

Girls and STEM

A Guide for Adults



Advantages of a Science, Technology, Engineering or Math (STEM) Education



76% of top jobs require a STEM education



Graduates with STEM degrees earn 26% more on average



STEM qualifications are in demand

Busting Myths About Girls and STEM

The following myths were identified by young women when asked what barriers they felt they faced when making career decisions and how we can bust these myths!

Physics and math subjects aren't for girls.

Simply not true! **Girls are just as capable in math and physics as boys** and can enjoy these subjects just as much. The issue is that often, girls lack confidence in these subjects. This is partly due to unconscious messages from society and the media that girls aren't good at math. Discuss these messages with girls, so they can defend against them.

Technology careers are for male geeks, are boring, and require little imagination.

The media often paints a skewed version of what technology careers are actually like. There are a multitude of jobs in the technology field that fit all kinds of different personalities. These can range from software engineer, to web designer. It is important to point out to girls that **technology jobs are often very collaborative and creative.**

You are either good at math and science or you aren't.

Contrary to popular belief, effort and proper guidance are mainly responsible for success in STEM, more so than natural ability. Girls in particular tend to think that if they don't obtain A+ marks in math and science classes then they can't have a STEM career, and this simply isn't true. Math and science subjects require hard work and practice, but you can improve your marks! **STEM jobs are an option not just for the top students.**

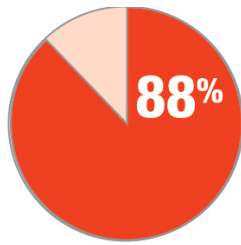
If you want a helping career, your STEM options are limited.

Many girls believe that if they want to be in a helping profession then their only options within STEM careers are medicine, nursing or veterinary sciences. This is simply not the case. Biomedical engineers apply engineering concepts and design to solve health related problems, environmental engineers design and create solutions to environmental problems. Research scientists plan, conduct experiments, and analyze results to contribute to the knowledge base that informs medical doctors and nurses. These are just a few examples of how **STEM careers are also helping careers.**

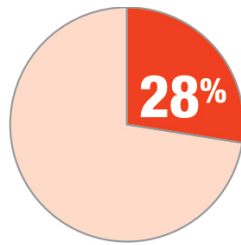
STEM jobs are not suitable for girls if they wish to have a family.

As noted above, STEM jobs are in demand, offer excellent salaries and flexibility. **You can definitely have a family and have a STEM career.**

Guiding Girls Through the STEM Pathway



88% of Canadian parents believe that they can help guide their children's learning.



BUT only a small percentage of parents actually discuss the value of a STEM education with their children.



31%
of parents believe science is a mandatory academic requirement through high school – **it isn't!**

In fact, no province requires a Grade 12 science course for graduation.

Let's go! Science Inspiring Discovery AMGEN

Discuss the myths and biases about girls in STEM.

- Ask youth what they consider to be a job for a woman vs a job for a man. Why do they think this?
- Discuss and showcase these careers differently. Visit WISEatlantic.ca/videos.asp for short role model videos featuring women in various STEM careers.

Assume girls are interested in STEM and talk to them like they are!

- Encourage girls to ask questions about the world around them and facilitate meaningful debate. If you don't know the answer to a question, research or experiment together to find out!

Break the cycle of self doubt.

- We send an important message when we praise girls on their effort, rather than what they achieve. This kind of praise helps to eliminate self-doubt and reinforces that math and science are skills to be practiced.
- The fear of not having top marks in these classes should not deter girls from taking them. The skills and knowledge gained are useful in a myriad of STEM careers.

Expose girls to STEM role models and activities.

- Girls will believe that they can achieve a particular career if they see someone like them in that career. Research local organizations or events that will expose girls to STEM activities and role models. Visit WISEatlantic.ca/resources.asp for information on STEM opportunities.

Expand horizons and encourage an open mind.

- Remind girls that changing their mind about a school subject or career is NOT a failure and that a change of career is always an option. As we grow as individuals, so do our interests and passions.
- Let girls know that having math and science subjects can make it easier to switch post secondary programs or careers later in life.
- Take every opportunity to showcase various STEM careers to girls. You can do this by encouraging friends and family to discuss their careers, attend career fairs/university open-houses, discuss jobs of the various people you encounter or see in the media during the day (i.e., physiotherapist, veterinarian, radio producer, etc.).

The Women in Science and Engineering - Atlantic Region (WISEatlantic) program is primarily engaged in inspiring girls to consider Science, Technology, Engineering and Math (STEM) careers and making them aware of the diversity of jobs that exists within these fields. We also support women in STEM careers through professional development opportunities.

Find out more at www.WISEatlantic.ca