



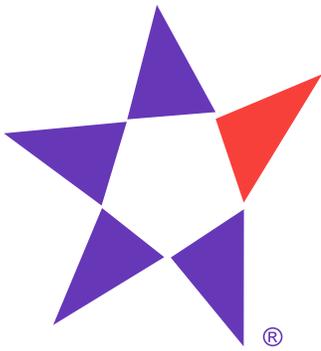
Youth Science Canada
Sciences jeunesse Canada

Fueling the curiosity of Canadian youth through STEM projects, adapting to the times.



YOUTH SCIENCE CANADA ANNUAL REPORT

JULY 2021 - JUNE 2022



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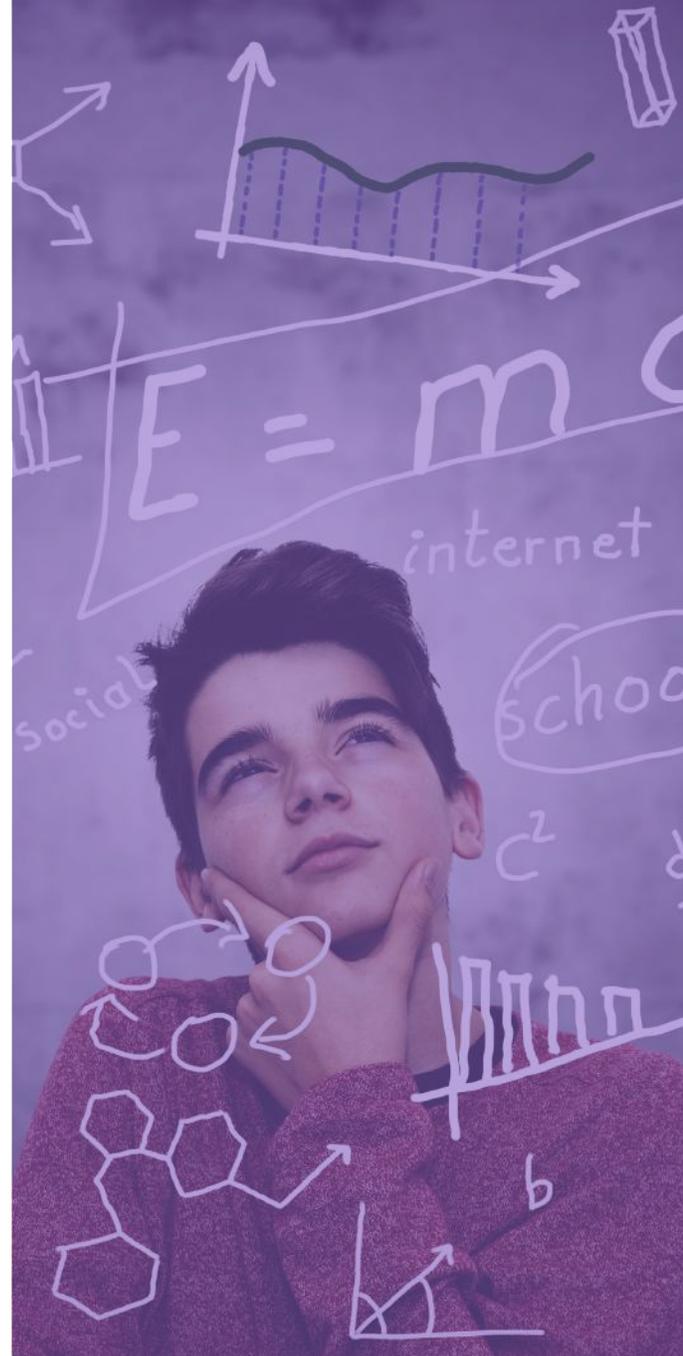
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Youth Science Canada is a registered charity
Canada Revenue Agency, Reg. No. 888909645



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MESSAGE FROM THE EXECUTIVE DIRECTOR

For 60 years, Youth Science Canada has engaged and supported Canada's youth through STEM initiatives and projects. In 2021-2022, the global pandemic continued to challenge youth programs and events, yet we witnessed awe-inspiring creativity and ingenuity as the country's young scientists continued to discover and innovate, building towards a better tomorrow.

