



Innovation & Entrepreneurship in Science, Technology, Engineering and Mathematics

Do science, technology, engineering and mathematics (STEM) have anything to do with being an entrepreneur? Perhaps you picture an entrepreneur as someone rolling in money and making amazing financial deals on their cell phone. In reality, being an entrepreneur is much more than this — it is also a way of thinking and working that relies on innovation and creativity, research and development, solid communications and even hard work.

The Billion Dollar Question

There are so many career choices! Have you ever considered the option of becoming an entrepreneur? Are you keeping your options open?

Watch [The Billion Dollar Question](#) video and put entrepreneurship on your radar!



Think being an entrepreneur is beyond your reach? Think again!

In 2015, there will be over 1.3 billion self-employed people worldwide. Each of these people is really an entrepreneur. In poorer areas of the world, being an entrepreneur is often a necessity due to a lack of education, illiteracy or poor economic conditions. In Canada, increasing competition in the workforce and a changing corporate and industrial climate, is limiting the availability of ready-made jobs and careers. You may have to rely on your ideas, initiative and entrepreneurial thinking skills to secure your future in the workforce.

A background in science, technology, engineering and math offers a great start to developing the knowledge and many of the skills necessary to be an entrepreneur. In fact, many of the skills you learn and practise in science, technology and mathematics have similarities with entrepreneurial thinking skills – creative problem solving, divergent thinking, data collection, organization and analysis of information and clear communication of results, to name a few.

What is entrepreneurial thinking?

Entrepreneurial thinking is a learning style propelled by the desire to solve problems and create.

MaRS Discovery District

A knowledge and comfort with STEM and the innovations in STEM provide opportunities for the use of these discoveries and technologies in new business ventures. Entrepreneurial thinking is usually the key ingredient in turning a new scientific discovery or innovation in technology into a usable product. Consider the discovery of [Polytetrafluoroethylene](#) (PTFE), which was discovered by accident in 1938 by Roy J. Plunkett, a scientist at DuPont. PTFE is now recognized worldwide as the Dupont brand Teflon™ which we associate with non-stick frying pans. But today PTFE, as well as a number of other fluoropolymers, have industrial applications that encompass everything from aerospace wiring to ski



wear. Today the global demand for fluoropolymers is estimated at greater than 7 billion dollars US and is still growing. Ongoing entrepreneurial thinking has been responsible for transforming this scientific discovery into the mega-product it is today.

The number of science and technology start-up businesses in Canada has been increasing in recent years, along with significant increases in the number of education and health-based start-ups. There are also more education programs at colleges and universities that focus on entrepreneurship. Most provinces and territories in Canada have initiatives in place to promote entrepreneurship and help support students and budding entrepreneurs to get the educational basics and access mentors and financial support to turn their entrepreneurial ideas into reality. Check out some of the great business ideas of Ontario youth who participated in the Ontario government's [Summer Company](#) program in 2014.

Despite the increasing interest and support for young entrepreneurs in Canada, being ready to be an effective entrepreneur takes knowledge, and a good grounding in STEM can really help new entrepreneurs. A recent [study](#) of Canadian small business owners showed that 39 per cent failed a 10-question financial literacy quiz, and 57 per cent achieved a score of 50 per cent or less. These results highlight the real need to have knowledge and skills in mathematics as well as great ideas to start a business because successfully staying in business also relies on understanding profit margins, fixed assets and the balance sheet of your business.



Entrepreneurship

The capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit. The most obvious example of entrepreneurship is the starting of new businesses.

Businessdictionary.com

Canada has a rich history of entrepreneurial thinkers. The Hudson Bay Company was built by the entrepreneurial spirit of the fur traders. Sir Adam Beck masterminded the development of public ownership of energy generation, which evolved into Ontario Hydro. The brands and businesses widely recognized within Canada today all started with entrepreneurial thinkers. Where would Canada be today without entrepreneurs like Timothy Eaton, John Molson, Samuel Bronfman (Seagram's), Alexander Graham Bell, John Redpath (sugar), the McCains (french fries), Ron Joyce (Tim Hortons), and more recently, Guy Laliberté (Cirque du Soleil) and Mike Lazaridis (BlackBerry)? Entrepreneurs have made huge contributions to growing Canada's economy and securing our position as a leader in the global marketplace.

Are you ready to be the next Canadian entrepreneur on this illustrious list? You can find out more about Entrepreneurship in science, technology, engineering and mathematics in the [Innovation & Entrepreneurship](#) section of CurioCity. Listen to the start-up and success stories from real Canadian entrepreneurs. Learn about the skills and knowledge needed to be a successful entrepreneur and start to imagine how you can follow your passions and hone your skills into a career as an entrepreneur.



References

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Additional Resources



[Summer Company Yearbook 2014](#). In this yearbook you'll see how great ideas turned into summer jobs, and in some cases careers.

Click on image to access PDF.

Ranker.com. [Famous Entrepreneurs from Canada](#) (Accessed January 29, 2015)

This webpage offers a list of notable or famous entrepreneurs from Canada, with bios and photos, including the top entrepreneurs born in Canada and even some popular entrepreneurs who immigrated to Canada.

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