

**Early-Phase Competition Absolute Priority 4 (SEL)  
President and Fellows of Harvard College  
S411C220046**

**Kernel of Practice for Social Emotional Learning in Afterschool Settings**

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Applicant Name: Texas A&M Research Foundation

Project Title: PreK Let's Talk Science (PkLTS): Building an Inclusive and Innovative Science Base for Diverse Early Learners

Type of Grant Requested: (select one)  Early-Phase Absolute Priorities the Project

Addresses:

Absolute Priority 1—Demonstrate a Rationale (Early), Moderate (Mid), Strong (Expansion)

Absolute Priority 3-- Field-Initiated Innovations—Promoting (STEM) Education

Competitive Preference Priorities the Project Addresses:

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: 1,360

Grade level(s) to be served by the project: Prekindergarten

Your definition of high-need students: Students who are 3-4 years old and are enrolled in a free prekindergarten classroom in Texas - meeting at least one of the following free prekindergarten eligibility requirements (as outlined in Texas Education Code 29.253b): unable to speak and comprehend the English language, is educationally disadvantaged (eligible to participate in the national school lunch program).

Brief description of proposed project, including project activities: Project PkLTS is based on moderate evidence generated by Let's Talk Science (LTS) tested in kindergarten and first grade (Irby et al., 2020; Wang, 2020), and aims to (a) iteratively develop, refine, and evaluate a PK version of LTS science-infused literacy curriculum, (b) provide high-quality, interactive, reflective ongoing virtual professional development (VPD) and virtual mentoring and coaching (VMC-R) with real-time instructional feedback, (c) design and implement Let's Talk Science at Home (LTS@Home) to facilitate family engagement and observe family science-infused literacy learning behaviors, and (d) support dissemination of science-infused literacy instructional practices for high-needs PK students via professional development modules, a Summer Institute, and broad dissemination.

Summary of project objectives and expected outcomes: Project PkLTS objectives include the iterative design and development of a PK Let's Talk Science curriculum to promote oral language and science academic vocabulary development of high-needs PK students, implementing PK teacher virtual professional development and virtual mentoring and coaching to build teachers' science-infused literacy instructional capacity, evaluating the impact of VPD and VMC model on PK teachers' pedagogical practices and quality of instruction during full implementation of the PkLTS curriculum, evaluate impacts of PkLTS teacher VPD, VMC, and science-infused literacy curriculum on PK students' science academic language and oral language development, design and implement Let's Talk Science at Home kits to facilitate family engagement and to observe family science-infused literacy learning behaviors, and to support broad dissemination of science-infused literacy instructional strategies and practices for high-needs PK students.

Describe how the proposed project is innovative: Project PkLTS is based on the moderate evidence generated by Let's Talk Science (LTS) tested in kindergarten and first grade (Irby et al., 2020; Wang, 2020), and will build on these existing evidence-based strategies and approaches by iteratively developing innovations under new conditions at the PK level. Project PkLTS will build an innovative science base for diverse early learners through the development of a science-infused literacy curriculum innovation, professional development innovations including ongoing virtual PD and real-time virtual mentoring and coaching, and the development of innovative family take-home science-infused literacy kits – including collection of at-home recordings to provide insight into PK family science learning behaviors.

Identify other studies and/practice related to the proposed project: The work proposed in Project PkLTS is related to work conducted in a series of large-scale federally funded grants awarded to this research team to support literacy and science academic language for economically-challenged (EC) students and English language learners (ELs) and the provision of ongoing teacher professional development and mentoring and coaching, and the development and testing of curriculum, and provision of family engagement opportunities. The citations for these research-grants are listed below in chronological order: • Lara-Alecio, R., Irby, B. J., & Mathes, P. (2003). English Language and Literacy Acquisition (ELLA), Institute of Education Sciences. U.S. Department of Education, Washington, D.C. (PR/Award Number R305P030032). • Lara-Alecio, R., Irby, B. J., & Tong, F. (2008). Middle School Science for English Language Learners (MSSELL), National Science Foundation. (PR/Award Number DRL-0822343). • Lara-Alecio, R., Irby, B. J., & Tong, F. (2013). English Language and Literacy Acquisition-Validation (ELLA-V). Office of Innovation and Improvement, U.S. Department of Education, Washington, D.C. (PR/Award Number U411B120047). • Lara-Alecio, R., Irby, B., & Tong, F. (2016). Literacy Infused Science and Technology Opportunities (LISTO). Office of Innovation in Education (I3), U.S. Department of Education, Washington, D.C. (PR/Award Number: U411B16001). • Lara-Alecio, R., Irby, B., & Tong, F. (2020). Virtually-Infused Collaborations for Teaching and Learning Opportunities for Rural Youth: Implementation and Evaluation of Online and Face-to-Face Delivery in High-Needs Schools (Project VICTORY). Education Innovation & Research (EIR), U.S. Department of Education, Washington, D.C. (PR/Award Number: S411B200055). Proposed implementation sites: Proposed implementation sites include 34 prekindergarten sites from 8 districts (rural, suburban, urban) in Texas.

List all organizations partnering with this project: Project PkLTS partnering organizations include the Texas A&M Research Foundation, the Center for Research & Development in Dual Language & Literacy Acquisition (CRDLLA) at Texas A&M University (note: CRDLLA is also a cost-share partner), the Education Leadership Research Center (ELRC) at Texas A&M University, and The Center for Research and Reform in Education (CRRE) at Johns Hopkins University (JHU) will serve as the external evaluator.