STEAM is the new STEM

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$E = mc^2$. Did your palms just begin to sweat? Does the term atomic structure give you flashbacks to sitting in class anxiously while the teacher calls on you? These stressful memories are all too common and have a lasting impact on our future goals. Science and math anxieties often start as early as elementary school due to a lack of approachable STEM teaching methods in our education systems.

For many, science and math bring up uneasy flashbacks of being forced to sit through boring lectures and completing dull worksheets. Michael Stone is ten years old and in the fifth grade at Midwest Academy in Ames, Iowa. “I hate science! All we do is watch videos," he barks with a snarled look on his face. Michael’s mother, Rochelle, also grew up hating math and science. "I just remember trying to get through it. I always hated it. I never understood what was going on, and it always made me nervous."

A recent study from the National Science Foundation alleges, “In the 21st century, scientific and technological innovations have become increasingly important as we face the benefits and challenges of both globalization and a knowledge-based economy. To succeed in this new information-based and highly technological society, students need to develop their capabilities in STEM to levels much beyond what was considered acceptable in the past.” So how do we help our children learn to love STEM courses? By supporting their teachers.

Dr. Yen Verhoeven is the Chief Executive Officer and Founder of Qi Learning Research Group, an organization determined to change students' STEM learning. When sharing our conversation with Michael and his mother Rochelle, Yen shared, “We need to help the teacher so they can help the students. As a society, we must help our teachers to retain our most passionate and dedicated workforce. They literally hold the key to our future.”

Qi Learning Research Group recently developed a groundbreaking professional development program for STEM educators called Qi STEAM Academy. The “A” in STEAM stands for “art” and expands on the theory that to broaden the understanding of STEM education, teachers need to begin including arts and humanities in STEM to inspire students' creativity and curiosity.

Qi STEAM Academy is a year-long program with a mission to empower teachers with innovative and creative resources as well as non-traditional STEAM techniques. “Why give a student a worksheet on DNA when you can help them extract and test DNA from strawberries? Kids are smart and creative, and they are the future,” comments Dr. Yen Verhoeven.

There are many students like Michael Stone; maybe you were one of them. It is unfortunate that so many students already "hate" science and math by such a young age. Fortunately, driven and enthusiastic teachers hold power to ignite passion in their students and open a realm of wonder through Science, Technology, Engineering, Art, and Mathematics. With innovation from learning theorists, inventive teachers, and supportive individuals, the future of STEAM is bright.