



Why STEM?

Concerns about the quality of Science, Technology, Engineering, and Mathematics (STEM) education and U.S. dominance in science and technology have been mounting for decades, and has risen to a new level with the publication of various reports in the last few years. In the 1980s, the U.S. led the world in the percentage of college graduates with STEM degrees. Today, we rank among the lowest in the world, and the level of interest of American students in technical disciplines continues to remain comparatively low.

In order to increase college and career readiness and student interest in STEM, the U.S. Army Corps of Engineers (USACE) and the Department of Defense Education Activity (DoDEA) established a partnership in May 2013. Unlike other STEM initiatives, this program is embedded in the classroom and tied to the DoDEA curriculum. The program provides integrated conceptual understanding and face-to-face, long-term interaction with teachers and students.

The Partnership

USACE and the Department of Defense Dependents Activity (DoDEA) have established a one-of-a-kind partnership for the purpose of leveraging the strengths of both organizations to advance STEM education in communities where DoDEA and USACE activities are co-located. Creating local partnerships sets forth a more strategic approach for connecting DoDEA students and teachers with real-world STEM applications related to specific civil works projects or other USACE functions within the community. Each site will have the freedom to set priorities, choose partners and select activities that represent the best fit between USACE and DoDEA. This facilitates a more strategic, personalized approach.

Objectives

1. Connect and leverage USACE STEM professionals to establish a focused and sustainable long-term STEM partnership in communities where DoDEA and USACE activities are co-located.
2. Increase student awareness and interest in STEM curricular and co-curricular activities and careers.
3. Increase awareness of the need for more STEM focused professionals to address USACE missions and the Nation's needs in the future.

Way Forward

Students will work with a minimum of two USACE volunteers—military and civilian engineers and scientists—at seven pilot schools to explore a STEM project with the concept: Building strong structures that withstand the forces of nature. The STEM professionals will be in the classroom one to two hours per week for approximately six weeks addressing STEM challenges that relate to the USACE mission and align with DoDEA's curriculum. The program will culminate in a competition and award ceremony during National Engineers Week in February of each year.