Registration in mySTEMspace and the YSC portal continued to grow, with 74 of our 108 affiliated regions holding STEM fairs and six sending students to the YSC Virtual Regional STEM Fair.

In May, we celebrated the 60th anniversary of the Canada-Wide Science Fair with our second virtual edition, hosted from the University of New Brunswick in Fredericton. The event showcased 324 projects by 371 students and 66 STEM Expo exhibitors, with five full days of activities for youth and adult participants and nine hours of on-

demand CWSF-TV programming. Thanks to the hard work of volunteers, staff, sponsors and partners, we welcomed 39,679 visitors for virtual field trips over three days. Most of these were teachers sharing their screens with classes of 15-30 grade 5-11 students, so the actual number was much higher. Most importantly, 92 percent of finalists rated their overall CWSF experience as good (46%) or excellent (46%).

The work of YSC is made possible thanks to the generous support of volunteers, community partners, sponsors, regions, members, board members and staff. Thank you to all. I am proud of what YSC and our national network of regions achieved this past year, and we are all excited to be returning to an in-person Canada-Wide Science Fair at the Edmonton Convention Centre in May.

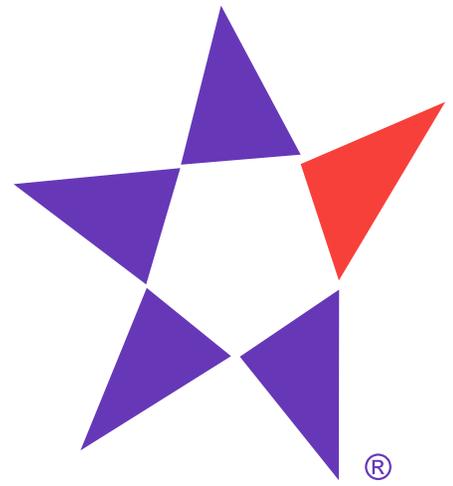
Thank you for your interest in Youth Science Canada and for contributing to this important mission.

A handwritten signature in black ink, appearing to read 'Reni Barlow'. The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Reni Barlow, Executive Director

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Pickering, ON L1V 2R4
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ABOUT YOUTH SCIENCE CANADA



Youth Science Canada exists to enable Canadian youth to investigate scientific questions and develop innovative solutions related to current and future challenges.

Our goal is to ensure that Canadian youth:

- Have the inspiration, resources and opportunities that enable them to complete STEM projects, regardless of cultural background, socioeconomic status or geographic location
- Can share their discoveries and innovations publicly at the local, national, and international levels



We are grateful for the generous support of our partners in the private and public sectors, individual donors, and the work of more than 8,000 volunteers.

We believe this is one of the most important causes in our world today: formative and affirmative STEM experiences for today's youth, leading to a better and more innovative tomorrow for all.

Youth Science Canada is accredited under Imagine Canada's national Standards program, a credential awarded to charities that demonstrate excellence in five key areas: board governance, financial accountability and transparency, fundraising, staff management and volunteer involvement.



Youth Science Canada
Sciences jeunesse Canada





OUR MISSION ...

Youth Science Canada creates value for Canada by fueling the curiosity of Canadian youth through science, technology, engineering, and mathematics (STEM) projects.

“ *The past few years have reinforced the importance of STEM in answering essential questions and developing solutions to urgent problems. YSC responded to the challenge of the global pandemic by enabling virtual STEM projects, fairs, and online support for youth getting started with STEM projects. As we return to in-person activities and events, we are excited by the potential of hybrid projects and events to enable every young Canadian to share their curiosity and ingenuity.* - Reni Barlow, Executive Director, Youth Science Canada

PROGRAMS 2021-2022

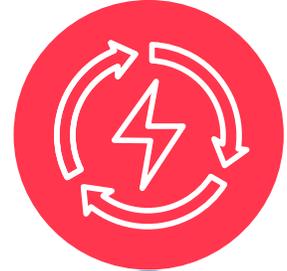
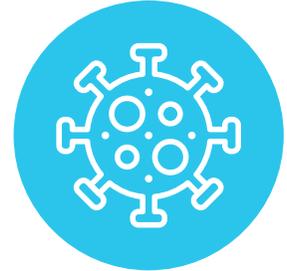
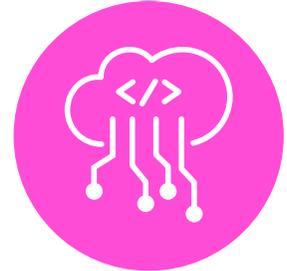
Encouraging young people to harness their natural inquisitiveness through problem-solving and STEM projects is an excellent act of education and mentorship. It also helps them develop essential skills and life-long interests worth investing in.

