



Barrington 220 elementary grade students are introduced to STEM curriculum in a pilot program. (Photos: Courtesy of Barrington 220)

Barrington 220 Expands STEM Pilot Program to Elementary Grade Levels

ACCORDING TO THE NATIONAL Research Council, what students learn about the science disciplines, technology, engineering, and mathematics during their K-12 years shapes their intellectual development, opportunities for future study and work, and choices for careers. Barrington 220 is in the pilot year of expanding STEM curriculum to the elementary grade levels. QB asked Superintendent of Schools Dr. Brian Harris about how the pilot is going, and how the program will grow in the future.

QB: *The 2015-16 school year has been the pilot year for elementary Science, Technology, Engineering and Math (STEM) in Barrington 220. Tell us how things have been going so far.*

Brian Harris: The student response to our pilot program at Roslyn Road and Sunny Hill Elementary Schools has been phenomenal. Students at Barbara B. Rose will also experience the pilot program later this spring. Fourth- and fifth-grade students are working with certified teacher Becky McDowell during their STEM rotations on comprehension of the engineering process. Data we have collected has indicated

significant student growth in this area as a result. Students are learning problem solving skills, how to collaborate with a team and communicate engineering claims and evidence.

Before students take the STEM course, we ask them to complete a brief survey measuring their interest in science, technology, engineering, and math on a scale of 1-5. We give them the same survey upon completion of the course, and have found the average student response has indicated interest in engineering specifically has grown a great deal. Students are believing in the work they are completing, and gaining the confidence that they have the skills necessary to someday choose an occupation in a STEM field.

QB: *Barrington 220 offers Project Lead the Way curriculum at the middle and high school levels. Why is STEM at the elementary level so important?*

BH: Research from the National Research Council indicates that most people with successful careers in the STEM area became interested in these subjects before entering middle school. By including STEM

programs as part of the elementary school day, all of our students will be exposed to this curriculum at an early age, and have the confidence to explore STEM fields in middle school, high school, and possibly as a future career.

QB: What have you learned by initiating the pilot? Any surprises or things that will help guide the program in years to come?

BH: While this didn't come as a surprise, we have learned that elementary students are eager to work together as a team when they are engaged with a problem-solving type challenge. The team dynamics are inspiring, and the students naturally think out-of-the box at this age level.

QB: Sunny Hill Elementary School is one of three schools piloting the



STEM curriculum this school year. Because of the school's involvement, Barrington 220 was recognized by the U.S. Department of Education for its commitment to advancing educational opportunities for Hispanic students. How are Sunny Hill students responding to the STEM curriculum?

BH: Sunny Hill students are early in their rotation with the STEM curriculum. They are eager and excited to learn, just as the students were at Roslyn Road. We hope that through the STEM program our students who may not have access to design engineering activities at home will grow an interest and passion in these areas.

All Sunny Hill students participated in code.org's Hour of Code for the first time this year as a way to introduce them to the field of computer science and programming. In addition to instruction by teacher Mrs. McDowell, two professionals volunteered their time to inspire each class to explore computer science.

QB: What is the plan for the coming years in rolling out STEM to all of Barrington 220's elementary schools?

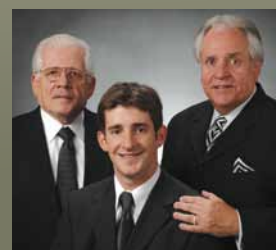
BH: In 2016-17, the integrated STEM program is expected to expand to all fourth- and fifth-grade students district-wide. A pilot program for second and third grades will be initiated at that time. In 2017-18, the integrated STEM program will be implemented for those grade levels, and the pilot for younger grade levels will begin. By the 2018-19 school year, STEM is expected to be part of the elementary school day for all students in preschool through fifth grade. We are very grateful to the Barrington 220 Educational Foundation for supporting these programs by purchasing the STEM materials necessary for implementation, as well as our Board of Education for their continued support. ☺



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