

# **STEM, STEAM . . . and Montessori**

**by Melissa Berbine**

## **Introduction by Suzanne Lawson, Assistant Head at Bridgeview Montessori School**

***Melissa Berbine**, Bridgeview Montessori School Elementary I Teacher (mixed age 1<sup>st</sup> to 3<sup>rd</sup> grade), joined our faculty in September 2012. She holds a BA in Elementary Education and is certified by the state to teach grades 1-6. Melissa completed her Lower Elementary Montessori training at Seacoast in New Hampshire. When I read Melissa's article, I cannot help but think of today's newest educational buzzword: STEM (Science, Technology, Engineering and Math)... or STEAM (add in Art). A common belief about STE[A]M education:*

All students benefit from the STE[A]M program because it teaches independent innovation and allows students to explore greater depths of all of the subjects by utilizing the skills learned; these skills are going to be required in order for today's students to be tomorrow's global leaders. (Understanding the Basics of STEM Education, Dr. Patricia Fioriello)

*It seems like this trend in education today is something that Maria Montessori, Melissa Berbine, the parents of Montessori educated children Jeff Bezos, Julia Child, Sergey Brin & Larry Page, Yo Yo Ma, Katherine Graham, T. Berry Brazelton, Gabriel Garcia Marques, and many others including you already understand: deep academic exploration, coupled with making connections between disciplines and the larger community is a wonderful way to learn*

*Melissa's article.*

I have been a teacher for a long time, and Cosmic Education is by far my favorite curriculum area to teach. I always knew I wanted to be a teacher from the days when I set up classrooms in my mother's garden shed and played school with my younger brothers and sisters and my neighbors. And although, this bossy know-it-all child perhaps garnered some eye rolls from adult passersby, I loved teaching others what I knew and learning new things that I could then share. I admired my teachers, and I knew that I had found the path that I wanted to follow.

After attending college, teaching in the public schools, and very fortunately finding the Montessori way, I was sure I was heading in the right direction. I continued my studies, completed my Montessori training and eagerly and enthusiastically began an elementary program at a small, fledgling Montessori school. As I met people socially, they would inevitably ask me what I did for a living. "I'm a Montessori teacher." Troublingly, I was consistently dismissed with an "oh-not-a-REAL-teacher" attitude. I wished

they had a better understanding of what I did, but I had already lost them, knowing they could not truly understand unless they saw it for themselves. Usually, this feeling was something I could brush off of the surface of my skin knowing that they had no idea about what I did or how I did it. I tucked it into my pocket excusing their misunderstanding, explaining to myself, "All they know is traditional education."

After taking time off to be with my young children, I went back to teaching in the public schools. In the time that I had been away from public education, many things had changed: State Standards. Common Core. Standardized Testing. Raise the Bar. No Child Left Behind. It was a very different place that felt foreign to me having spent my last teaching experience fostering a love for learning and inspiring children by letting them discover concepts on their own, leaving them thirsty to delve deeper. After three years in public school, I knew I had veered off my path even if I had a tiny feeling of accomplishment as it made a significant difference to be a REAL teacher when folks asked me what I did for a living at social gatherings. Yet, after three years seeing seven year olds unhappy about learning and robotically completing tasks was becoming unbearable. It was stressful to try to add a little fun and excitement to our mundane, daily routines while keeping one eye on my classroom door for fear an administrator was going to walk by and discover that perhaps we were wasting time. I left.

I felt truly fortunate to secure a position at Bridgeview Montessori. I knew this was a very special place, and a phone conversation with Sandy Nickerson, our Head of School, confirmed what I sensed to be true. I was getting back on my path. In so many ways, my journey at Bridgeview has solidified what I know to be true about teaching and learning. However because of something a student recently said during a lesson, I am more assured than ever:

The third years are learning about orders of vertebrates in Biology with me. When studying orders of fish, we came upon the coelacanth, which biologists thought to be extinct until they found one in 1938. It has been in existence for 380 million years. It has jointed, bony fins which places it in its own order, and the fins move in an oar-like way like limbs. Knowing it was older than dinosaurs, the students made the leap to their History lessons and showed me that they had found the coelacanth on the timeline of life. An awesome find! They also made the leap to say how it might be "a step before a salamander" in evolution. They were bringing their knowledge from first and second year Biology lessons; life began in the sea and this fish was a bit like an amphibian with a simple lung and limb-like fins.

A Third Year student comments, "It is so cool how all of this happens around us in nature with no one controlling it. We just get to figure it out, learn about it, and discover it while it was there all along."

As if I needed another reason to love my job.

Cosmic Education to me as a Montessori educator means interconnectedness on a personal level, a professional level and a universal level. Cosmic educators understand that this cannot be measured by a benchmark or by a score on a standardized test. We aim for passionate learning, sending students on a quest for more. We work to foster this in the classrooms of Bridgeview Montessori instead of squashing it with traditional grades and competition. These children are individuals whose growth is measured by their own progress. Rather than test, test, test, we need to trust, trust, trust. We know our work as guides, and our administration supports that. We need first to observe then meet the needs of and trust in the abilities of our students. Equally as important, we need to trust in our own abilities as guides whether we are parents or REAL teachers. We know that it all comes together as it should in the end when our children are allowed, in fact, strongly encouraged to follow their interests and learn about what they love. We know where this leads them when they understand what is truly important. We have faith in the people they are becoming based on the love and passion for the paths they follow. It is an honor to walk quietly behind them.