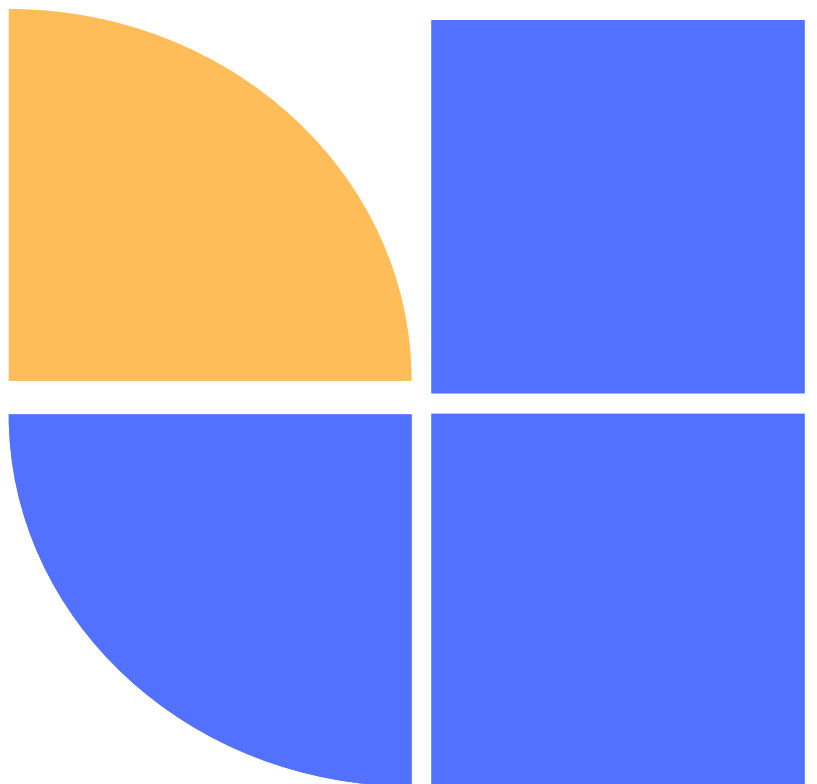


Hands-On Science Program 2022/2023 Annual Report



Prepared By: Kristen Bonner

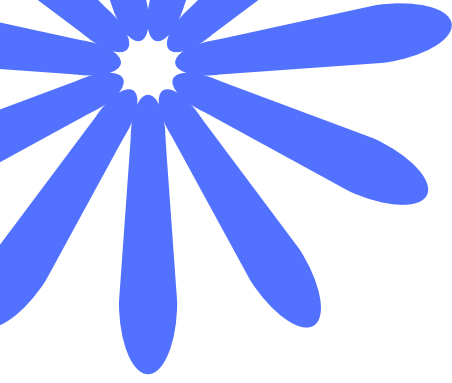
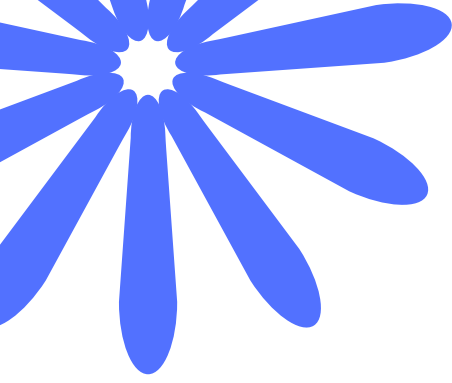


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Hands-On Science Teacher's Message

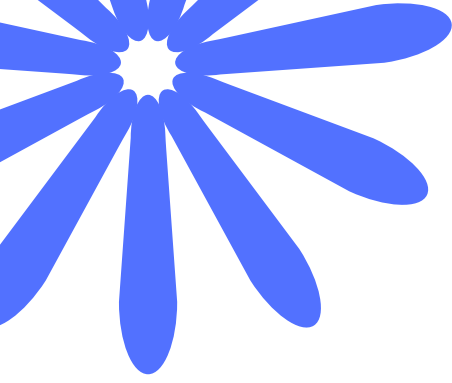
Over my six years as the Hands-On Science Teacher, I have collaborated with faculty, staff, administrators, families, and community partners to add value to the science and engineering education of our Indian Hills students.

