

Our EIR early-phase project, **Metrics: Maximizing Engagement Through Regular Immersion in Computer Science**, addresses *Absolute Priority 1: Demonstrates a Rationale* and *3: Field-Initiated Innovations: Promoting STEM Education with a Particular Focus on Computer Science (CS)* and the *Competitive Preference Priority: Expanding Access to and Participation in Rigorous CS Coursework for Traditionally Underrepresented Students*. Our vision is that a whole school immersion approach to CS integrated across the curriculum into daily classroom and real-world experiences will boost traditionally underrepresented, high-need student aspirations, attainment, and achievement. Our field-initiated innovations will be tested at two K-4, Title I schools serving 914 high-need students with a free- and reduced-lunch rate of 83%. Our model includes three integrated activities: (1) Creating rigorous CS curriculum units and assessments to support STEM coursework connected across all subjects through problem-based learning; (2) Providing a high-quality teacher development and support process to sustain innovative CS instructional practices; and (3) Strengthening students' tethers to CS and STEM coursework by engaging students in real-world linkages beyond the classroom. Objectives are designed for each key area and include increases and improvements in student interest, knowledge, and skills in CS and computational thinking; teacher knowledge and instructional skills in CS and STEM; and engagement in CS for female and minority students and student interest and aspirations in CS careers. We predict the results of our study will show three key impacts: (1) improved academic achievement in math and reading for high-need K-4 students; (2) students prepared for success in CS focused curriculum and activities in middle and high school; and (3) expanded access to and participation in rigorous CS coursework for traditionally underrepresented students. Partners include CodeVA, Bright Futures, Handley Trust, STARBASE, Shenandoah University, Shenandoah Valley Discovery Museum, Museum of the Shenandoah Valley, and a variety of local STEM businesses.