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"Given the demands we're going to see for skilled workers over the next five or ten years we can't afford to ignore half the population. Techsploration directly addresses this problem. We've also seen the direct success of Techsploration as young women who have been through the program enter occupations they wouldn't otherwise have heard about. To hear them talk about what a positive impact Techsploration has had on their lives and to see the program expand into more and more schools is very gratifying."

> Adrian Morrison, Regional VP Black and McDonald Ltd.

# Message from Laurie Edwards President, Techsploration Board of Directors



Techsploration Board of

Directors

On behalf of the Techsploration Board of Directors, it is an honour to provide a few words about our organization in our first Community Report. The Board's work has been built on an appreciative model of Discovery, Dream, Design and Destiny. These four words have enabled the Board to build upon our collective vision and design the future of Techsploration.

For the Board, these words truly describe the work we are undertaking. We have discovered the opportunity to build upon our vision or dream of a pan-Canadian impact while balancing the importance

of raising funds and supporting staff, role models, team leaders, sponsors, school administrators, teachers, government leaders, and employers in becoming actively engaged partners. This acknowledgement that "every woman counts" will continue to inspire the Board to ensure young women have the opportunity to pursue their destiny without the constraints of men's work or women's work.

Celebrating our 15th anniversary, the Board of Directors has worked hard to renew our strategic vision; to engage in discussions about evidence-based program delivery and deliver our promise of more young women having the information and experiences they need to choose a career in skilled trades, technology or applied sciences.

As we move ahead with our vision for the year, my hope is that our work will be seen as positive transformation and that our membership will help us empower and support all of the Techsploration community to connect, cooperate and co-create so that we can continue to grow in innovative and bold ways.

My personal thank you to our community who continue to serve with enthusiasm and energy. It's been a great year, and on behalf of the Board, let me assure you that 2013–2014 will be an even bigger year for all of us.

# **About Techsploration**

Our future economy and well-being will depend on Nova Scotia developing an innovative workforce in science, trades, and technology. As our population ages, we will have a significant gap unless we engage many more youth—including females—to consider careers in these fields. Yet, students still have misconceptions and often don't see these as viable options. That's where Techsploration comes in.

In 1998, Techsploration started as a pilot program in eight schools, working with close to 50 young women in grade nine. Now celebrating our 15th anniversary, Techsploration has grown to include over 40 schools across Nova Scotia reaching more than 3000 students every year with the support of nearly 30 sponsors and three partners: the Nova Scotia Community College, the Department of Labour and Advanced Education-Apprenticeship Training Division, and Women in Trades and Technology Nova Scotia.

Bringing together educators, industry, unions, government, and students, Techsploration offers an interactive program that introduces young women throughout the province to in-demand careers they may not have thought about before. Our programming, for young women in grades nine through twelve, creates awareness about the role of work in their lives and helps them understand the significance of math and science for their future careers.

The goal of Techsploration is to increase the number of women working in science, trades, and technology occupations by assisting young women from diverse backgrounds explore a wide range of career options. Every dot on the map represents a school that has participated in Techsploration over the past 15 years.

In addition to the schools on the map are dozens of other schools that have participated as guests at Techsploration events.

Techsploration is truly province-wide; reaching out to rural and diverse communities throughout Nova Scotia.

"Techsploration impacted me by making me realize that careers are not gender specific. Techsploration, along with my parents, encouraged me to chase whatever career I wanted, regardless of stereotypes."

> Ashley Fairfax, 2004 Techsplorer Completions Engineer 2013 Alumnae Survey Respondent

# **The Program**

#### **Techsploration Career Research Model**

#### December-March

A teacher selects six young women in grade nine to be on their school's Techsploration team. Together, they research a science, trade, or technology career assigned to their team. With the help of a female role model working in that field, the team spends a day at her workplace, learns about her work and creates a presentation.

