FY 2023 ANNUAL REPORT

Utah STEM
Action Center

Utah STEM Action Center

MISSION

The STEM Action Center is Utah's partner in promoting Science, Technology, Engineering, and Math education through the identification and support of best practices and leveraging of resources across education, industry, government, and community partners to support economic prosperity.

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CCE DEPARTMENT HIERARCHY

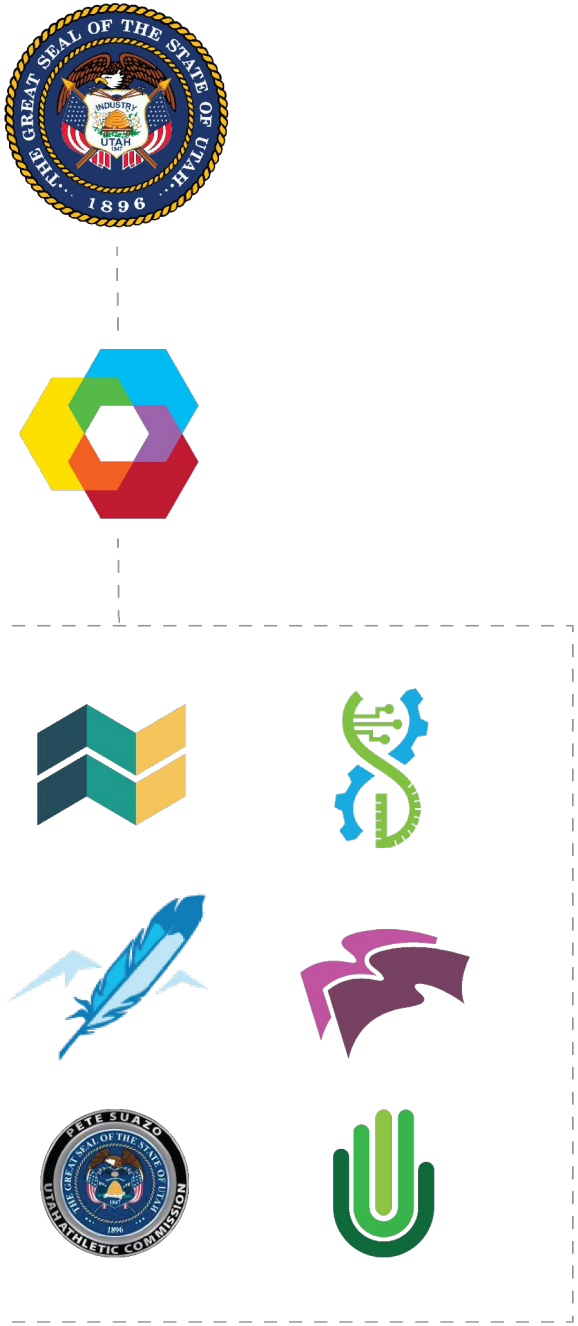
The Utah Department of Cultural & Community Engagement collaborates internally and aligns with the Utah Governor's office to create a vibrant place for all state residents to thrive.

Each of our seven divisions and two offices strive to achieve three overarching goals through unique programs that serve all corners of Utah.

