through Expanding Your Horizons (EYH) Network programs, we provide STEM role models and hands-on activities for elementary, middle, and high school girls. Our ultimate goal is to motivate girls to become innovative and creative thinkers ready to meet 21st century challenges. We aim to change the youth's opinions about people who work in STEM careers and show the fun, interesting and variety of careers choices that people in STEM can have.

EYH conferences are held around the world at over 120 locations. Over 625,000 girls have participated in EYH conferences since their inception in Northern California in 1976. Now in its 42nd year, the Northern New Mexico EYH (NNM-EYH) conference is organized by Los Alamos Women in Science (LAWIS) and is licensed by the New Mexico Network for Women in Science and Engineering from the Expanding Your Horizons Network (NMNWSE). The NNM-EYH conference alone has impacted over 13,000 girls! We focus in particular on the 5th-8th grades that are critically timed for positively affecting attitudes while affording opportunities to pursue math and science pre-requisites in high school for future STEM majors. Additionally, the NNM-EYH also features a concurrent Teacher's Conference where teachers can focus on new opportunities to better promote STEM in the classroom. This year's NNM-EYH took place on Thursday, February 15, 2018 at the Santa Fe Convention Center.

There is a long-term vision that the EYH program seeks to realize by actively generating interest in STEM fields by young women through engaging workshops and STEM mentors. Cultivating this interest in youth can lead to stable, productive, and stimulating careers in the future. The important role that STEM fields play in personal and national economy bears out in recent statistical studies. In 2012 in the midst of the most significant economic crisis since the Great Depression, there are 3.2 million permanent employment opportunities that cannot currently be filled in the United States. The vast majority of these are STEM occupations. Beyond this, these are the fields of future employment opportunities. According to the U.S. Department of Commerce, STEM occupations are projected to grow by 17% from 2008 to 2018 in contrast to 9.8% growth in non-STEM occupations. (See Figure 1) The STEM workforce enjoy higher salaries, less unemployment, greater gender pay equity, and an outsized relative impact on a nation's competitiveness, economic

growth, and overall standard of living.

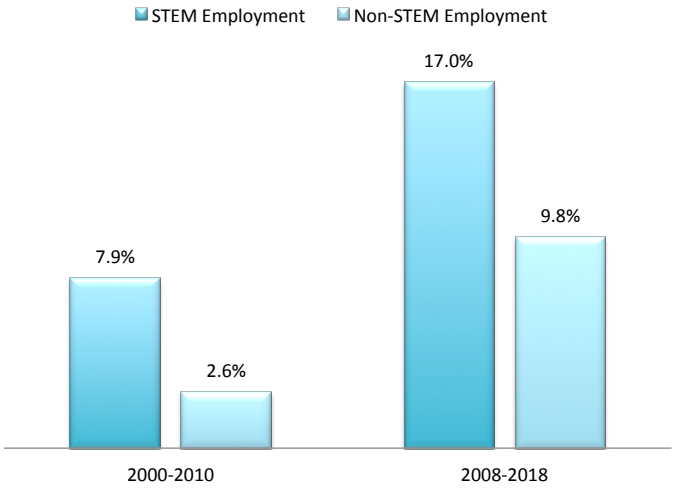


Figure 1: Recent and Projected Growth in STEM and Non-STEM Employment from the Department of Commerce in [3]

2 Women in STEM

Despite these clear benefits in salary, stability, and career opportunities, women held less than 25 percent of STEM jobs in 2009. This contrasts with the case where women constitute close to half of the general workforce. These stark statistics are shown in Figure 2. The US Department of Commerce Economics and Statistics division speculates on possible explanatory factors such as the lack of female role models, gender stereotyping, and less flexibility for working mothers in STEM fields. Regardless of the causes, the 2011 US Commerce Issue Brief on Women in STEM calls for the need to encourage and support women in STEM. While these numbers have slightly improved since the 2009 census we still find that only 12% of engineers are women and the number of women in computing has fallen from 35% in 1990 to 26% in 2013.

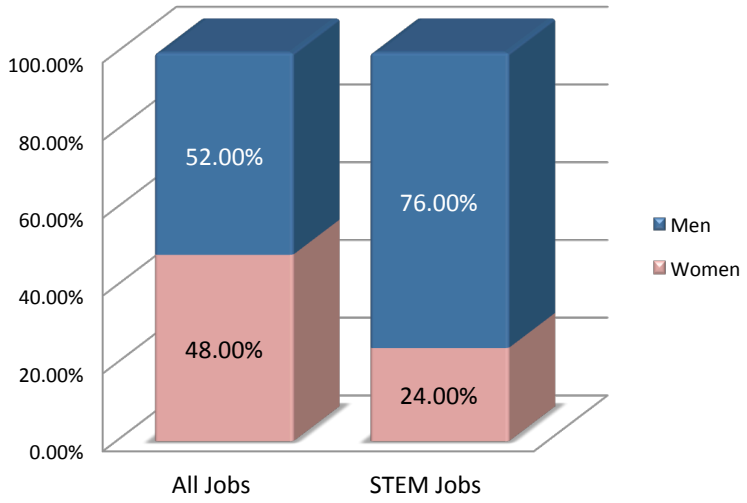


Figure 2: Relative percentages of employment by gender as discussed by the Department of Commerce in [2]

2.1 Minority Women in STEM

These numbers become even more discouraging for the representation of Hispanic, African American and Native American Women in STEM fields. A 2013 report from the American Association of University Women found that African American women constitute 1% of engineers and 3% of the computing workforce. Hispanic women hold only 1% of jobs in each discipline. Native American women represent only a fraction of 1%.[1] This is the problem that EYH strives to address with presenting young students with a wide range of backgrounds and educational opportunities to positive female role models passionate about their scientific work in STEM fields through fun and engaging hands-on STEM activities.

3 STEM Interests

To open up young minds to the world of STEM, we take special care to present a wide range of STEM topics in youth-oriented workshops such as physics, chemistry, computer science, robotics, environmental science, minerals, math, and accounting. We truly want the participants to walk away feeling that STEM is fun and interesting and to feel more empowered to follow their interests. Key to this empowerment is the relaxed, interesting hands-on experiments the students participate in and the

personal connection they develop with their STEM role models.

4 Who's Participating

4.1 The Participating Schools

Students came from as far as over 76 miles to participate in this year's EYH conference at the Santa Fe Convention Center. We had students from all over northern New Mexico: Española, Los Alamos, Dixon, Pojoaque, Albuquerque, Santa Fe, Kewa, and Taos. Our participating schools are shown in Figure 3.

