



**KEYSTONE  
SCIENCE SCHOOL**

**2023  
GIRLS IN STEM  
IMPACT REPORT**

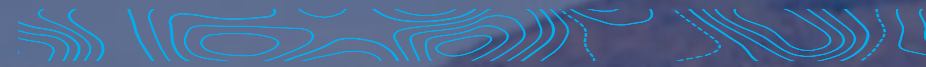






KEYSTONE SCIENCE SCHOOL

# OUR MISSION



With the outdoors as a backdrop for learning, Keystone Science School inspires curiosity and critical thinking through the lens of science to change lives and strengthen communities.



# WHY GIRLS IN STEM MATTERS

Keystone Science School's Girls in STEM Program strives to break through gender barriers in STEM fields, inspires girls to be their authentic selves and empowers girls to be confident leaders in their classrooms and beyond.

Our program fosters an amazing community of females, students, and adults alike—all who want to see a shift within STEM careers in the future. We launched our Girls in STEM Program in 2015 to be part of this change. We aim to involve a significant number of female students in STEM education, striving to bridge the gender gap and foster social transformation in STEM disciplines.

“Marla inspired me by showing me that girls can do anything and should fight for what they want to do.”

- 2023 Girls is STEM Student



# OVERVIEW



Each three-day, two-night session highlights at least one STEM career and provides a female guest STEM professional and mentor who acts as a role model for the participants. Students are presented with a challenge to design a prototype or solution using the Engineering Design Process (EDP).

Our female STEM mentors work side-by-side with the girls to help facilitate discussions on the design of their prototypes and/or solutions. Girls present their final products to their peers and parents—often in a fun public setting.





## PROGRAM GOALS

1. Inspire young females to build their confidence to pursue or continue studies in STEM subjects.
2. Encourage teamwork and leadership skills through group challenges related to STEM.
3. Incorporate the Engineering Design Process into interactive, engaging activities with real-life applications.
4. Expose participants to STEM-related careers and professional females in those roles.
5. Promote reflection through journaling and meaningful conversations.



“ I love girls in stem! I will come back again and again and again! ”

- 2023 Girls in STEM Student





# STEM MENTORS

**28 STEM professionals volunteered**

STEM Mentors are a key component of each Girls in STEM Program. Female professionals who have careers in STEM join us to share their stories of successes, challenges, and inspirations with girls to demonstrate real-world examples of what women can accomplish in STEM careers.



Our STEM Mentors provide unique insight on career paths, challenges in STEM fields, and anecdotes of times they've experienced failure, success, and been part of innovation. In 2023, each program had an influential STEM professional speak about their career, what inspired them to choose that career, challenges they faced and other factors of STEM that relate to their professional and career experience.



“Girls in STEM is so important to me. I feel like if I had a program like this when I was growing up it would have meant so much, to not only get to create things and learn all the different parts of the process, that seemed so elusive the older you get, but to be able to work with adults who are working in the profession, and get to chat about their experience. I feel like it would have been really cool, and it has been a blast.”

