



# **FY 2022** ANNUAL REPORT



## 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.

# TABLE OF CONTENTS

4 **ABOUT**

7 **SUCCESSSES**

10 **2022 EVOLUTION**

17 **BUDGET INFORMATION**

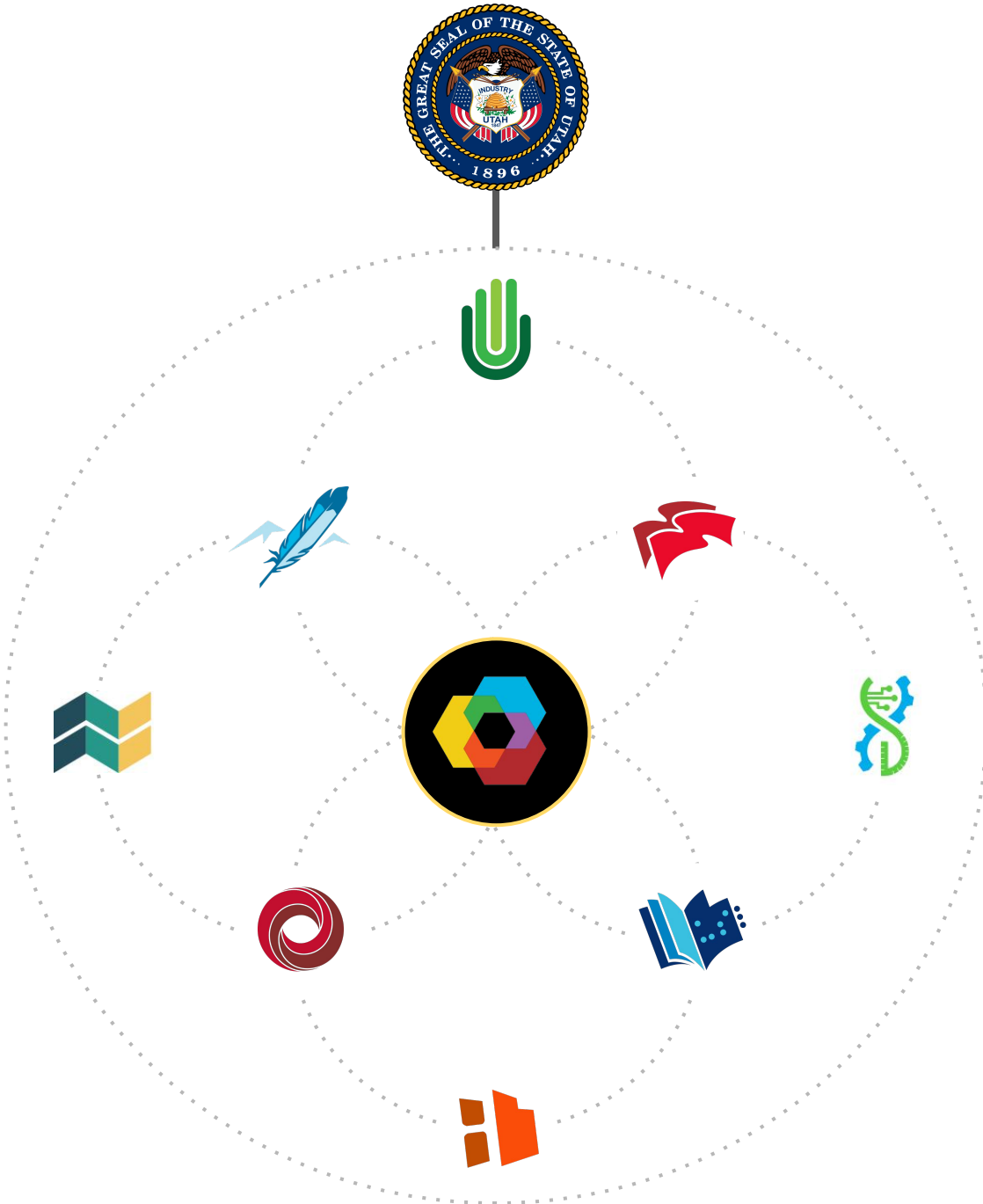
