



## ABSTRACT

In response to the Absolute Priority (2) STEM Education, and the Competitive Priority, DeSoto Independent School District in partnership with T-STEM Academy, University of Texas at Dallas, DeSoto Arts Commission, EduTopia, Project Lead the Way and Buck Institute for Education, proposes a Development grant to implement **iSTEAM3D** for K-12 grade students. **iSTEAM3D** will serve **600** new students annually for a total of **1,800** students. **iSTEAM3D** will integrate the arts with STEM using project- and problem-based learning (PBL) strategies to improve students' engagement, academic achievement levels, graduation rates and overall college enrollment. **Objectives:** **1)** Design and implement STEM instructional practices through Arts integration that connect PBL strategies to technology and Arts curricula; **2)** Create a blueprint that develops highly-effective principals and teachers that support, sustain and scale-up STEM disciplines through Arts integration school-wide; and **3)** Increase the number of students prepared to graduate high school on-time and who pursue postsecondary education targeting STEM courses and careers. To this, **iSTEAM3D** will: 1) forge strong links between arts and STEM learning and curricula (Math and Science); 2) incorporate PBL-driven learning opportunities for students; 3) provide professional development to educators on arts-integrated curricula and instruction; and 4) give students access to rigorous coursework, advising/counseling, and enrichment activities. **Outcomes:** 70% of teachers will increase pedagogical content knowledge; 70% of teachers will report using student-led data to inform instruction; 70% of teachers will receive training in STEM strategies and Arts integration and will report utilizing technology in STEM learning; 50% of principals and teachers will be categorized as high-quality educators; 70% and 58% of students will score proficient in Math and Science, respectively; 70% of students will increase their competencies in STEM and Arts disciplines; 23% of high school students receive AP credit in Math and Science, and 84% of students will graduate on-time of which 70% will enroll into college. A quasi-experimental evaluation will be conducted by a highly-qualified external evaluation firm and sufficient resources have been allocated.