

"People of all ages learn science in an increasingly wide variety of ways. Formal schooling is only one part of a larger ecosystem of science, technology, engineering and math (STEM) learning that also occurs throughout one's lifetime." – InformalScience.org (website operated by Center for Advancement of Informal Science Education, a National Science Foundation-funded resource center for the Advancing Informal STEM Learning program)

While adults often underestimate the developmental capabilities of young children, studies have found that children begin systematically and intentionally exploring their environment even as infants. Young children have an enormous capacity for STEM learning and early STEM engagement is critical for a child's future development. Informalscience.org, a National Science Foundation initiative, suggests that early learning outcomes can have long-term effects on a child's interest in and engagement with STEM later in life. Moreover, engagement with STEM at a young age may form the foundation of differences in science participation across genders.

The importance of early childhood education was underscored by recent study of kindergarten readiness by Dallas Independent School District. The research found that students who attended Pre-K were twice as likely to be Kindergarten Ready than eligible students who did not attend Pre-K; students who are Kindergarten Ready are three times as likely to be reading on grade level in 3rd grade than their peers who were not Kindergarten Ready.¹⁵



With this research in mind, walkSTEM piloted an early childhood education program in a pre-kindergarten classroom at Gooch Elementary (DISD) in Spring 2018. Through this pilot we developed a collection of best practices that engage young learners while remaining developmentally appropriate. We have received extremely positive feedback from educators and plan to expand the program to additional schools and early childhood centers. As always, walkSTEM wants to make it easy for educators to utilize the walkSTEM methodology in the classroom. Proposals for incorporating walkSTEM into early childhood education include "walkSTEM in a box" – a kit that gives early childhood educators all the tools they need to engage their students in STEM activities. Moreover, conversations with DISD schools about instituting walkSTEM programming throughout the school day for K-12 students are ongoing.

¹⁵ [2017 The Commit Partnership Community Achievement Scorecard](#), The Commit Partnership.