



GO!
ENGGIRL
GÉNIales, les filles

OCTOBER 17•2009 RECORD OF ACHIEVEMENT

Presented by
The Ontario Network of Women in Engineering



ONWiE

Engaging Girls Across Ontario in Engineering

The Ontario Network of Women in Engineering (ONWiE) presented its fifth annual Go ENG Girl/GÉNIales, les filles event on October 17, 2009. A total of 675 girls in grades seven through ten, 542 parents/guardians and 291 volunteers attended Go ENG Girl/GÉNIales, les filles at eleven locations across Ontario. The goal of the day was to introduce the participants to university engineering programs and the diverse, rewarding careers related to a degree in engineering.

At each Go ENG Girl/GÉNIales, les filles event location, girls met women studying or working in engineering and listened to their inspiring stories; participated in hands-on activities using the engineering cycle of design, create and solve; and visited interactive exhibits hosted by engineering organizations, campus clubs and employers. Each girl took home a USB device uploaded with current information about engineering programs at Ontario universities and useful web links.

Parents met with a panel of engineering faculty, alumnae and students to learn about undergraduate and post-graduate programs and the kinds of careers their daughters might pursue.

At the end of the day, the majority of girls expressed interest in exploring engineering as a possible program or career choice. Many of the girls commented that they had not been aware there were so many different engineering careers or that these careers improved our quality of life. Girls learned that engineering isn't just about math, it's also about creativity and working closely with others.

Go ENG Girl/GÉNIales, les filles will take place again on October 16, 2010. Each year, ONWiE seeks to increase registration and reach more girls with the message that math and science will lead them to amazing places. Watch for more information and the opening of registration at www.ospe.on.ca/goenggirl.



Competing to see which team built the strongest toothpick bridge!

ONWiE's membership consists of representatives from fifteen Schools and Faculties of Engineering in Ontario. ONWiE works to support and promote the participation of women in engineering. Information about ONWiE is available online: www.onwie.ca.

While 47% of the Canadian labour force is female, women make up only 12.2% of the total engineering workforce (Statistics Canada 2006). In education, women comprise only 17.2% of the student enrolment in accredited engineering programs at the undergraduate level and 21.1% at the post-graduate level (Engineers Canada 2009).



"About 4,000 young women have participated in Go ENG Girl/GÉNIales, les filles over the past five years. Through this event, the members of ONWiE are making a significant contribution to raising awareness and interest in engineering careers."

- Valerie Davidson, Chair of ONWiE and NSERC/RIM Chair for Women in Science and Engineering for Ontario (CWSE-ON).

For more information about the CWSE-ON program go to www.cwse-on.ca.

Designing, Creating & Solving Together

Interacting with women and other girls who share their passion for math and science along with team-building are important features of the Go ENG Girl/GÉNIales, les filles experience. In 2009, girls learned engineering principles while collaborating

in small groups to design and build projects to meet a specific need like a hydraulic arm, a balloon-powered car, a lightning telegraph, a rocket, or an earthquake-proof shelter.



Building rockets can be a lot of fun!



The Freeze-O-Nator
A completed insulated structure designed to keep ice frozen.



Creating toothpaste requires chemistry, physics and math skills!

"We need the bright ideas and imagination that women have to offer. Perhaps today you will listen to the speaker or watch the demonstration that inspires you to create the world's next great engineering discovery."

— Kathleen Wynne,
Former Minister of Education,
Letter to Go ENG Girl/GÉNIales,
les filles 2009 participants



Designing a device to keep a raw egg intact when dropped from the third floor of a building.



Girls learn concepts of structural engineering and measuring critical load.



Consulting a mentor on the design of their rocket.

Feedback from the Girls

Approximately 70% of the girls who attended Go ENG Girl/ GÉNIales, les filles, completed an evaluation form. Here's what they told us about the event:

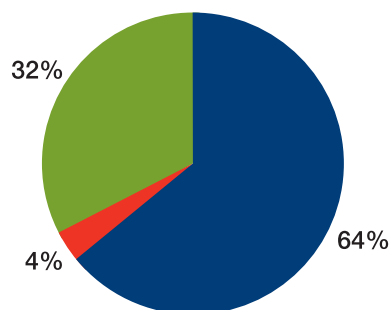
Top 3 expectations for the day:

1. Learn about engineering careers.
2. Have fun!
3. Design and build things.

How effective was today's program in meeting your expectations?