In 2021-2022, we continued challenging Canadian youth to engage their curiosity and transform their questions and ideas into projects that tackle current issues, including agriculture, fisheries, and food; digital technology; disease and illness; energy; environment and climate change; health and wellness; and natural resources.

The results are astounding.

“ *My CWSF experience this year was great! I learned many new things both in science and in my life. The CWSF has had an impact on me because it gave me a place to express my passion for STEM and interact with other kids who liked the same things I did. I learned a valuable lesson at CWSF after the past two years, even if you don't place to be top in Canada, still be proud you made it there and never stop being passionate about STEM or a STEM career. **My plan is to do the science fair again one hundred percent, and I would like to do it every year. I would like to graduate high school and go into the medical field.***

- CWSF finalist, anonymous





NATIONAL STEM FAIR NETWORK

Every year, approximately 500,000 K-12 students undertake a STEM project, and the number of students committing to such projects this year was inspiring. Again, this year most regional fairs went virtual — with 74 regional fairs collectively engaging some 10,000 youth across the country. To mitigate the cancellation of 27 regional fairs, YSC was pleased to welcome their students to its second YSC Virtual Regional Fair using ProjectBoard and the 60th edition of the Canada-Wide Science Fair.

By the numbers:

- **371 finalists with 324 projects** participated in the 2022 virtual Canada-Wide Science Fair
- **270 judges conducted 1,078 interviews** with CWSF finalists over two days to select award winners
- **96 adult delegates provided guidance and supervision** for the finalists — and participated in a one-day virtual conference



CANADA-WIDE SCIENCE FAIR 2022 – OUR 60TH EDITION OF THE CWSF

From May 16 to 21, 371 finalists from every province and the Yukon showcased 324 projects. Each participant received a kit via mail containing CWSF identity, promotional and program items, and specially branded items to celebrate the 60th. During the week, youth finalists and adult supervisors explored the virtual Project Zone, STEM Expo with 66 exhibitors, and CWSF-TV featuring original programming. Behind the scenes, 250 dedicated judges selected 201 finalists to receive special awards, medals, challenge awards, scholarships, and grand awards, including our six Platinum Award winners.

More than 900 teachers and 33,705 grade 5-12 students visited the first virtual Canada-Wide Science Fair. We're thrilled that we were able to celebrate the 60th of the CWSF with so many students and teachers across the country and brilliant young minds.



WHAT FINALISTS SAID:

“ **My CWSF experience has truly shaped my future in STEM and research differently.** Through discussions with the judges, I have really become more interested in research in my undergraduate and postgraduate studies to make an impact on the world through science and innovation. Thank you. - CWSF 2022 Finalist

“ **I'm so honoured to have been able to come to CWSF this year! I never expected that I would someday be able to participate in a fair at this level, and it was overall an amazing experience.** I left feeling inspired by the speakers like Ann Makosinski and the awesome projects from students all over Canada. - CWSF 2022 Finalist



“ **Thank you for facilitating this amazing opportunity! This year was a truly memorable experience for me because it was the first time I had been selected to be a participant in the Canada Wide Science Fair (CWSF). Although it was virtual this year, I still got a lot out of it! From speaking with judges, looking at projects, to attending CWSF and meeting the other finalists, it was one of the best science fair experiences I've had.** - CWSF 2022 Finalist

WHAT JUDGES SAID:

“ **Another beautiful day spent with young entrepreneurs and scientists. Always a pleasure to be part of CWSF; nice teams and a wonderful organization.** - Judge at the CWSF 2022

“ **It was a pleasure to participate in judging team 13 Senior Engineering today. It was a worthwhile experience.** - Judge at the CWSF 2022



“ **Participating was a pleasant experience, as always. Thank you for your dedication to organizing this valuable event!** - Judge at the CWSF 2022





