STEM Project Quick Guide

for Grades 7-12

A step-by-step reference guide on how to:

- complete a STEM project from start to finish
- fit it into your school year
- compete at Western Manitoba Science Fair
- leverage your results into other academic opportunities

WMSF

Welcome to Your STEM Journey

Have you ever wondered how things work, or thought of a way to solve a problem in your community, at school, or even in your own life? That's what STEM projects are all about. Exploring your curiosity, asking questions, testing ideas, and sharing what you discover.

Each spring, students from across Western Manitoba gather to share their projects at the Western Manitoba Science Fair (WMSF). This regional fair is more than just a competition; it's a chance to meet other curious thinkers, practice your creativity, and build real-world skills.

Bonus! The top 4 WMSF projects in grades 7-12 are invited to represent our region at the Canada-Wide Science Fair (CWSF). It's an incredible opportunity to travel, make friends, and showcase your ideas on a national stage. At CWSF, students compete for over $1 million in scholarships and awards. Even if you don't move on to CWSF, entering WMSF is a win: you'll gain confidence, make connections, and get valuable feedback from judges to make your future projects even stronger.

Think Big! Your STEM project research can be used for more than just competing at WMSF:

- It is great for university admission essays and scholarship applications.
- If you are an AP or IB student it could potentially be used toward your coursework.
- Student Initiated Project credits may be available at your school for completing STEM projects as an extra.
- Use it to apply for science research experiences such as the SHAD Canada summer program.

We recommend discussing these things with a teacher or school counsellor to make the most of your STEM project work.

The Big Picture: Your STEM Project in 6 Steps

- **Choose a Topic** - Pick something that interests you in science, technology, engineering, or math.
- **Ask a Question/Define a Problem** - What do you want to test, discover, or design? Should you work with a scientific mentor?
- **Plan & Research** - Learn what's already known, make a plan, and check safety/policy guidelines.
- **Experiment/Build/Test** - Collect data, run experiments, try out prototypes. Keep a logbook from the beginning!
- **Analyze & Conclude** - What do your results show? What did you learn? What would you do differently? How can your results be applied to real life?
- **Share Your Project** - Design your backboard, complete your project report, and present your work at the fair.

Resources

This document is a companion to the WMSF Guide. All project resources, including the WMSF Guide and WMSF Entry form, can be found at www.wmsf.com/resources. For additional help please contact us.

Your STEM Project Timeline

The following timeline is suggested for Student Initiated Projects self-entering WMSF (no science fair at your school). If your school has a science fair you must compete in that fair for your chance to enter WMSF, and your timeline may differ slightly based on your teacher's guidance.

September/October - Get Inspired

- Explore what interests you (science, technology, engineering, math).
- Brainstorm problems you would like to solve or questions you would like to answer.
- Chat with teachers, friends, or family for ideas.
- Decide if you will be working with a mentor. Info about mentorship.
- Pick your project topic by the end of October.

How to pick a Project

A strong project doesn't just answer a random question. It shows curiosity, critical thinking, and creativity. Here are a few ways to find a high-impact idea:

- Look for a real-world problem.
- Connect with your school work.
- Innovate or improve something.
- Think big-picture STEM.
- Make it measurable.
- Choose something you are passionate about.

Think about potential applications of your work in real-world situations or how it might connect to various fields, or existing or emerging technologies. What judges value: originality, relevance, understanding, passion.

Feeling stuck or need some help with your idea? Try out Spark, a STEM project idea generator! Other project idea resources available HERE.

Your project will fall under one of two categories:
Discovery - these projects ask a question and involve research and/or experiments to find an answer.
Innovation - these projects create, design, or build something new to solve a problem.

November/December - Plan & Research

- Read articles, watch videos, or look up past projects.
- Keep a logbook from the beginning. Judges want to know your process and will ask to see your logbook. Check out these logbook tips.
- Write down your main question or problem.
- Create a simple plan for your experiment or build.
- Read through the entire WMSF Guide.
- If your project involves humans (ex. surveys) or animals, determine which forms/approvals you need BEFORE your begin. Use our wizard HERE to figure this out.
- Make your Hypothesis and keep the scientific method in mind as you proceed with your project.