### **Techsploration Goes to School**

#### February-April

The Techsploration team shares their experience and presentation with students at their school. Young women and young men, staff and invited guests are introduced to in-demand careers by participating in a round robin with women working in these fields. Students can ask the role models questions about their jobs, training, and education.

## **Techsplorer Events**

## April–May

Techsploration teams from across the province gather together to share their presentation with participants from other schools. The young women get an in-depth look at multiple sciences, trades, and technology careers and learn valuable skills by participating in interactive presentations and workshops.

## **Techsplorer Alumnae Activities**

#### Ongoing

Young women in grades 10–12 are invited for follow-up activities such as interactive workshops and alumnae conferences to learn about more career options. They are encouraged to help teachers select the new school team and assist with the program. In grade 12, all participants can also apply for scholarships created especially for Techsploration by our sponsors.

"The round robin stood out because it provided us with an opportunity to meet multiple role models, ask questions and spark an interest to do more research on the topic. It was a quick way to expose women to more than one career."

2013 Alumnae Survey Respondent

# **Current Projects**

Each year, Techsploration begins new projects and initiatives. This year, we focused on the continued production of the Women in Action Web Videos and the Alumnae Tracking Project (detailed on pages 8–11).

#### Women in Action Web Videos

The first phase of Techsploration's Women in Action Web Video Series is complete, with 33 videos available online, and even more in final editing or production.

The videos explore diverse careers for women in science, trades and technology-related fields. Since their launch in 2009, the videos have become increasingly popular, quickly approaching 100,000 views—literally from across the globe!

Each video features a Techsploration role model who provides a two-to-three minute overview of her career. Among the featured careers are chemical engineers, electricians, pipefitters, and physicists.



This year we added videos featuring:

- Andrea MacDonald, Tug Master
- Jesse Benjamin, Veterinarian
- Carolyn Skerry, Marine Survey Technician
- Shalyn Williams, Electrical/Systems Engineer
- Meg O'Neill, President (oil and gas sector)

The videos can be viewed in the Women in Action library on the Techsploration website, or on Techsploration's YouTube channel.

The videos are finding success in classrooms across the country as a way to introduce youth—male and female—to careers they may not have thought were an option. This past year, the videos were also noticed and given high praise by the Department of Labour and Advanced Education; adding them to their website careers. novascotia.ca.

For phase two of the web video series, Techsploration has partnered with Women in Science and Engineering (WISE) Atlantic to produce three videos per year for the next five years. Also, in addition to the videos already in the library, Encana has also agreed to sponsor 15 more videos in the oil and gas sector. Several videos are currently in production.

The success of the videos speaks to the demand for relevant career resources for young women. The continuation of the series will help ensure Techsploration can continue to reach out and demonstrate these career options in an interactive and meaningful way.

> 92% of alumnae agree that Techsploration introduced them to career opportunities they wouldn't have known about otherwise.

# **Current Projects**

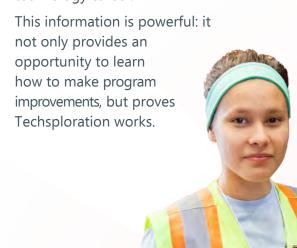
#### **Alumnae Tracking Project**

This year, Techsploration celebrates our 15th anniversary working with today's young women; tomorrow's skilled workforce.

Over the past 15 years, the program has grown exponentially and expanded throughout the province, currently in 24 schools across Nova Scotia and reaching over 3000 students every year.

We've been reflecting on this progress and it got us thinking, "where are all our Techsplorers now?" We wanted to find out.

Over the past several months, we have been searching for past Techsploration participants to reconnect and find out if they pursued a science, trade or technology career.



# Impact

There are many ways young women in the program can learn about different careers. In our survey, we asked alumnae to rate each of our events and activities on their effectiveness.

Below, you will find the percentages of respondents who agreed each event was 'somewhat' or 'very effective' at:

- making them more aware of careers in science, trades, and technology (dark pink)
- making them more interested in pursuing a career in science, trades or technology (pink)
- helping them select a career, regardless if it was in science, trades or technology (pale pink).

