

Yonkers City School District –Yonkers Codes
2015-2018 Learning Technology Grants Three Year Application

Proposal Abstract

Yonkers Codes is a unique initiative demonstrating the potential of instructional technology to support student achievement through use of innovative techniques which engage students incorporating rich content and project based learning opportunities. *Yonkers Codes* supports student centered active learning through thematic instruction via computer coding and programming development. Staff and students will receive training in the positive impact of computer coding, and the development of computer coding and programming activities designed to enrich aligned instructional delivery through gaming and problem based learning design. Professional learning opportunities will support portal and product creation supporting computer coding and programming efforts. Students engage in logical thinking, and challenge based learning, acting as computer coding and programming leaders through online tools and resource areas. Research verifies the potential of virtual tools to support student achievement. 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 coding and programming. Efforts support teachers, administrators, students, and families, from **School 13**, a Priority school, **Pearls Hawthorne School for Academically Gifted**, and **Sacred Heart Grade School** a Nonpublic School partner, of **grades 3 through 8**. Activities include implementation of rigorous and highly engaging blended resource use and development in computer coding and programming through a three year progression of escalating complexity. Year 1 reflects *Cracking the Code*, a baseline effort, which moves to year 2 *Programed to Achieve*, with year 3 leveraging capacity, celebration and focused design through *Yonkers Codes Explodes!* Project objectives include a) high quality professional development provided by district staff members, project partners Microsoft and Sarah Lawrence College, and b) engaging student centered innovative learning experiences through computer coding and programming. Efforts will foster student engagement, leadership development, fostering Habits of Mind while providing a community service opportunity through outreach efforts.

Yonkers Codes 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. *Yonkers Codes* 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 programming student centered learning experiences.