January/February - Experiment, Build, Test

- Run your experiment, collect data, or build your prototype. Do multiple trials if you can.
- If your are doing an experiment, don't forget your independent, dependent, and controlled variables.
- Be sure to update your logbook (daily notes, sketches, charts, photos).
- Start analyzing your results as you go; don't wait until the end.

March - Put it all Together

- Finish collecting and analyzing your results.
- Complete and submit your WMSF entry form and any applicable ethics forms by the deadline.
- Submit your project report online by the deadline. Instructions are in the WMSF Guide.
- Start designing your backboard display. Here are some design tips and a free template you can use. You can change the colors to suit your project.
- Practice presenting your project in clear, simple terms, in 5 minutes or less. Have a family member or friend ask questions.

April - Showtime!

- Finalize your backboard.
- Finalize your presentation. Keep it conversational rather than reciting a script. Be ready for common questions (why, challenges, surprises, improvements).
- Double-check that your display follows WMSF size & safety rules.
- Fair Day: Present your project at the Western Manitoba Science Fair!
- Celebrate your hard work no matter what; you've accomplished something amazing!

Tips for Success

- Show your passion: pick a topic that excites you, the judges will notice. Be sure to consider the potential applications of your work in relation to the real world.
- Manage your time: start early, break into small tasks, set mini-deadlines.
- Run multiple trials of your experiment if you can. More data is always better. Don't forget your variables.
- Keep a logbook: document daily notes, mistakes, sketches, and charts.
- Avoid common mistakes: don't copy existing work; follow academic integrity rules and citing rules.
- Practice your presentation: Be clear, confident, and keep it to 5 minutes or less.
- Don't bring pieces of your experiment or project to the fair. Instead, take pictures to show the judges. Less 'stuff' at your project display is preferred.
- Don't forget to have fun! Science fair is all about the experience and not about winning. Medals or awards are a bonus, but your satisfaction with your work is most important.

What Judges Are Looking For

- Scientific Thought & Understanding - clear question/problem, well-planned, results analyzed, science understood, AI properly fact checked and cited, sources properly cited.
- Originality & Creativity - new idea, creative approach.
- Communication - backboard, project report, oral presentation, logbook.
- Mentorship - student did their own work and understands it fully.

Judges will ask questions to see how far your knowledge on your project goes. Be ready to have a conversation about your project and discuss your work.

Awards

In addition to gold, silver, and bronze medals, here is a list of the special awards up for grabs at the Western Manitoba Science Fair. These may change from year to year as different awards come on board. On the next page you can check out the Canada Wide Science Fair awards and opportunities from 2025.

Farm to School - Manitoba Association of Home Economists Awards
Awarded to the best projects related to food and nutrition. Grades 1-4, 5-6, 7-8. $50 each.

Energy & You Awards (Manitoba Hydro)
Best project related to energy for Grades 1-4, 5-8, 9-12. $50 each.

Brandon Fire & Emergency Services Award
Awarded to the best project related to fire prevention. $50.

Medical Laboratory Technology Awards
Awards are presented to the projects demonstrating an interest in the field of medical laboratory science. Grades 5-6, 7-8, 9-10 and 11-12. $50 each.

Brandon Emergency Support Team - Emergency Preparedness Award
Award is given to the best projects showing an idea or concept relating to emergency preparedness or disaster prevention. This relates to large scale events impacting a significant geographical area and/or large numbers of people in an area. All hazards that can affect people and property may be considered. Three $100 awards, grades 1-4, 5-8, and 9-12.

Science of Health Care Award
Awarded to the best project which demonstrates the role of science innovation in health care and pharmacy. One $50 award for grades 1-6 and one $50 award for grades 7-12.

Brandon Chamber of Commerce Award
An award given to the best project demonstrating entrepreneurial concept. $100.

Climate Change Action Award
Awards will be presented to the best projects demonstrating “environmental awareness” based on the big moves from the City’s climate change action plan; alternative transportation, renewable energy, waste diversion, and conserve and protect nature. Four $50 awards.

