

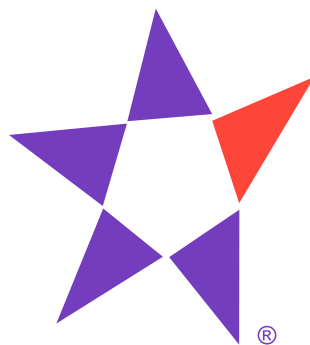
Youth Science Canada
Sciences jeunesse Canada

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



YOUTH SCIENCE CANADA ANNUAL REPORT

JULY 2020 – JUNE 2021



BOARD OF DIRECTORS

Caroline Whippey (Chair)

Director of Library Services,
Brescia University College

Jamie Parsons (Vice-chair)

Assistant Principal, Holy Spirit High School

Najib Hayat (Treasurer)

Founder and CEO of NHK Consultants Inc.

Mandy Dennison (Secretary)

Director, Social Responsibility,
Intact Foundation

Alastair Komus (Member)

Engineer, Composites Innovation Centre

Elaine Ma (Member)

Family Physician

Trevor Maguire (Member)

Financial Advisor, Maguire & Associates

Christian Theriault (Member)

Serial entrepreneur

Dick Wilson (Member)

VP Public Affairs – Retired

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

CONTENTS

About YSC	4
Our Mission	5
Programs	6
YSC in the News	13
Financial Summary	14
What's Next	15
Sponsors	17
Member Associations	18



MESSAGE FROM THE EXECUTIVE DIRECTOR

Since 1966, Youth Science Canada has played a **pivotal** role in engaging and supporting Canadian youth through STEM projects. In 2020-2021, we continued our **pivot** in the face of challenges to deliver programs that inspire students today and, through the results of their work and innovation, forge a better tomorrow for us all.

In February, we launched a new YSC website and mySTEMspace, our new project support and registration portal. In collaboration with ProjectBoard, partners since 2020, we helped 40 affiliated regions hold virtual STEM fairs over two months (March and April). In May, we showcased 337 projects by 374 students as part of the first virtual Canada-Wide Science Fair. Thanks to the hard work of volunteers, staff, sponsors and partners, we exceeded all expectations with 1,507 teachers and 51,548 grade 5-12 students registered for virtual field trips over the three days of the event. Most importantly, 91 per cent of finalists said they enjoyed their experience at CWSF (49 per cent said their experience was 'excellent'; 42 per cent said it was 'good').

The work of Youth Science Canada is made possible thanks to the generous support of volunteers, community partners, sponsors, regions, members, board members and staff. Thank you to all. As we prepare for our 60th Canada-Wide Science Fair, I am filled with pride and enthusiasm at what we can achieve in the next 60 years. **Our work is more important today than ever before.**

Thank you for taking an interest in our annual report and for your contributions to this important mission.

Reni Barlow, Executive Director

PO Box 297
Pickering, ON L1V 2R4
Tel: 416-341-0040
Toll free: 866-341-0040
Toll-free fax: 866-613-2542

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
- Are able to 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.

“ *Within every challenge lies an opportunity. The global pandemic has highlighted the value of STEM in answering important questions and developing solutions to urgent problems. Youth have remarkable ideas that demonstrate the power of curiosity and ingenuity. We're committed to ensuring that every young Canadian is inspired to transform their ideas into action and to share them with the world.*

- Reni Barlow, Executive Director, Youth Science Canada

PROGRAMS 2020-2021

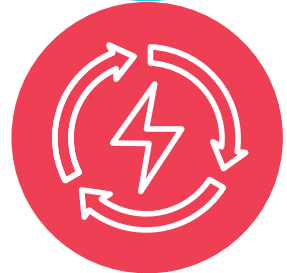
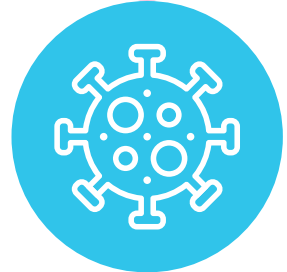
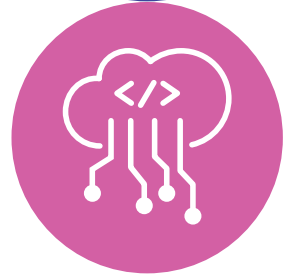
Encouraging young people to harness their natural inquisitiveness through problem-solving and STEM projects is a great act of education and mentorship. It also helps them to develop essential skills and life-long interests that are worth investing in.

