

Yonkers City School District –*Inventors/Achievers*
2015-2018 Learning Technology Grants Three Year Application

Proposal Abstract

Inventors/Achievers provides a powerful opportunity to demonstrate the potential of instructional technology to support student achievement through STEM learning. *Inventors/Achievers* supports student centered active learning through STEM engaged hands on learning delivered via a site-based STEM Learning Bus and further supported through virtual STEM activities designed to extended learning. Staff and students will receive training in the positive impact of STEM learning, the development of STEM instructional techniques and resources, and activities which support student achievement through aligned design. Professional learning opportunities will support lesson, unit, and resource development including web portals. Students will engage in STEM learning through unique school based activities, and aligned virtual activities through online tools and resources areas supporting Science, Technology, Engineering, and Mathematical inquiry through hands-on and virtual strategies. A 2009 study, *U.S. Department of Education Study Finds that Good Teaching Can be Enhanced with New Technology*, indicates “digitally rich educational strategies, such as blended learning experiences, are more effective than conventional face-to-face instruction.” A 1997 Northwest Regional Educational Laboratory study, *Inquiry strategies for science and mathematics learning: It’s Just Good Teaching*, illuminates the value of inquiry to support achievement.

Project design develops student content knowledge, skill, and achievement, through active student engagement in STEM learning. Efforts support teachers, administrators, students, and families, from **Enrico Fermi**, a Priority school, **School 23**, and **St. Peter’s School** a Nonpublic School partner, of **grades 3 through 8**. Activities include implementation of rigorous and highly engaging STEM resources, blended portal development, and STEM activities supporting achievement through a three year progression of escalating complexity. Year 1 reflects *Get on the Bus!* a baseline effort supporting core team development. Project efforts move to year 2 “*Inventors Needed*” designed to foster leadership efforts of students and staff. Year 3 leverages capacity, with targeted development and focused design through *STEM of Achievement*. Project objectives include a) high quality professional development provided by district staff members, and project partner STEM Learning Bus, and b) engaging student centered innovative learning experiences through STEM learning. Efforts will foster student engagement, leadership development, fostering Habits of Mind while providing a community service opportunity through outreach efforts to peers and families.

Inventors/Achievers supports the **New York State Regents Reform Agenda Goals #1, #2, and #3** through high quality sustained professional development supporting Development of Highly Effective School Leaders and Teachers, and Development of Student College and Career Readiness. Efforts align with New York State Learning Standards, including **Common Core**, and support development of lessons, units, and resources. *Inventors/Achievers* supports the objectives of the New York State Learning Technology Plan, Standards of the International Society for Technology in Education (*ISTE*), and District Technology Plans as students and staff place value evidence and use technology capably to read, write, speak and listen for information and understanding (*ELA.1*). College and Career Readiness will be supported as students respond to varying demands of task while using technology and digital media strategically (*CCR*). Common Core Standards include gathering relevant information from multiple sources (*W.3-8.8*); present information, findings, and supporting evidence clearly, concisely, and logically (*SL.3-8.4*); enhance understanding through strategic use of media in presentations (*SL.3-8.5*) through inquiry based coding and programing student centered learning experiences.