- 2023 Girls in STEM Mentor



# 2023 MENTORS



## SNOW & AVALANCHE SCIENCE

### Lindsay Wiebold

Ski Patrol Supervisor at A Basin

### Helen Rowe

Team Lead for Summit County Rescue Group

### Amy Smallwood

Program Director of Avalanche Science

### Korinne Krieger

Assistant Director of Programs at Desert Mountain  
Medicine

### Sharon Birchfield

Alpine Guide for Mountain Madness

### Jess Knowles

Ski Patrol at Beaver Creek, Program Manager  
Desert Mountain Medicine

## FILM FEST

### Ginger Perez

Freelance Videographer

### Rebecca Knowles

Producer, Creator, Actor

### Darcy Miller

Writer, Director, Producer, Actor

### Celia Tewey

Producer, Composer, Animator

### Nicolette Percle

Freelance Editor

### Angela Cohen

Director, Writer, Producer Actor, VR Filmmaker

### Nuria Menchaca

Director, Animator

### Charlotte Percle

Freelance editor

### Marny Eng

Producer

## MEDICAL RESEARCH EXPLORATION

### Amelia Drumm

Research Fellow

### Leslie B. Vidal

Orthopedic Surgeon

### Suzanne Page

Vice President of Operations

### Chloe Barton

Clinical Trials Coordinator

### Kristen Grunerud

Nurse Practitioner

### Lauren Watkins

Principal Scientist for Imaging Research

### Heather Gillman

Physician Assistant and Practice Manager

### Justin Hollenbeck

Biomechanical Research Engineer

### Patricia Macnamara

Administrative Coordinator

## WATER IN THE WEST

### Teal Lehto

Water Rights Activist, Content Creator

### Mary Dawson

Aurora Water - Sr. Environmental Education &  
Outreach Specialist

### Sarah Schliemann

PhD. Earth & Atmospheric Science Professor

### Laura Lynch

CWP. Water Division Manager





# SNOW & AVALANCHE SCIENCE



**FEBRUARY 10TH - 12TH, 2023**

Participants learned about [snow science](#) and [avalanche](#) mitigation in alpine environments while directly taking scientific measurements with experts in the field. Over the three-day program, participants learned how to measure snowpack stability, snow water equivalent, as well as how to use avalanche beacons. Additionally, students had the opportunity to cross country ski and meet avalanche dogs. Participants gained hands-on experience using the Design Thinking Process, they had the opportunity to hear from women working in ski patrol, avalanche safety and they learned about the barriers they have faced as women and how they have overcome those challenges.

**WATCH THE MISSION  
MOMENT VIDEO HERE:**





# MEDICAL RESEARCH EXPLORATION

APRIL 28TH - 30TH, 2023

The girls learned about [bioengineering and healthcare](#) in partnership with The Steadman Philippon Research Institute (SPRI). Girls had an interactive experience that included a Question-and-Answer session with SPRI scientists. These experiences connected girls to women's experiences in the industry to learn about the unique challenges women faced and how those were overcome.

WATCH THE **MISSION**  
**MOMENT** VIDEO HERE:







# FILM FEST

**SEPTEMBER 22ND - 24TH, 2023**

In partnership with Breck Film Fest, participating girls learned about [careers within the film industry](#) as they produced their own short films. All students created their own film, with each girl having support from a variety of females currently working in the film industry. This included cinematographers, directors, film editors, producers and more. At the close of the program, girls presented their short films during a scheduled event included within the Breckenridge Film Festival schedule.

**WATCH THE SHORT  
FILMS CREATED HERE:**





# WATER IN THE WEST



**OCTOBER 20TH - 22ND, 2023**

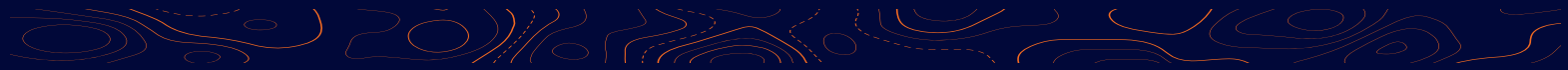
Keystone Science School's [Girls in STEM: Water in the West](#) focuses on addressing challenges experienced by women interested in pursuing STEM-specific education and careers. Participants learned about water management in Colorado and the western United States as they come to a consensus around solutions to a water management problem. Over the three-day program, participants learn about watershed science, water management strategies, and challenges faced by real-world water management stakeholders. As participants work through the consensus building process, they have the opportunity to hear from women connected to the water industry and learn about the barriers they have faced as women and how they overcome those challenges.

