The urban STEM challenge

Students in our central city, too often lack the science, technology, engineering and math (STEM) education and enrichment opportunities afforded those in more affluent Kansas City metro area neighborhoods and schools.

Programs like *FIRST*® Robotics and Project Lead the Way® are recognized leaders in improving student engagement, interest in STEM and preparation for success in college. While these programs are expanding throughout this region, Kansas City's most under-resourced schools struggle to provide the financial and volunteer support and physical space necessary to exponentially grow these programs.

Barriers also include little or no access to machine tools, limited afterschool transportation and fewer opportunities for attracting and retaining coaches, mentors and professional role models to adequately prepare college and career ready students.

KC EZ is a direct response to these equity and access issues.

"We know that when students have experiences on college campuses, surrounded by college students and faculty, they are more likely to pursue post-secondary education."
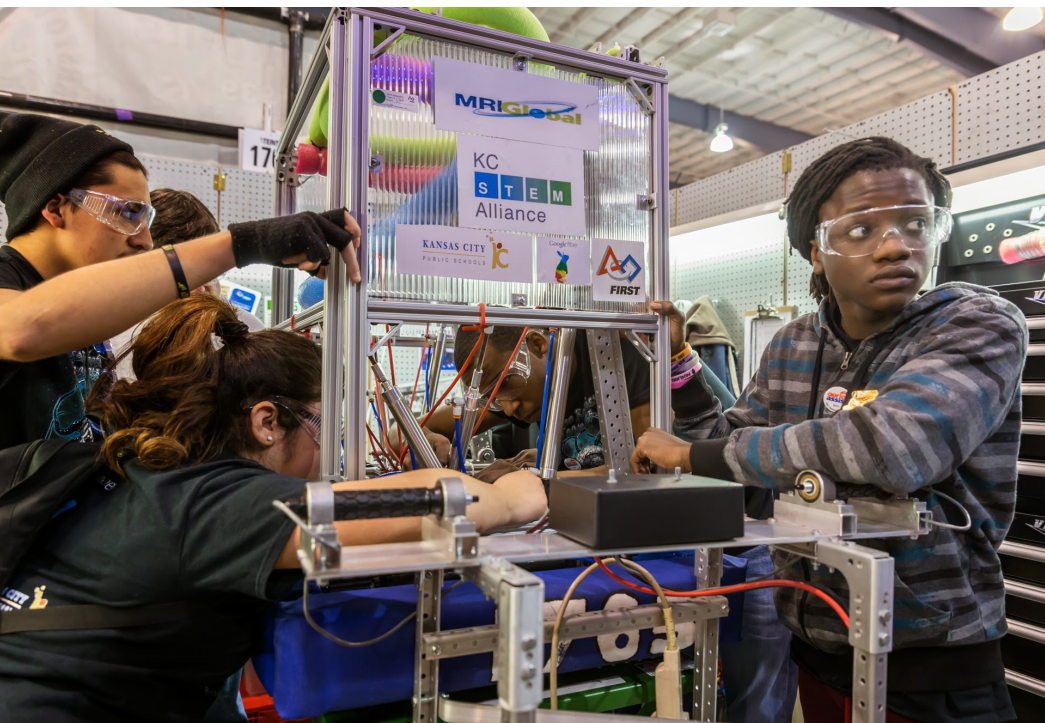
Kevin Z. Truman, Dean
UMKC School of Computing and Engineering

Model for Success

• Safe, managed environment
• Professional mentors on-site
• Located on the UMKC campus
• After-school and weekend hours
• State-of-the-industry Machine Shop
• Supervised access to equipment and tools
• Computer Design Lab
• Tutoring and mentoring provided by UMKC students and faculty
• Student transportation provided
• Improved access for mentors

Benefits

• Students: Urban youth receive help and support in a safe and accessible on-campus facility
• Families: Diminishes the burden of poverty by encouraging college and career readiness
• Community: Enriches community by supporting corporate and civic engagement
• Workforce: Develops a pipeline to support a more educated and competitive future workforce
• Corporate and College Partners: Provides opportunities for mentorship and recruitment

Year one will include build out of the KC EZ space, fundraising and the rapid deployment of a pilot program to provide space and support to two urban FIRST Robotics Competition (FRC) teams.

Photo credit: Charles Maples Photography

space to create + innovate

A space to create and innovate.

KC EZ is a safe and supportive space where Kansas City's K-12 urban students will acquire real-world knowledge, skills and experience through hands-on science, technology, engineering and math programming, initially through *FIRST* Robotics.

This exciting new initiative is modeled after the Michigan Engineering Zone and will be launched in partnership with UMKC School of Computing and Engineering, KC STEM Alliance with the generous assistance of the Ewing Marion Kauffman Foundation and five major founding partners: US Engineering, NNSA, Honeywell, BNIM, JE Dunn and Mark One Electric. These founding project partners are generously stepping up to provide in-kind donations of space, equipment and project management, as well as down-the-road corporate commitments of financial and volunteer support.

KC Engineering Zone

Additional Utilization Options

Focus groups will work during Fall 2014 to determine additional options for full utilization of the KC EZ space by K-12, college, business and community organizations. This might include, but is not limited to:

- Industry certification courses – safety and machining
- Regional workshops for area *FIRST* teams and members
- Programming and Computer Science workshops
- College level courses – math, physics, programming (dual credit)
- Summer STEM Enrichment Programs
- Community access to space/ equipment made available to partners and youth agencies.

Year two, KC EZ anticipates full utilization by FIRST teams during the FIRST Robotics Competition (FRC) season. Focus groups will identify additional uses for the space and other ways to provide wrap around support for K-12 STEM students.

Photo credit: Charles Maples Photography

KC EZ Partners

The success of this initiative is dependent on broad financial and volunteer support from area businesses and organizations.

Please visit www.kcstem.org or contact Laura Loyacono at loyaconol@kcstem.org for more information on corporate sponsorships and volunteer and mentor opportunities.

Founding Project Partners

Ewing Marion KAUFFMAN Foundation

NNSA National Nuclear Security Administration

Honeywell

US ENGINEERING

BNIM

JE DUNN CONSTRUCTION

Mark One Electric Company, Inc. The Mark of Electrical Excellence™

Science • Technology • Engineering • Math

It's the talk of the town.