In 2020-2021, 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.

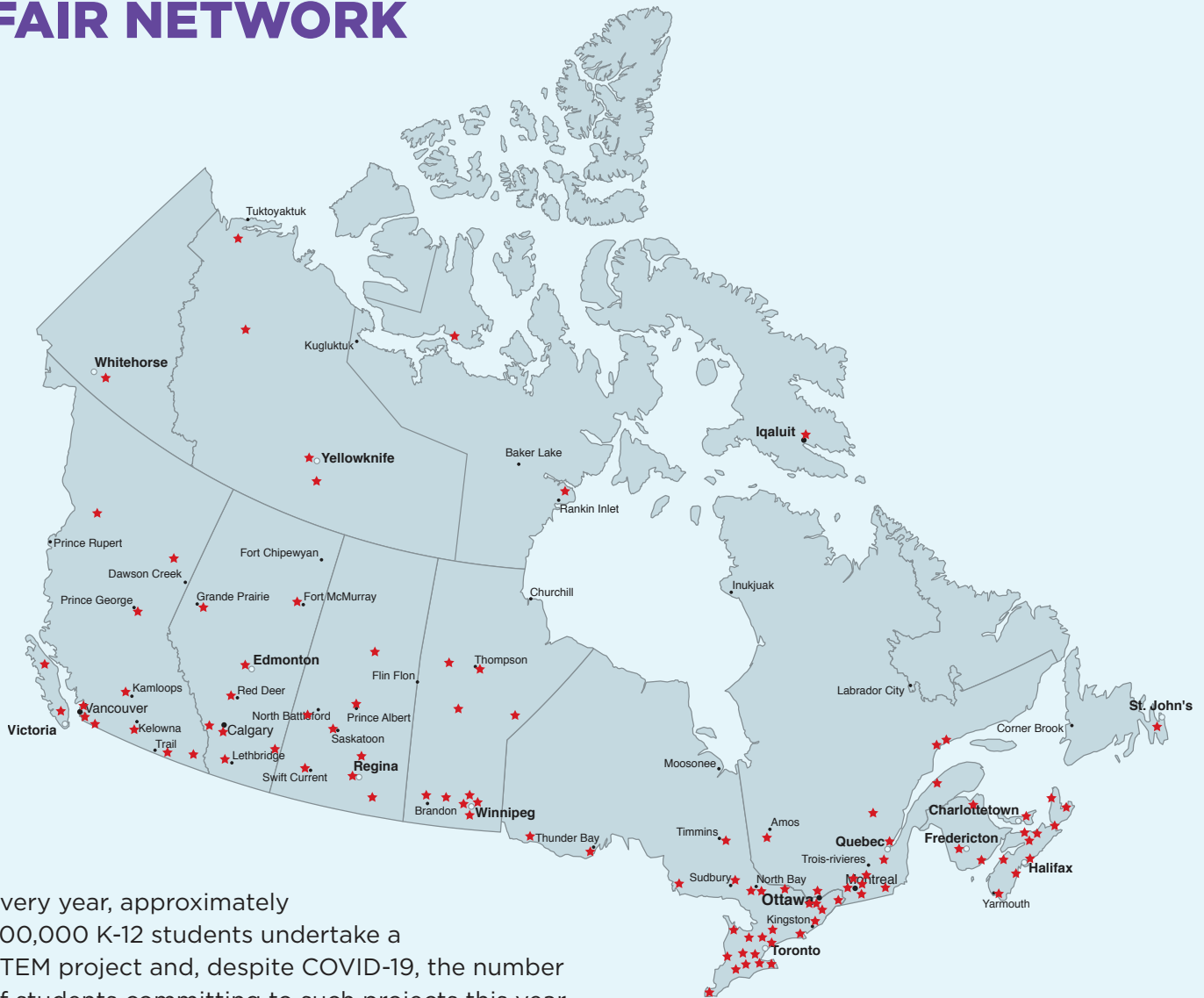
The results are astounding.

“ *I am very grateful for being able to share my research with the Canadian science community despite the pandemic. It was extremely rewarding to talk with judges who are experts in the field, so I could learn more about science and the scientific method. I look forward to the end of the pandemic and having the chance to return to CWSF in person so I could meet other scientists my age and see world-renowned facilities right here in Canada.*

- Nathaniel Martin, Grade 7, Manitoba Schools Science Symposium.



