



URBAN
LIBRARIES
COUNCIL

STEM PROGRAM MODEL

STEM *En Español*: Language Diversity in STEM Programming

Provided by Gwinnett County Public Library (Ga.)

HOW WE STARTED

HOW IT WORKED

WHAT WE LEARNED

HOW WE STARTED

Concept

A series of bilingual Spanish/English STEM programs intended to engage the whole family, both at the schools and at library branches, by blending science and art learning activities.

Goals

- Increase middle schoolers' understanding and interest in STEM.
- Foster greater participation in the library's future STEM programs.
- Increase parent/guardian/caregiver participation in youth activities; more multi-generational involvement.

Locations

- Three local schools in the county
- Four library branches

Timeline

Individual events lasting 1.5-2 hours each, held about once per month.

Staffing

- Six library staff members:
 - Of staff who chose to participate, two were already doing STEM programming and four were new to both STEM and working with tweens.
 - Staff who were fluent in Spanish were asked if they wanted to participate.

Partner

- Gwinnett County Public Schools Buice Center



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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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Reaching New Audiences

- The library's partner, Buice Center, had preexisting ties to the local Hispanic community including a Hispanic mentoring program, which the library leveraged to reach new members of its target audience.
- Programs held outside of the library at local schools increased accessibility for a larger range of participants.
- The library used bilingual advertisements to attract participants from both Spanish-speaking and English-speaking communities.

Building Staff Confidence

- Youth services held hands on training at library headquarters and staff from different branches were invited to join.
- Staff participated in hands-on STEM activities that they would facilitate with tweens.
- After the training, staff worked together to create program plans and shared materials they created.
- Staff embraced non-English programming after seeing how successful and accessible it could be, setting the stage for future programming.

Blending Science and Art

Programs in this series encouraged creativity by blending art and science, including sessions on:

- Electronic embroidery
- Creating paintings based on observations of cells under a microscope
- Video game character creation using Bloxels
- Robotics programming featuring LEGO Mindstorms



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Evaluation Methods

Evaluation occurred both through in-person conversations during the programs and a short post-program survey given to tweens and their caregivers.

The survey was provided as a printed sheet, with an English version on one side and a Spanish version on the other. Out of 40 survey responses, the four responses from adults were the only ones submitted in Spanish.

Lessons Learned

- Bilingual Spanish/English programming draws in not only the Hispanic community, but also other bilingual communities.
- Staff representation in programming matters.
- Consistency is key; Offering programs as a regular series at the same location helps build attendance as word-of-mouth advertising grows.
- English language programming doesn't need to be the default. Tweens in the programs preferred communicating in English while parents preferred Spanish, leading to the programs being bilingual instead of Spanish only.

Outcomes

- Kids really enjoyed the creative parts of programming as much as the more technical portions.
- Based on feedback, staff were able to modify programming to combine art and STEM components moving forward.
- Kids don't like long presentations — they want to be "doing stuff" — which will lead staff to develop more hands-on programming moving forward.



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