My collaborators and I began by shifting our scripted hands-on science activities to teacher-guided and student-driven science and engineering labs that align with best practices in science education to promote curiosity and sense making. We continually strive to integrate science and engineering lab learning into classroom curriculum allowing students to make more connections.

We then expanded Hands-On Science beyond our school building and grounds to offer outdoor science-based field trips where students connect their classroom and science and engineering lab learning to their greater community. We are thrilled that every grade has at least one field trip per year! Additionally, through classroom visits from community partners we expose our students to resources that are not readily available in our school, such as 3 million year old fossils, that support student learning about past environments.

This year we separated our kindergarten through 6th grade Science, Technology, Engineering, Arts, and Math Fair (STEAM) into two distinct STEAM Fairs, one for kindergarten through 3rd grade held in October and one for 4th through 6th grade held in January. In the 2021/2022 scholastic year, 78 students in grades kindergarten through 6th grade participated in the STEAM Fair. This year, 261 students participated in the STEAM Fairs. By separating the STEAM Fair, our Indian Hills community was better able to assist our students in completing a STEAM Fair project.

Lastly, we launched the Green Team in September. The Green Team is a student-lead and project-based club that works to promote environmental awareness through education resulting in sustainable practices in our Indian Hills community based on the SLCSO Sustainability Action Plan. Students researched, problem solved, shared their learning, joined together with our school community to make behavioral changes, and celebrated our actions that benefit our broader world.

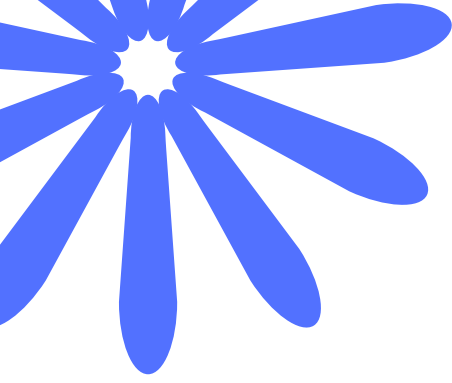


Hands-On Science Teacher's Message

All of our efforts have led to a robust Hands-On Science Program that contributes to student enjoyment and success. In 2019, 59% of 4th through 6th grade Indian Hills students scored proficient or higher on the end of level state science test. This year that number increased to 77%. This level of student growth takes hard work, coordination, and collaboration between the Hands-On Science Program, classroom teachers, specialty teachers, families, staff, administration, community partners, and the students.

Thank you for being part of the Indian Hills community that supports student learning. In this report you will find highlights from the 2022/2023 scholastic year and future goals for the elements of the Hands-On Science Program. I look forward to continuing to grow and build upon our strong foundation with you to facilitate the best possible science and engineering educational experience to our students.