NATIONAL STEM FAIR NETWORK



Every year, approximately 500,000 K-12 students undertake a STEM project and, despite COVID-19, the number of students committing to such projects this year was inspiring. Even in the face of restrictions, regional fairs went virtual — with 75 regional fairs collectively engaging some 10,000 youth across the country. To mitigate the cancellation of 24 regional fairs, YSC was pleased to welcome their students in the first YSC Virtual Regional Fair using ProjectBoard.

By the numbers:

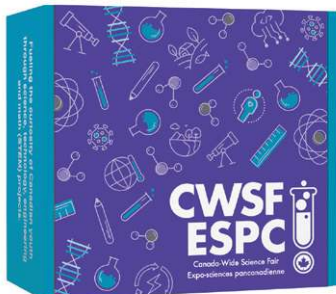
- 374 finalists with 337 projects participated in the 2021 virtual Canada-Wide Science Fair
- 270 judges conducted 1,078 interviews with CWSF finalists over two days to select award winners
- 96 adult delegates provided guidance and supervision for the finalists— and participated in a one-day virtual conference



OTTAWA
2021 [virtual/virtuelle]

CANADA-WIDE SCIENCE FAIR 2021 – OUR FIRST VIRTUAL CWSF

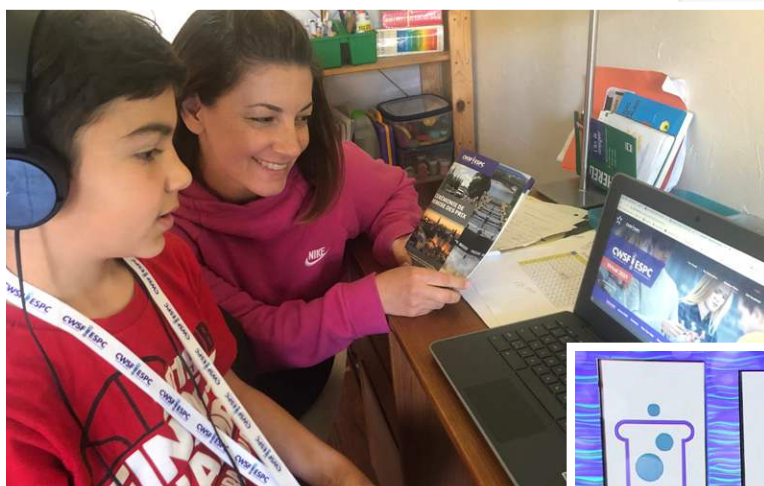
From May 17 to 21, 374 finalists from every province and the Yukon showcased 337 projects. Each participant received a kit via mail containing CWSF identity, promotional and program items. During the week, youth finalists and adult supervisors explored the virtual Project Zone, STEM Expo with its more than 60 exhibitors, and CWSF-TV, featuring more than nine hours of original programming. Behind the scenes, 270 dedicated judges selected 188 finalists to receive special awards, medals, challenge awards, scholarships and grand awards, including our six Platinum Award winners.



More than 1,500 teachers and 51,000 grade 5-12 students visited the first virtual Canada-Wide Science Fair. We're thrilled that we were able to share the CWSF experience with so many students and teachers across the country.

“ The overall CWSF experience was fun, illuminative, and memorable! Looking back, I would say that my favourite part of the fair was looking at the other finalists’ projects on ProjectBoard; I felt deeply inspired by the innovation and problem solving of my peers.

*- Maya Honda-Granirer, Grade 8,
Vancouver Island region.*



“ I really enjoyed this year’s Virtual Canada Wide Science Fair and have learned a lot from the experience that will help enhance my understanding towards my future studies in science and technology. Throughout the CWSF event, I was able to learn more about the different branches of science through all the amazing projects presented. I also enjoyed the activities and found the interviews interesting and a great learning experience.

*- Maryam Khanum, Grade 7,
Northern British Columbia region.*



Youth Science Canada's STEM Expo—the nation's largest youth STEM outreach and promotion event—also made the shift to a virtual format in 2021 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 2021 Virtual CWSF. Some 60 private and public organizations invested in a virtual exhibit.

Highlights

- **188 finalists** with outstanding projects shared awards and scholarships valued at **over \$925,000**
- **60 organizations** shared their passion for STEM and youth as STEM Expo exhibitors
- **51,548 students** registered for virtual field trips to CWSF and STEM Expo 2021
- **26,500 minutes of content viewed** on CWSF-TV over 3 days.

