



Youth Science Canada
Sciences jeunesse Canada

SCIENCE IS SERIOUS FUN!

March is Youth Science Month

What issues matter to Canadian youth? How do they want to improve their world? And what are they going to do about it? For answers to these questions, visit your local science fair!

Youth Science Canada has proclaimed March as Youth Science Month.

Canadian youth are demonstrating that science is serious fun, as they show their ingenuity at local and regional science fairs from coast to coast to coast. One hundred regional science fairs take place across Canada over the next two months. More than 500 young scientists will be selected for a week of serious fun and competition – for \$1M in prizes – at the Canada-Wide Science Fair in Peterborough, Ontario, May 15-23.

At press time, Youth Science Month has been proclaimed or endorsed by the following provinces and territories:

British Columbia, Newfoundland and Labrador, Manitoba, Northwest Territories, Ontario, Prince Edward Island, Saskatchewan and Yukon.

Smarter Science

Wonder. Curiosity. Creativity. These are key to the scientific impulse and one of the best ways to nurture that impulse is to encourage students to observe, question and investigate their world through science projects. For inspiration, students need look no further than their own experience – exactly what the top young scientists profiled in this newsletter did – and the result was great science!

Continued on page 2



Proclamation: Youth Science Month in Canada

Whereas 500,000 children and teens across Canada will be participating in local and regional science and technology fairs in every part of the country in March, and

The very best of these participants will earn the right to compete in the Canada-Wide Science Fair, our annual national championships, under the auspices of Youth Science Canada, and

All of these young scientists have worked diligently to produce projects that demonstrate Innovation, Initiative and Imagination, and

It is in the best interests of young people to acquire knowledge and skills in science and technology in order to better understand the world and to further their educations and future career prospects, and

It is in the best interests of our society and our economy to support the creation of an innovation culture and the nurturing of a generation of scientifically literate young people who will push forward the boundaries of our knowledge and improve the quality of our lives in the future, and

All Canadians should be supporting and celebrating our young scientists.

Therefore, Youth Science Canada proclaims that March 2010 is the annual

Youth Science Month in Canada

So proclaimed March 1st, 2010 by

Youth Science Canada

Antoine Garwah,
B.Appl.Sc., B.Eng, B.Ed
Chair

In this mailing

Please post or share this newsletter and the contents of this mailing with your students and science educators:

Canadian Young Scientist Journal, research papers by and for young Canadians (secondary schools only)

EnviroExpo poster, challenging students to do an environment-themed science project and use the arts to communicate their message

Youth Science Month poster, Youth Science Canada's invitation to submit a project, sign up as a volunteer or judge, or visit your local fair, lists all 100 regional fairs from coast to coast to coast

Multi-Functional Mobility Aids: Improving Mobility, Autonomy and Efficiency



Gary Kurek
Grade 11,
Bonnyville
Centralized High
School
Bonnyville, Alberta

Born and raised in rural Alberta, Gary Kurek is living proof that kids can innovate wherever they live.

Gary developed a novel add-on to a standard rolling walker and a multi-functional manual/electric wheelchair aimed at improving mobility, autonomy and independence for the physically disabled. His aim was to improve the design, functionality and cost of current mobility technology. Gary has competed in the last four Canada-Wide Science Fairs and in May 2009 went

home with the EnCana Best in Fair Award, along with ten other awards and scholarships with a total value of \$46,800. He says his success has raised the sights of students, teachers and parents in his rural community and he is grateful to Youth Science Canada, which he credits with having "opened up my doors of opportunity."

Smarter Science

Continued from page 1

Teachers have a crucial role to play in connecting students' everyday world and experiences to science.

With support from the Province of Ontario, Youth Science Canada recently launched Smarter Science, a framework for teaching and learning science in grades 1-12 and for developing the skills of inquiry, creativity and innovation in a meaningful and engaging manner. The supporting web site connects science teachers with each other to share best practices, lesson plans and other resources, bringing project-based science into Ontario classrooms.

A key feature of Smarter Science is its open-source nature. All resources developed by cooperating school boards and contributing teachers can be accessed online at no cost through the smarterscience.ca (and educasciences.ca) website and may be freely reproduced and distributed. Resources are just beginning to be added to the website as boards and teachers adopt the Smarter Science framework. Youth Science Canada's vision is for the framework to be used to support science curricula in all Canadian provinces and territories.

L'uni"ver" est au cheval !

A love of horses inspired Camille Salvas' and Estelle Simon's project.