**WATCH THE MISSION  
MOMENT VIDEO HERE:**



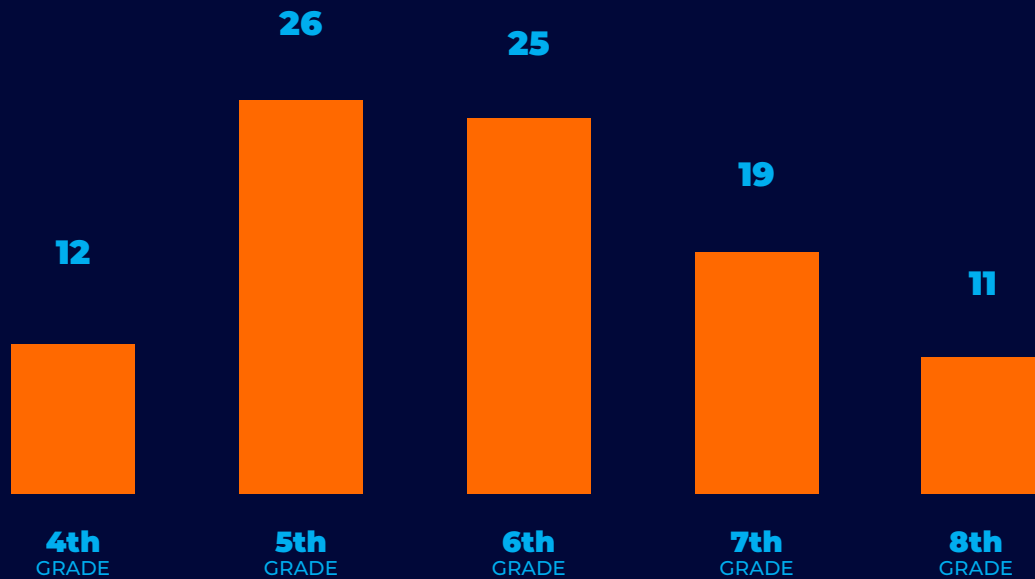


# IMPACT BY THE NUMBERS



**93** TOTAL GIRLS SERVED

## TOTAL REGISTRATIONS BY GRADE



**2,912**  
**TOTAL CONTACT HOURS**  
TOTAL REGISTRATIONS X CONTACT HOURS PER STUDENT

**\$2,810**  
**TOTAL FUNDS SUBSIDIZED**  
FOR LOCAL SUMMIT SCHOOL DISTRICT STUDENTS  
THROUGH OUR SLIDING FEE SCALE BASED ON INCOME



**FILM FEST**



**MEDICAL RESEARCH EXPLORATION**



**SNOW SCIENCE**

**WATER IN THE WEST**





# THANK YOU TO OUR GIRLS IN STEM SPONSORS!



We are so thankful for all the corporate, foundational, and individual supporters of our Girls in STEM program.



The Phyllis Fund - In honor of Phyllis Martinez





# TESTIMONIALS



“Celia inspired me with how she became a filmmaker! I now think I want to have a career in film!”

**- 2023 Girls in STEM Student**

“They can explain in detail the science of avalanches and the type of equipment that she used. I feel like she learned a huge amount over the short weekend. She is more interested in snow science now, and wants to learn about this topic on her own.”

**- 2023 Girls in STEM Parent**



“My daughter loves STEM. She learned so much and really appreciated learning from all the female identifying leaders. She wants to come back next year!”

**- 2023 Girls in STEM Parent**







**KEYSTONE  
SCIENCE SCHOOL**

# THANK YOU!

See you at our upcoming  
Girls in STEM Programs

**SNOW & AVALANCHE SCIENCE,  
FEBRUARY 9TH-11TH, 2024**

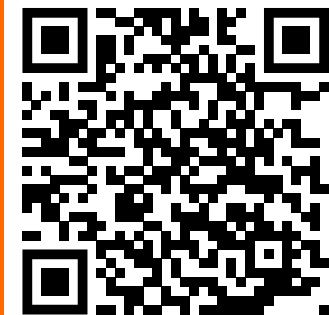
**MEDICAL EXPLORERS,  
APRIL 19TH-21ST, 2024**

## **SUPPORT KSS PROGRAMS**

Help us continue our mission and  
deliver quality outdoor education by  
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**KEYSTONESCIENCESCHOOL.ORG**

or scan the QR code below!



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