Work site visits		84	92 99
Team presentations	62	77	97
Techsplorer Events		E	6 92 98
Techsploration Goes to School		75 78	98
Alumnae Event		71	89 93
Workshops at events		83	91 98
Team role models			90 92 97
Role models at events		82	95 97
Role models in round robins		80	91 96

# Influence

Not only did we set out to learn where our alumnae are now, but also how their Techsploration experience influenced their lives.

Common themes arose as survey responses were received. This section outlines those themes and provides the percentage of respondents who said they either 'somewhat,' or 'strongly agree' with the following statements:

### **Choosing Careers**



80

Techsploration introduced me to career opportunities that I don't think I would have known about otherwise.

Techsploration led me to seriously consider entering careers that I would not have thought about otherwise.

## **Advancing Education**



Techsploration showed me that math and science courses are important.



Techsploration influenced my decision to take math and science courses in high school beyond the basic level required for graduation.



Techsploration influenced my decision to stay in school and graduate from grade 12.



Techsploration helped me make a decision to go to community college, university or other post-secondary study.

## **Building Confidence**



Techsploration showed me that women can be successful in careers involving trades, technology or science.



Techsploration showed me that I can be successful in any career I choose.



I think that my experience with Techsploration made me feel more confident about my future career options.



I think that my experience with Techsploration helped increase my self-esteem.

## **Developing Skills**



I think that my experience with Techsploration helped me learn skills I could use when applying for a job or at work.



I think that my experience with Techsploration gave me better career research skills.



I think that my Techsploration experience helped me feel more confident when making presentations or speaking.

## Changing Attitudes



Based on my Techsploration experience, I am more likely to recommend that other girls/women consider careers in trades, technology or science.



Based on my experience with Techsploration, I believe I will/would encourage my own daughters to consider careers in trades, technology and science.

# Alumna Profile: Meet Rebecca White, Chemical Engineer

Techsploration is now starting to see the effects of the program as students come full circle; from grade nine 'Techsplorers' to volunteering as role models. Below, read about alumna Rebecca White and her experience with Techsploration.

When grade nine student, Rebecca White, walked into the Dartmouth office of Accent Engineering Consultants with her Techsploration teammates, not only did her image of an engineer immediately change, but so did her future plans. "Up until then, I had no idea what an engineer did," says Rebecca. "When I thought about engineering, I didn't think it was my kind of thing. I knew I didn't want to build bridges or robots."

But watching engineers at Accent pore over blueprints and hearing them talk about designing oil and gas pipelines was exciting. "It was over my head but I thought it was really interesting. I had never considered engineering as a career before participating in Techsploration."

In June of 2010, Rebecca graduated with a degree in chemical engineering from Dalhousie University in Halifax, thanks in part to the experience she had eight years earlier as a member of the Techsploration team at East Antigonish Education Academy.

"I didn't know any women engineers. Prior to that, my options felt limited to jobs I saw other women doing."

Techsploration showed Rebecca that there were careers she'd never heard of and women doing them! "The program allowed me to be more open-minded about my future choices and to see a variety of different careers. This helped me choose what was best for me."

Rebecca now works as an engineer in the Distribution Design group at ATCO Gas. Knowing how impacted she was by meeting female role models and hearing their stories, she makes a point of doing the same.

"As a role model now myself, it's very gratifying to be able to open doors for young women and see how excited they get when they hear about what I do."

> 1225 On average, the number of role models a young woman will meet and interact with if she participates in every Techsploration event in grade nine through grade twelve.

# **Benefits to Sponsors**

### **Commitment to the Development of a Local Workforce**

Your support demonstrates leadership in promoting education, training, and youth initiatives that will lead to career and job opportunities for Nova Scotians.

