



Scientists and Engineers are Everyday People!

By Jeanette McPherson

Over the last few years I have had the opportunity and honor of interviewing and photographing amazing Atlantic Canadian women in the STEM fields for a WISEatlantic project called the “**Career Spotlight Booklet Series**”.

I say honor, as I was blown away by the talent these women emulated. Each one of them made me feel welcomed (even though I thought I would be intimidated!) and all were excited to share with me their educational and career experiences and triumphs.

To date, I have completed two books in the series, “Women in Science” and “Women in Engineering” and presently in the process of completing “Indigenous Women in STEM”. You can find these two booklets on the WISEatlantic website, on the resource page, and they have also been distributed to some schools in Atlantic Canada.

A common theme throughout the interviews was the fact that if you don’t know what you want to do right now, don’t worry! You can always change directions. Just do “something” and the rest will follow, and if you do change your mind, that’s okay too! For instance, one woman I interviewed never intended to be a professor as she thought she was an introvert and hated speaking in front of people, but she found once she had the expertise and experience she became more confident.

Another common theme was that you may think you want to do one thing but may end up doing something completely different and unrelated and that’s okay also. For example, one woman I interviewed thought she wanted to be a veterinarian but when she took a class in Animal Biology she realized it wasn’t for her.

Creativity was also a universal theme throughout. Almost every one of these amazing women had a creative side they nourished including a writer, artist, and photographer.

Other Common pieces of advice included:

- Never give up
- Be Persistent
- Be Flexible
- Be Resilient
- Stay with it if you are interested in it. Don’t think “I can’t do it”.
- Challenge yourself and don’t be afraid to take on new tasks or something you are not comfortable with

- Do a co-op placement if available
- You can learn something from everything you do and every job you try
- Don't be afraid to speak up if you have a different perspective or opinion
- Do what "lights you up"
- Ask lots of questions of people about jobs you may be interested in
- Network and volunteer
- Get a Mentor
- Keep your options open
- Don't prejudge yourself or your capabilities

Career Highlights

I interviewed one amazing lady who had completed a geology degree and then decided she really wanted to be an aerospace engineer so she did and now she is working on designing a new lighter and more flexible space suit at Massachusetts Institute of Technology (MIT) for NASA.

I also interviewed a Biomedical engineer who is in the medical field researching the maternal make-up of the heart and how heart valves are remodeled during pregnancy. I learned about one female working on a vaccine for ovarian cancer, a biologist who monitors areas for the presence of whales using their sounds, and another woman who is researching new sustainable ways to make better plastics like water bottles.

Educational Paths

Did you know that you can get paid while doing your Masters and PhD's?! Yes, you are going to school but it's a job too! I also learned that it may seem like a long time in school, but everyone I interviewed said the time goes fast.

When asked about their educational path all the women completed an undergrad degree, Masters degree and most even PhD's!

Career Impacts

Some of the many broad impacts these amazing scientists and engineers have had on society include:

- New **medical** applications such as development of new vaccines, research on impacts of heart valves during pregnancy, and other medical treatments for osteoporosis, knee injuries, medical supplies for military use and space application.

- Study of **environmental** impacts on our eco systems, global warming, agricultural waste, biofuel applications, protection of our whale population, lowering gas emissions, and creating sustainable plastic options.
- **Engineering** developments such as creating sustainable wind and solar energy resources to guarantee reliable energy options for the future, protecting the public and environment by understanding and reducing dam safety risks, ensuring clean water sources and safe hydro systems, maintaining aircraft safety measures, as well as influencing policy decision makers.

Vision

All these women had a vision of equal opportunity for everyone and equal representation, including pay, promotion and gender equality, as well as hope that more women excelled to positions of leadership.

So yes, I learned lots of great things, including Scientists are everyday people and they all want to exceed!