1 Create opportunities for community understanding and civic engagement throughout Utah.

2 Ignite curiosity, creativity, and passion for learning and service.

3 Preserve, protect, and activate Utah's historical and cultural treasures.

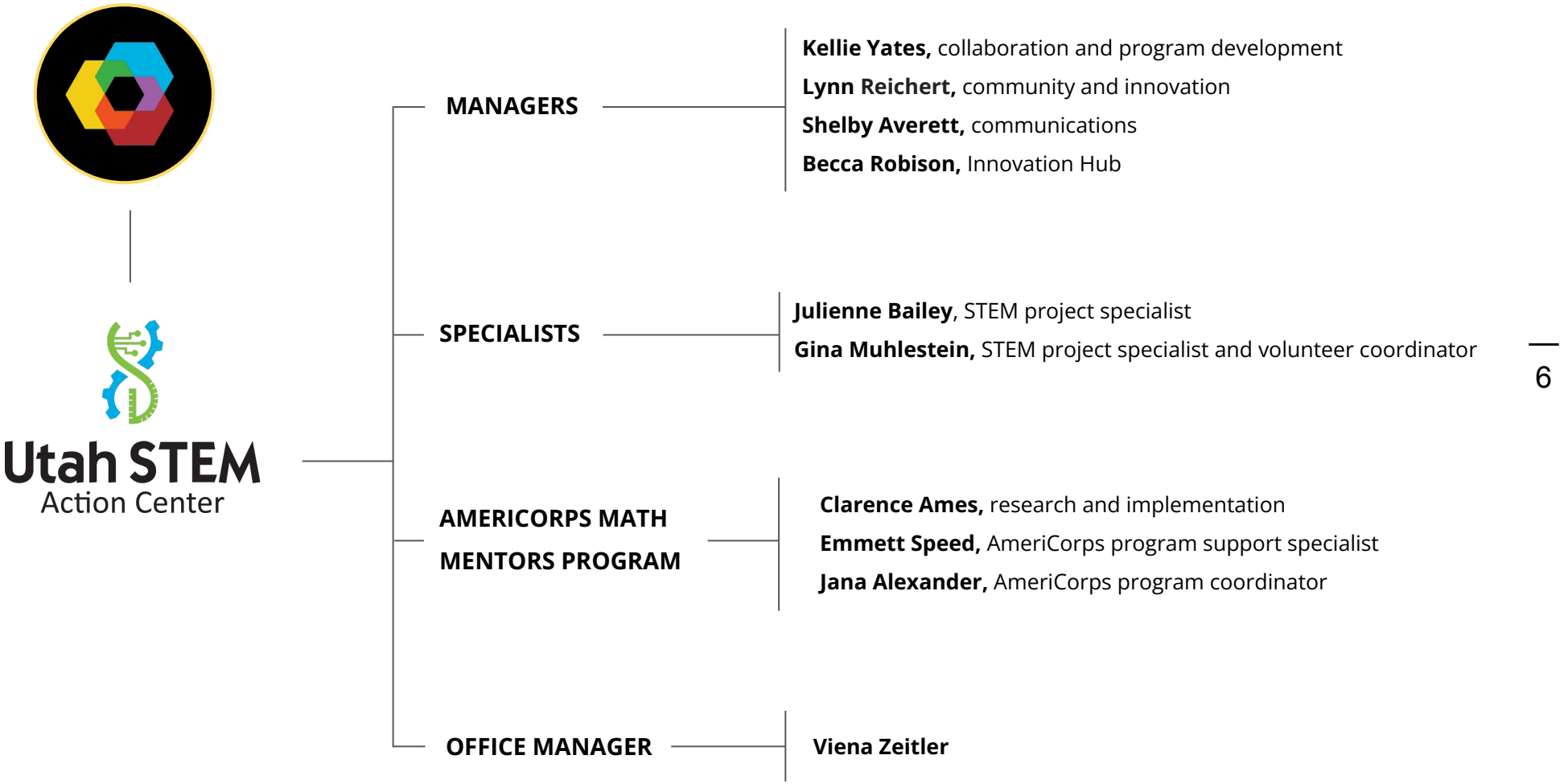


Dr. Tamara Goetz
Director
tgoetz@utah.gov

Sue Redington
Program Director
sredington@utah.gov

Allison Spencer
STEM Foundation Director
aspencer@utah.gov

STEM ACTION CENTER ORGANIZATION



PRIORITY SUCCESS

FIRST ANNUAL WEEK OF STEM

The first annual Week of STEM celebrated “all things STEM” and served as an opportunity to create greater access for students, educators, and communities in Utah. Private-public partnerships were critical to helping us achieve that goal.

