

Early Phase Competition -- Absolute Priority 3 (STEM)  
University City Science Center  
S411C210055

**Experiencing STEM FirstHand: The Impact of a Novel Approach to Bolstering Scientific Identity, Interest, and Knowledge in Low-Income Middle School Students of Color**

---

**Project Title:** *Experiencing STEM FirstHand: The Impact of a Novel Approach to Bolstering Scientific Identity, Interest, and Knowledge in Low-Income Middle School Students of Color*

**Type of Grant Requested & Priorities:** Early-Phase Grant. **Absolute Priorities 1** (Demonstrates Rationale) and 3 (Field-Initiated Innovations in STEM); **Competitive Preference Priority 1** (Computer Science) and 3 (Promoting Equity and Adequacy).

**Total number of students/grade level(s) served:** 336 students from grades 6-8

**Definition of high-need students:** We define high-need students by the societal, economical, and educational challenges pervasive in Philadelphia. As of 2018, 39% of Philadelphia youth were living in poverty. The School District of Philadelphia provides universal free lunch. Only 29% of SDP students scored "Proficient" in Science, 14% in Math, on standardized assessments.

**Description and Activities:** We aim to advance evidence-based STEM educational practices for low-income students of color through immersive, inquiry-based experiences in an out-of-school laboratory setting. SDP students will participate in programming and the project team will evaluate students' STEM identity, interest, and knowledge.

**Objectives and Outcomes:** *Objective 1* is to engage underserved, middle school students in hands-on, discovery-based, mentored STEM programming in a professional laboratory setting; *Objective 2* is to conduct a formative evaluation to collect baseline data and refine program delivery; and *Objective 3* is to conduct a summative evaluation to demonstrate the effectiveness of the program on students STEM identities, competencies and skills.

**Special Features:** By connecting high-need students to the vast STEM social network within their own community, this project promotes positive STEM learning and career outcomes.

**Project Partners:** *Fiscal Agent and Project Implementation:* The University City Science Center (UCSC). *Research and Evaluation:* AnLar LLC and Palmer Wolf Corporation.