Kristen Bonner
Hands-On Science Teacher
indianhillsscience@gmail.com



Hands-On Science

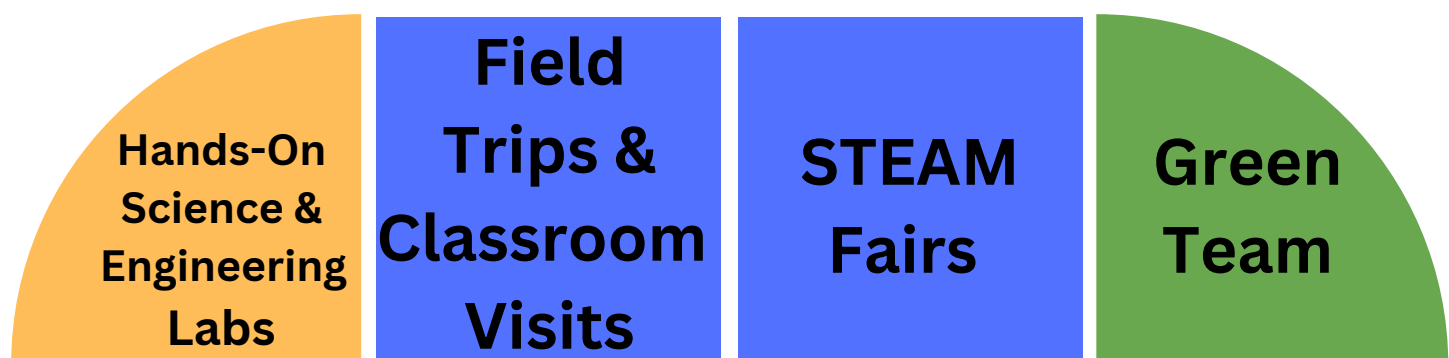
The Vision:

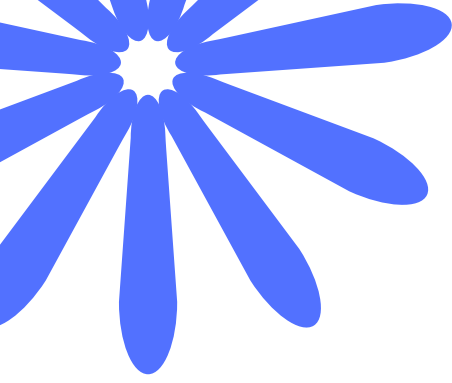
Inspire an excellence in and a passion for science and engineering.

The Mission:

Cultivate curiosity, connections, and critical thinking skills through science and engineering education rooted in the Framework for K-12 Science Education for Indian Hills learners of all ages.

The Elements:





Hands-On Science By the Numbers

2022/2023

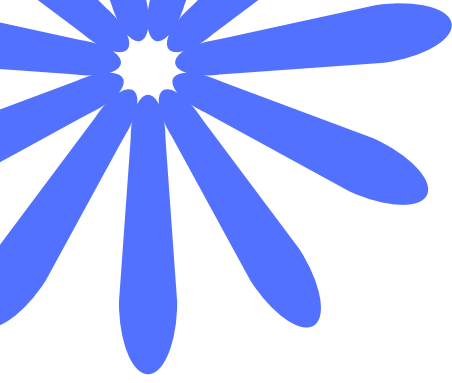
**78 Science
& Engineering
Labs**

**15 Field Trips
& Classroom
Visits**

**261
STEAM Fair
Student
Participants**

**6
Green Team
Projects**

299 Volunteers Donated 1,062 Hours



Science & Engineering Labs

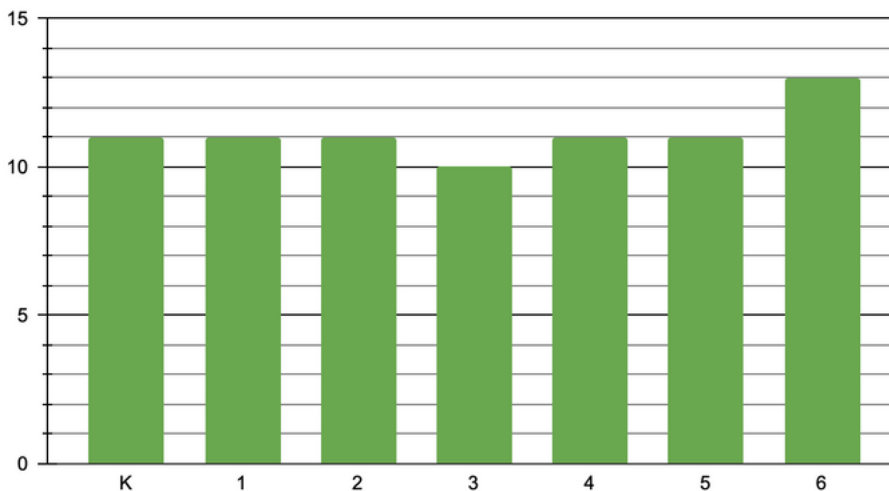
2022/2023

Purpose:

Support student learning through coordination and collaboration with classroom teachers to provide 10 hands-on science & engineering labs for every class throughout the year.