During and following the inaugural Week of STEM, the STEM Action Center highlighted six programs: Robotics, Club Ability, Tech-Moms, Chief Science Officer, Micro STEM Fest Kit, and Hydroponics.

The Center raised $7,000 from industry partners, matched by $7,000 from the Utah STEM Foundation for Robotics. The Chief Science Officer pilot program was launched with 24 students from nine schools. There were 50 Micro STEM Fest Kits (in partnership with Utah Valley University’s School of Education) checked out and used for schools and community events.

In addition, 37 schools and 12 Utah libraries established the Hydroponics program in partnership with Green Our Planet.

PRIORITY SUCCESS

MILO & FRIENDS PROGRAM

The MILO & Friends program (Math Introductions and Learning Opportunities) provides resources for pre-K early math engagement in Utah communities and homes. The program was designed to support pre-K math learning in everyday activities, such as dinner and outdoor play, with the goal to facilitate greater success in kindergarten math.

The STEM Action Center staff, in collaboration with partners, have delivered more than 4,500 board games to families at Family Math Nights and Early Math Engagement events. These intentionally selected games teach important early math skills, such as symbolic number recognition and one-to-one correspondence. Most importantly, the games help parents overcome hesitation to engage in math conversations with their children.

In addition to giving out board games, the MILO & Friends program partnered with Loveland Living Planet Aquarium to start an early math scavenger hunt, and placed informational signs at Salt Lake County' Wheeler Farm to help inspire math conversations.

> The exhibits [at STEM Fest 2022] were FANTASTIC and offered our students a wide variety of fun and interesting STEM opportunities. You know it's a successful field trip when parents email and thank you for "stimulating their child's mind" with ideas in the science world. We had a few students go home after our field trip and look up different things that they'd seen and learned about while attending the STEM Fest. THANK YOU for this wonderful opportunity that you provided for our state.

— Ann Kutterer, Syracuse

Innovation Hub

The STEM Action Center's Innovation Hub serves as a community incubator for best practices in STEM and Maker Education. The space intentionally targets people who may not already think of themselves as STEM practitioners, and strives to change minds through purposeful STEM experiences.

In 2021, the Innovation Hub started hosting free, drop-in Tinker Time sessions, inviting people to learn new skills and work on personal projects. The popularity of Tinker Time grew during 2023, so the STEM Action Center pivoted to a reservation model to accommodate the demand. Since April 2023, community members have the ability to reserve a two-hour time slot.

In February 2023, the STEM Action Center also started hosting a monthly Saturday Educator Learning Series workshop, which pairs makerspace tools with state content standards.

Best Practices Conference

STEM Best Practices is a conference targeted to educators, offered as single event in the summer since 2015. Feedback from attendees indicated that many educators were not able to attend because of long travel distances.

Beginning in summer 2022, the STEM Action Center offered the conference at three locations, with two additional events at locations off the Wasatch Front. Different breakout sessions were offered at the three locations, but all conferences emphasized hands-on learning opportunities aligned to content standards. Breakout sessions were recorded for educators who weren't able to attend.

Survey data showed that having multiple locations was a priority for attendees, and respondents also underscored the value of recorded sessions. STEM Best Practices conference will retain its commitment to multiple locations, going forward with events at two locations, one on and one off the Wasatch Front.

Hydroponics

The Green Our Planet Utah hydroponics project is a trailblazing initiative, aimed at fostering awareness of the delicate balance of natural resources and the imperative to conserve through STEM principles. The project also nurtures the potential for students to shape the future as scientists, farmers, chefs, and entrepreneurs.

The project began with hydroponics installed in 12 Utah libraries: Washington, Enterprise, New Harmony, Springdale, Hildale, Minersville, Moab, Blanding, Monticello, Parowan, and two in St. George. Those systems sparked interest in installing hydroponics systems in schools statewide.