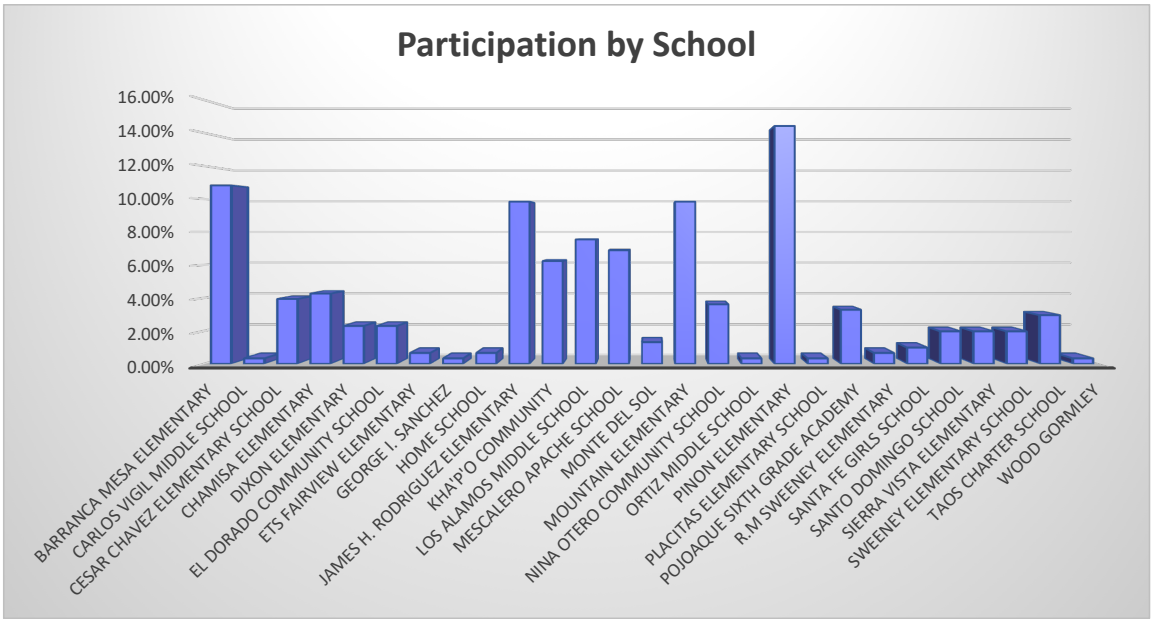


Figure 3: EYH Participating Schools

A few years ago we found out that transportation was one of the main reasons why some schools could not attend the event. EYH leadership responded with the investment of a 20% of the budget for transportation costs as well as the enormous help of EYH volunteer Karen Kelly to bring students from all over northern New Mexico. Just look how far they've come to attend our EYH conference in Figure 4!

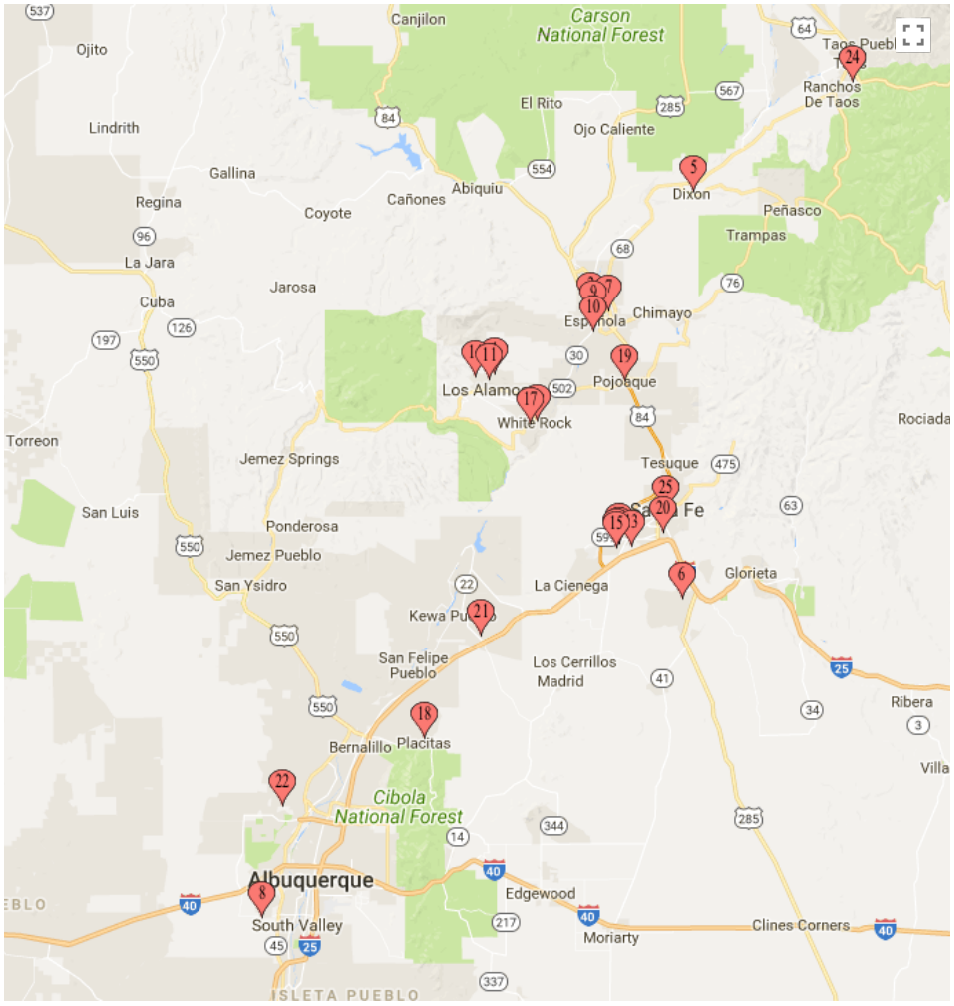


Figure 4: How Far They Travel to Get to EYH

4.2 Student Demographics

EYH 2018 reached out to underrepresented areas and demographics with an impressive participation by minorities with over 61% of the total participation by underrepresented minorities in STEM.