STEM EXPO STIM

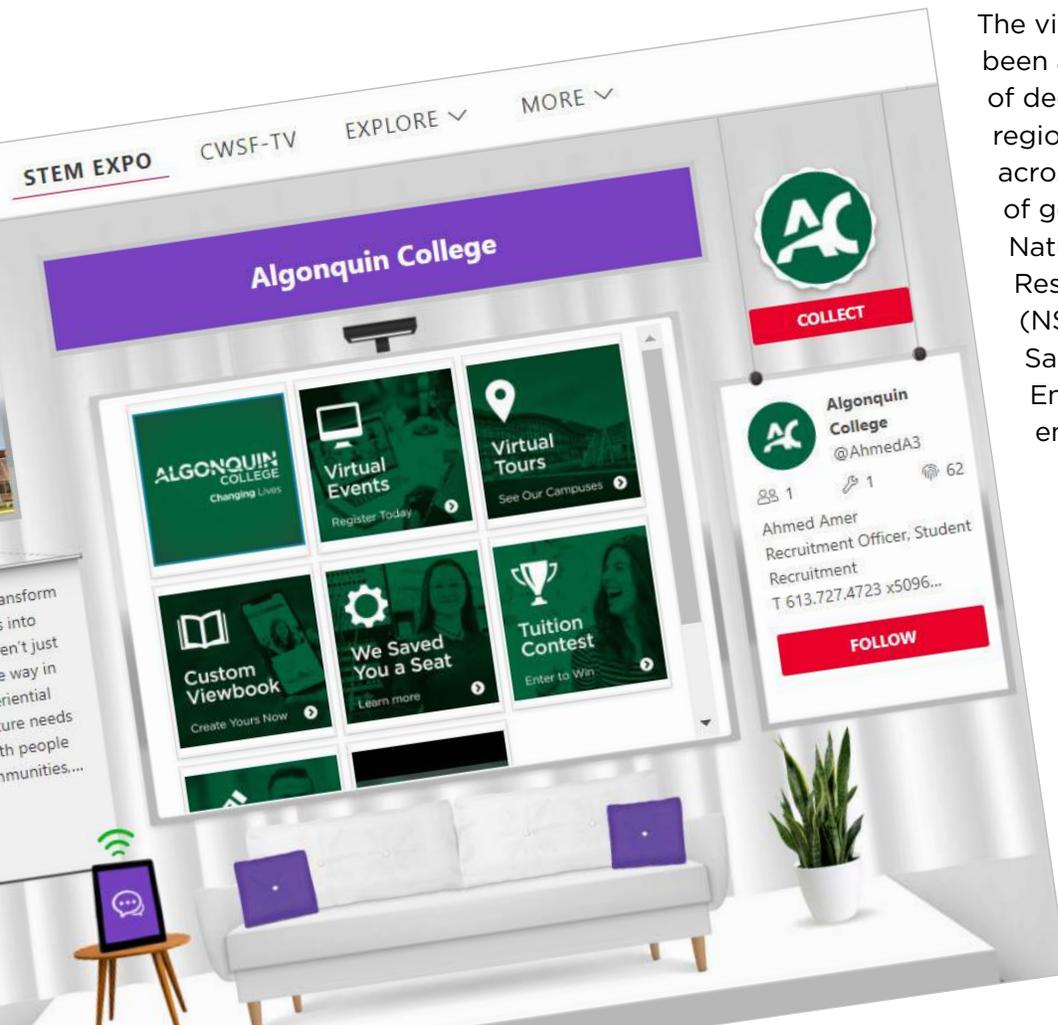
Science, Technology, Engineering & Mathematics
Sciences, technologie, ingénierie et mathématiques

YSC's STEM Expo—the nation's largest youth STEM outreach and promotion event—also shifted to a virtual format in 2022 with a dedicated area for STEM-related companies, organizations, agencies, and institutions to engage with students, teachers, and the public. The event offered visitors a unique opportunity to learn more about today's STEM leaders and enhance their overall experience at the 2022 Virtual CWSF. Some 66 private and public organizations invested in a virtual exhibit, including 28 post-secondary institutions.

