



PHOTO: TAO ZHANG

## An Update on STEM Learning

EVERYDAY THERE ARE SCIENTISTS, innovators, engineers, and mathematicians creating and collaborating to make sure our country remains a global leader. They make up the STEM (Science, Technology, Engineering, and Mathematics) workforce. Quintessential Barrington talked with Superintendent of Schools Dr. Brian Harris about how Barrington 220 plans to continue preparing students to enter these growing industry sectors.

**QB:** *How does Barrington 220 incorporate STEM into curriculum at all grade levels?*

**BH:** One of the goals of Barrington 220 is to engage students in integrated science, technology,

engineering, and mathematical practices through authentic and real-world problem-solving opportunities, rooted in inquiry and innovation.

Our K-5 STEM program begins with an introduction to programming and robotics, then culminates in 5th grade, with participation in the Fresh Inc entrepreneur program. This program teaches students to identify real-world problems and develop solutions through products they can sell online.

At the middle school level, students participate in Project Lead The Way (PLTW) Gateway, where students engage in activities in computer science, engineering, and biomedical science. It gives them a chance to see a range of STEM-related paths they

can take in high school and beyond.

In high school, students can choose robotics and computer science classes throughout all four years. They can also participate in Project Lead The Way's four-year program, which combines traditional math and science courses, with engineering courses.

**QB:** *Why is STEM education so important?*

**BH:** STEM is important because it impacts every part of our lives. Science is all around us, technology is evolving, engineering can be seen in the design of appliances, electronics, and the bridges and roads around us, and math, whether complex or simple, is used by everyone on a daily basis.

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.....

According to the United States Department of Commerce, over the last decade STEM careers have grown by nearly 25 percent, compared to non-STEM careers, which have grown by about four percent. It is important to generate interest in STEM careers at an early age, so students will have the confidence to explore STEM fields as they progress through middle school, high school, and beyond.

**QB:** *How does the current design of Barrington 220 schools impact STEM education?*

**BH:** Due to the fact that all Barrington 220 schools were built long before a formal STEM education was introduced to the district, many of our buildings don't have the appropriate, flexible spaces to support the curriculum in the best way possible.

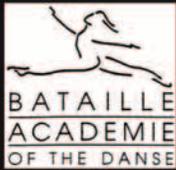
For instance, STEM instruction at our elementary schools sometimes has to take place in hallways, pods, libraries, and traditional classrooms. These spaces are not designed specifically for STEM activities.

At the middle and high school levels, even though some STEM spaces do exist, they cannot always be used as intended, because of the maximum utilization of space within the schools. Our teachers do a phenomenal job using the spaces they are given, but we are close to a point where our physical spaces drive or limit our curriculum.

**QB:** *How can the Blueprint 220 initiative take the district's STEM curriculum to the next level?*

**BH:** Blueprint 220 is a multi-year master facilities plan for all Barrington 220 schools. STEM is one of four priority areas of the initiative. The goal is to renovate facilities that allow students to use multiple approaches to solve problems, think flexibly and inter-dependently, and create models/experiments to answer questions. Possible facility upgrades that would allow students to enhance learning include dedicated, updated, and redesigned science and engineering labs and hubs, as well as hands-on maker spaces.





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*Dance Jam!*

Sunday, January 21st at 4:00pm

Open to the public-free admission  
and

Save the Date!

Integrity Dance Project Performance

*The Journey We Dance VI*

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# Special Parent Event on January 30

B-STRONG TOGETHER, A PARENT SUPPORT  
AND ADVOCACY GROUP FOR  
BARRINGTON 220, HOSTS AN IMPORTANT  
SPEAKER EVENT FEATURING DR. SHIMI  
KANG TO SPEAK ABOUT RAISING HEALTHY,  
HAPPY KIDS IN OUR MODERN WORLD.

**EVENT DETAILS:**

Tuesday, January 30, 2018

7– 9 p.m. / Event is free

Barrington High School Auditorium

**B**-STRONG TOGETHER is proud to welcome Dr. Shimi Kang to Barrington High School as part of the its FREE B-Strong Together Speaker Series. Dr. Kang is a Harvard-trained, award-winning physician, researcher, media expert, writer, TEDx keynote speaker, and expert on the science of human motivation.

Drawing on the latest neuroscience and behavioral research, Dr. Kang has created a four-part parenting model to guide parents as they support their children in developing their own internal motivation and lifelong love of learning.

In contrast to the pushy, hovering “tiger parents” or the permissive “jellyfish parents”, Dr. Kang’s parenting philosophy is based on the model of the dolphin—an intelligent, strong, joyful, and highly socialized creature. “Dolphin parents” compassionately, yet authoritatively, guide their children while focusing on maintaining balance in their children’s lives and developing the key 21st century skills of creativity, communication, collaboration, and critical thinking.

Focused on the development of the key traits of adaptability, community mindedness, creativity, and critical thinking, Dr. Kang teaches parents how to guide their children toward lasting health, happiness, and success, and provides the tools people of all ages need to succeed in our ever-changing, competitive world.

We hope you will join us for this incredible evening with Dr. Kang as she presents, “The Self-Motivated Kid: Raising Happy, Healthy Kids in This Modern World.”<sup>U</sup>

Visit their robust website at: [www.bstrongtogether.org](http://www.bstrongtogether.org) to learn more about B-Strong Together and for helpful parenting resources.

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