In FY23, we financially supported 37 Utah schools, with funding from Green Our Planet and the Utah STEM Foundation. More than 19,000 students and nearly 400 educators worked with hydroponics systems in the 2022-2023 school year.

Micro STEM Fest

Micro STEM Fest Kits offer 10 stations for a pop-up event that challenges students to work together to learn STEM activities.

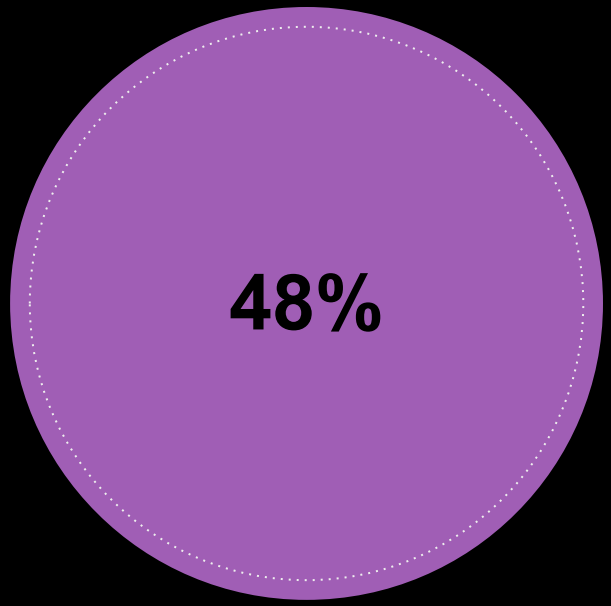
The kits were designed for first- through fourth-grade students, with stations run by fifth- or sixth-grade students. The kits also worked well for community STEM events, such as after-school programming or kids clubs.

Materials, packed into four bins, can be checked out for a two-week period for free. Educators have enjoyed receiving hands-on STEM resources that can be used for large groups of students.

In FY23, 54 kits were checked out, with 16 of those serving Title 1 schools. A total of 13,599 Utah students took part in a Micro STEM Fest.

PERFORMANCE MEASURES

Prioritize **STEM** education to develop Utah's workforce of the future by emphasizing services to rural Utah communities, by measuring the percent of grants awarded off the Wasatch Front.



2023 Target: 40%

40% of the **STEM Innovation Incubator Classroom grants** awarded went to educators off the Wasatch Front (%). $57,352 represents the financial impact to educators off the front.

33% of the Local Education Agencies (LEAs; school districts and charter schools) participating in the **Professional Learning programs** were off the Wasatch Front. The total financial impact of this program to rural communities was $644,380.

39% **STEM Community Impact sponsorships** went to organizations off the Wasatch Front. The total financial impact of this program to rural communities was $45,550.

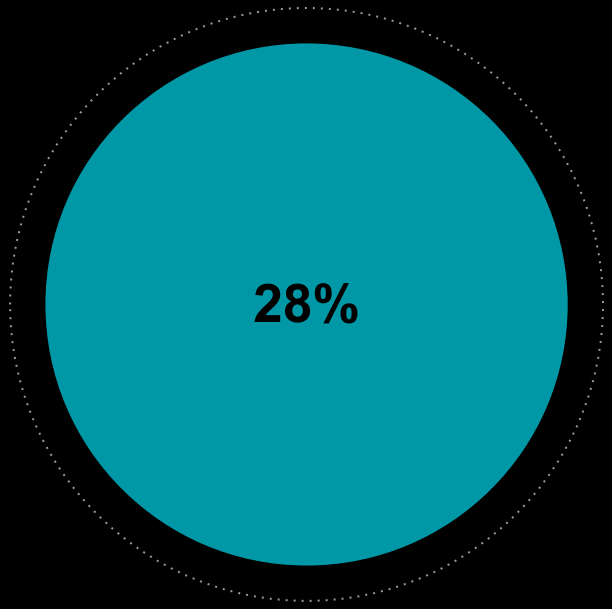
32% of the **Green Our Planet Hydroponics programs** were awarded to schools off the Wasatch Front. The total financial impact of this program to communities in rural Utah was $120,000.