Highlights

- 201 finalists with outstanding projects shared **awards and scholarships valued at over \$942,600.**
- **66 organizations** shared their passion for STEM and youth as STEM Expo exhibitors.
- **39,679 students** registered for virtual field trips to CWSF and STEM Expo 2022.
- **730 minutes of content** on CWSF-TV over the virtual fair.

The virtual fair could not have been achieved without the help of dedicated volunteers from our regional STEM fair organizations across the country and the support of generous partners, including the Natural Sciences and Engineering Research Council of Canada (NSERC), Intact Foundation, Sanofi Biogenius Canada, Cenovus Energy, Youth Can Innovate and engineering.com.



TEAM CANADA



ÉQUIPE CANADA

YSC selects students and their STEM projects each year to represent the country at renowned international youth STEM competitions. With the generous support of Youth Can Innovate, a Gwyn Morgan and Patricia Trottier Foundation program, YSC covers all registration, travel, accommodation, and other costs for selected students. In addition, team members receive coaching to help them prepare for world-class judging and refine their presentation skills.

Highlights

- **Two of Canada's young scientists took home awards from the 2021 EU Contest for Young Scientists in Salamanca, Spain.** Competing against 158 contestants from 34 countries, Hardit Singh won second prize for his teleophthalmology project, and Calvin Karthik won a special award for his biogas production project.
- **Ten young scientists in Team Canada represented the country from May 7 to 13 at the 2022 Regeneron International Science and Engineering Fair.** The Team Canada-ISEF students brought home seven grand awards and two special awards.



smarter science éduca sciences



Smarter Science is a framework for teaching and learning K-12 science that emphasizes the investigative, creative, and social nature of STEM. Our Smarter Science professional development workshops and resources offer a simple and effective way for teachers to successfully implement scientific inquiry and problem-solving in their classroom—and prepare students for STEM projects.

In collaboration with schools, school boards/divisions and ministries/departments of education, YSC has trained thousands of teachers in every grade.

Highlights

The redesigned Steps-to-Inquiry posters for our Smarter Science teacher professional development program have been well-received as student-friendly. We produced Smarter Science video workshops for teachers in Nunavik (northern Québec).



YOUTH SCIENCE CANADA LAUNCHES THE PURPLESTEMWAVE!

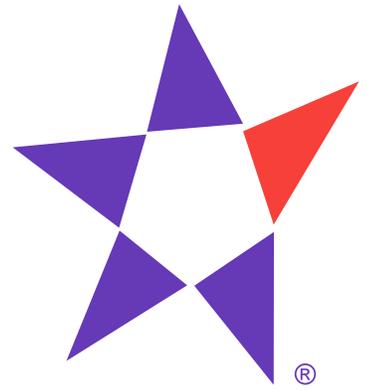
The purpleSTEMwave is a call to action for Canada's youth to apply their natural curiosity and ingenuity to investigate scientific questions and develop innovative solutions to current and future challenges.

The purpleSTEMwave celebrates and unites every young Canadian who asks 'how' and 'why' and transforms those powerful questions into action – in the form of a STEM project.

The purpleSTEMwave reflects YSC's goals of:

- inspiring Canadian youth and providing resources and opportunities that enable them to complete STEM projects regardless of cultural background, socioeconomic status, or geographic location.
- ensuring that youth can share their discoveries and innovations locally, nationally, and internationally.

YOUTH SCIENCE CANADA— IN THE NEWS



YSC works diligently to share its story with national, regional, and local media throughout the year. We strive to reach Canadian students, education community members, the government, and the public through traditional and social media. Together, we're getting the word out that STEM is important and a priority for our education system and the leaders of tomorrow.