This continued pivot 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, Cenovus Energy, Rogers Communications, Youth Can Innovate and engineering.com.



**CWSF-TV
TÉLÉ-ESPC**

TEAM CANADA



ÉQUIPE CANADA

Each year, Youth Science Canada selects students and their STEM projects to represent the country at renowned international youth STEM competitions. With the generous support of Youth Can Innovate, a program of the Gwyn Morgan and Patricia Trottier Foundation, Youth Science Canada 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

- After winning top honours at the 2021 CWSF, Hardit Singh (right in photo) and Calvin Karthik (left in photo) represented the country at the 32nd European Union Contest for Young Scientists (EUCYS) hosted virtually from Salamanca, Spain, September 17 – 19, 2021. Hardit Singh won second prize for his teleophthalmology project and Calvin Karthik won a special award for his biogas production project.
- Eight students participated as members of Team Canada-ISEF at the 2021 virtual Regeneron International Science and Engineering Fair (ISEF), May 16 – 21, earning four awards, including a US\$5,000 first award.





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, Youth Science Canada has trained thousands of teachers, in every grade.

Highlights

Virtual professional development workshops were delivered in Manitoba, New Brunswick, Québec, and Saskatchewan.



YSC HIGHLIGHTS



For the fifth consecutive year, in August we held the STEM Entrepreneur Experience, generously supported by Rogers Communications and York University's Lassonde School of Engineering. Seventeen students selected at the Virtual 2021 Canada-

Wide Science Fair spent four intense days in a virtual workshop examining their projects with a critical eye and learning what it takes to transform their novel ideas into successful businesses. The final pitch competition was won by the team headed by Mac Dykeman with "An innovative approach to improving biosecurity in hatching."

YOUTH SCIENCE CANADA— IN THE NEWS

Youth Science Canada works diligently throughout the year to tell its story through media at the national, regional and local levels.

We strive to reach Canadian students, members of the education community, 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 34 million impressions
- Minimum of 371 units of coverage
- Minimum of 58 interviews



CTV
Newfoundland:
Your Morning (Jan
6, 2021) **600,000**
impressions



Global News:
The Joel Matlin
Entrepreneur
Show (Feb 7,
2021)
2,808,000
impressions



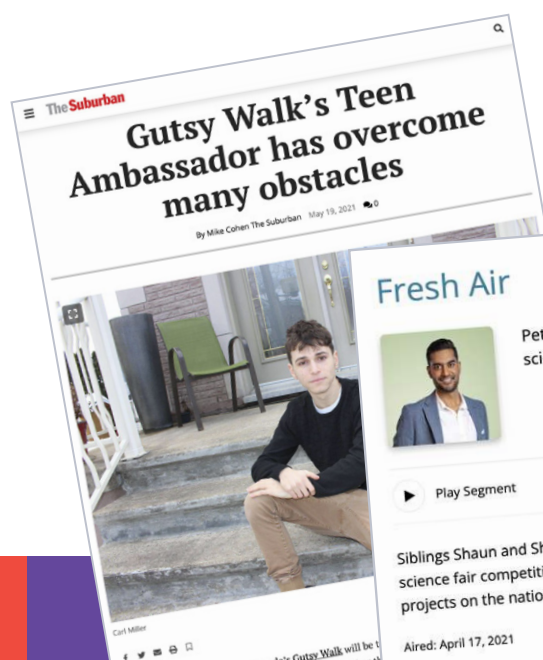
TheStar.com
(Apr 14, 2021)
1,349,000
impressions



CBC Toronto:
Fresh Air
(Apr 18, 2021)
650,000
impressions



The West Island
Suburban
(Montreal) (May
19, 2021)
133,200
impressions



Fresh Air



Peterborough siblings set to compete in national science fair

Play Segment

9:36

Siblings Shaun and Shreya Plassery both won their respective regional science fair competitions. Now they're getting set to showcase their projects on the national stage.

