

CANADA-WIDE SCIENCE FAIR

2007 - Truro, Nova Scotia



Laura Simandl

Contribution to Sustainability in Cement and Coal Production

Division: Earth & Environmental Sciences

Category: Junior

Region: Vancouver Island

City: Victoria, BC

School: St Margaret's

Abstract: The Quinsam Coal Mine rejects are a valuable resource. They have ideal proportions of major oxides for high-quality cement production and contain between 6MJ and 12.5MJ of energy per kilogram of rejects. Their use would extend the life of the mine, reduce waste piles, and provide a reliable source of raw materials and energy savings for cement producers. The industry, society and environment would benefit.

Awards	Value
Bronze Medal - Earth & Environmental Sciences Junior Sponsor: Petro-Canada	\$300.00
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000.00
Total	\$1 300.00



Youth Science Foundation Canada
PO Box 523, Station R
Toronto ON M4G 4E1
www.ysf-fsj.ca
info@ysf-fsj.ca
416-341-0040



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Simon Bild-Enkin

Dissolving Buildings: The Effects of Acid Rain on Limestone Structures

Division: Earth & Environmental Sciences

Category: Intermediate

Region: Vancouver Island

City: Victoria, BC

School: Esquimalt Community School

Abstract: Acid Rain dissolves our architectural heritage. Using hydrochloric acid as a proxy, I measured how limestone tiles dissolved depending on concentration and time of exposure, and measured the structural strength by dropping weights on the tiles. A protective coating resists the acid but cracks concentrate the damage leading to structural weakness. The real solution to acid rain is the reduction of sulfate and nitrate emissions.

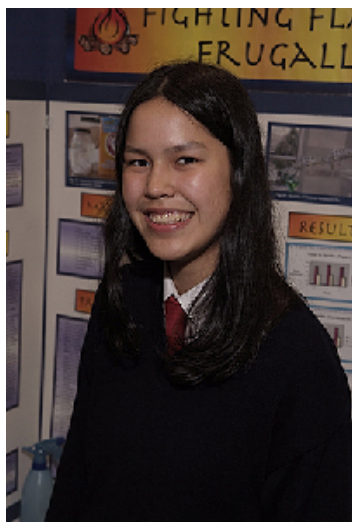


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Adrienne Duimering

Fighting Flames Frugally

Division: Physical & Mathematical Sciences

Category: Intermediate

Region: Vancouver Island

City: North Saanich, BC

School: St Margaret's

Abstract: My experiment is designed to find out if baking soda and ammonium sulfate are effective alternatives to the expensive commercial fire retardants and the best concentration to use for different materials. My results were that the more concentrated the compound was, the better it worked. The baking soda and ammonium sulfate were both effective fire retardants and affected the flammability of the various materials differently.

Awards	Value
Silver Medal - Physical & Mathematical Sciences Intermediate Sponsor: EnCana Corporation	\$700.00
The University of Western Ontario Scholarship Silver Medallist - \$1500 Entrance Scholarship Sponsor: University of Western Ontario	\$1 500.00
Total	\$2 200.00



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Alice Jourmel

Mechanical Properties of Hardwoods: A New Test

Division: Physical & Mathematical Sciences

Category: Intermediate

Region: Vancouver Island

City: Duncan, BC

School: Frances Kelsey Secondary

Abstract: This project assessed the effectiveness of the impact surface hardness test, developed by the exhibitor, as an alternate method of determining the mechanical properties of hardwood specimens. The nature of the relationships between density, modulus of elasticity (stiffness), and impact surface hardness within and between four hardwood species were determined. Clear, positively-sloped, linear correlations were found, confirming the impact surface hardness test's applicability.

Awards	Value
Silver Medal - Physical & Mathematical Sciences Intermediate Sponsor: EnCana Corporation	\$700.00
The University of Western Ontario Scholarship Silver Medallist - \$1500 Entrance Scholarship Sponsor: University of Western Ontario	\$1 500.00
Total	\$2 200.00



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Michael Peters

The Actuator: a New Wheelchair Designed to Prevent DVT

Division: Health Sciences

Category: Intermediate

Region: Vancouver Island

City: Victoria, BC

School: Glenlyon Norfolk School

Abstract: This new wheelchair design that I invented increases circulation to the legs to prevent deep vein thrombosis in wheel chair bound people. The secondary purpose is to increase range of motion of the legs and prevent excessive scar tissue post-operatively. This project is dedicated to my grandmother, Mary Kozlo, who gave me inspiration after her stroke and death from artery occlusion of her left leg.

Awards	Value
Silver Medal - Health Sciences Intermediate Sponsor: Canadian Institutes of Health Research	\$700.00
The University of Western Ontario Scholarship Silver Medallist - \$1500 Entrance Scholarship Sponsor: University of Western Ontario	\$1 500.00
Total	\$2 200.00



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Avery Noonan

Tseycum: est-il propre?

Division: Earth & Environmental Sciences

Category: Junior

Region: Vancouver Island

City: Victoria, BC

School: L'ecole Victor Brodeur

Abstract: The effectiveness of a wetland to improve the water quality of a creek receiving runoff from agricultural land was investigated by measuring physical/chemical water quality parameters and assessing the benthic community upgradient and downgradient of the wetland. No significant difference was measured between physical/chemical water quality parameters. However, benthic community results indicated that water quality below the wetland was better than that above.