Highlights from our publicity efforts over the past fiscal year include:

- Minimum reach of 136,304,414 million impressions
- Minimum of 485 units of coverage
- Minimum of 19 interviews



CBC Radio One
Toronto: Metro
Morning (May 24,
2022) **1,583,000
impressions**

CBC Radio One
- CWSF 60th
Anniversary
documentary
(May 23, 2022)
**860,300
impressions**

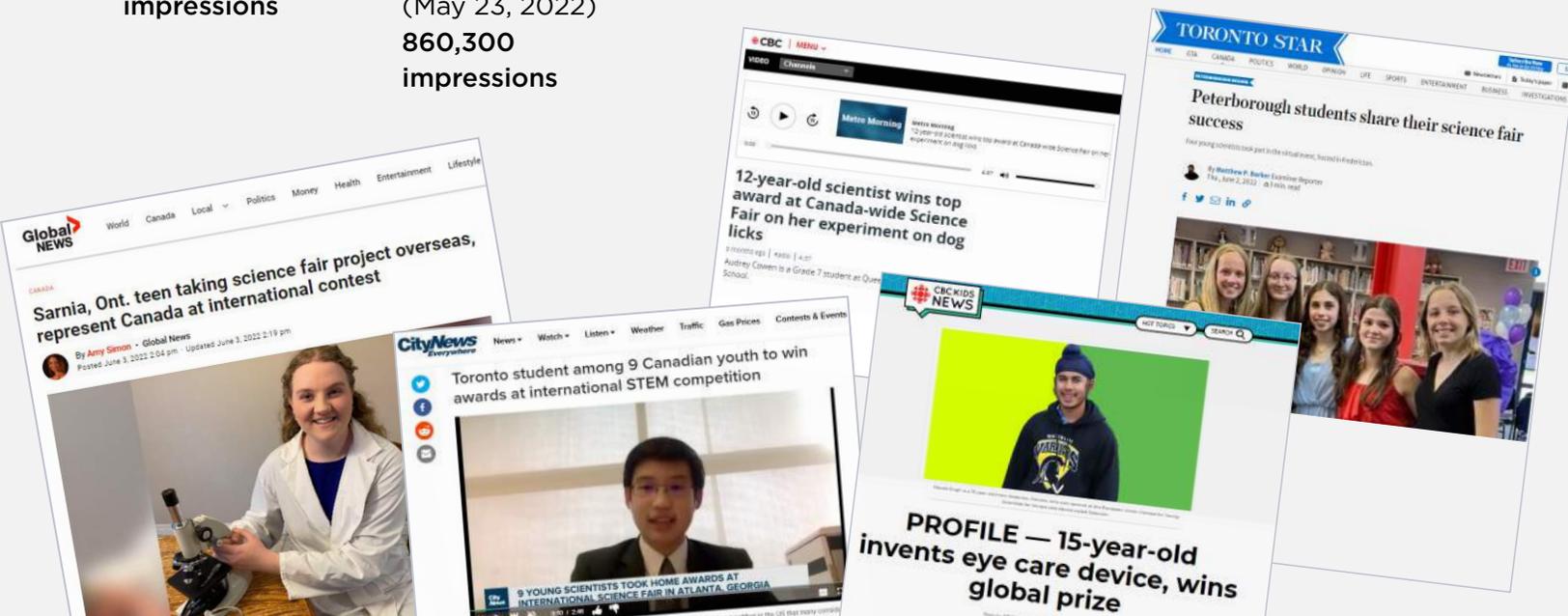
CBC Radio One
Thunder Bay (May
19, 2022) **898,200
impressions**



City News 680:
(May 17, 2022)
**1,362,500
impressions**



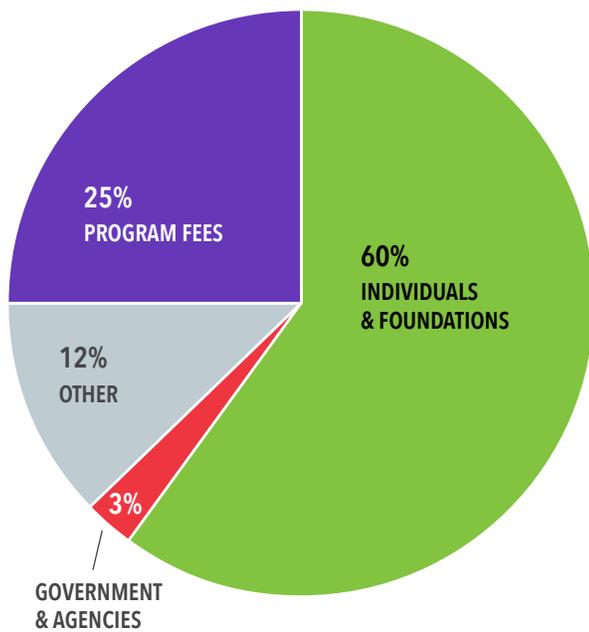
Toronto Star: (June
2, 2022) **1,561,000
impressions**