19 **CLOSING**

## 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.



## DIVISION LEADERSHIP



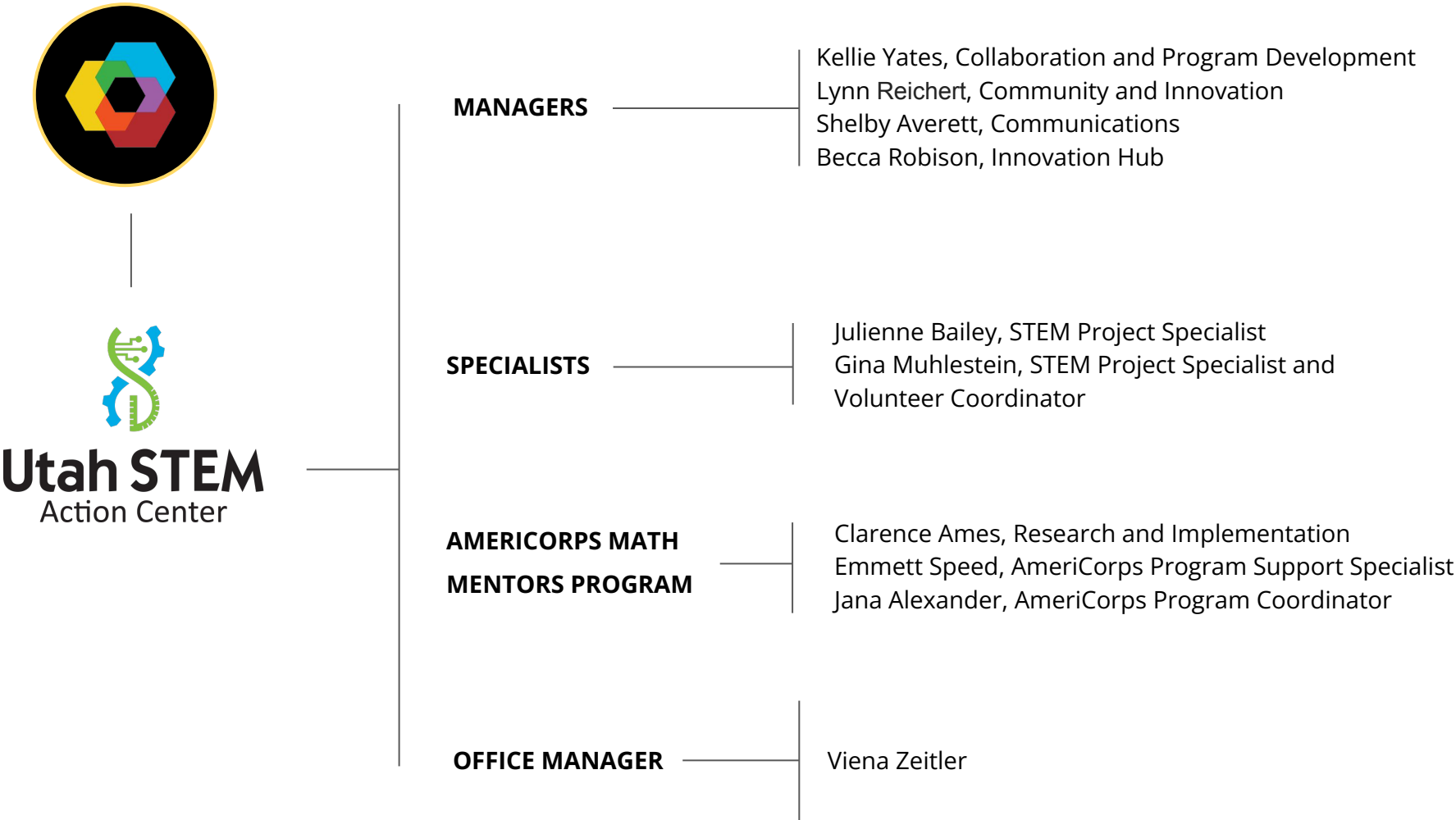
Dr. Tamara Goetz  
**Director**  
tgoetz@utah.gov



