



The opportunities in STEM education

By Nicola Enright-Morin

Educating children is a serious business. Trends come and go and millions of dollars are spent on research, trying to find the best way to fuel kids' developing minds.

While some trends are over before they start, STEM education looks like it's here to stay. STEM education stands for Science, Technology, Engineering and Mathematics, and its curriculum is based on the idea that these subjects should be taught together, rather than separating them into individual topics.

Although a relatively new concept in Canadian education, studies show that not only is STEM invaluable in terms of an educational experience, the future job market also depends on it. According to the Digital Adoption Compass, in Canada there will be 182,000 unfilled jobs in the information and communications technology fields by 2019. This gap in students' education, coupled with the ever-growing need in

the job market, has not gone unnoticed by corporate giants and many of the big players like Google Canada and Microsoft have invested in programs that bring STEM to Canadian kids.

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So what STEM opportunities are currently available for kids in BC right now? Templeton Secondary School in Vancouver is in its second year of offering a STEM program for students. The principal, Aaron Davies, explained to BC Parent what this innovative program is all about.

"In a traditional classroom you typically get your assignment and then finish it, one shot and then move on, whereas our students use skills and information to work as a team. Students embrace a fail fast, fail often' model. They identify a problem, they go through a design process, they come up with a solution that they test, analyze, and then go back and redesign."

He says that one of the best things about the program is that it's been designed with the students future in mind. "What sets our program apart is that it's been designed in collaboration with BCIIT and with a major industry partner in the tech industry. We have worked together to create a model for students to have pathways to post-secondary education, as well as to jobs in STEM related fields once they leave school."

He says that students that left the program last year and are now in STEM related programs at university feel totally confident about some of the challenges they're being

asked to do, because high school prepared them for the challenge.

Davies says that so far the program has been a great success and that it is getting positive feedback from the students. "They absolutely love it. They love the creativity, the opportunities to think differently, to look at some real world problems. The projects they undertake can be incredibly complex, sometimes it will take them six to eight weeks. The students learn how to think critically and collaboratively, take responsibility for whatever their role is in that project and they also develop flexibility of mind to think creatively around problem solving."

However you don't have to wait until high school for your children to get involved in STEM education. There are many ways to get your kids onboard at a much earlier age. Brain STEM Learning Canada is a company that operates out of North Vancouver and their workshops, camps and afterschool programs are aimed at kids from 4-14 years old.

One of the owners, Sarah Baldwin, says one of the striking things about STEM programs is how the hands-on approach really enhances children's desire to get involved in science and engineering, which in turn gives the kids a much better sense of confidence, no matter what their age.

Baldwin says that getting kids involved in STEM learning from a young age allows them to gain practical skills in a topic they

might have a natural talent for, and that a summer camp or afterschool program in STEM will hopefully encourage a desire to continue learning STEM subjects as they get older. Baldwin says the key to success

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is that no matter how old the kids are, it's important to make sure they are learning through fun. "We did a birthday party in Coquitlam recently where the kids got to make roller coasters. There were three different groups of kids and after each challenge, the kids would view each other's challenge and what they had done and they were literally jumping for joy. The looks on their faces were priceless."

Here are a few ways to get your kids a STEM education fix online and give them games to stimulate and engage their critical thinking:

- Backed by some of the biggest names in technology, www.code.org features the 'Hour of Code Movement' (a global challenge to get kids of all ages trying out computer coding) where kids can learn

how to code anything from their own Star Wars game to a Frozen game featuring Anna and Elsa.

- Let's Talk Science is an award-winning, national, charitable organization that delivers learning programs and services that engage children, youth and educators in STEM. Their website is a great resource for anyone wanting to find out more about STEM and it also has information on their Canada-wide program, that gives kids as young as three-years-old a chance to attend a hands-on STEM workshop, free of charge.
- Aetna is another leader in this field here in Canada, delivering STEM programming to more than 225,000 youths across Canada.

As parents, you can turn everyday activities into a STEM project with a little creativity. For example, cooking the family dinner can be a chemistry project, while planting a vegetable garden is biology. Both are hands-on and simple ways that parents can show their kids the importance of STEM in everyday life.

Ultimately it's important to recognize that in our technology driven world STEM is here to stay, and just like any other aspect of life, the more fun we can have with it—and our kids—the better. ★

Resources
www.stemscience.ca
www.aetna.ca

STEM Educators

BrainSTEM Learning Canada

730 Marine Dr.,
 North Vancouver, BC, V7M 1H3
 604-379-2167
brainstemlearning.ca

BrainSTEM Learning Canada Corp. is an extracurricular education provider focused on Science, Technology, Engineering, and Math (STEM) systems. Unique programs are designed by working engineers for learners aged 4 to 14 through fun, creative, and innovative science experimentation students explore their creativity.

Sylvan Learning

Burnaby, Vancouver, North Vancouver, West Vancouver, Delta, Richmond, Maple Ridge, Kelowna, Langley
 1-800-EDUCATE
sylvanlearning.ca

Math-Reading-Writing-HomeWork Skills-Study Skills-Robotics-Engineering-Coding-College/University Prep
 Looking for ways to give your child an edge for the future? Turn to SYLVAN for our innovative STEM education, as well as accelerated after-school programs. We'll challenge and inspire your child to master critical 21st century skills with programs ranging from Robotics to Coding.

Bricks 4 Kidz

Vancouver, Richmond
bricks4kidz.com/Vancouver
 604-250-6665

Bricks 4 Kidz offers hands on, project-based curriculum that introduces elementary aged children to concepts of engineering, architecture and mechanics using motorized LEGO® bricks. Our program provides quality STEM learning (STEM: Science, Technology, Engineering and Math) in a positive and collaborative learning environment!