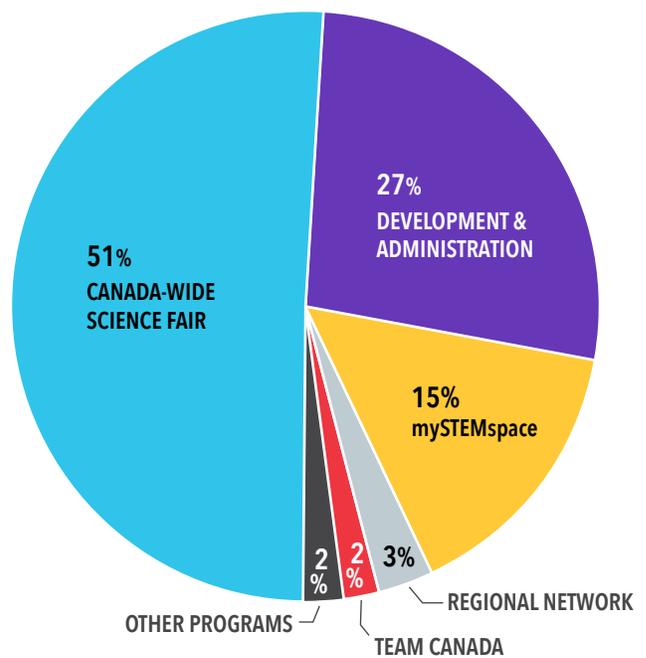
FINANCIAL SUMMARY

The budget for YSC in 2022 was \$1,118,333. This does not include the operating budgets of our National STEM Fair Network members.

REVENUE



EXPENSES



WHAT'S NEXT ...

CANADA-WIDE SCIENCE FAIR 2023

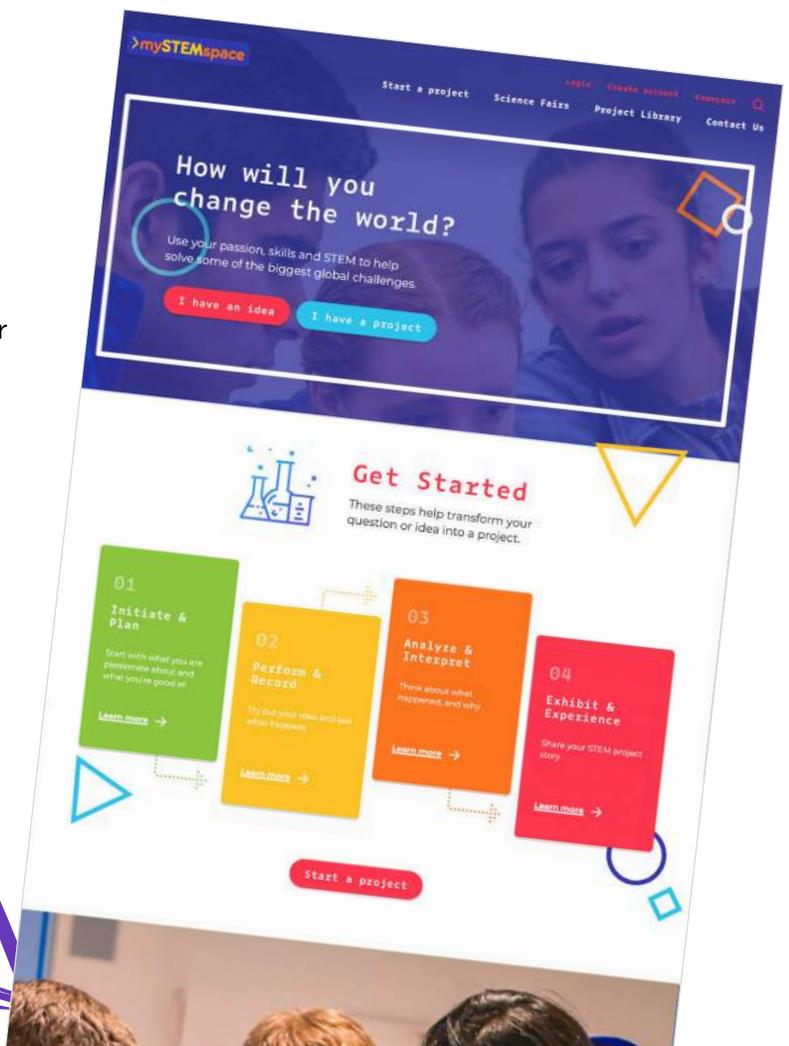
YSC will host the Canada-Wide Science Fair in Edmonton from May 14 to 19, 2023, at the Edmonton Convention Centre. The event will return to an in-person format for the first time since 2019. The virtual format allowed a space to welcome visitors from across Canada and finalists to showcase their award-winning projects in the Project Zone. YSC is looking forward to creating an unforgettable STEM experience for young scientists and visitors in 2023. Having emerged from the pandemic with an online, virtual platform, YSC is ready to grasp the new normal and build back better and anew. The in-person CWSF is also an opportunity to amplify YSC's call to action for Canada's youth to join the purpleSTEMwave.