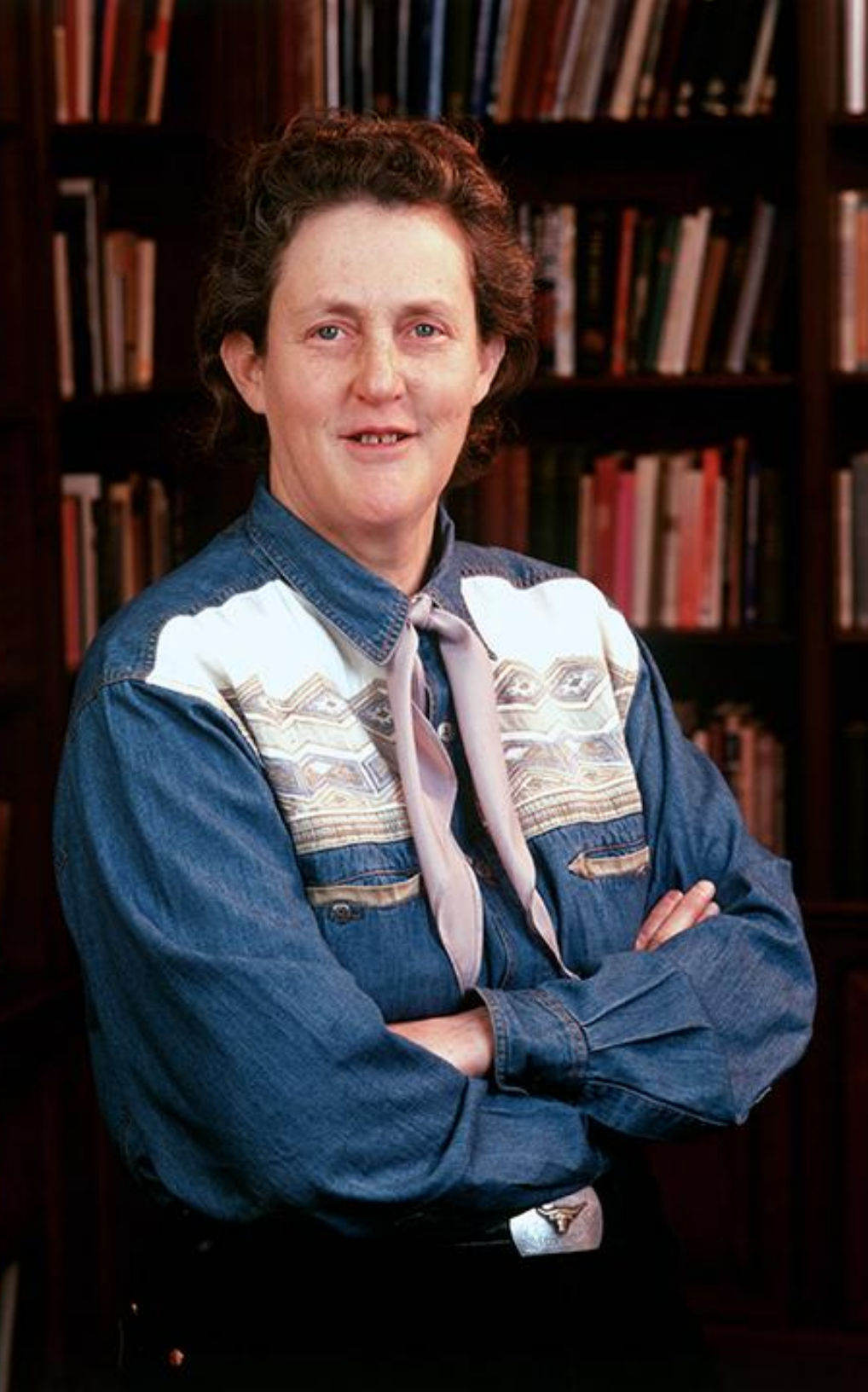
Sue Redington  
**Program Director**  
sredington@utah.gov



Allison Spencer  
**STEM Foundation Director**  
aspencer@utah.gov







PRIORITY SUCCESS

## STEM PODCAST LAUNCH

**“How’d You Think of That? with Temple Grandin” explores diversity and innovation through conversations with STEM professionals.**

The podcast explores how STEM professionals see and solve critical issues in our society through diverse thinking. Dr. Grandin has engaging conversations with professionals and gives listeners a chance to learn about careers, exciting innovations, and insight into how education and hands-on experiences can inspire curiosity and a love of STEM. The first season has had 2,398 downloads, from every continent and in nearly every state in the United States. The series’ average weekly downloads ranks in the top 50% of podcasts. It was picked up by Utah Public Radio and premiered on June 3, 2022.



