



URBAN
LIBRARIES
COUNCIL

STEM PROGRAM MODEL

TechVenture: Removing Barriers Through Outreach

Provided by Mount Vernon City Library (Wash.)

HOW WE STARTED

HOW IT WORKED

WHAT WE LEARNED

HOW WE STARTED

Concept

Programming to give low-income middle schoolers exposure to STEM concepts using hands-on learning and virtual reality activities.

Goals

- Reach rural, low-income students with STEM programming.
- Increase awareness and interest in STEM among local middle schoolers.
- Remove equity barriers to increase participation in STEM programming.



Locations

Two local middle schools.

Timeline

Weekly 90-minute sessions held during afterschool hours for a total of five weeks.

Partners

- Mount Vernon School District.
- The Kulshan Creek Neighborhood Station's afterschool program.
- The Boys & Girls Club of Skagit County.



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The program outlined above was piloted as part of ULC's Partners for Middle School STEM initiative. This project was made possible in part by the Institute of Museum and Library Services grant LG-95-18-0025-18.

[Click here to learn more.](#)



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Locating Programs at Schools

- The library hosted their programming at local middle schools in order to make it more accessible, since the target population lacked safe transportation methods for getting to the library.
- School staff helped to facilitate the STEM programming.
- Virtual reality technology was set up at the schools during lunch and free periods to ensure opportunities for access.

Leveraging Partners to Recruit Participants

- The Mount Vernon School District recruited program participants from the Boys & Girls Club of Skagit County and the Kulshan Creek Neighborhood Station's afterschool program.
- These organizations were ideal partners for recruiting program participants since they serve low-income students in rural areas, are located near the participating middle schools and had existing connections to those schools.

Exciting and Engaging Learners

Program activities were:

- Led by the students; staff acted more as facilitators rather than teachers.
- Connected to the library's local community issues. The library took summer camp programming into the community to engage underserved tweens that were hard to reach previously.
- Focused on uncommon technology, like virtual reality.
- Centered around STEM career exploration.



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Evaluation Methods

The participants' experiences were evaluated with:

- Informal observation during programming.
- Open-ended questions that participants would respond to using Post-it Notes.

Lessons Learned

- Bringing materials from the library to the school required considerable time and staff capacity.
- Participants preferred more career-oriented programming over recreational programming.
- Many of the activities promoted organic student mentorship.
- TechVenture has helped the library staff learn how to better communicate with partners and build more sustainable partnerships. Having a specific partner who works directly with the underserved Latino community led to more success.
- By leveraging a partnership with a school representative, the library was able to easily communicate the grant's plan and goals.

Outcomes

- **High participation:** The library engaged a total of 130 participants in the program. If TechVenture activities had been held at the library instead of at schools, the library predicts that a maximum of 20-30 participants would have attended.
- **Sustained engagement:** The same group of tweens returned for multiple weeks of the program.
- **Long-term partnership:** The initial partnership based around STEM programming has allowed the library to open conversations for continued partnership for future programs.



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