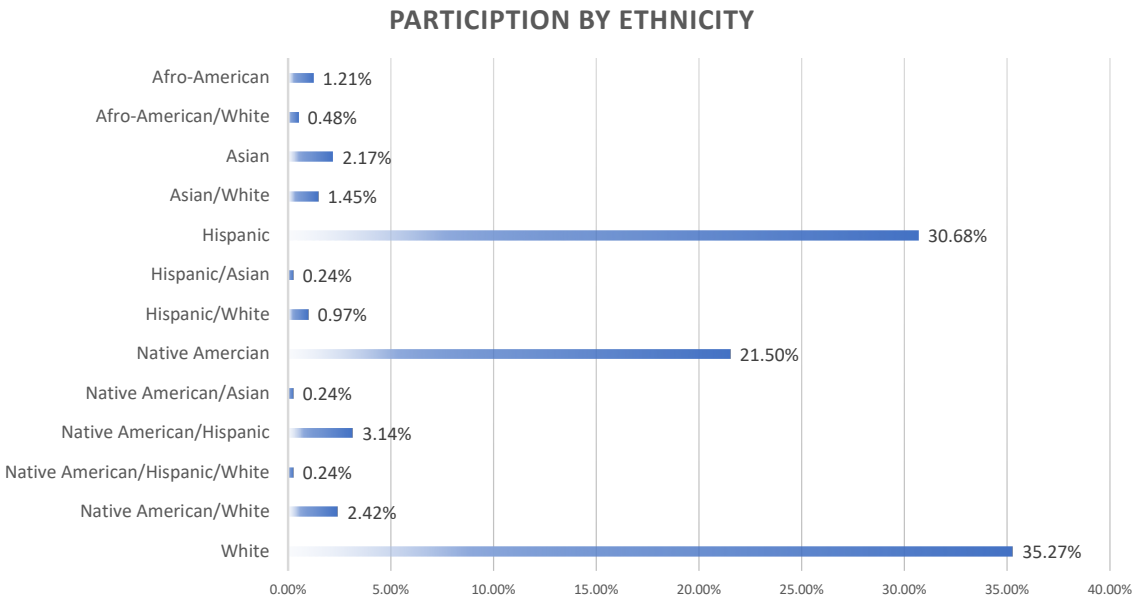


Figure 5: The Diversity of EYH Participants

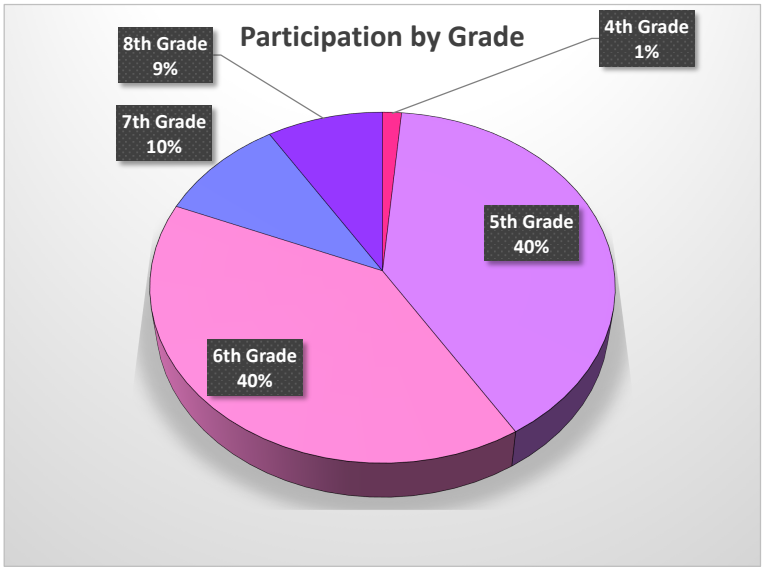


Figure 6: EYH Participation by Grade

Another focus of this year's EYH conference was to focus on critical early years for encouragement towards pursuit of STEM fields. Here in Figure 6, we see the predominant participation from 5th, 6th, 7th and 8th graders with 40%, 40%, 10%, and 9% respectively.

5 The Impact of EYH

5.1 Student Impact

A total of 290 participants from all over northern New Mexico made it to the event. Registration is no small feat with logistical complications stemming from registration caps, long waitlists, and cancellations, and walk-ins. None of this could have been handled with more kindness, grace, and acumen than by our EYH registrar Josefina Salazar.

We are very encouraged by the indications of the impact the EYH conference has on youth participants. Over 79% of those polled say their attitude toward STEM fields was positively affected by their experience at the EYH conference. Over 71% of the students attending our conference expressed that they feel more motivated to take STEM classes. EYH attract students with an already positive attitude towards STEM with 18% having a positive attitude towards STEM and 24% having a positive attitude towards STEM classes. These striking statistics of changing attitudes based on student feedback are summarized in Figure 7, 8, and 9.

Figure 7: Changing Attitudes Towards STEM

	Yes!	No	Already Positive Attitude!
Did EYH positively change your attitude about STEM?	79%	3%	18 %
More STEM classes in the future?	71%	5%	24 %