## PRIORITY SUCCESS

# CREATING AN INNOVATION HUB NETWORK

**The Utah Innovation Hub Network creates statewide support for schools, libraries, and communities across the state.**

Since opening its doors in June 2021, the Innovation Hub has continued to gain momentum and has observed a clear demand and need for high-quality, STEM-focused makerspace opportunities. As a statewide agency, the STEM Action Center recognized its unique position to promote and support makerspace resources and best practices across the state.

In November 2021, the Utah Innovation Hub Network held its first meeting attended by representatives from Utah Valley University, Southern Utah University, Utah Tech University, the Southeast Education Service Center, and the State Library Division.

Hub partners are dedicated to providing resources, such as curriculum support and technical assistance, to school and community makerspaces and STEM centers, with the intention of developing impactful opportunities throughout the state. Staffing of Hub sites will be supported by an AmeriCorps grant awarded to the STEM Action Center. AmeriCorps members will provide onsite support for new programs and field support to schools and community partners.





We have greatly appreciated the help and support of the STEM Action Center, not just with funding, but additional support through networking with other districts around the state and expertise. With their support, [Iron County School District] students have a more robust opportunity to explore computer science. Thank you!"

— Iron County School District Administrator

## CHANGES TO EXISTING PROGRAMS



### K-12 PERSONALIZED MATH

The STEM Action Center created the AmeriCorps Math Mentors program to support elementary and secondary students struggling in math. Kindergarten math entry scores predict future success in reading, math, and careers.

To help with early math learning, we have created the MILO (Math Introduction and Learning Opportunities) & Friends program targeting math learning from ages 0-5. This program includes signage with activities at Salt Lake County's Wheeler Farm. It will also include Family Game Nights with math-focused games for families to play with young children.



### STEM PROFESSIONAL LEARNING

In addition to serving 2,972 formal educators via district and school-designed STEM professional learning programs, we also piloted a professional learning grant program for institutions that provide informal STEM learning opportunities. These informal participants — including Utah's Hogle Zoo, Red Butte Garden, and Hawkwatch International — reported impacts such as an increased ability to inspire guests to care about science, an increased comfort in approaching visitors of all ages and demographics, and increased knowledge of how to encourage interactions with STEM topics.

Another change in the professional learning program will be the addition of the STEM Education Innovator component. This cohort-based program will develop STEM educators who commit to staying in the classroom while also becoming a Teacher Leader.

## NEW PROGRAMS



### STEM BEST PRACTICES

The 2022 Best Practices conference was held in three locations to reach more educators, and focused on hands-on STEM activities with the “I Am STEM” theme. The conference was held on June 6 in Ogden, June 9 in Price, and June 13 in St. George. More than 500 educators attended across the three locations.

The feedback from our post-conference survey showed that attendees appreciated that the conference took place outside of the Wasatch Front. We plan to host conferences in two locations in the future, one in a metro area and another other in a rural area.

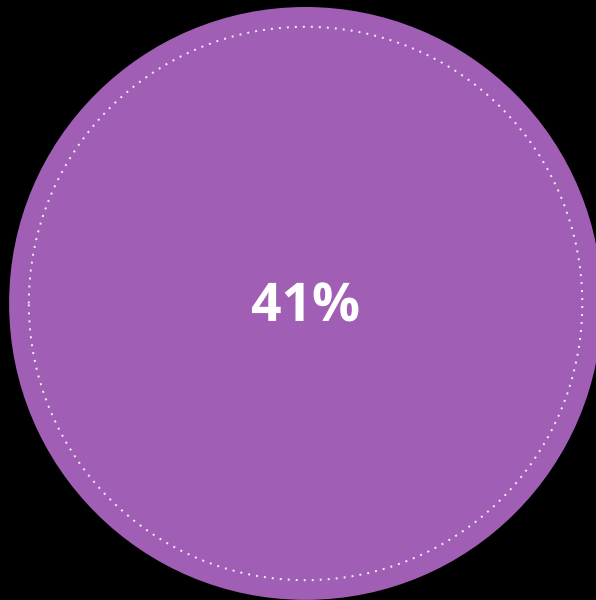


### COMPETITIVE ROBOTICS TEAMS

The Utah STEM Foundation has committed 50% matching funds to support 20 new robotics teams for children and youth that typically do not have access to participation. The remaining 50% is being matched by industry partners. Currently, five teams have been supported.

