

Proposal Abstract

The Bronx Mathematics Preparatory School (TBMPS) is a middle school with 289 students in grade 6 through grade 8 and is a **Priority** school with need for improvement in both our students' math and ELA scores. The school population is comprised of 34% Black, 62% Hispanic, 1% White, and 2% Asian students. The student body also includes 10% English language learners and 25% special education students. We are partnering with Holy Family School, a non-public school that shares a common goal to improve our students' performance, across our general population with particular attention to two groups, students with disabilities (SWD) and English Language Learners. A focus of our grant program, *Success in the Making*, will be to help our educators to develop technology-enriched and active learning strategies that support scaffolding and differentiation for all learners needs.

Each school will identify a team of teachers of sixth through eighth grade math, literacy, science and social studies teachers, SPED, ELL and a technology/library specialist. At their school sites, teachers will receive in-school and in-class support to engage in collaborative unit and lesson planning that will integrate active learning and instructional technology with their instruction. They will also receive assistance in technology identification, acquisition and materials management and direct support to and implement hands-on activities and integrate greater usage of technology in their classrooms. Goals for the program include:

- Help students attain higher levels of performance in the NY State Learning Standards including the Common Core Learning Standards, with a focus on ELA and math.
- To improve teacher effectiveness by emphasizing content knowledge and pedagogical best practices in using technology, for differentiated instruction, in the classroom as well as better data-driven instructional strategies.
- To increase the knowledge and skills of teachers and school librarians to support the greater use of technology to enhance teaching and learning and create new effective learning environments for students.

The Bronx Mathematics Preparatory School offers students a choice of electives during their expanded learning time that encompass science, technology, engineering, art and math (STEAM). Our educators will develop lessons and activities that extend the content and activities of the electives into and across regular school instruction. For example, 6th grade science includes the study of energy, simple machines, mechanisms and engineering and ecology and our school has adopted a green theme. Our educators and students will engage in the study of ecology and sustainable development, which will require them to compare and contrast information from sources on the internet. They will use the information they gather to delve into horticulture, vermiculture & composting and hydroponics to green our school environment. They will also research and design with 3D software (which make use of algebra and geometry) systems to make our school environment not only more aesthetically pleasing, but also healthier for themselves and the planet. For example, students will be invited to re-imagine their cafeteria space, including designing a program to reduce food waste and increase recycling. Finally, students can develop video games that teach about the value of recycling and maintaining the ecological systems of our planet. These activities require literacy skills to research, design, read and create instructions and to engage in critical thinking and discussions with other members of their class and design teams. They also require the application of math and scientific thinking to build the devices and then capture, graph, measure and calculate data and describe results.