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Timpanogos Elementary STEM Robotics, Coding, AI, and Innovation Summer Camp

Location: Provo, Utah

Dates: June 10th - July 20th

Host: Timpanogos Elementary School and My HomeTown Initiative

Program Lead: Seth Ogoe Ayim, BYU Ph.D. student and Co-founder of Bountiful STEM Educational Foundation, a Utah-based NGO with presence in Ghana as well.

Website: www.bountifulstem.org

Overview

During the summer of 2025, the Bountiful STEM Educational Foundation, in partnership with the My HomeTown Initiative and Timpanogos Elementary School, a Title I public school in the Provo City School District, successfully conducted a six-week, hands-on STEM, Robotics, AI, Coding, and Innovation Summer Camp.

The camp engaged 22 elementary students, many of whom are English as a Second Language Learners (ESL) from immigrant families, providing them with transformative opportunities to build foundational skills in robotics, coding, and engineering design. Beyond technical skills, the program emphasized creativity, teamwork, and problem-solving, empowering students to envision themselves as future innovators and leaders in STEM fields.

This initiative represents a collaborative investment in the future of our community, showing what is possible when schools, local organizations, universities, donors, and business leaders come together to inspire and equip the rising generation with the tools needed to thrive in Utah's growing STEM economy.

What Students Learned

- **Robotics Fundamentals:** Students gained hands-on experience assembling and programming simple robots, sparking curiosity and confidence in engineering and technology.
- **Coding Skills:** Through block-based programming and micro:bits, students were introduced to the logic of coding, enabling them to bring their ideas to life through digital creativity.
- **Engineering Principles:** Learners explored design thinking and the iterative process by testing, refining, and improving their projects, reinforcing problem-solving and resilience.

- **Collaboration and Teamwork:** Working in groups, students tackled challenges together, shared ideas, and built essential communication and leadership skills for future success

Program Highlights

- **Hands-On Projects:** Students engaged in exciting LEGO-based challenges, including building race cars and exploring creative problem-solving activities like the Logo Hotel. These projects helped them apply STEM concepts in fun, practical ways.
- **Mentor Support:** Dedicated instructors and senior volunteers provided consistent guidance, encouragement, and inspiration, creating an environment where students felt supported to take risks, explore ideas, and innovate.
- **Showcase Day:** The program culminated with a showcase event, where students proudly presented their projects to teachers, volunteers, and community members, demonstrating not only their technical skills but also their creativity, teamwork, and confidence.

Impact

- **Building Confidence:** Students grew more comfortable using technology and approaching unfamiliar challenges, developing a mindset of persistence and resilience.
- **Strengthening Teamwork:** Through collaborative projects, students learned to work effectively in teams, listen to one another, and communicate their ideas with clarity and respect.
- **Fostering Creativity:** By experimenting with robotics challenges, students were encouraged to think outside the box, resulting in innovative solutions and a deeper love for exploration and problem-solving.

Conclusion and Next Steps

The 2025 Summer Camp at Timpanogos Elementary proved that hands-on learning, mentorship, and community collaboration can transform young learners' futures. By equipping students, especially those from underserved backgrounds, with confidence, creativity, and technical skills, the camp planted seeds of lifelong interest in STEM education and careers.

Building on this success, the Bountiful STEM Educational Foundation, in collaboration with My HomeTown Initiative and the Provo City School District, would like to prepare to launch a sustained after-school STEM program at Timpanogos Elementary School and explore plans to expand to additional schools in the district. This program will provide year-round access to robotics, coding, and innovation experiences, ensuring that students continue to thrive academically and prepare for Utah's growing STEM economy.

We warmly invite principals, district leaders, university partners, donors, and industry leaders to join us in expanding this model and investing in the future of our children, schools, and communities.

Photos



Elementary students' first day in class.



Students are building with Legos and having fun.



Students were spoken to about the importance of the skills they developed during the STEM Summer Camp.



Student receiving Certificate of Accomplishment during the closing ceremony.



Group Picture of participants and volunteers during the last day of the STEM Summer camp.



Group picture outside the Summer Camp Venue/



Group picture of our Awesome Volunteers.



Timpanogoes Elementary School Vice Principal Leeann was there !

Acknowledgments

Thanks to the Timpanogos Elementary School Principal, Mr. Clint Wolfe, Vice Principal Leeann, Mr. Alan Thomson, Bountiful STEM Educational Foundation volunteer instructors, and its co-founder, Mr. Seth Ogoe Ayim, our senior and young high school volunteers, and the Utah STEM Action Center, who made this summer camp a success.

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