## 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.



Target: 40%

**14 out of 33 STEM Community Impact Sponsorship grants** awarded went to organizations off the Wasatch Front **(42%)**; \$36,786 of \$76,386 awarded went to organizations off the Wasatch Front **(48%)**.

**24 of 66 Innovation Incubator Classroom Grants** awarded went to educators in communities off the Wasatch Front **(36%)**; \$25,791 of \$77,280 awarded went to classrooms off of the Wasatch Front **(33%)**.

**9 of 24 LEAs** (school districts and charters schools) participating in the **Professional Learning grant program** were located off of the Wasatch Front **(38%)**; \$546,700 of \$3,063,800 awarded went to LEAs off of the Wasatch Front **(18%)**.

**12 of 17 LEAs** (school districts and charters schools) participating in the **Computing Partnerships grant program** were located off of the Wasatch Front **(71%)**; \$694,936 of the \$1,127,164 awarded went to LEAs off of the Wasatch Front **(61%)**.

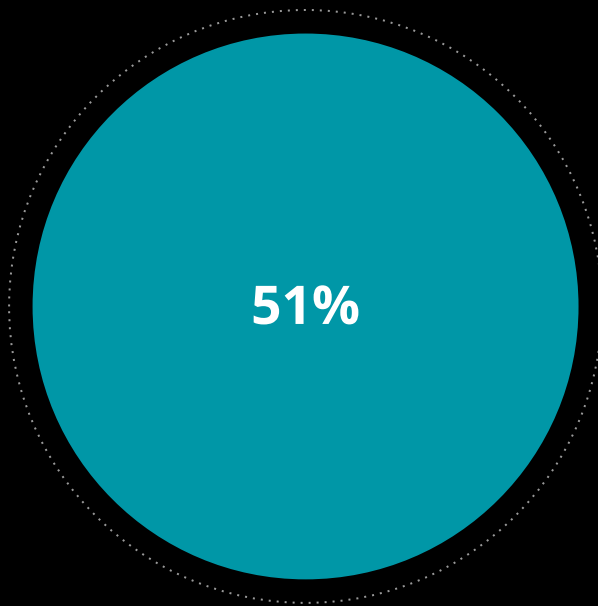
**4 of 30 Competition Grants** were awarded to schools off the Wasatch Front **(13%)**; \$12,626 of \$37,802 awarded went to LEAs off of the Wasatch Front **(16%)**.

**42 of 94 LEAs participating in Math Personalized Learning grants** were off the Wasatch Front **(45%)**; \$752,933.97 of \$3,252,006.84 went to provide software licenses to students off the Wasatch Front **(23%)**.



## 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.



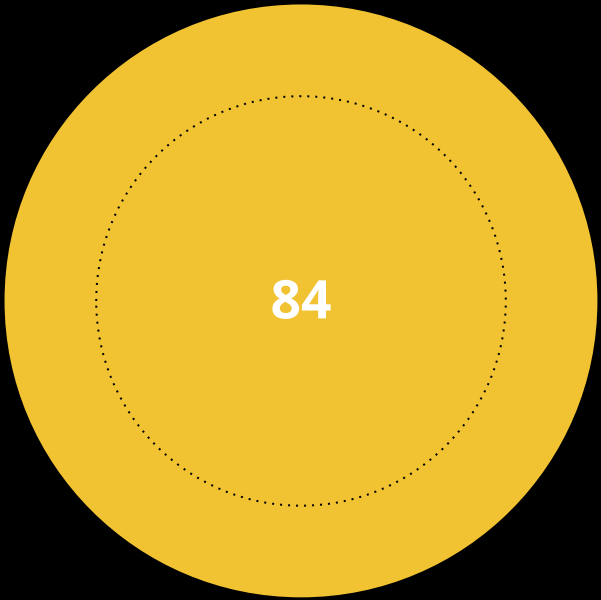
**Target: 30%**

The STEM in Motion team provided services to 134 schools and programs, 69 of which were located off the Wasatch Front (51%).