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Daniel Bild-Enkin

Voila les Voyelles: French Vowel Pronunciation in a Victoria High School

Division: Physical & Mathematical Sciences

Category: Senior

Region: Vancouver Island

City: Victoria, BC

School: Esquimalt Community School

Abstract: Part of learning a new language is learning the pronunciation. Pronunciation is simply the physical system of sound source and vocal tract resonances. Articulatory features of vowels can be determined from acoustic ones. Software was developed to determine formants (resonances) of vowels spoken by students of various levels of French instruction. Significant correlations were found between French instruction and acoustic indicators of French proficiency.

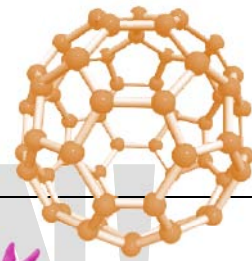
Awards	Value
CAP Physics Prize Sponsor: Canadian Association of Physicists	\$1 000.00
The Manning Innovation Achievement Award Sponsor: Ernest C. Manning Awards Foundation	\$500.00
The Manning Innovation Achievement Award and \$4000 Manning Young Canadian Innovation Award Sponsor: Ernest C. Manning Awards Foundation	\$4 000.00
Bronze Medal - Physical & Mathematical Sciences Senior Sponsor: EnCana Corporation	\$300.00
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000.00
Total	\$6 800.00



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YOUTH SCIENCE FOUNDATION CANADA CHANGING THE WAY WE PLAY SCIENCE



SERIOUS! FUN!

Every year, over 500,000 young Canadians participate in project-based science – as many as play hockey. Unlike hockey, those numbers don't last. And no wonder.

If we played hockey the way we play science – “Read the chapter on body-checking, answer the questions at the back” – there'd be a lot less hockey in this country.

Playing science means giving kids the chance to get their hands dirty and their imaginations engaged.



“I know where to go to sign my kids up for hockey, but how do I sign them up for science?”

Letting teachers, parents and kids know what programs and services are available and how to tap into them is an important part of what we do. Teachers know science is important, but many just don't feel comfortable teaching it. They're looking for support and resources. Parents, too, consistently place a high value on science, and they want their children to succeed at it. But don't know where to turn. Interested kids often need help getting started – and want to find others with similar interests.

Youth Science Foundation Canada [YSF] is committed to providing better science programs to youth. YSF offers improved communication about what is available, so that teachers, parents and kids know how to “sign up” for science.

Signing up for science

Best-known for the Canada-Wide Science Fair, YSF addresses some of the most pressing issues separating teachers, parents and youth from participating in, and enjoying, science. Our programs represent a bold move to change the culture – to change the way Canadians think about science, and change the way we play it.

Our goal is a country where:

- > Teachers *look forward* to teaching science
- > Parents are *thrilled* to be “science parents”
- > And kids *can't wait* to play science!

Who knows? Accomplishing our goal might even change the way scientific ideas enter the marketplace.

Experiential science

Initiatives that invite youth to get their hands dirty and their minds engaged by doing science lie at the heart of YSF's programming. In collaboration with organizations such as Waterloo's Perimeter Institute for Theoretical Physics, Engineers Without Borders (Canada) and the CIHR's Institute for Musculoskeletal Health and Arthritis, YSF works to provide our most accomplished young Canadians with access to immersive “real science” experiences.



On-line resources

Many teens now spend more time on-line than watching TV. They connect through instant messaging and email, exchange ideas through blogs and forums – often while doing homework, talking on the phone or playing on-line games. They are both consumers and producers of on-line information. If we want more kids to play science, we need to go to where the kids are. We need to provide them with the tools to help connect them with one another in safe on-line communities dedicated to youth science.

International opportunities

YSF's Team Canada-ISEF brings together the country's very best young scientists. Every year they compete, with spectacular success, at the world's largest pre-college science competition: the Intel International Science and Engineering Fair (Intel ISEF).

YOUTH SCIENCE FOUNDATION CANADA

VECTOR AECL EACL

Celebrating 25 Years of Support for 250 Camps

Youth Science & Technology Program Directory

Show what's open to students in: Search by keyword:

All Grades	All Types	Innovation	All Disciplines
Grade 7/secondaire I	Contest - Written/Online	Leadership	Astronomy
Grade 8/secondaire II	Event - Competitive	Mathematics	Behavioural/Social Sciences
Grade 9/secondaire III	Event - Non-competitive	Research	Biology
Grade 10/secondaire IV	Program - Fall/Winter/Spring	Science	Biotechnology
Grade 11/secondaire V	Program - Summer	Technology	Physics/Chemistry/Earth/Space

Program language: English Français When: [Add Listing](#)

12 Search Results

Canada-Wide Science Fair 2007, Youth Science Foundation Canada
Dates: 2007-05-13 to 2007-05-20 City/Province: Truro, Nova Scotia

Canada-Wide Science Fair 2008, Youth Science Foundation Canada
Dates: 2008-05-10 to 2008-05-18 City/Province: Ottawa, Ontario

Canadian Computing Competition 2007, Faculty of Mathematics, University of Waterloo
Dates: 2007-02-27 to 2007-02-27

Each year, thousands of science-oriented events – fairs, competitions, programs, lectures and summer camps – take place in communities across Canada. Often the challenge is finding out about them. Vector, our on-line directory of events and opportunities in science, technology, engineering and mathematics, lets students in every part of the country easily find local and national programs of interest.