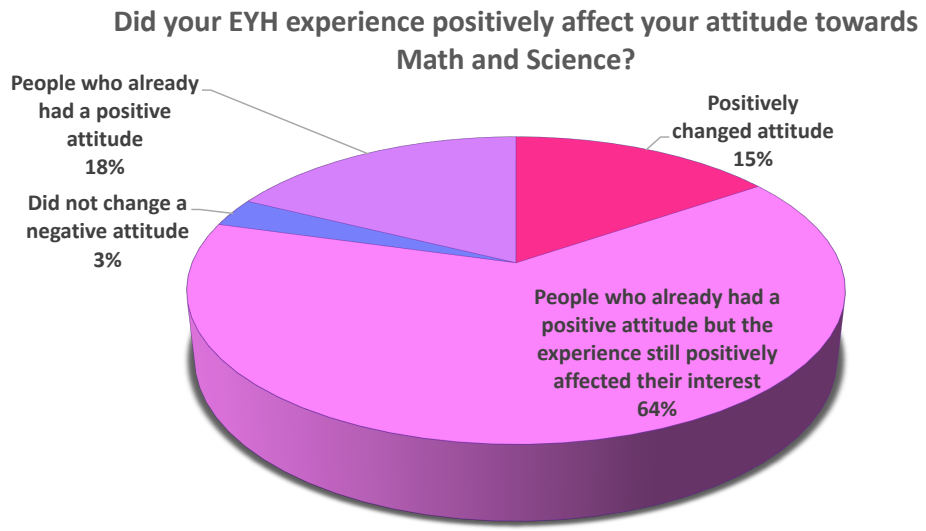


Figure 8: Changing Attitudes Towards STEM Fields

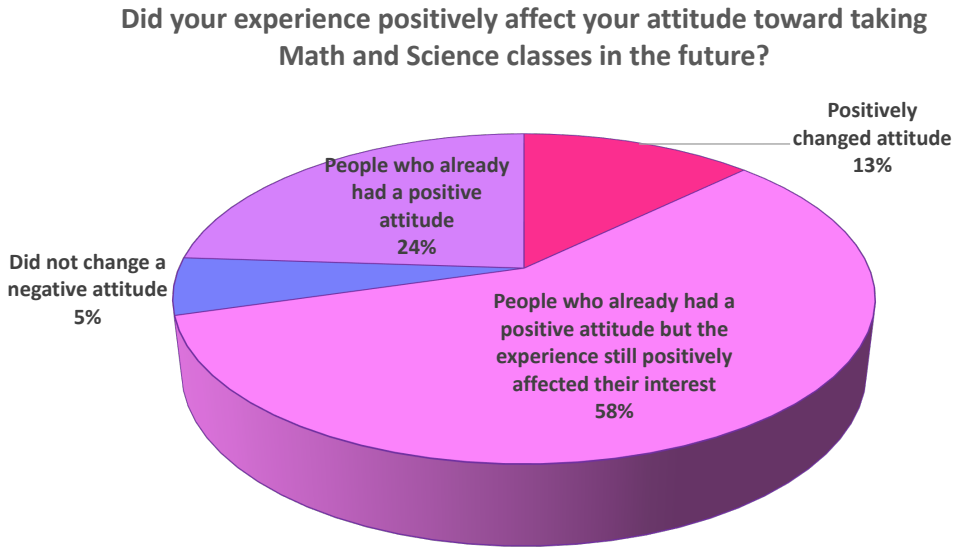


Figure 9: Inspiring the Pursuit of STEM Classes

6 The Day of the EYH Workshop-Feb 15, 2018

6.1 EYH Keynote Speaker

Figure 10: Jennifer Hollingsworth offers words of inspiration to our EYH participants and shares her journey to nanotechnology research career.

> *STEM is for anyone, regardless of gender, race or sexual orientation. Avoid being driven by stereotypes; follow your passion! Stay "STEM-informed" even if you pursue a non-STEM career, because the Scientific Method is a useful way to tackle any problem.*

Our keynote speaker, Dr. Jennifer Hollingsworth is a Los Alamos National Laboratory Fellow and a staff scientist in the Center for Integrated Nanotechnologies (CINT), a US DOE Nanoscale Science Research Center and User Facility. She has a bachelor's degree in chemistry from Grinnell College and a PhD in inorganic chemistry from Washington University in St. Louis. She has received accolades for her discovery and elaboration of non-blinking "giant" quantum dots (gQDs): ultrastable nanoscale emitters of light. Her current research interests include elucidating the

in-depth connections between synthesis methods, nanostructure and optical properties as the basis for a rational design of novel functional materials. Her patented gQD design has been extended to multiple QD and other nanostructure systems, and several are being explored for applications from efficient solid-state lighting and single-photon sources for quantum information technology to ultra-stable molecular probes for advanced biological imaging and as components of theranostic agents that target, image and kill cancer cells. She relishes the collaborative "big science" fostered by the national lab environment and the many opportunities to work with leading national and international scientists afforded by working in a National User Facility like CINT. In addition to making new materials discoveries, she is excited about having students...from high school to graduate students and postdocs working in the lab, making discoveries of their own. She lives in Los Alamos with her husband and two children. Outside of science, she enjoys travel, cooking (because chemistry is cooking!), photography and belly dancing (because sometimes you have to try something new!).

6.2 Science Fair

During the fair, students had the opportunity to interact with organizations from New Mexico that are involved in industries related to STEM. The invited representatives described the work they are involved in, discussed the studies needed to work in their fields and had a short hand-on activity so students could see applications and be stimulated to learn more about careers in these fields.

The fair participants at the February 15th 2018 EYH event in Santa Fe were:

- New Mexico State Parks
- New Mexico Forestry Division
- New Mexico Wild Fire Prevention
- Scientists from the University of New Mexico University (UNM) and Los Alamos National Laboratory (LANL) working in computer science
- New Mexico Border Patrol (Department of Homeland Security)
- University of New Mexico Health Science Center
- Flow 3D

- Forest Guild and the New Mexico Department of Fish and Game

The fair participants had various hands-on activities such as tree cookies highlighting how scientists from the New Mexico Forestry Division study tree responses to environmental stresses, multiple medical equipment showing how basic physiological parameters are measured in hospitals, or a border patrol dog and his trainer demonstrating how luggage is systematically scanned when passing the border.

6.2.1 Comments from Wildfire Prevention and Communications Coordinator

New Mexico State Forestry had a great time at the Santa Fe event. We appreciate how receptive the kids were and hope we inspired some of them to consider a future in Forestry.

Wendy Mason
Wildfire Prevention Communications Coordinator
New Mexico State Forestry Division

6.3 Student Workshops

- **The Power of Women in STEM!**
  Presenter: Basia Cruz
  By participating in an exciting and thought provoking 'Game Show' experience, girls will be divided into teams to be challenged with questions that have been created to emphasize woman achievements, advancements and new opportunities available in the world of STEM. Filled with new found information and excitement girls will leave the workshop not only with prizes but with reinforced encouragement to continue their personal pursuits in STEM.

- **Analysis of Stellar Light Curves from the NASA Kepler Spacecraft**
  Presenter: Joyce A. Guzik
  The students will be given a short introduction to the NASA Kepler spacecraft and the 'light curve' data that was collected for thousands of stars for 90 days each, showing how the star varies in brightness over time. They will also be shown examples of light curves for several variable star types, including eclipsing binary stars, red dwarf stars with flares, and several types of pulsating variable stars. Working in teams of two, the students will be given approximately 40 stellar light curves to classify according to their types. They

will be asked to analyze the light curves and/or pulsation period spectra and make some observations and draw some conclusions about the number of stars of each type and how the stars behave. Such observations may include rotation periods, numbers of flares, frequency of eclipses, number of pulsation modes, temperatures, and masses. Each group will be asked to make a short presentation about their findings at the end of the workshop.

- **Aviation/Aerospace**
  Presenter: Elizabeth Hunke
  Have you ever wondered what makes an airplane fly? How a plane goes from Point A to Point B? How pilots communicate? Come and learn about the physics of flight, aircraft design, flight tests, navigational charts and radio communication in this fun workshop!

