Accelerating Maximum Potential (AMP)
Through Science, Technology, Engineering, and Mathematics (STEM) Partnership

Accelerating Maximum Potential (AMP) is a partnership of the Hillsborough County Public Schools (HCPS), Polk County School Board (PCSB), and the University of South Florida (USF) Coalition for Science Literacy (CSL). AMP's purpose is to increase teachers' subject matter (content) knowledge and ability to create high-quality, standards-based integrated STEM lessons for grades 3-12 through collaboration with STEM professionals at USF who help to provide professional development (PD) and design project components. It is designed to enhance the skills of each school district's math and science teaching force to educate students in STEM areas while increasing student achievement in STEM areas in grades 3-12.

AMP has three major project goals: *Goal 1*—Develop collaborative teacher training through intensive, enhanced, and ongoing PD that includes strategies for integrating STEM concepts for grades 3-12 math and science teachers; *Goal 2*—Increase cross-curricular content knowledge and knowledge of strategies for integrating STEM concepts for grades 3-12 math and science teachers; and *Goal 3*—Increase student achievement in STEM areas in grades 3-12. To accomplish these goals, there are three project components: Summer Institutes, a STEM Writer's Academy, and Teacher Certification Readiness courses.

An Executive Team of USF faculty and HCPS and PCSB math, science, career technical education (CTE), and technology curriculum experts is responsible for planning, developing, overseeing implementation, providing quality evaluative feedback, and dissemination of all three project components. CSL recruits faculty at the USF College of Arts and Sciences (CAS) to assist in design and delivery of targeted PD. All AMP components are developed collaboratively and implemented by members of the Executive Team and additional teachers who are eager to integrate STEM concepts and skills into lessons aligned to state standards for math and science.

Each partnering district will identify 40 middle and elementary school teachers for a STEM Writer's Academy. These teachers will be identified as highly effective teachers recruited and vetted through an application and interview process to ensure that they chosen are the most compatible with AMP's needs. In addition to math and science teachers, Writer's Academy members will include CTE and instructional technology (IT) teachers to provide meaningful integration of career and technology connections into the lessons. During the Writer's Academy, participants will learn how to develop and revise a total of 48 integrated, standards-based STEM lessons. The lessons will be piloted in multiple classrooms and revised according to feedback.

The PD will include Summer Institutes designed to allow teachers who demonstrate content knowledge deficits to benefit from 80 hours of PD to sharpen their content knowledge base. PD will focus both on increasing teacher content knowledge in STEM and on improving pedagogy and changing teacher beliefs and attitudes about STEM integration. There will be active learning opportunities to apply to teaching practices and curriculum, as well as integration of IT and inquiry.

The lesson writers and implementing teachers will meet periodically in Professional Learning Communities (PLC) throughout the process as part of a Lesson Study model. Collaboration among involved teachers in Lesson Study PLCs will be multi-modal, taking place via face-to-face meetings, virtual meetings, conference calls, and school district electronic systems. Eighteen hours of follow-up training for all participants will be held at least quarterly throughout the school year, with job-embedded follow-up support from district academic coaches. The coaches will participate in a twelve-hour PD to understand the structure of the integrated STEM lessons and best practices for implementing them in addition to working within the Lesson Study PLCs. These trainings will enable academic coaches to assist with project implementation at their sites while also equipping them with the knowledge needed to help teachers at their sites navigate the nuances of the AMP project.

AMP endeavors to create and implement a sustainable, replicable PD model to cultivate a pool of exceptional and effective STEM educators. These leaders will be relied upon to forge strong STEM programs using their ability to deliver effective STEM lessons to their students, by serving as ambassadors for STEM in HCPS and PCSB, and by acting as mentors to other math and science teachers. Both districts will co-develop Teacher Certification Readiness Courses to increase the number of teachers certified to teach 6-12 math and science.