86% of the respondents indicated that the day was "effective" or "very effective" in meeting their expectations.

● Yes ● No ● Maybe



After today's event, are you more interested in exploring engineering as a possible study or career choice?:



Girls make fuel to run their "green cars" from water using hydrolysis.



Engineering is about creativity and team work!

Who would you talk to about going to college or university after you graduate from high school?

80% of respondents indicated that they would consult a parent or guardian. The second most common source of information was a science or technology teacher (65%).

COMMENTS BY PARTICIPANTS:

GEG made me realize that engineering is all around us.

After learning about the different kinds of engineers and meeting girls who are engineers, I now feel like it is more possible.

I now realize that I don't have to be super duper good at math to be a good engineer. Imagination is important.

I never really knew anything about engineering, so it really opened windows for me.

I thought there was only one kind of engineering, but today I learned that there is a lot more types of engineering.

Je voulais devenir docteure, maintenant le genie civil m'intéresse plus.

J'ai aimé l'implication des bénévoles.



Feedback from Parents

About half of the parents and guardians who attended completed an evaluation form. Here is what they had to say:

- **85%** of parent respondents confirmed that Go ENG Girl/GÉNiales, les filles was “effective” or “very effective” in meeting their expectations.
- **80%** of parent respondents indicated that they planned to encourage their daughter to consider a career in engineering.

“Engineering is a profession that makes invaluable contributions to our quality of life.”

– Dalton McGuinty, Premier of Ontario

COMMENTS BY PARENTS:

I learned about the different aspects and interests that my daughter has that are directly in engineering that I did not know before.

Engineering seems more accessible than I thought.

GEG made the girls feel special and empowered.

There is a much wider spectrum of areas (e.g. biological, mechanical) than I was aware of.

I am more aware of the wide variety of career opportunities and also the importance of creativity in engineering jobs.

Makes me want to go back to school and become an engineer!



Thank You to Our Volunteers

ONWiE recognizes that the success of Go ENG Girl/GÉNiales, les filles relies on the many volunteers – students, faculty, alumnae and staff – who help plan and lead activities, act as role models, and provide support wherever it is needed. Thank you!



Exhibits

At each Go ENG Girl/GÉNIales, les filles event location, participants had the opportunity to visit interactive exhibits hosted by engineering organizations, campus clubs and employers. The exhibits provided another opportunity for the girls to connect with role models and to see and try the many applications of engineering in the world around us.

PARTICIPATING EXHIBITORS INCLUDED:

Alternative Fuels Team, University of Toronto
Baja SAE
Bombardier Inc.
Canadian Association for Girls in Science (CAGIS)
CiSters, University of Guelph
City of Guelph Community Design and Development Services
Cook Engineering
Creative Encounters, University of Guelph
Discovery Days, University of Western
EcoCAR Challenge, University of Toronto
Engineering Science Quest, University of Waterloo
Engineers Without Borders
FIRST Robotics Regional and Lego League, University of Waterloo
Institute of Electrical and Electronics Engineers (IEEE)
Institute of Electrical and Electronics Engineers
Women in Engineering (IEEE WiE)
Learning Enrichment Advancement Program (L.E.A.P.),
McMaster University
Ontario BioCar, University of Guelph
Ontario Power Generation
Ontario Society of Professional Engineers
Professional Engineers Ontario
Shad Valley International
Toronto Area Rover Club
University co-op, career and admissions services
University engineering faculties and schools
University racing teams
University student engineering societies
Unmanned Air Vehicle (UAV) Project Team, Carleton University
Venture Summer Camp and Venture Girls Club,
McMaster University
Virtual Ventures, Carleton University
Waterloo Unlimited, University of Waterloo
WE Bots, University of Western Ontario
Women in Engineering
Women in Science and Engineering

Media Outreach

Go ENG Girl/GÉNIales, les filles is advertised at both the provincial and the local levels through a variety of media including electronic, print and broadcasting.

