

At Work

4-H SySTEMatics: Creating Excitement around Learning

City of Milwaukee's low-income youth have a low proficiency rate in both science and math, yet STEM careers offer families livable wage jobs. Of the 10 specific occupations predicted to be the fastest growing in Wisconsin, eight (8) require STEM skills or knowledge (Public Policy Forum Report, 2009). According to statistics provided by Million Women Mentors, these STEM positions lack diversity, 74% of STEM workers are white, while 17% are Asian and only 9% are other minorities (Million Women Mentors). 4-H SySTEMatics is a unique initiative designed to enrich learning experiences for middle school youth and encourage their pursuit of science, technology, engineering, and mathematics (STEM) careers.

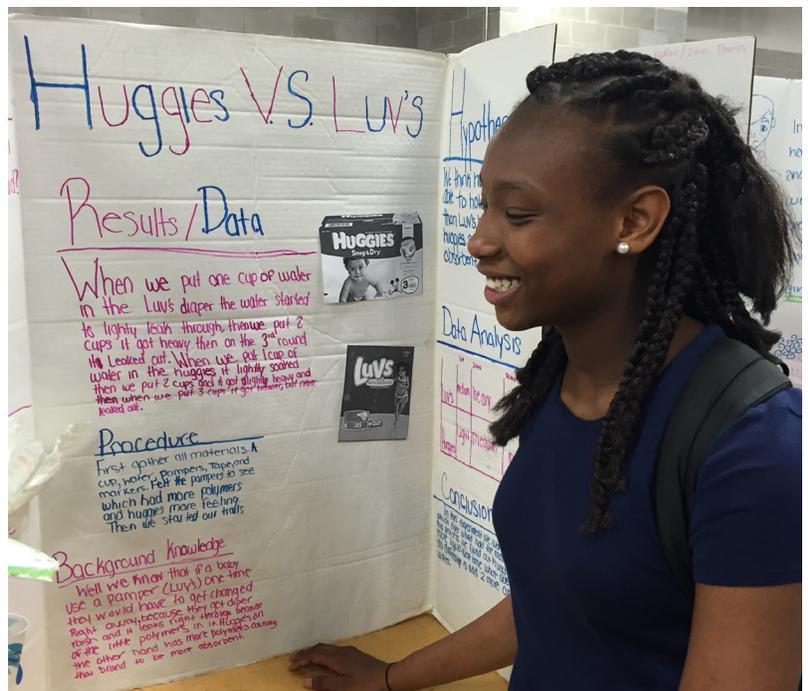
This two-year skill progressive certificate program is offered to a diverse group of largely low-income, 7th and 8th grade students in the City of Milwaukee, through the University of Wisconsin Extension Milwaukee County 4-H Program. 4-H SySTEMatics was created in 2010. Program staff sought a partnership with University of Wisconsin-Waukesha Continuing Education (UWWCE) to promote college awareness, a key component of the program. The program began in the 2010-2011 school year with 30 city youth from two participating schools. In 2015, there were 145 city youth in the program from seven (7) participating schools. Youth in the program complete university researched, hands-on, 4-H science and engineering experiments, and pre-college activities at their school. Teachers are drawn to the hands-on lessons that are provided through the program, which is often missing in the schools' classroom curricula due to the lack of resources.

This program provides higher education resources including campus visits, college application practice, financial planning, and career exploration to students who are frequently first-generation college-bound.



Milwaukee County 4-H Youth Development provides hands-on, university-based curriculum that gets the youth noticeably excited about learning. In addition to completing at least eight (8) STEM lessons and three (3) pre-college lessons during the academic year, youth participate in other hands-on events:

On March 21st, 85 youth got hands-on STEM experience and earned a Certificate of Participation during a STEM day at UW-Waukesha. Participants built bridges, completed a sling shot challenge, studied blood and the human skeleton, and learned about environmental adaption and wildlife rehabilitation. At the 5th Annual Science Fair and Recognition Ceremony on May 28th at the MATC Walker's Square Educational Center, 89 youth presented a STEM project they created to STEM professionals and received a 4-H STEM Certificate of Completion. 31 4-H SySTEMatics youth attended the UW-Richland College Experience for one week in July.





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Each youth was selected after an essay review process and most youth received full scholarships. The youth took STEM classes in the college science labs, experienced dorm and student college life, and bonded with youth from various backgrounds.

4-H SySTEMatics is a team effort. Without one branch of the team, the full program would not be possible. Each individual part of the program (the STEM lessons at the Milwaukee schools, the science fair at MATC, UW-Waukesha STEM Day, one week college experience at UW-Richland) is great, but combining it all together adds a more complete, enriching, and impactful experience



for city youth to pursue STEM careers. In 2016, the 4-H SySTEMatics team received a University of Wisconsin Board of Regents Diversity Award for our work in the community.



For more information about this project, please contact:

Eva Terry
4-H SySTEMatics Coordinator
4-H Youth Development



9501 W. Watertown Plank Road, Bldg. A
Wauwatosa, WI 53226
414-256-4627
<http://milwaukee.uwex.edu/>

eva.terry@ces.uwex.edu