By The Numbers:

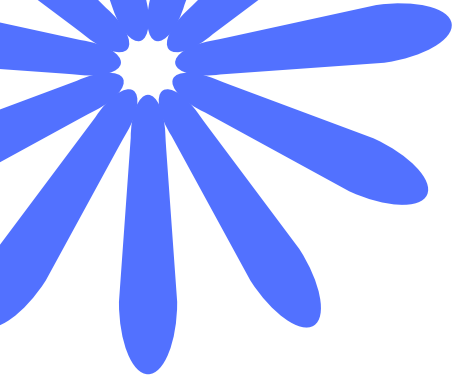
Number of Hands-On Science Labs Per Grade



160
Volunteers
Donated
199 Hours

Future Goals:

- Increase coordination and collaboration with classroom, art, and library teachers.
- Develop clear guiding questions for each lab that will be used as an assessment.
- Create garden labs for each grade.
- Create community science labs for each grade.



Field Trips & Classroom Visits

2022/2023

Purpose:

Connect classroom learning to science & engineering experiences from and within our greater community.

By The Numbers:

79
Volunteers
Donated
522 Hours

11
Field Trips

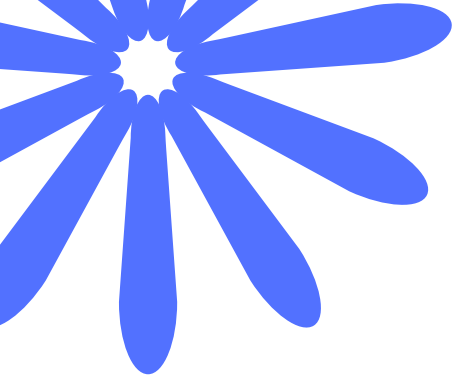
4
Classroom
Visits

- Kindergarten - Hogle Zoo & Dandelion Day at Donner Park
- 1st Grade - Great Salt Lake State Park
- 2nd Grade - Eccles Wildlife Education Center at Farmington Bay
- 3rd Grade - Wasatch Mountain State Park
- 4th Grade - The Nature Conservancy's Wings & Water Wetlands Education Program at Great Salt Lake Shorelands Preserve
- 5th Grade - Three Creeks Confluence to the International Peace Gardens
- 6th Grade - Antelope Island State Park, Wasatch Mountain Institute's Rock Cliff Nature Center, Jordan Valley Water Conservancy District's Water Treatment Plant, & U of U Atmospheric & Earth Science Department

- 1st Grade - Ogden Nature Center & Red Butte Garden
- 6th Grade - Air Quality Lego Sensors, U of U Environmental Studies Program & Earth Matters Game Development and Play

Future Goals:

- Further integrate field trip experiences into classroom learning.
- Coordinate and collaborate with classroom teachers to be aware of and when possible attend science & engineering based field trips and classroom visits.
- Secure funding for supplies & staff time.



STEAM Fairs

2022/2023

Purpose:

Provide a fun and meaningful way for students to engage with science & engineering ideas, concepts, and practices.

