**The BoSTEM Project:** United Way of Massachusetts Bay and Merrimack Valley (UWMB) partnered with Boston After School & Beyond (BASB) to propose an early-phase inquiry to address urgent needs for quality STEM education and college/career readiness [Absolute Priority 4]. BoSTEM will serve 1,294 high-need students in Year 1, scaling to 2,000 high-need students per year by Year 4 [Absolute Priority 1] in grades 6-8. **Description:** BoSTEM will increase culturally responsive STEM out-of-school programming, aligned with in-school curricula, to prepare high-need middle school students, academically and socially, for STEM postsecondary education and careers by: 1) Employing a collaborative, continuous performance feedback cycle to encourage innovative, customized site-based strategies and supports within a framework for quality implementation; and 2) Implementing culturally responsive STEM programming to increase students’ college/career STEM aspirations. The BoSTEM EIR Project will provide a scalable, replicable, community-driven program to address this national need both in Boston and across the nation. **Outcomes** include increased student interest in STEM and STEM-related careers; increased student attendance and social-emotional skills; improved student STEM achievement; improved STEM learning opportunities, alignment with school curricula, and program quality; and increased needs-based, customized professional learning. **Sites:** All implementation sites serve students from the Boston Public Schools. **Partners:** Boston After School & Beyond, Boston Public Schools, Boston STEM Network, US2020, City of Boston Education Cabinet, Citizen Schools, CitySprouts, Community Boat Building, Latino STEM Alliance, Lena Park CDC, Massachusetts General Hospital, Sociedad Latina, and Thompson Island Outward Bound Education Center.