In FY23, the STEM in Motion program plans to increase sustainability of curriculum deliveries, and focus on integrating teacher feedback to increase the quality and comprehensiveness of curriculum.

PERFORMANCE MEASURES

Prioritize STEM education to develop Utah’s workforce of the future by measuring the number of students attending STEM events that include engagement with corporate partners.



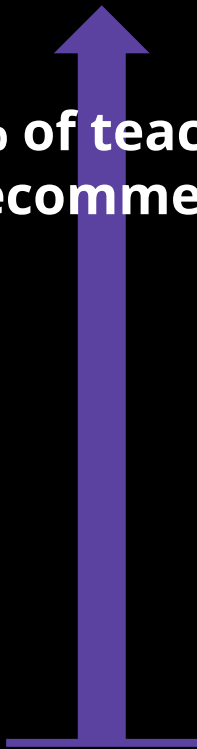
Target: 50

## PERFORMANCE MEASURES

### STEM in Motion classroom kits.

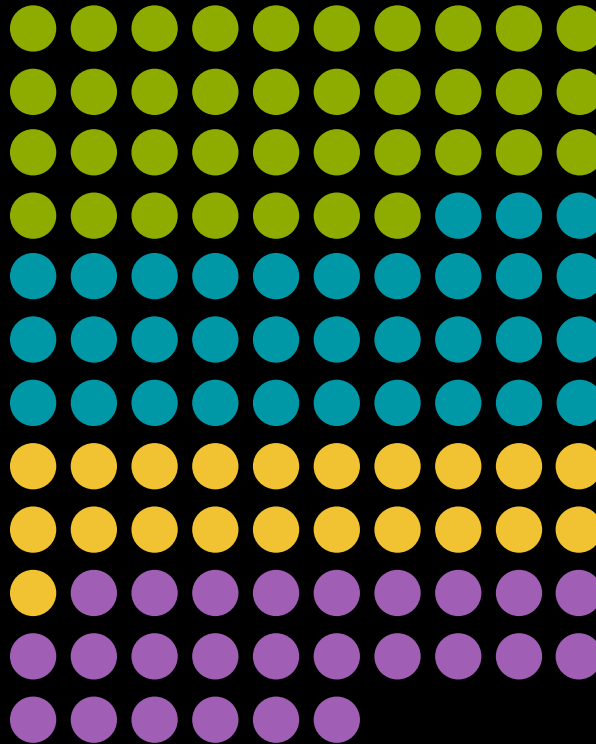
Through survey responses, student interest in STEM increased to 65% from 26% after using the classroom kits. The new kit program also had a great response from teachers: 97% said they would recommend the STEM in Motion program to other teachers.

97% of teachers  
recommend



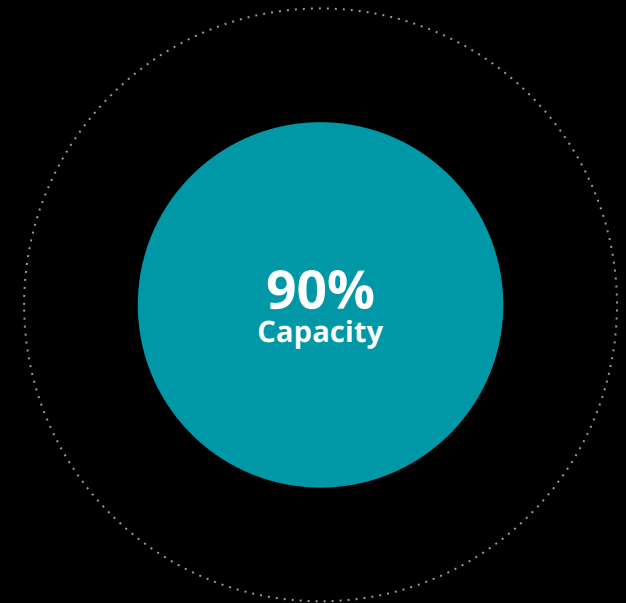
### Increased work-based learning opportunities in Computing.