By The Numbers:

261 students participated in Indian Hills STEAM Fair

22 students from 12 projects progressed to SLCSD Science & Engineering Fair

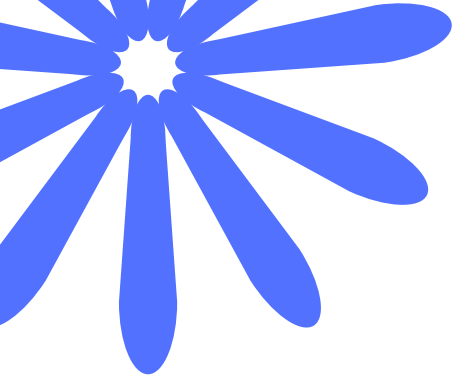
18 students from 10 projects progressed to U of U Science & Engineering Fair

11 students from 6 projects placed at U of U Science & Engineering Fair

33 Volunteers Donated 216 Hours

Future Goals:

- Coordinate and collaborate with classroom teachers so that every student at Indian Hills participates in our STEAM Fairs.
- Secure funding for supplies & staff time STEAM Fairs.



Green Team

2022/2023

Purpose:

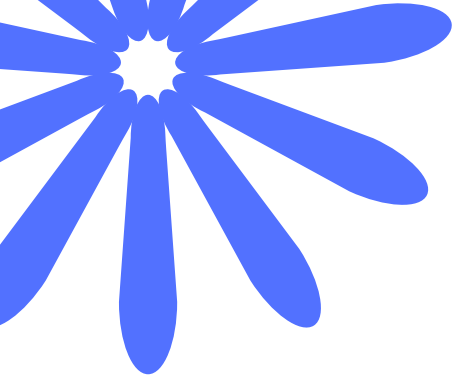
Promote environmental awareness through education resulting in students, faculty, staff, and the greater school community engaging in more sustainable practices.

By The Numbers:



Future Goals:

- Begin mixed recycling in our cafeteria.
- Reduce school electricity use.
- Compare waste management and recycling data between years.
- Secure funding for supplies and staff time for Green Team.



Financial Report

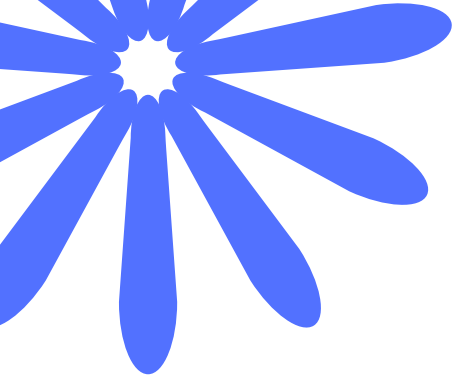
2022/2023

Funding Sources:

Funder	Amount
SITLA Funds allocated by SCC for MOU	\$16,000
BOOT Funds for MOU	\$7,500
Supply Funds allocated by Indian Hills	\$1,700
Supply Funds allocated by BOOT	\$300
STEAM Fairs Funds allocated by PTA	\$400
Green Team Funds allocated by Indian Hills	\$250
Total	\$26,150

Donations Received:

Description	Amount
The Nature Conservancy of Utah - Field Trip Bus Funding	\$225
Wasatch Mountain Institute & SLCS D Science Department - Field Trip Bus Funding and Cost	\$1,700
Indian Hills Family - Field Trip Entry to Great Salt Lake State Park	\$70
SLCS D Science Department - STEAM Fair Trifold Boards	\$75
SLCS D Facility Services - Yellow Mixed Recycling Bins	\$182
U of U Center for Science & Mathematic Education - Science & Engineering Lab Supplies	\$1,500
Total	\$3,752



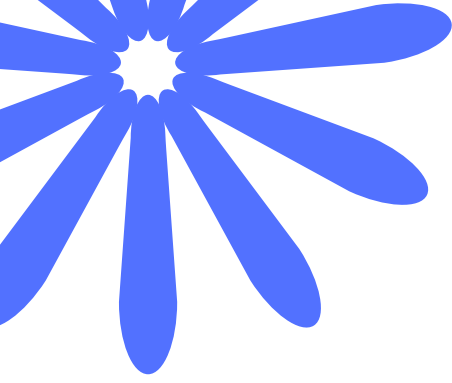
Financial Report

2022/2023

General Budget:

