

IDEA Public Schools is applying for an **Early-Phase** EIR grant project, to be known as ***Mathways to STEM Success***. This proposal addresses **Absolute Priorities 1** (Demonstrates a Rationale) **and 3** (Field-Initiated Innovations—Promoting STEM Education, with a Particular Focus on Computer Science). **This project will serve 43,253 high-need students** (majority-minority, eligible for free and reduced-price meals, and English-language learners) **in grades 6-12** by the end of the five-year funding period.

EIR funding for ***Mathways to STEM Success*** will help IDEA **create, develop, pilot, refine, and replicate a three-part entrepreneurial, evidence-based, field-initiated innovation to improve student achievement and attainment**. **Research-based components** of the project design include **1) a comprehensive, standards-aligned, educative math curriculum for grades 6-12 that incorporates vertically-aligned computer science standards to increase computer science readiness; 2) increased access to AP Computer Science Principles** with district-endorsed curriculum and professional development support; and **3) a work-study high school pilot program in two cities** that includes opportunities for paid internships in STEM fields with an emphasis on computer science.

Expected outcomes include improved student performance on district, state, and AP math assessments (AP Computer Science Principles, Calculus, and Statistics); increased enrollment in AP CSP and other AP STEM coursework; improved teacher and leader perceptions of the math curriculum; improved teacher performance on annual reviews/ratings; increased retention of high-performing teachers; an increased number of students planning a STEM college major and career in STEM; and a reduction in the FAFSA gap calculation for graduating students (as a result of their participation in the paid STEM/CS internships and increase in AP scores). Long-term outcomes also include an increased number of alumni employed in a STEM field and improved collegiate outcomes, such as college acceptance and matriculation rates (especially to highly competitive institutions) and improved college graduation rates.

IDEA will partner with the American Institutes for Research (AIR), which will study how IDEA's design of a computer science-integrated math curriculum impacts participation and performance in computer science in high school and in college. Sharing this knowledge will contribute significantly to the field, helping other secondary schools improve STEM preparation for underrepresented students nationwide.

IDEA will also partner with **Project Lead the Way** for Computer Science curriculum and the **National Math + Science Initiative (NMSI)** for AP teacher training.