- **Space Weather**
  Presenter: Lisa Winter
  The Sun produces powerful flares and plasma storms that pose a risk to us on Earth through their space weather effects. The harsh radiation and relativistic particles streaming from these events can fry the electronics on satellites, cause health risks to astronauts, and even induce currents on the Earth that can cause power blackouts. This workshop will allow you to be the first line of defense against a recent eruption on the Sun. You'll figure out how long until the shock from a plasma storm will arrive at Earth to give a warning to satellite operators and astronauts to prepare for the storm.

- **Plants, water, and climate**
  Presenter: Sanna Sevanto
  This workshop will introduce the participants to basics of plant biology, and how plants respond to environmental stress like drought, and influence climate. we will conduct hands-on measurements of hydraulic conductivity of plant tissues and leaf gas exchange, discuss differences between plants and how that feeds back to their drought tolerance.

- **Water, Coming and Going**
  Presenters: Siobhan Niklasson and Jennifer Baca
  Have you ever wondered where your water comes from, and where it goes after you use it? Explore aquifers and the water distribution and wastewater collection processes with hands-on activities and demos from the Los Alamos County Department of Public Utilities and Pajarito Environmental Education Center.

- **The water beneath out feet: how groundwater supports life in New Mexico**
  Presenter: Michelle Bourret
  We will have an interactive display (table-top model) that shows how water flows through the ground, and the how it is affected by activities at the ground surface. This includes pumping/injection at wells and contaminant spills (food dye tracer). We will also use sediment-filled tubes to perform experiments to qualitatively estimate permeability and porosity of different sediment types, and use these results to explain where the tracer tends to flow in the table-top model.

- **A Hands-on Introduction to Arduino**
  Presenters: Alia Long
  Learn about the Arduino hardware and software and then program it to do simple things like making a LED blink and accepting input from a push button and potentiometer.

- **Cryptography: How Well can you Keep a Secret?**
  Presenter: Lissa Baseman
  Can you solve a mystery in 90 minutes? Something strange is going on around here... but there are clues lying around. Unfortunately, the clues seem to be written in some kind of code. Learn how to crack the codes and solve the mystery! The participants learned to design their own secret codes and write secret messages of their own. Sending messages and information so that only the right people can understand them is very important in computer science, but it turns out you can send your secrets, even pictures and sounds, safely and securely without using a computer, and people have been doing just that for thousands of years.

- **Snap Circuits**
  Presenter: Jan Frigo, Heidi Morning, Kim Katko
  Build an FM radio and a motion detection circuit with snap circuits, experiment with modifications to the circuits to learn how circuits work.

- **Light, Color, and Sparkles**
  Presenter: Laurie Waters
  The girls explored the wave nature of light by learning about the electromagnetic spectrum from infrared to visible to ultraviolet light. They used prisms and diffraction gratings to separate white light into colors and light sticks to

bring colors back together. Using laser pointers, they examined light scattering, reflection and refection through cloudy water and smoked acrylic object prisms. They looked at fluorescent objects, and wrote with light on phosphorescent paper. They also looked at infrared light with a special camera that attaches to an iPhone. There were several experiments set up around the room such as a laser microscope, and a demonstration on why the sky is blue.

- **Black Sharpie Paper Chromatography**
  Presenter: Loren I. Espada
  Students learned about paper chromatography. The experiment consists of separating mixtures of ink. The ink of a black Sharpie marker was applied to the end of a chromatograph paper and the tip of the paper will be immerse in a solvent. The student observed how via capillary action the black ink of the sharpie separates in to several colors. They were able to identify substances both qualitatively (by color) and quantitative by its characteristic Rf value.

- **Criminal Law**
  Presenter: Sue Hermann
  In this workshop students learned the criminal law process by enacting a mock trial with a jury, attorneys, and 1 or more witnesses.

- **Genes in a Bottle**
  Presenters: Christina R. Tyler; A.S. Tisza
  Discussion of genetics and DNA with a DNA extraction of student's own cheek cells.

- **Explosions**
  Presenter: Katie Mussack Tamashiro
  In this explosion workshop, we tried out different types of explosions and experimented with how to manipulate them to get the effects you want.

- **Following the Bouncing Ball...into the FUTURE**
  Presenters: Jessica Baumgaertel and Katie Brown
  Bendy and stretchy materials are everywhere, from our bodies to space shuttles! We introduced a class of molecules called polymers and explored how chemistry at the molecular level leads to elastic materials with properties that we can literally play with. We made some super bouncy balls that participants can take home. We learned about different types of energy, and how storing energy and releasing energy makes the balls bounce so high, Experiments were performed using the new bouncy balls!

We summarize our workshops in a fun word cloud (Fig 11)!

Figure 11: EYH 2018 Workshop Word Cloud

6.4 Teacher Workshop

This workshop started with a teacher discussion lead by Carolyn Torres, who was New Mexico's Teacher of the Year in 2014. She discussed meeting each child where they are to make progress and easy to implement teaching tools in the classroom such as free or low cost materials for innovative learning like dice so that learners perceive mathematical concepts and gain intuition by manipulating them.

This interesting discussion was followed by a hands-on workshop lead by Sandy Frost and Lucia Short, from Los Alamos National Laboratory, taught the teachers about the LilyPad Arduino, which is a microcontroller designed to be integrated into e-textiles and wearable projects. The workshop covered the basics of hardware and

software and included hands-on "design your own bracelet" e-sewing project, which included a light emitting diode (LED), a battery holder, conductive thread, and a piece of felt.

7 The EYH Evaluations

7.1 Student Workshop Ratings

Figures 12 and 13 below shows the ratings for workshop content and workshop difficulty-level based on the student evaluations. The average for workshops content was 4.0 out of 5.0 for mostly good and for difficulty-level 2.73 between just right (3) and easy (2). It is a great challenge to appeal to the broad student base that spans the 4th-8th grade as well as diverse educational backgrounds with students across Northern New Mexico. We are thrilled by these results as they show that our presenters are right on track.

