

Our students need and deserve a foundation in STEM to thrive in the 21st century and this foundation is best laid in the early years of a child's education.

Washington State ranks #1 in the nation in the concentration of science, technology, engineering, and mathematics (STEM) jobs. At the same time, the mismatch between the skills required for available jobs and individuals with those skills is growing faster than in every other state but one.

Bellevue needs to develop the capacity of our preschool and K-5 teachers by developing their STEM knowledge and instructional skills. The inclusion of engineering design and technology in the new science standards is especially challenging in terms of teacher confidence and preparation.

Science taught in our elementary schools has been based on science curriculum purchased in 1999 with support from Bellevue Schools Foundation donors. After 18 years of use, our schools need new instructional materials.

PROGRAM DESCRIPTION

This five-year STEM initiative will pursue success for every student in preschool through 5th grade, providing the needed foundation for achievement in secondary STEM programs. This foundation improves opportunities for all students, including those most underserved and underrepresented in STEM fields. Major goals are:

Goal 1: Provide effective STEM instruction in preschool and K-8 classrooms which capitalizes on students' early interest and experiences, identifies what they know, and provides them with experiences in school and after-school to engage them in STEM practices and sustain their interest.

Goal 2: Increase the capacity in Bellevue to deliver a professional development program that can be scaled up to help teachers in every elementary school develop the ability to enact effective STEM instruction in class, in after-school STEM enrichment activities, and in cross-curricular instructional areas such as writing and art.



5-Year Elementary STEM Initiative

- Science and Engineering instruction
- High-quality STEM professional development for all elementary teachers
- STEM integrated into art and other curriculum areas
- After-school STEM enrichment
Family engineering and coding events

During the first three years, the initiative introduced engineering design challenges at every grade level, started after-school STEM enrichment in robotics and coding at every elementary school, and increased teacher STEM knowledge and instructional skills. In year 4, the initiative piloted and adopted new curriculum to replace 17-year-old science materials and expanded teacher professional development. In year 5, the initiative implements new STEM curriculum in all elementary schools and discontinues the practice of sharing science kits between schools. This facilitates STEM alignment with literacy and math learning at every school to support critical thinking skills. In addition, the STEM initiative provides professional development to support skilled STEM instruction to every elementary teacher and continues after-school STEM enrichment.

Total 5-year Investment: \$1.3 M

5-Year Timeline: September 2013—August 2018

MEASURABLE OUTCOMES

During Year 5 of this project, student learning and growth will be measured using reading, math, and science state assessments.