

Rural Tennessee STEM.LD Abstract

The Niswonger Foundation (NF) respectfully submits this 5-year proposal for the EIR mid-phase program to implement STEM.LD. The project addresses Absolute Priority 1 (Moderate Evidence) and Absolute Priority 2 (Field-Initiated Innovations—STEM). STEM.LD will design in-person and virtual STEM-rich learning environments in rural northeast Tennessee for ~57,000 students in grades 6-12; at least 48% are considered high-risk (“low-income”). The project will also test and scale strategies for student outreach and engagement, expanding participation of rural students in these learning environments.

STEM.LD includes three major components: (1) strengthening the teaching/learning classroom experiences with engaging materials for students and professional development for teachers; (2) experiential out-of-school time (OST) opportunities to explore STEM content; (3) expanding participation in rigorous STEM and dual enrollment (DE) courses. Partners include TNTP, BioBuilder, University of Alabama in Huntsville, East Tennessee State University, If I Had A Hammer, STREAMWORKS, and Purdue University and a consortium of 21 LEAs. AnLar, LLC, will conduct the external evaluation.

Goals include: 1. Build educator STEM knowledge, skill, and pedagogy by providing teacher **professional development** to effectively implement curriculum supplements. 2. Deepen exploration and enhance readiness for STEM coursework among rural middle/high school students through increased access to and awareness of high-quality **OST activities**. 3. Provide more challenging **opportunities** for students **and** increase student academic **readiness** to meet these opportunities. 4. Conduct **formative and summative evaluations** of the project in order to continuously improve over the grant period and add to the STEM evidence base.