Prairie Electric Award
Awarded to the best project on solar energy, or an electrical related project. $100 cash award.

Russ Edwards School of Ag & Environment Environmental Care Award
Two awards for projects supporting environmental care and the sustainability of the land, water, and air on which we all depend. Two $100 awards.

Assiniboine College Innovation Award
Given to the two best projects involving communications engineering technology. The projects must be innovative and of significant scientific or technological value, according to the age of entrant. Two $100 awards.

Don Sumner Memorial Award
Awarded to a student who has demonstrated exemplary mathematical skills in their scientific research by recording and analyzing data in a quantitative method. Cash award of $100. Grades 5-8.

Brodie Davis Alumni Award
Awarded to the project best demonstrating an understanding of the water cycle, it’s integral role in the health of watersheds and how best to improve and maintain it. $300 cash award, Grades 7-12.

Land and Water Conservation Award
Awarded to the best projects relating to the development or application of practices aiming to protect water quality and/or land conservation in agricultural watersheds. Two $200 awards, grades 5-8 and grades 9-12.

Healthy Lake Award
Awarded to the project that best demonstrates the enhancement or acceleration of a natural process or processes to aid in environmental repair/recovery or augmentation of a watershed. Two $100 awards, Grades 1-6 and 7-12.

Andrews Foot Clinic Award
Project that best relates to human physical mobility. Two $75 awards, grades 1-6 and 7-12.

Charlee McLaughlin Bender Alumni Award
To be awarded to a deserving student or students from grade 7-12 whose project best relates to developing a new innovation, sustainability method, management practice and/or an environmental protection project within the agricultural and rural development field. $100 cash award.

Engineers Geoscientists Manitoba Award
This award is presented by the Engineers Geoscientists Manitoba to the best project in grades 7-12, related to the fields of either engineering or geoscience. The winner will receive a cash award of $100.

Flatland Drugs Award
Awarded to the two best projects in the field of entomology (the study of insects). Two cash awards of $50 each.

Behavioral Science Award
Awarded to the best project(s) in the area of Human Behavioral Science; including but not limited to the effects of social, cultural, and psychological factors on human behavior, physical and mental health, preferences, beliefs, etc. $50 each for levels 1-4, 5-8, and 9-12.

Brandon University Award
This award is given to the best overall individual project in grades 10 - 12. Cash award of $200, plus a tuition credit for one term of Undergraduate level courses at Brandon University (excluding student fees).

Best of Fair - Trip to Canada Wide Science Fair
Exceptional project in grade 7-12 receives an all-expenses paid entry to the Canada Wide Science Fair. Runners up will be selected as well, and will receive all expenses paid trip to CWSF in Edmonton, AB, May 23 - 30, 2026.

CWSF ESPC
Canada-Wide Science Fair
Expo-sciences pancanadienne

2025

AWARDS CEREMONY

presented by cenovus ENERGY

63rd Annual Canada-Wide Science Fair
Fredericton, NB • May 31-June 7, 2025

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MESSAGE FROM YOUTH SCIENCE CANADA

Reni Barlow
Executive Director

Youth Science Canada is pleased to present the 63rd Canada-Wide Science Fair – the country's largest national youth STEM event. In 1962, the first CWSF welcomed 45 finalists and projects from 12 regions. It's grown a lot since then.

This week, we've showcased and recognized nearly 400 of the country's top young scientists and innovators selected by our network of 96 regional organizations for another inspiring celebration of science, technology, engineering, and mathematics (STEM).

As always, the finalists have impressed us with the quality of their projects and their creativity in tackling nine important challenges that face our communities, the country, and the world.

Throughout this week, over 130 adult delegates provided support and guidance, 200 volunteer judges shared their time and expertise, 50 community and national volunteers helped make this possible, and we welcomed over 7,000 in-person visitors, including students, teachers, and members of the public.

None of this would be possible without our generous sponsors, who continue to demonstrate their commitment to fueling the curiosity of Canadian youth through STEM projects – and developing Canada's top young scientists and engineers. Finally, it is my pleasure to thank our dedicated national volunteers and our staff for ensuring the success of this year's fair. They have provided CWSF 2025 participants and visitors with a unique and memorable scientific, cultural and social experience.