Both girls have a longstanding interest in science and this past year, turned their scientific curiosity on the problem of drug resistant equine parasites. Concerned both about the adverse health effects of parasites on horses and the environmental impact of conventional medications, Camille and Estelle tested the efficacy of various natural alternative products on equine parasites. The pair shared \$10,600 in scholarships and prizes at the Canada-Wide Science Fair in May 2009, including the EnCana Platinum Award for Best Intermediate Project.



Camille Salvas
and Estelle Simon
Secondaire 4 (Grade 10),
École secondaire
Fernand-Lefebvre
St-Robert and
Ste-Victoire-de-Sorel,
Québec

Bonita LeBlanc: Ocean Currents Research Leads to Arctic Expedition

Bonita LeBlanc's passion for science has led her from one adventure to the next. She was selected to participate in the 2008 Canada-Wide Science Fair in Ottawa with her project on ocean currents and subsequently has pursued her research with a passion. For her original project, Bonita prepared 240 biodegradable bottles, each with a message inside, directing the finder to a website to record the details of where the bottle was found. She then convinced the Canadian Coast Guard to drop the bottles into the ocean at predetermined coordinates. Since then, she's coordinated the launch of several hundred more bottles. So far six bottles have been recovered – in Iceland, England, two in Ireland and two on Baffin Island. This summer, Bonita was selected by Youth Science Canada

as one of 13 students from across the country to participate in a polar science expedition in celebration of International Polar Year. In November she spent two weeks aboard CCGS Amundsen, Canada's state-of-the-art icebreaker, as part of the Schools on Board program. Bonita assisted scientists with experiments while sailing from Iqaluit, Nunavut and along the Labrador coast to Quebec City.



The journey gave her a taste of life as an oceanographer, a career that's high on her list.

For more information on the Schools on Board program, visit www.arcticnet.ulaval.ca/sb/index.php.

CPR Training Simulator Improved for Kids

Melissa Chopcian rose to the top at her first Canada-Wide Science Fair, winning the EnCana Platinum Award for Best Junior Project and taking home \$8,500 in scholarships and prizes. After participating in a first aid class at her school, Melissa was inspired to improve CPR training for senior elementary students. Her innovation is a better training mannequin that provides the student with real-time feedback on the rate and force of their CPR compressions.



Melissa Chopcian
Grade 7, Hanna Memorial School
Sarnia, Ontario

Ben Gulak: From Science Fair Participant to Entrepreneur



Following a trip to smog-laden Beijing, China, Ben was inspired to invent a cleaner, more compact vehicle than the polluting scooters and motorcycles he had seen swarming that city. The Uno was Ben's project when he was selected by Youth Science Canada to be a part of Team Canada-ISEF 2007, the country's elite team competing at the Intel International Science and Engineering Fair.

Ben took a year after high school to continue the development of his environmentally friendly invention before entering MIT's engineering program in 2008. That was a banner year for Ben and the Uno, which garnered considerable attention from media and investors alike. The Uno was selected as "2008 Invention of the Year" by Popular Science Magazine and was featured on cover. That same month, Ben was recognized with a Top 20 Under 20 Award from Youth In Motion. In November 2008, Ben appeared on the CBC television show,

Dragons' Den, where entrepreneurs pitch their ideas or inventions to a panel of successful business people who decide whether or not to invest. Ben convinced all five "dragons" to offer jointly \$1.25 million for 20% of his company. Following due diligence, one of the five agreed invest the entire amount.

Ben and his team have rented workshop space and hired engineers to refine the Uno concept. To add stability and safety at higher speeds, the Uno has been redesigned to transform into a two-wheel vehicle when it hits 30 km/h. While more work to finesse the steering and transformation from one to two wheels is underway, Ben's company, BPG Motors, is hoping to have pre-production models for sale in 2010. Ben offers these words of advice to aspiring innovators, "If you really believe in something, keep going after it and if you want it badly enough, there's always a way and you can make your dreams come true."

Milton,
Ontario's
Ben Gulak,
inventor of a
self-balancing
electric
unicycle,
has come a
long way with
his Uno.



Youth Science Canada gratefully acknowledges the following Educator Awareness partners:



Youth Science Month – Serious Fun! is published each March by Youth Science Canada for Canadian educators. We encourage Canadian youth in science and technology by offering opportunities to get involved in project-based science; and inspiring and enabling educators to bring project-based science into their classrooms. To learn more about our programs, visit www.youthscience.ca