Science & Engineering Labs	
Supplies	\$1,000
Time	440 Hours
Field Trips & Classroom Visits	
Supplies	\$400
Bus Travel	\$2,000
Car Travel	\$65
Fees	\$200
Time	150 Hours
STEAM Fairs	
Supplies	\$600
Fees	\$450
Time	120 Hours
Green Team	
Supplies	\$350
Time	40 Hours
Hands-On Science Supplies, Fees, Travel Total	\$5,065
Hands-On Science Time Total	750 Hours

A detailed breakdown of expenses is available on request.



Professional Learning

Purpose:

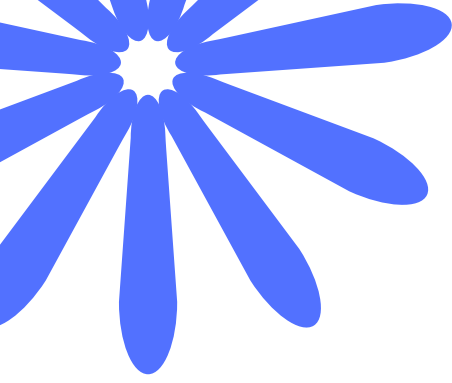
To maintain best practices in science & engineering education, informal science education, outdoor environmental education, and elementary education, the Hands-On Science Teachers participates in the greater education learning community.

Completed 2022/2023:

- Became Certified Interpretive Guide from the National Association for Interpretation, May 2023
- Attended Nature Journaling class from Natural History Museum of Utah, January 2023
- Guest speaker for the Utah Academy of Engineering and Science, December 2022
- Coordinated and hosted an informal gathering of Utah Society for Environmental Education supporters at the Utah Museum of Fine Arts, Fall 2022

On-Going:

- SLCSD Science & Engineering and Invention Convention Coordinator, Fall 2021 - Present
- University of Utah Science & Engineering Fair Planning Committee, Fall 2021 - Present
- Friends of Great Salt Lake, Board Member, Education Committee Chair, Fall 2018 - Present
- Volunteer Naturalist for the Nature Conservancy and USU Botanical Center's Wings & Water 4th Grade Field Trip Program, Fall 2017 - Present



Further Engagement

A heartfelt thank you to:

- BOOT, PTA, & SCC for funding the Hands-On Science Program
- Indian Hills staff, faculty, and administration for their flexibility, coordination, & support
- Family & friends of students for volunteering their time, knowledge, and enthusiasm
- The Green Team
 - 5th & 6th Grade Students: Parker, Sydney, Nora, Ellen, Lily, Lavi, Gwen, Shannon, Jack
 - Faculty: Ms. Starr & Ms. Mills
 - Administration: Mr. Luthy & Mr. Horne
 - Staff: Mr. Zavala
 - Community Representative: Jen Solomon
- Community Partners - SLCSD Science Department, Sam Mills at SLCSD Facility Services, Greg Lebecchi at SLCSD Sustainability, Utah's Hogle Zoo, SLC Public Lands Department, Great Salt Lake State Park, Eccles Wildlife Education Center, Wasatch Mountain State Park, The Nature Conservancy, Utah State University, Cottonwood Canyons Foundation, Seven Canyons Trust, Jordan River Commission, Antelope Island State Park, Wasatch Mountain Institute, Jordan Valley Water Conservancy District, University of Utah, Friends of Great Salt Lake, Earth Matters Game, Red Butte Garden, Ogden Nature Center, Natural History Museum of Utah, Utah Geological Survey, Ace Recycling and Disposal

Find more Hands-On Science at:

indianhillsscience.com

Instagram @krispmb80 or #indianhillsschoolhandsonscience

LinkedIn at Kristen Bonner