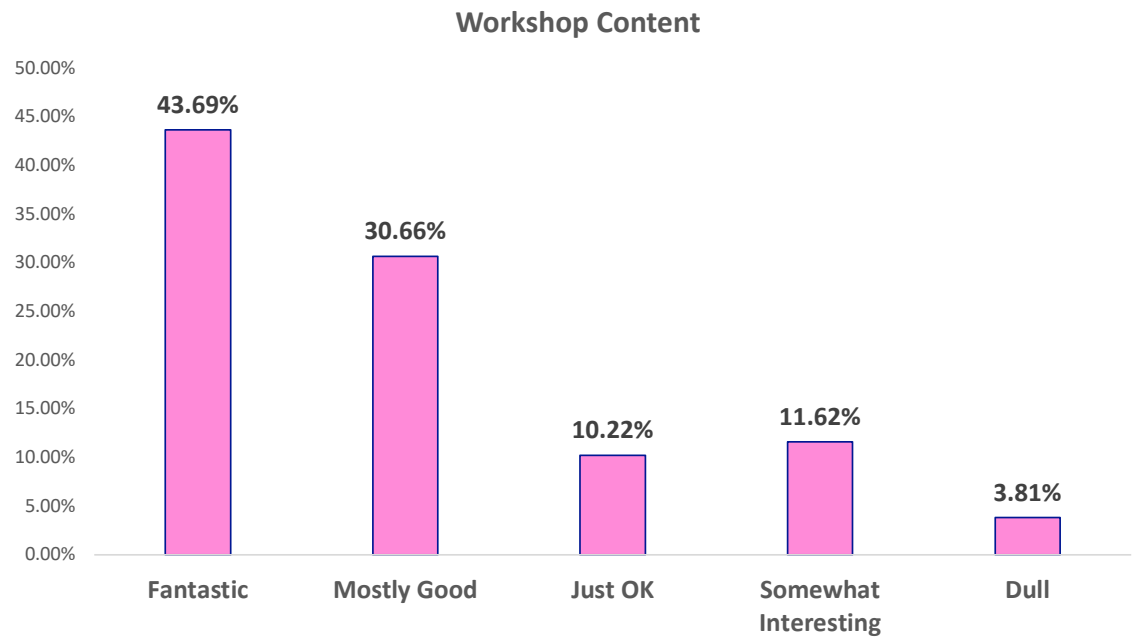


Figure 12: Student Evaluations of Workshop Content

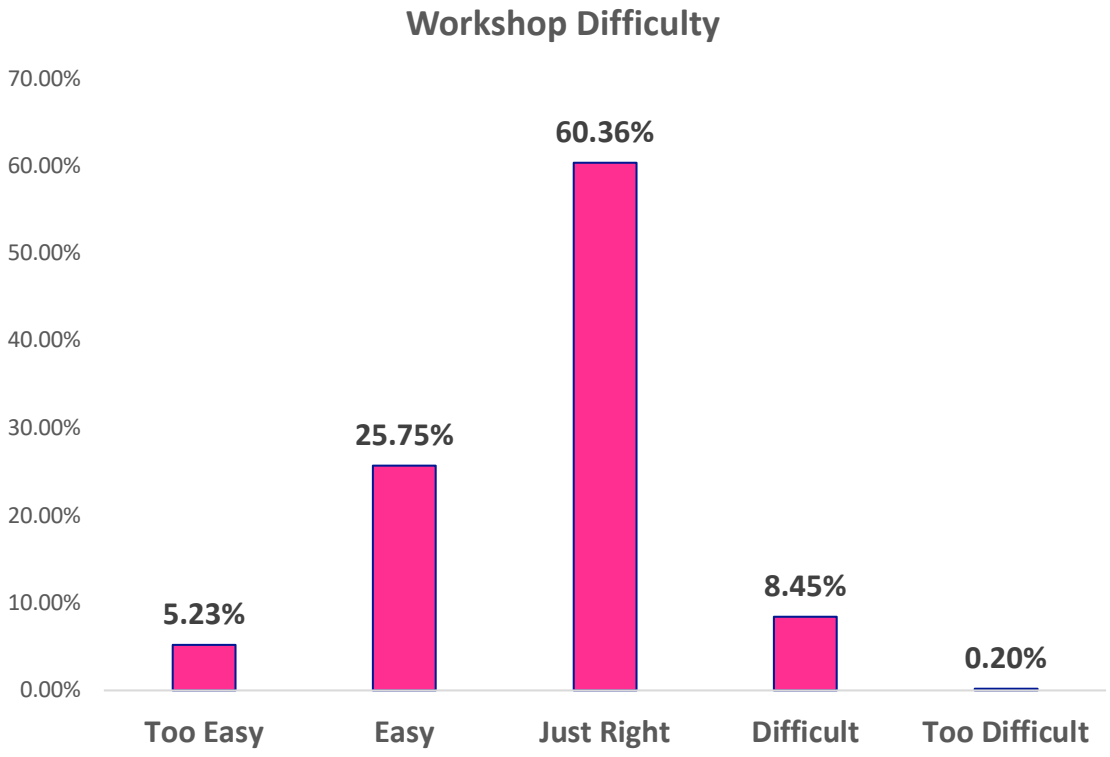


Figure 13: Student Evaluations of Workshop Difficulty

8 Expanding our Impact: STEM Outreach

8.1 Dr. Joyce Guzik mentors a high school student presenter, Stephanie Flynn

Expanding the EYH engagement to include older students, Dr. Joyce Guzik, a retired LANL Laboratory Fellow works with a high schooler, Stephanie Flynn, to prepare and present a workshop on Astro Physics "Analysis of Stellar Light Curves from the NASA Kepler Spacecraft" based on Guzik's LANL research. Here are some wonderful insights from Joyce based on her experience:

> It was ... great to spend so much time preparing in advance, working with Stephanie to think of ideas for how to do the workshop, and meeting for many weeks to prepare the materials and the presentation.

> Some of the girls asked excellent questions and gave me new insights into the data. I ... wanted them to discover the patterns and things similar/different about the stars themselves.
>
> I was encouraged that some of the girls were taking notes, making notes or putting post-its on the star pages. I was glad that they were willing to write and pay close attention.

8.2 EYH on the Road

After experiencing such successes with the February 15th EYH event, Northern New Mexico EYH leadership sought to outreach to more children by taking the hands-on STEM workshops developed for our NNM EYH event to local schools:

Sandy Frost and Lucia Short brought their LilyPad Arduino and Snap Circuit workshops to one hundred twenty 5th and 6th graders in Española and twenty from Santa Clara Pueblo based on requests from the schools. For many children, this was the first time they had been exposed to the connection between hardware and software in the LilyPad Arduino workshop, however their workshop teachers observed that many seemed to be naturals and were inspired by their excitement. Similarly with the Snap Circuit workshop, this was the first time the 6th graders were exposed to the study of electricity and circuitry. However, they all expressed a great interest in circuitry, finished lots of projects, and were not hesitant to explore further by reading the write-ups in the book and trying out really complicated projects. Some of the pupils expressed a wish to acquire snap circuits to continue their exploration at home.

