

**Education Innovation and Research Program (EIR)
Project Abstract**

Applicant Name: Young Audiences Arts for Learning, Inc.

Project Title: Equitable Access to STEM Engagement (EASE)

Type of Grant Requested: (select one) Early-Phase Mid-Phase Expansion

Absolute Priorities the Project Addresses: (select all that apply)

- Absolute Priority 1-- Demonstrate a Rationale (Early), Moderate (Mid), Strong (Expansion)
- Absolute Priority 2-- Field-Initiated Innovations—General
- Absolute Priority 3-- Promoting STEM Education
- Absolute Priority 4-- Meeting Student Social, Emotional, and Academic Needs
- Absolute Priority 5-- Educator Recruitment and Retention

Competitive Preference Priorities the Project Addresses: (select all that apply)

- Competitive Preference Priority 1— Promoting Equity in Student Access to Educational Resources and Opportunities: Implementers and Partners
- Competitive Preference Priority 2— Addressing the Impact of COVID–19 on Students, Educators, and Faculty

Total number of students to be served by the project: 5700

Grade level(s) to be served by the project: K through 5th

Definition of high-need students: Elementary students who are from low-income families, and/or are English Language Learners, performing below grade level, or from groups underrepresented in STEM

Brief description of project activities: Young Audiences Arts for Learning, Inc. (YAI) will partner with two other nonprofit organizations, ArtsNOW and Young Audiences of Louisiana, to provide three large school districts across three states (Georgia, Louisiana and South Carolina) with in-depth, customized, and arts-informed STEM curriculum alongside intensive job-embedded coaching and leadership development for teachers. Building on prior studies of arts integration as a teaching strategy which demonstrated significant benefits to students' achievement, EASE will focus on K-5th math and science classrooms across nine schools struggling with post-COVID achievement gaps, integrating the arts with core content standards including rigorous, engaging, and well-rounded approaches to learning that will improve students' engagement and achievement and increase access to STEM curriculum in underfunded communities. The program consists of two primary activities: (1) customized, collaborative STEM curriculum development and (2) professional learning and sustained job-embedded support for classroom teachers. Through scaled implementation, EASE will develop 18 STEM curricular units with grade K-5 teacher leaders, arts consultants, and university STEM experts, test them in a three-school feasibility study, then enter an impact study of 27 elementary schools (9 treatment and 18 comparison), serving at least 5700 students and 250 teachers from high-need districts. In Year 5, the arts-infused STEM units will be disseminated to comparison schools and to the Young Audiences national network of nonprofits and school partners, along with replication guidance.

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Summary of project objectives and expected outcomes: The primary focus of this project is to develop and test the use of a set of arts-integrated STEM units that are: aligned with the grade-level content standards for math and science, supported by standards in the arts, and incorporate inquiry-based activities to support the development of students' critical thinking skills. Goals are to 1) Develop, refine and implement integrated STEM units designed to improve achievement through the delivery of content that integrates various art forms, and 2) build the capacity of teachers and leaders to implement and sustain arts integrated instruction in math and science classrooms across grades K-5. Short-term outcomes include increased student and teacher engagement. Longer-term outcomes include improved student achievement in math (grades 3-5) and science (grades 4-5), over and above growth observed in matched comparison schools.

Summary of how the project is innovative: EASE will contribute to increased knowledge about how supporting teachers' skills in delivering integrated instruction, specifically using the arts, can improve student achievement. If this is found to be an effective strategy, it could greatly increase the efficiency with which instructional time can be used to address curricular standards. Further, our plan to expand the library of arts-integrated STEM units will contribute to increased understanding of what integrated instruction can look like when enacted in the classroom. Pairing curriculum development with a feasibility study allows for classroom-tested perspectives on components of each STEM unit; this crucial feedback will inform the units' revision. After the feasibility study, expanding to new schools in the three participating counties will allow the project to conduct a rigorous cluster-QED in an authentic setting, designed to meet the WWC standards with reservations. This can potentially contribute a significant amount of knowledge to the field related to the impact of designing and delivering integrated units that support student achievement while engaging creative expression and critical thinking.

Other studies related to the proposed project: Bowen & Kisida, 2019 (Houston's Arts Access Initiative); Nakamoto et al., 2015 (Arts 4 Learning Curriculum); Southworth et al., 2017 (job-embedded professional learning model in arts integration); Parkinson et al., 2015 (Children's Literacy Initiative); Mollette, 2023 (ArtsNOW's SAIL and SmART Literacy programs)

Proposed implementation sites: Richmond Cty (GA), Greenville Cty (SC), Jefferson Parrish (LA)

Organizations partnering with this project: Young Audiences Arts for Learning, Inc., ArtsNOW, Young Audiences of Louisiana, Xavier University, Georgia Institute of Technology