### Address the Skills Shortage

The current skills shortage will require a significant recruitment effort to attract new workers to science, trades and technology fields. Techsploration directly addresses this challenge. Women make up over half the workforce and present a viable source of skilled workers in a wide variety of occupations.

Involvement in Techsploration also facilitates organizations in attracting talented young people to post-secondary educational training opportunities. For employers, this is a way to renew your workforce in future years and to start succession planning.

#### **Commitment to Diversity**

Your participation demonstrates the value you hold for workplace diversity. Techsploration is a proven program that supports employment equity initiatives and programs.

#### **Commitment to Community**

The increased popularity of corporate citizenship has meant corporations have become a vital part of community and non-profit organizations. Techsploration offers you the opportunity to make a significant statement about your commitment to the communities in which you operate.

#### **Sponsor Recognition**

Your organization will be recognized in all promotional materials. Your corporate logo will appear on Techsploration program materials distributed to teachers, role models, students and their parents. In addition, your name will be highlighted at the Annual Launch, Alumnae Conference and Techsplorer Events.

# **Get Involved**

## Provide a Female School Team Role Model

Each school team is assigned a science, trade, or technology career to research with the assistance of a team role model employed in that career. She will:

- facilitate a 'Techsploration Goes to Work' day
- participate in a 'Techsploration Goes to School' event
- participate in a Techsplorer Event

### Provide a Female 'Techsploration Goes to School' Role Model

Each year, up to 200 role models participate in Techsploration Goes to School events across the province. She presents on a science, trades, or technology-related career to male and female students, teachers and invited guests. The employer supports her participation by providing the time to attend the event and by covering the cost of travel and expenses.

#### **Provide In-kind Products or Services**

Techsploration relies on support from industrial and educational organizations. If you can provide an in-kind donation of services, promotional products, or participate on a Techsploration committee, please feel free to contact the Techsploration office at 902.491.4693. We would love to discuss this with you.

## **Provide Financial Support**

Your donation will ensure the ongoing success and expansion of the Techsploration program. While considering the benefits to your organization, we want to assure you that your contribution can be flexible; payment for your contribution can be in one or more instalments. If you decide that Techsploration is a great fit for your organization, please contact Tricia Robertson, Executive Director, at 902.431.0216 or tricia.robertson@techsploration.ca.

# **The Organization**

## **Board of Directors**

President Laurie Edwards, Director, Career Development Nova Scotia Community College (NSCC) People and Planning

Vice-President Dale Crawford, Manager, Administrative Services Apprenticeship Training, NS Department of Labour and Advanced Education

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Visit us online at techsploration.ca Twitter: @techsploration Like us on Facebook

80% of alumnae say that Techsploration led them to seriously consider a career they would not have thought about before.

## **Our Sponsors:**



Black & McDonald Limited

Cape Breton Island Unionized Contractors

Dove Canada

Encana Corporation

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Halifax International Airport Authority

Imperial Oil Foundation

International Association of Heat and Frost Insulators and Asbestos Workers, Local 116

International Brotherhood of Electrical Workers, Local 625

International Union of Painters and Allied Trades, Local 1439

IWK Health Centre

Labourers' International Union of North America, Local 615

Maritime Forces Atlantic

Maritimes & Northeast Pipeline

Millwright & Machine Erectors, Local 1178

Mount Saint Vincent University NSERC Atlantic Chair for Women in Science and Engineering

Norex

Nova Scotia Advisory Council on the Status of Women

Nova Scotia Construction Labour Relations Association Limited

Nova Scotia Department of Economic and Rural Development and Tourism

Nova Scotia Department of Education

Saint Mary's University

Sheet Metal Workers' International Association, Local 409

United Association of Journeymen Plumbers, Pipefitters and Welders, Local 244

United Brotherhood of Carpenters, Locals 83 & 1392

## **Our Partners:**

Nova Scotia Department of Labour and Advanced Education Apprenticeship Division Women in Trades & Technology Nova Scotia Nova Scotia Community College