60% of the LEAs participating in the **Math Personalized Learning program** were off the Wasatch Front. 75% of the LEAs participating in the Math Mentors program were off the Wasatch Front. The combined total financial impact of these math programs to rural communities was $2,084,594.

71% of **Computing Partnership projects** were awarded to LEAs off the Wasatch Front. The total financial impact of this program to rural communities was $644,915.

PERFORMANCE MEASURES

Prioritize **STEM** education to develop Utah's workforce of the future by emphasizing services to communities off the Wasatch Front by measuring percent of curriculum delivered to schools and programs off the Wasatch Front.

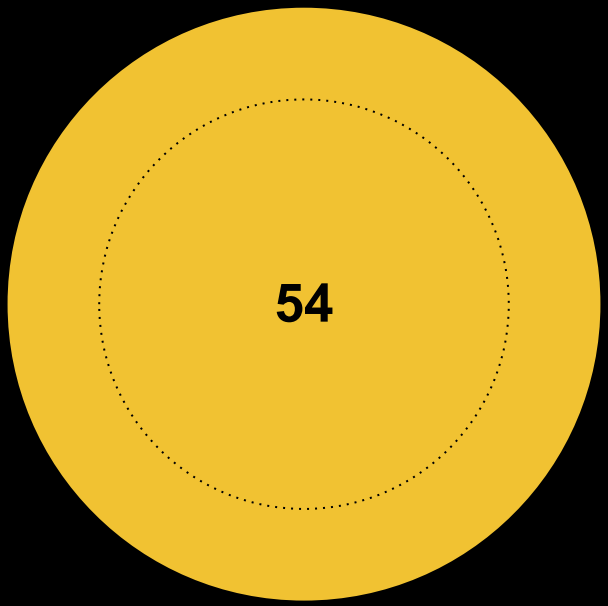


Target: 40%

- 18 out of 64 STEM in Motion kits were delivered to communities off the Wasatch front.
- In the 2024 fiscal year, the STEM in Motion program plans to double the total amount of kit deliveries, as well as nearly tripling the number of deliveries off the Wasatch Front.
- 92% of students reported an increased desire to have a STEM job when they grew up. 95% of teachers strongly agreed that they would recommend the curriculum kit program to other teachers.

PERFORMANCE MEASURES

Prioritize **STEM** education to develop Utah's workforce by exposing them to STEM careers through measuring the number of students attending STEM events that include engagement with corporate partners.



Target: 50

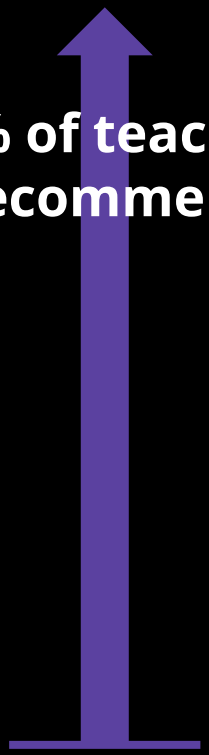
PERFORMANCE MEASURES

STEM Fest

84% of educators say STEM Fest will impact the way they teach and talk to their students about STEM

13,000 attendees

60+ STEM exhibitors



Volunteer Program

319

New Volunteer Registrations

886.9

Volunteer Hours

292

Volunteer shifts at STEM events

STEM ON STAGE

75 schools

45,000 students impacted

2022-2023 | 75 Schools

2021-2022 | 65 Schools

K-12 PERSONALIZED DIGITAL MATH

To view school recipients of this grant program, visit this link.

PROFESSIONAL LEARNING

To view school recipients of this grant program, visit this link.

COMPUTING PARTNERSHIPS

To view recipients of this program, visit this link.