YSF also provides opportunities for ambitious young scientists to participate in Sweden's Stockholm Junior Water Prize Competition and MILSET: International Movement for Leisure Activities in Science and Technology / Mouvement International pour le Loisir Scientifique et Technique, dedicated to developing scientific culture among youth through science fairs and experimental activities.



Mentorship

Scientists and researchers who serve as mentors foster excellence and are powerful role models. Whether visiting a classroom or providing students with supervised access to labs and equipment, mentors influence the next generation of scientists by sharing knowledge, providing encouragement, teaching lab techniques and skills – even offering career guidance.

Programs like SMARTS (Student Mentorship Association Regarding Technology and Science), our for-youth, by-youth network that connects young Canadians with science – and one another – encourage “experienced” youth to mentor others just getting involved in hands-on science.

Other collaborations with organizations like the Canadian Institutes of Health Research and corporations such as Intel Canada connect youth with professional scientists, engineers and researchers.

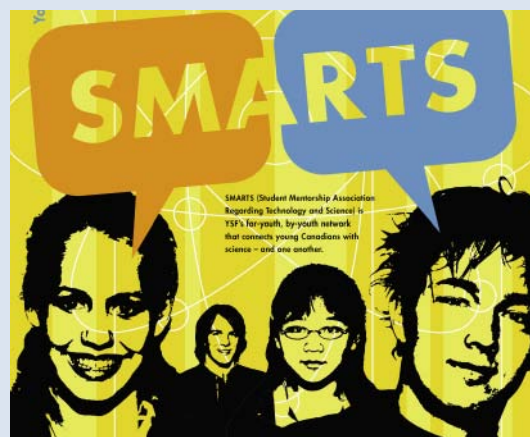
Special events

Science is intricately entwined with social issues and the unfolding of world events. Climate change, the environment, tsunami warning systems as a result of the disaster that struck southeast Asia and east Africa: young Canadians respond quickly and passionately to what they see and experience. YSF alerts Canadian youth to important science initiatives – and urges them to get

Run by a national network of student volunteers, SMARTS helps kids get excited about and involved in science, whether through getting into a particular program or competing – and winning – at science fairs. Founded by then-16-year-old Joshua Liu, SMARTS promotes science, technology, engineering and mathematics to students, grades seven and up. The SMARTS network includes forums, as well as School and Regional Correspondents, and an “Ask an Expert” program.

Think you could use some help? Think you could give some help?

Visit www.ysf-fsj.ca/smarts



involved. From the World Year of Physics to International Polar Year, YSF provides information and stages events to let youth see first-hand what's at stake.

Competitions

YSF's network of 100 regional science fairs lets young Canadians in every province and territory test themselves – and their science – against their peers. Approximately 25,000 young scientists compete to qualify for the Canada-Wide Science Fair, which brings together the country's top 500 young scientists for a week of intense competition and an enormous amount of fun.

Inspiring and celebrating youth science

Invent the Future

Invent the Future challenges young Canadians to explore the world. Held every fall, it is a call to youth to take a different look at what they see around them – to recognize the science that's part of the things they care about, from the environment to the technologies they play with on their mobile phones. Invent the Future's goal is to engage their imaginations, encourage them to begin shaping and inventing the future, and change the way they think about science.

Youth Science Month

After the fall's call to action, Youth Science Month in March heralds success. Declared by provincial and territorial governments across Canada, Youth Science Month celebrates the achievements of the over 25,000 young Canadians competing in local and regional science fairs across the country. A national mailing to over 11,000 schools in grades 7–12 and CÉGEP helps spread the word.

So, sign them up for some serious fun!

Active organizations exist in every province and territory, so signing kids up to play science is a click or two away. For national programs, start with our website: www.ysf-fsj.ca. To find the local science fair closest to you, go to <http://apps.ysf-fsj.ca/fairlocator> and enter your postal code.

Thank you to our partners and volunteers

Our partners and volunteers make the frontiers of scientific research tangible. They make their scientists accessible – as judges, mentors, speakers. They show how research turns into technology, turns into the things that surround us. Perhaps most importantly, they set a powerful example of good citizenship – and good corporate citizenship.

Youth Science Foundation Canada

Since 1962, Youth Science Foundation Canada (YSF) has played a vital role in nurturing the scientific impulse among our youth, encouraging them to develop scientific and technological knowledge and skills. Fired by the tireless energy of over 8,000 volunteers – educators, scientists and parents across a network of 100 local organizations – YSF works to capture their imaginations and broaden their access to science. Our goal is to ensure that all young Canadians have the chance to peer through the lens of a microscope and be mesmerized by what they see.



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