Aired: April 17, 2021

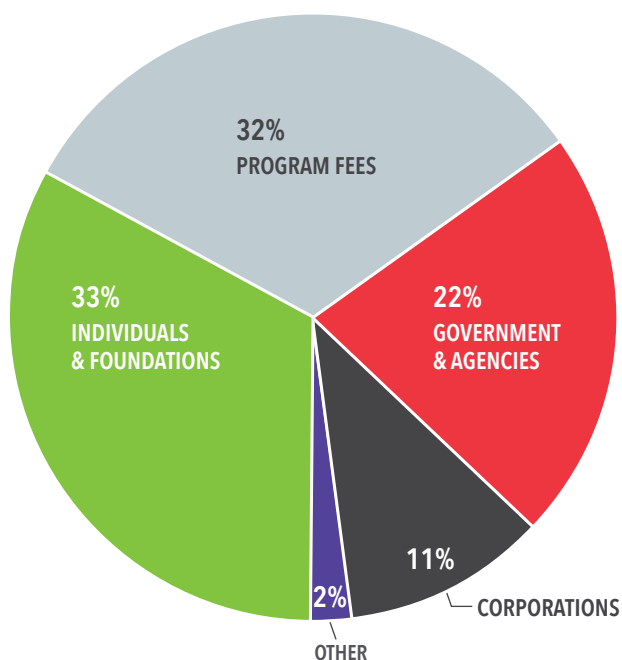


FINANCIAL SUMMARY

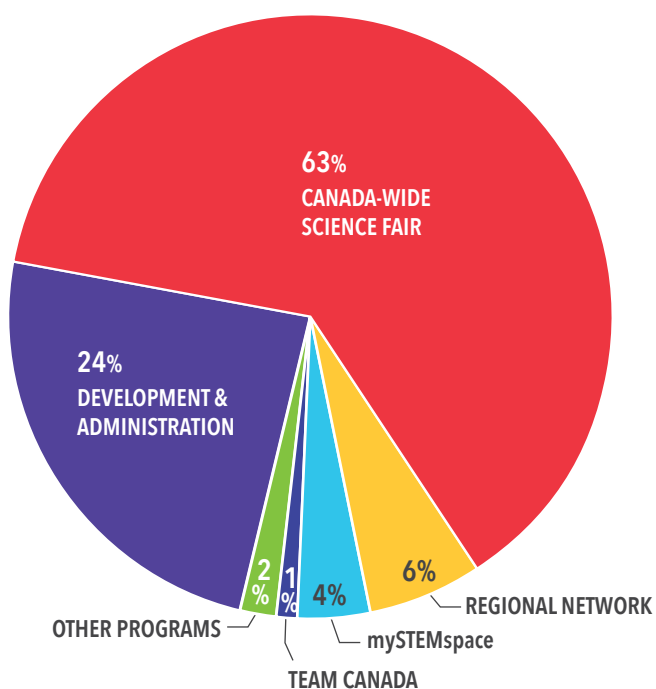
In 2021, Youth Science Canada welcomed the Trottier Family Foundation as a major sponsor to support the development of mySTEMspace. We are thrilled that all our major sponsors enthusiastically supported our transition to a virtual 2021 Canada-Wide Science Fair, during which all the regular special, excellence, challenge and grand awards were presented.

The budget for Youth Science Canada in 2021 was \$918,744. This does not include the operating budgets of our 105 National STEM Fair Network members.

REVENUE



EXPENSES



WHAT'S NEXT ...

60TH ANNIVERSARY CELEBRATIONS

In 2022, Youth Science Canada celebrates the 60th edition of the Canada Wide Science Fair— the single largest STEM-based gathering in our country. To commemorate the occasion, Youth Science Canada will celebrate throughout the year with various activities and events including student contests, facts and alumni spotlights as well as special moments throughout the 60th edition week. Together, let's look back on the last sixty years and, as always, look to the future together.



Did you know?

- The first CWSF, held in Ottawa in 1962, had 45 projects and finalists representing 12 regions
- The CWSF has been held in every province and one territory (Yukon) over its 60-year history
- The largest CWSF to date, with 425 projects and 509 finalists, was held in Toronto in 2011—the 50th anniversary year



WHAT'S NEXT ...



CANADA-WIDE SCIENCE FAIR 2022

Youth Science Canada will once again host an all-virtual Canada-Wide Science Fair from May 16 to 20, 2022. The decision was unanimously made in July 2021 due to restrictions and uncertainty on travel, accommodations and event logistics, as well as the time required for participants and organizers to make all necessary arrangements.