Lucia Short and Jan Frigo brought the Snap Circuits and e-sewing workshops to one hundred children at Chamisa Elementary and Piñon Elementary in White Rock, NM. The students did not have exposure or knowledge of basic circuit elements and how to connect them and what a "good connection" means. The workshop teachers had a fun time working with sewing conductive thread to circuit components to make a bookmark the students could take home. Students with strong sewing skills helped others!

9 The Best Part of the Report

9.1 The Pictures

The student workshop experience is beautifully told in pictures:

Figure 14: Safe experimentation with explosions

Figure 15: Learning about material science by making bouncy balls

Figure 16: Raising test tubes with DNA

Figure 17: Learning about water

Figure 18: Kim Katko helping students in the Snap Circuit workshop

Figure 19: Learning to build interactive digital devices in the Arduino Workshop

Figure 20: Learning about the Water beneath our feet

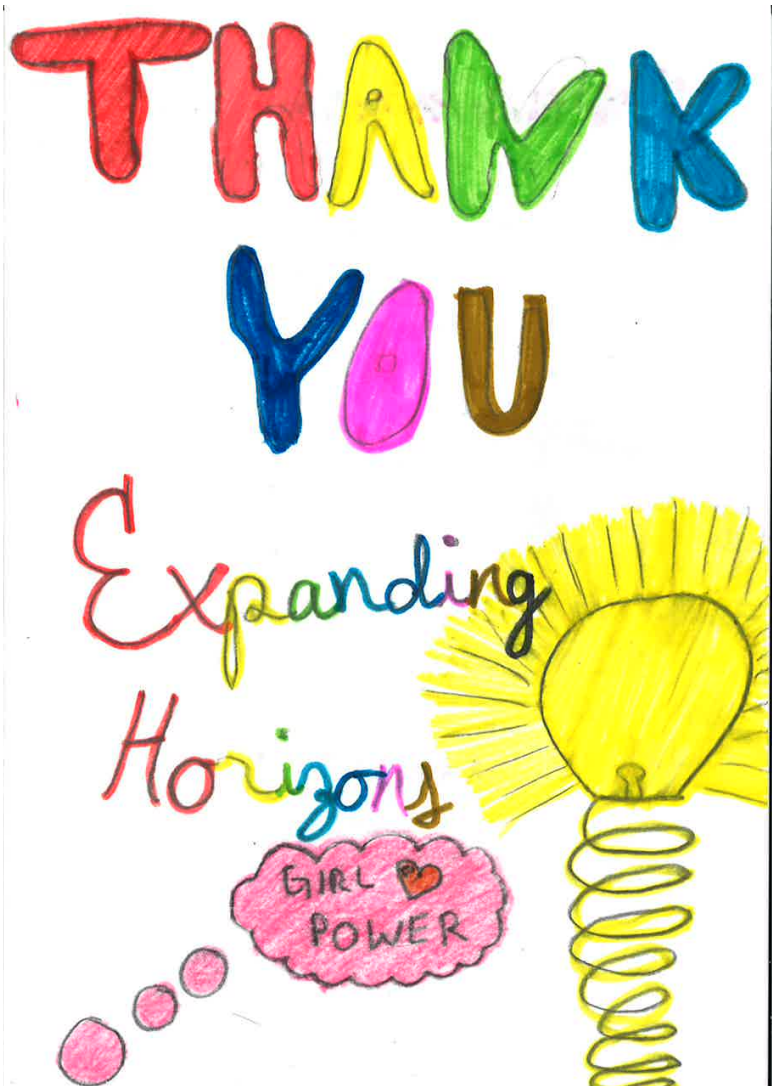
Figure 21: Workshop teachers and participants working with DNA

9.2 Dear Women in STEM: Students' and Teachers Thank You Letters

We receive wonderful expressions of gratitude from our participants. As an example, here are beautiful Thank you letters from the 5th graders of Cesar Chavez Elementary

and a Thank you email from, Diane Chavarria, a 5th grade teacher from Kha'p'o Community School.

9.2.1 Handmade Cards from Cesar Chavez Elementary



Thank you so much Expanding Horizons for having me. I had such a good time. I loved meeting new people and doing fun activities. My favorite part about it was when I got to learn about ground water. That was very exciting. I loved the food, the activities, the people, I just loved everything about it. I loved that it was all girls only because GIRL POWER rocks!!!

Sincerely,

Marissa Rascon

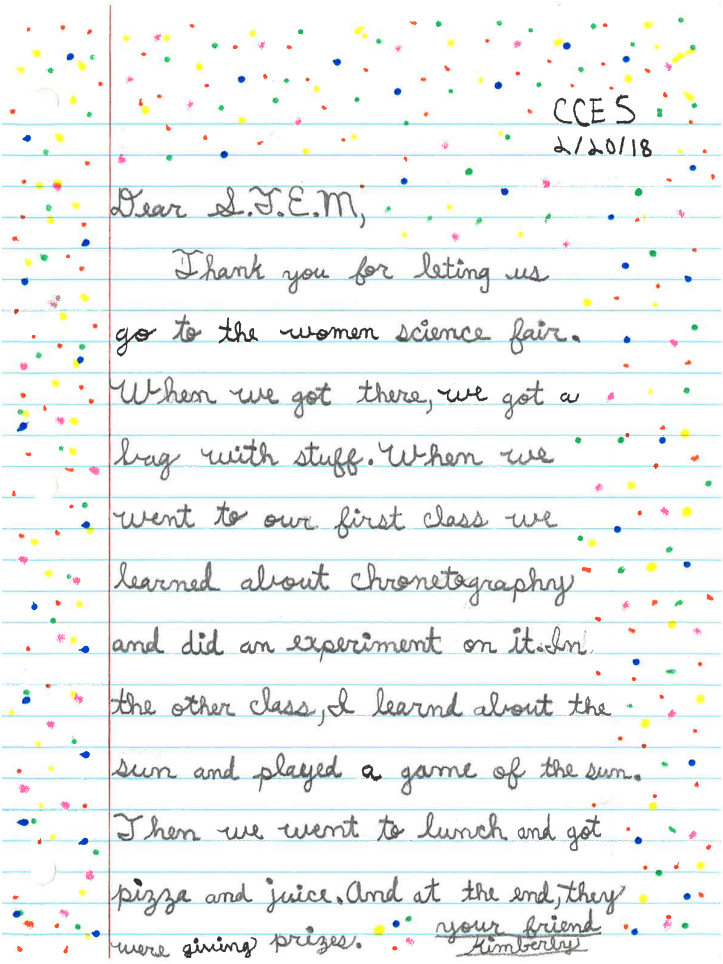

THANK
YOU
Expanding
Horizons
Idea

Thank you Expanding Horizons for the wonderful experience. You showed me many really great things. I even saw my own DNA! It was stringy and clear. You could see through it. I also made a breadboard make sound & programmed a little bot to make & made it go fast and slow. I'm still surprised on how I saw my DNA. I will never forget my experience there.

