

## Proposal Abstract

Community School JHS 162, Lola Rodriguez de Tio school is a **Priority** school. We are partnering with St. Theresa school, a non-public school, who shares our student population. Lola Rodriguez de Tió is a middle school with 378 students, grades 6-8. In terms of academic performance on last NYSED assessment, nearly 95% of students performed below standards in ELA and nearly 93% are performing below standards in Mathematics.

Our scholars need support to strengthen their basic and higher-level skills in both literacy and math and because skills related to these subjects impact performance across subject matter, our program, *Active Learning Through Tech (ALTT)*, will take a blended learning approach with an emphasis on enhancing students' math and ELA skills and secondarily science and social studies.

The program will provide models of effective technology integration with content instruction. Students not only use computers and Web 2.0 apps to learn, share information, communicate and create, but will also immerse in invention, electronics and robotics. For example, a 10-week robotics unit will explore every aspect of robots from the history of computers, programming and robotics, to robots in film (e.g. WALL-E, R2D2) and in other cultures (e.g. Japan's talking robot vacuum cleaner) to making of robots. Like inventors, students will keep design thinking notebooks with research notes, sketches and updates about the design process, prototypes and the iterative process of design. They will design robots with 3D software such as Autodesk Tinkercad or Fusion 360. They will program them in visual basic, python or JavaScript. They will post photos and descriptions about their inventions and report on how they made them and create DIY videos about them on a blog shared by both JHS 162 and St. Theresa school.

At their school sites, teachers will receive regular visits from professional developers who will provide in-school and in-class support including lesson and unit planning, materials management and implementation. Each school will identify a team of teachers made up of sixth through eighth grade ELA, science and social studies teachers, and technology/library specialists and, in JHS 162, ELL and SPED specialists. Through immersing students in hands-on activities and technology-rich instruction, the teachers will improve their own technical skills and refine both the curriculum and methodology through *Active Learning Through Tech (ALTT)*. Developing informational pieces, video casts, blogs and other communication and information sharing tools support both teachers and students to engage in 21<sup>st</sup> century literacy practices. Goals for the program include improved student achievement in grades six through eight in ELA and math (including in Common Core standards) through increased teacher use of technology and blended learning approaches in instruction and collaborative projects across classrooms.