CLASSROOM GRANTS

To view recipients of this program, visit this link.

COMPETITION GRANTS

To view school recipients of this grant program, visit this link.

COMMUNITY IMPACT SPONSORSHIPS

To view recipients of this program, visit this link.

		FY21	FY22	FY23
Revenue	General Fund	6,370,600	1,594,600	1,631,500
	Restricted Revenue			
	Dedicated Credits	22,300	74,400	10,900
	Federal Funds	317,300	244,600	87,200
	Transfer Funds	50,000		
	Pass Through			
	Beginning Balance	102,200	157,200	102,800
	Closing Balance (Non-lapsing)	($1,400,000)	(102,800)	(26,900)
	Lapsing Balance			
	Total Revenue	**5,462,400**	**1,968,000**	**1,805,500**
Expenditures				
	Personnel	1,115,500	1,157,100	915,200
	In-State Travel	900	4,300	4,000
	Out-of-State Travel	-	1,000	8,300
	Current Expense	530,700	390,300	520,100
	Data Processing Current Expense	54,800	198,800	58,700
	Data Processing Capital Expense			
	Capital Expenditures			
	Pass-Through	(1,500)	216,500	299,200
	Total Expenditures	**1,700,400**	**1,968,000**	**1,805,500**

		FY21	FY22	FY23
Revenue	General Fund	3,869,400	9,835,800	9,060,500
	Restricted Revenue			
	Dedicated Credits	-	-	
	Federal Funds			
	Transfer Funds			
	Pass Through			
	Beginning Balance	18,800	1,242,800	703,400
	Closing Balance (Non-lapsing)	0	(703,400)	(1,009,500)
	Lapsing Balance	(780,800)		
	Total Revenue	**3,107,400**	**10,375,200**	**8,754,400**
Expenditures	Personnel	55,000	91,700	604,300
	In-State Travel		4,100	12,300
	Out-of-State Travel			5,100
	Current Expense	3,972,600	3,593,400	3,646,600
	Data Processing Current Expense	-	34,900	7,600
	Data Processing Capital Expense			
	Capital Expenditures			
	Pass-Through	2,841,800	6,651,100	4,478,500
	Total Expenditures	**6,869,400**	**10,375,200**	**8,754,400**

FINAL NOTES | TAMI GOETZ

This anniversary offers a chance to reflect on the first 10 years of the Utah STEM Action Center. The successes, and the learning moments, wouldn't be possible without the passion and commitment of more partners and friends than can be recognized in one annual report. There isn't a program, project, or event that has been launched without the support of many in our STEM community.

We learned that STEM doesn't have a shelf life — it's here to stay. The demand for STEM resources and opportunities has continued to grow over these years. Perhaps it's because we know that the ability to learn through the lens of STEM fosters a mindset of creativity, curiosity, and desire to solve problems. We don't learn STEM in a vacuum — we learn STEM in a world that is immersed in art, music, food, and literature. We are reminded every day that STEM truly is everywhere.

The past 10 years have confirmed many beliefs for us. Math is the key, and we will continue to find ways to ensure that children can build confidence in their math abilities. Educators are superheroes, and should be treated with respect and provided with the resources that they need to continue their superhero work. We must continue to increase access to STEM resources for parents to support education at home, and to help families explore and be curious together.

The team at the Utah STEM Action Center extends sincere gratitude to our friends, partners and advocates. It's humbling to be in a community that is motivated by the desire to improve the lives of children, youth, parents and educators across the state.

STEM ACTION CENTER STRATEGIC PLAN
STEM STORIES

UTAH STEM ACTION CENTER
3848 S. West Temple | South Salt Lake, UT 84115
801.535.3970

A DIVISION OF THE DEPARTMENT OF CULTURAL & COMMUNITY ENGAGEMENT
3760 S Highland Drive | Millcreek, UT 84106

> stem.utah.gov

Utah Department of Cultural & Community Engagement

Utah STEM Action Center