

Project Abstract:
MNPS Girls Realizing Opportunities With STEM: GROW STEM

Girls Realizing Opportunities With STEM: GROW STEM is an i3 Development project that will test promising strategies for ***Absolute Priority 2: Improving Science, Technology, Engineering, and Math (STEM) Education*** through high quality STEM extended learning and mentoring to inspire middle school girls' interest in STEM, improve achievement, and address gaps in the STEM pipeline. As a novice applicant, Metropolitan Nashville Public Schools qualifies for the ***Competitive Preference Priority***. *GROW STEM* will impact 210 girls at seven Title 1 middle schools serving our highest need students: 83% low-income, 44% African American, 20% Hispanic, 6% Asian, and 13% ELL. *GROW STEM* will use *Engineering Everywhere (EE)* as the foundational hands-on, problem-based learning (PBL) STEM curriculum. **Key strategies:**

- ◆ Afterschool Girls STEM Clubs exploring a broad range of STEM topics.
- ◆ Saturday STEM Sessions providing STEM explorations, field trips, and speakers.
- ◆ Theme-based STEM Summer Camps offering STEM PBL learning, field trips, and speakers.
- ◆ STEM Professional Development for Lead Teachers incorporating *EE* and PBL training, externships, conferences, and a professional learning community.
- ◆ Mentoring with female STEM role models (high school students, college students, and professionals).
- ◆ Marketing and outreach to help shift the STEM culture in families.

GROW STEM will test a strong **theory of change** by implementing a quasi-experimental design to examine the impact of STEM extended learning and mentoring on middle school girls who are predominantly low-income and/or minority. **Key outcomes:** 285 hours of extended learning annually; improved academic achievement in math and science; increased girls' awareness and interest in STEM careers; increased matriculation into STEM career academies; and improved STEM efficacy and collaboration among teachers. *GROW STEM* will engage 17 community partners (universities, nonprofit, and professional organizations) and 60 business/industry partners.