Sincerely,

Alisha

Nava



CCES
2/20/18

Dear S.T.E.M,

Thank you for letting us go to the women science fair. When we got there, we got a bag with stuff. When we went to our first class we learned about chronetography and did an experiment on it. In the other class, I learnd about the sun and played a game of the sun. Then we went to lunch and got pizza and juice. And at the end, they were giving prizes.

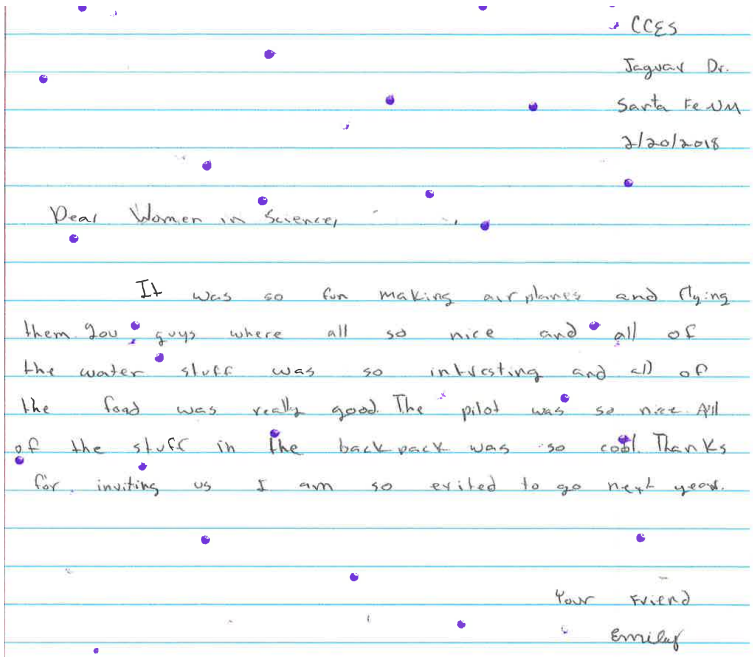
your friend
Kimberly

CCES
2-20-18

Dear Stem,

Thank you for having us there it was really fun and I really like the backpacks all the stuff was cool and cute also I did the D.N.A and plants and water I really liked the classes and I think it was a good idea to seperate us so we make friends also. I LOVED THE PIZZA! because my favorite food is pizza and I liked the tiny fair behind the tables also the free stuff. Thank you

your friend,
Annette De la Rina



CCES
Jaguar Dr.
Santa Fe NM
2/20/2018

Dear Women in Science,

It was so fun making airplanes and flying them. You guys where all so nice and all of the water stuff was so interesting and all of the food was really good. The pilot was so nice. All of the stuff in the back pack was so cool. Thanks for inviting us I am so exited to go next year.

Your friend
Emily

CCES
Jaguar Dr.
Santa Fe
2/20/18

Dear Women in Science,

Thank you for letting us go even though we are 4th graders. We did chromotography and Computer Science. For lunch we ate pizza and drank juice. We got to eat pretzels and popcorn we got a water bottle too and other cool stuff. In the chromotography we put a dot of sharpie on a piece of napkin dipped it in alchd and water it expanded. In the computer scienbe we programed the computer to light the LED's on the audrino and the breadboard.

Love
Raquel

9.2.2 Teachers

Ms. Sandy Frost, presenter

First of all I would like to thank you for the amazing presentation at the Expanding Your Horizons Conference. The incorporation of fashion design and technology is an area that our students at Kha'p'o Community School have a great interest in. Therefore from our conversation, I would like to set up a follow-up session with you. We have 19 girls in fifth and sixth grade and I would love them to have the opportunity in having some time in developing bracelets along with computer programming to promote their interests in science and math. Please let me know if a community outreach opportunity can happen at the Kha'p'o Community School (Santa Clara Pueblo). Thank you for your time and willingness to share your knowledge.

Sincerely,
Diane Chavarria
Fifth Grade Teacher
Kha'p'o Community School

10 Making EYH Happen

Our EYH workshop would not be the enormous success that it is without the generosity of our volunteers and sponsors.

10.1 Volunteers for EYH 2018

The formidable task of organizing, setting up, and executing leverages many thousands of hours of volunteer time. This year we had a total of 126 volunteers, presenters, speakers and committee members working anywhere from 8 to 100's of hours each to make this event happen.

Planning Committee for EYH 2018

- Jan Frigo, Chair/Fundraising/Public Relations/Gifts
- Nick Sutfin, Workshop Coordinator
- Renee White, Supplies/Purchasing
- Kari Sentz, Reporting/Data Analysis

- Tana Cardenas, Site Coordinator
- Anna Cardenas, Food
- Charlotte Grossiord, Science Fair
- Sandy Frost, Teacher Workshop Coordinator/Presenter
- Karen Kelley, Transportation/Registration/Treasurer
- Josefina Salazar, Registrar/Outreach
- Shannon Steinfadt, Master of Ceremonies
- Tina Newberry, Prizes
- Kacy Hopwood,Jennie Harvey,Amanda Martinez, Signage/Printing
- Adam Shipman, IT support
- Jessica Manzanares, SWAG Donations
- Tamera Habinger, Volunteer Coordinator/SWAG Donations/Planning
- Zoe Ledbetter, Volunteers/SWAG/Tshirts/Planning
- Xiaoguang Yang, Website/Database
- Phil Rivera, IT Support Lead
- Lynne Goodwin, Speaker Coordinator
- Laurie Waters, Evaluations/Reporting/Fundraising
- Leslie Sandoval, Photography
- Jill Watson, EYH poster
- Carolyn Torres, Teacher Workshop Speaker

10.2 Sponsorship for EYH 2018

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