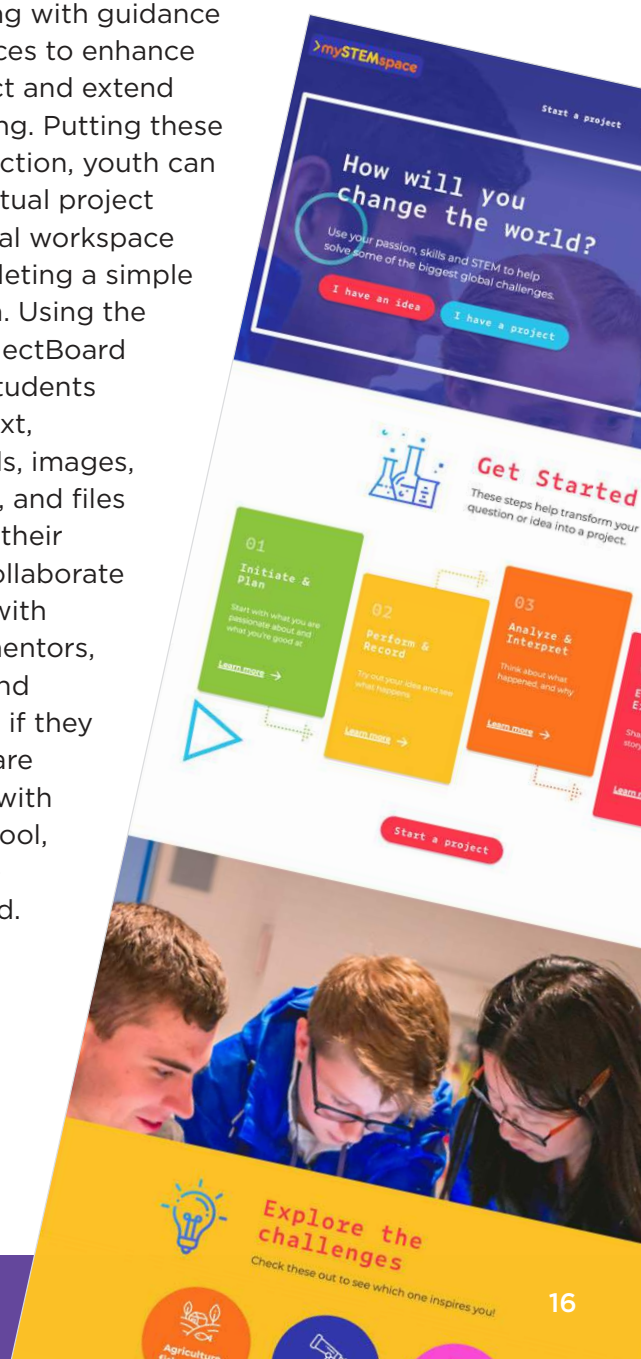
As in previous years, finalists from Canada's more than 100 regional fairs will be invited to showcase their award-winning projects in the Project Zone. Returning for a fifth year, STEM Expo is expected to feature more than 70 virtual exhibits from post-secondary institutions, agencies, companies, museums, and other youth STEM related organizations.

We are planning for a physical CWSF 2023 in Edmonton, with virtual elements to welcome visitors from across Canada. The decision to host CWSF virtually again in 2022 will allow many regions that did not run a regional fair in 2021 to resume fundraising to send finalists to Edmonton.

>mySTEMspace

>monEspaceSTIM

Launched in March 2021 after two years of planning and development, mySTEMspace—monEspaceSTIM in French—is YSC's online portal to the world of STEM projects for Canadian youth. In mySTEMspace, middle and high school students who want to start, improve, or extend a STEM project are inspired by the eight YSC challenges and an extensive project library, along with guidance and resources to enhance their project and extend their learning. Putting these tools into action, youth can create a virtual project in a personal workspace after completing a simple registration. Using the unique ProjectBoard platform, students combine text, whiteboards, images, video, links, and files to develop their projects; collaborate and share with partners, mentors, teachers, and others; and if they choose, share their work with a class, school, STEM fair—or the world.



SPONSORS

INNOVATORS \$100K+



DEVELOPERS \$50K+



MOTIVATORS \$10K+



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

Youth Science 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 of which are 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 nonprofit 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 scientific culture among young people through the organization of programs, including science fairs, science camps, congresses and other high-quality activities.





**CWSF
ESPC
2022**



**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 make a donation, bequest or other gift, please email info@youthscience.ca

To contact us:

**PO Box 297, Pickering,
ON L1V 2R4**

Tel: 416-341-0040

Toll-free: 866-341-0040

Toll-free fax: 866-613-2542