



Keystone
Science School

GIRLS IN STEM 2022 FINAL REPORT

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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 hope to engage as many female students in STEM education as possible to challenge the gender gap and inspire social change within STEM fields.

“I learned about water specialists and people who help out with the water community.”

- 2022 Girls in STEM participant

PROGRAM OVERVIEW

Each three-day, two-night session highlights at least one STEM career and provides guest female STEM professionals and mentors who act as role models 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—oftentimes in a fun public setting.

Our Girls in STEM Program relaunched in 2022 after a two-year hiatus during the pandemic. We are thrilled to bring this program back to girls across Colorado!

PROGRAM GOALS

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



STEM MENTORS

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 2022, each program had an influential STEM professional speak about their career, what inspired them, the path to that career, and other factors of STEM that relate to their profession and career experience.

2022 MENTORS

FILM FEST

HANK & BRIAN LEUKART

BRECK FILM FEST

PAT BATTISTINI

BRECK FILM FEST

ERIC FOSTER

BRECK FILM FEST

MAYA OTOUM

BRECK FILM FEST

KATIE OBERLAG

KEYSTONE SCIENCE SCHOOL

WATER IN THE WEST

TEAL LEHTO

WATER RIGHTS ACTIVIST

SARAH JOHNSON

WILD ROSE EDUCATION

KENDRA FULLER

BLUE RIVER WATERSHED GROUP



STEM Mentors support programming by:

- Helping facilitate STEM activities and team-building.
- Acting as a resource for student questions and inquiry.
- Sharing enthusiasm and excitement about STEM studies and careers.
- Motivating and encouraging students in all activities.

THANK YOU FUNDERS!



2022 PROGRAM RECAP

GIRLS IN STEM FILM FEST

SEPTEMBER 16-18

In partnership with Breckenridge Film Festival, 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. All parents received free entry to the final presentation.



**WATCH THE SHORT
FILMS CREATED [HERE!](#)**



SCHEDULE

Friday

- Overview of the weekend and film studies
- Film 101: Careers & Roles and Mentor Presentation
- Girls brainstormed their films within a group of similar aged peers

Saturday

- Instructional films on the management of space and film qualities and techniques
- Girls sketched out their films and began filming
- Question and Answer session over lunch with female mentors
- Editing of films and preliminary work on their movie's poster
- Watch and discuss the making of Ashly Avis' film Black Beauty

Sunday

- Groups completed final edits on their films
- Breckenridge Film Festival hosts the red-carpet debut of the girls' films
- Girls' films are shown at the Film Festival with parents in attendance



SCHEDULE

Friday

- Introduction to Water in the West activities and videos.
- Students met the workshop's mentors.
- Girls had time for reflection on learning

Saturday

- Field Day on local trails
- Activities included: Plumbing the Colorado River, building a watershed, and chemical water testing
- Visit Loveland Pass to discuss the Continental Divide
- Sledding at Dillon Nature Preserve
- Dinner with mentors and campfire with S'mores

Sunday

- Mining activity with cookies
- Environmental justice activity with mentors
- Presentations with parents

GIRLS IN STEM WATER IN THE WEST

NOVEMBER 4-6

Keystone Science School's Girls in STEM: Water in the West focused 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 learned about watershed science, water management strategies, and challenges faced by real-world water management stakeholders.

As participants worked through the consensus building process they had the opportunity to hear from women connected to the water industry, and learned about the barriers they have faced as women and how they overcame those challenges.

BY THE NUMBERS

37

NUMBER OF GIRLS SERVED

\$1,163

IN FINANCIAL ASSISTANCE
PROVIDED BY KSS

COLORADO HOMETOWNS

Denver	Louisville
Wheatridge	Dillon
Silverthorne	Frisco
Littleton	Arvada
Thornton	Creede
Aurora	Golden
Fort Collins	Morrison
Breckenridge	Lakewood



GIRLS IN STEM TESTIMONIALS

What did you enjoy about this program:

“Everything. Mostly getting to talk to professionals about what I have been interested in for a very long time.”

“I enjoyed hanging out with other girls and getting to know other people and learn about them. I enjoyed learning about film and just being able to spend time at camp.”



What STEM Careers did you learn about:

“How you can be an influencer about stem and science and still do well.”

“I learned about water specialists and people who help out with the water community.”



LOOKING TO THE FUTURE

UPCOMING GIRLS IN STEM PROGRAMS

GIRLS IN STEM

SNOW & AVALANCHE SCIENCE

FEBRUARY 10-12, 2023

Participants will learn 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 will learn how to measure snowpack stability, snow water equivalent, as well as how to use avalanche beacons. Additionally, students will have the opportunity to cross country ski and meet avalanche dogs.

As participants gain hands-on experience with using the Design Thinking Process, they will have the opportunity to hear from women working in ski patrol and avalanche safety and learn about the barriers they have faced as women and how they have overcome those challenges.



GIRLS IN STEM BIOMEDICAL RESEARCH

APRIL 28-30, 2023

Specifically, participants will learn about bioengineering and healthcare in partnership with The Steadman Philippon Research Institute (SPRI).

Girls will also have an interactive experience that includes a Question and Answer session with SPRI scientists. These experiences will connect girls to women's experiences in the industry to learn about the unique challenges women faced and how those were overcome.





Keystone
Science School

Keystone Science School, 1053 Soda Ridge Rd., Keystone, CO 80435
(970)468-2098 Support@KeystoneScienceSchool.org



THANK YOU!

