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.