Go ENG Girl/GÉNIales, les filles reached a broad audience through National Science and Technology Week 2009, Girl Guides Canada, CWSE-ON and ONWiE websites, as well as Girls4Science on Facebook and an article in the Science Teachers' Association of Ontario's *Crucible/Elements* publication. In addition to university communications, local television coverage, online listings and event calendars at the local level, the following media provided pre- and/or post-event coverage:

GUELPH AREA:

SNAP Guelph
Guelph Mercury
93.3 CFRU FM
1460 CJOY AM

HAMILTON AREA:

Hamilton Spectator
CHCH News

KINGSTON AREA:

e-Veritas

OTTAWA AREA:

Carleton University Communications
Carleton journalism project

SUDBURY AREA:

Radio Canada (French)

THUNDER BAY AREA:

Thunder Bay television
Chronicle Journal

TORONTO AREA:

Facebook
Craigslist
Kijiji

WATERLOO AREA:

CTV News

WINDSOR AREA:

Windsor Star
LaSalle Post
Tilbury Times
Shoreline Event



Exhibits included other opportunities, like summer camps or weekly programs, for girls to learn about engineering.

The People Behind Go ENG Girl/GÉNIales, les filles

At each location of Go ENG Girl/GÉNIales, les filles across Ontario, there is a committed group of volunteers comprised of staff, students and faculty members who organize every aspect of their event. Thank you to everyone who contributed their time and energy in 2009, and in particular the members of the local committees:

CARLETON

Rosalyn Seeton, Nicole Yu and Monique Frize

GUELPH

Valerie Davidson, Simone Saunders, Jessica Friesen, Melanie Veltman, Tara MacDonald

KINGSTON

Kristin Topping, Julie Boudreau and Mary Spencer

LAKEHEAD

Heather Moynihan and Wa Gao

LAURENTIAN

Brahim Chebbi

MCMASTER

Sarah Dickson, Carm Vespi and Linda Coughlin

OTTAWA

Valerie Michaud-Lal and Suzanne Balima

TORONTO

Krista Elliott, Li-Lian Lui, Jessie Metcalfe, Dawn Britton, Marnie Ham and Corinne Sperling

WATERLOO

Mary Wells, Rohini Wittke, Patrick Lam and Stacey Scott

WESTERN

Lesley Mounteer and Cynthia Dunning

WINDSOR

Christina Allsop and Mike Konstantino

We'd also like to thank the Ontario Society of Professional Engineers for their support. In particular, thank you to Julia Melnikova, Kris Light, Lee Weissling and Kamilla Molnar.

Go ENG Girl/GÉNIales, les filles is made possible by the support and participation of the Ontario Deans of Engineering:



Girls and their parents learn the properties of non-Newtonian fluids.

Thank You to Our Sponsors

ONWiE gratefully acknowledges the support of our provincial and local sponsors:

PROVINCIAL SPONSORS

PATRONS



Partners in Powerful Communities



CWSE-ON

SUPPORTERS



THE LASSONDE FAMILY FOUNDATION

SPONSORS



LOCAL SPONSORS

Boeing Company

Bombardier Inc.

Christie Digital Systems Canada, Inc.

City of London

COM DEV International Ltd.

Dessau Inc. LVM-Technisol Elytra

Dillon Consulting

Engineers Canada

Golder Associates

Hydro Ottawa Ltd.

IBI Group

Institute of Electrical and Electronics Engineers (IEEE)

Kraft Canada Inc.

MRI YSTOP

Ottawa Centre for Research and Innovation (OCRI)

Professional Engineers Ontario - Lakehead and Sudbury

Research in Motion (RIM)

Staples

Toyota Motor Manufacturing Canada



GO
ENGGIRL
GÉNIales, les filles

SATURDAY, OCTOBER 16 • 2010
WWW.OSPE.ON.CA/GOENGGIRL