The event is expected to attract 10,000 in-person visitors over three public viewing days and more than 30,000 students and teachers for virtual field trips.

>mySTEMspace

>monEspaceSTIM

mySTEMspace will continue to be a strong focus in FY2023 as we work to add tools and resources for students starting and refining STEM projects, including a project idea generator, location-aware program opportunities, and smoother integration with the YSC Portal and ProjectBoard.



SPONSORS

INNOVATORS \$100K+



DEVELOPERS \$50K+



MOTIVATORS \$10K+

University of New Brunswick (Fredericton)

York University - Lassonde School of Engineering

FRIENDS \$1K+

The Actuarial Foundation of Canada

Brainspace Magazine

Canadian Acoustical Association

Canadian Association of Physicists

Canadian Meteorological and Oceanographic Society and Pelmorex Corp.

Canadian Museum of Nature

Canadian Society of Clinical Chemists

Canadian Society of Senior Engineers

Canadian WEF Member Associations, the Canadian Water and Wastewater Association, and Jacobs

Centre for Canadian Nuclear Sustainability

Dalhousie University, Faculty of Science

DeutraMed Inc.

Edmonton Convention Centre

Engineering Institute of Canada

First Nations University of Canada

4-H Canada

Nutrients for Life Foundation Canada

Ontario Power Generation

Perimeter Institute for Theoretical Physics

Royal Astronomical Society of Canada

S.M. Blair Family Foundation

Shad Canada

Statistical Society of Canada

The University of British Columbia (Vancouver)

University of Lethbridge

University of Manitoba

University of Ottawa, Faculty of Science

Waterloo Institute for Nanotechnology

Western University

PROUD MEMBER OF ...

CANADIAN ASSOCIATION OF SCIENCE CENTRES

CASC is a national platform for Canada's Science Centres/ Museums and informal science engagement. Science Centres/ Museums have relevance to all sectors of the population and have become important meeting places for science and society. Research shows that science centres/Museums demystify science, conveying its beauty, showing its necessity, and making it accessible to the general public. Free-choice science learning is the hallmark of the science centre offering.



IMAGINE CANADA

YSC has been reaccredited under Imagine Canada's Standards program for five more years. YSC remains part of a community of more than 245 accredited organizations in Canada, all dedicated to operational excellence and setting the standard for corporate philanthropy. The program's goals are to increase organizational excellence and transparency in these areas and to strengthen public trust in individual organizations and the non-profit sector.



MILSET

The International Movement for Leisure Activities in Science and Technology (MILSET—Mouvement International pour le Loisir Scientifique et Technique) is a non-governmental, non-profit, and politically independent network of youth STEAM organizations, which aims to develop a scientific culture among young people through the organization of programs, including science fairs, science camps, congresses, and other high-quality activities.





Youth Science Canada Sciences jeunesse Canada

As a charitable organization registered with Canada Revenue Agency, Reg. No. 888909645, Youth Science Canada counts on the financial support of private and public organizations, foundations and other generous Canadians interested in funding STEM and encouraging the curiosity of Canadian youth. To donate, bequest or provide another gift, please email info@youthscience.ca.

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