Fall Semester data shows that **37 internships** were completed. Spring semester data indicates **33 internships** and an additional **21 apprenticeships** were accomplished. Grantees reported that students earned **25 industry-recognized certifications**, a marked increase over past years.



### Increased makerspace opportunities for students.

During Spring and Fall semesters in the 2021-22 school year, 23,392 elementary students, 668 middle school students, and 1,197 high school students participated in makerspace sessions or used makerspace kits sponsored through the Computing Partnerships grants. The frequency of makerspace use of at least once a week was reported as approximately 90% in Fall semester and 76% in Spring semester.



**LIST OF GRANT PROGRAMS AND GRANTEES**

**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 grant recipients, visit this [link](#).

**CLASSROOM GRANTS**

To view grant recipients, visit this [link](#).

**COMPETITION GRANTS**

To view schools who received this grant, visit this [link](#).

**COMMUNITY IMPACT SPONSORSHIPS**

To view a list of awardees, visit this [link](#).



## ADMINISTRATION BUDGET

		FY20	FY21	FY22
Revenue	General Fund	1,367,100	6,370,600	1,594,60
	Restricted Revenue			
	Dedicated Credits		22,300	74,400
	Federal Funds	42,600	317,300	244,600
	Transfer Funds		50,000	
	Pass Through			
	Beginning Balance	288,600	102,200	157,200
	Closing Balance (Non-lapsing)	(121,000)	(276,400)	(102,800)
	Lapsing Balance			
	<b>Total Revenue</b>	<b>1,577,300</b>	<b>5,462,400</b>	<b>1,968,000</b>
Expenditures	Personnel	884,600	1,115,500	1,157,100
	In-State Travel	3,200	900	4,300
	Out-of-State Travel	5,900	-	1,000
	Current Expense	333,400	530,700	390,300
	Data Processing Current Expense	49,700	54,800	198,800
	Data Processing Capital Expense			
	Capital Expenditures			
	Pass-Through	300,500	(1,500)	216,500
	<b>Total Expenditures</b>	<b>1,577,300</b>	<b>1,700,400</b>	<b>1,968,000</b>

## STEM PROGRAMS

		FY20	FY21	FY22
Revenue	General Fund	5,484,300	3,869,400	9835,800
	Restricted Revenue			
	Dedicated Credits	500	-	-
	Federal Funds			
	Transfer Funds			
	Pass Through			
	Beginning Balance		18,800	1,242,800
	Closing Balance (Non-lapsing)		(1,123,600)	(703,400)
	Lapsing Balance		(780,800)	
	<b>Total Revenue</b>	<b>5,484,800</b>	<b>3,888,200</b>	<b>10,375,200</b>
Expenditures	Personnel	55,000	55,000	91,700
	In-State Travel			4,100
	Out-of-State Travel			
	Current Expense	4,255,600	3,972,600	3,593,400
	Data Processing Current Expense	1,174,200	-	34,900
	Data Processing Capital Expense			
	Capital Expenditures			
	Pass-Through		2,841,800	6,651,100
	<b>Total Expenditures</b>	<b>5,484,800</b>	<b>6,869,400</b>	<b>10,375,200</b>



## FINAL NOTES | TAMI GOETZ

It has been an exciting year for the Utah STEM Action Center and its partners. The Center opened its new Innovation Hub in June 2021, and the Hub has been buzzing with activity and new opportunities. The Hub was originally intended to support robotics by providing a home to numerous teams to build and prepare for competition. It became evident that there is a much greater need; as a result, we launched the new Utah Innovation Hub Network, which will be developed over the next year to provide much-needed support to schools and communities across the state.

The K-12 Personalized Math programs continue to expand and evolve, and the new MILO (Math Introductions and Learning Opportunities) & Friends program will address the need for early math learning resources for parents and young children. The AmeriCorps Math Mentors program completed its first year and is already seeing early success in the pilot.

The Center continues to grow its partnerships and is grateful to the companies, state agencies, education, and community partners that share our passion and commitment to ensuring children, youth, educators, caregivers, and communities have access to STEM experiences and resources. We are excited to continue working to grow and learn together.

[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 Dr | Salt Lake City, UT 84106

---

> [stem.utah.gov](https://stem.utah.gov)



Utah Department of  
**Cultural & Community  
Engagement**



**Utah STEM**  
Action Center