See you next year at CWSF 2026 in Edmonton!

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mySTEMspace

HOW WILL YOU CHANGE THE WORLD?

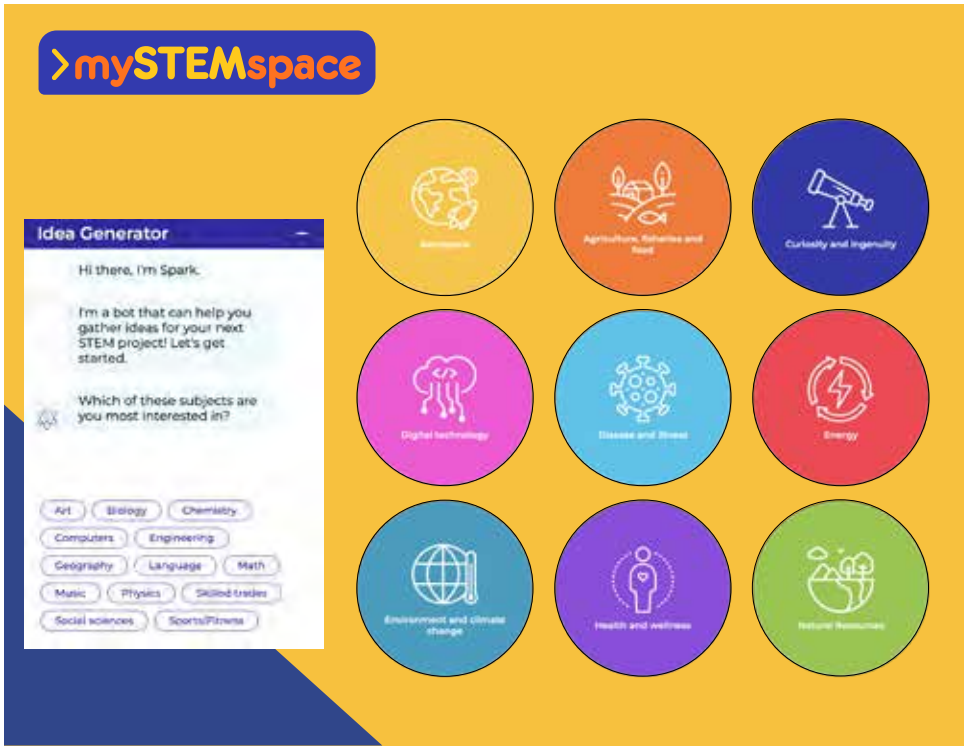
mySTEMspace.ca continues to grow!

YSC's resource portal for youth across Canada now includes mySTEMspace Spark. This AI-powered project idea generator combines your answers about what you're interested in, which YSC challenge you want to address, and what you love to do to provide sources and project ideas you can use to spark your next project!

Check it out at **mySTEMspace.ca/spark**

Whether it's your first project or you've got lots of experience, **mySTEMspace.ca** has resources to support you in developing your idea, following your curiosity, and applying your passion to new discoveries and innovations.

How will you change the world?



RECOGNIZING EXCELLENCE

A week-long, national event, the Canada-Wide Science Fair (CWSF) brings together top students from across the country to compete for nearly $1.3 million in cash, scholarships and exclusive science opportunities. Those who qualify have distinguished themselves from amongst the approximately 20,000 young Canadians who compete in regional science fairs.

Apart from the science, the fair is its own unique experience. The event, in a different part of Canada every year, brings together youth from the most remote regions of the country and their urban counterparts. Sightseeing tours, special events, dances – each host city goes out of its way to showcase the cultural, natural and human qualities of their part of the country.

The purpose of the CWSF Awards is to reward outstanding scientific and technological achievements and excellence by Canada's young scientists at the national level and to recognize those national finalists at the Canada-Wide Science Fair whose achievement places them above the rest.

Youth Science Canada, with its National Judging Policy Committee, establishes the criteria for awards, sets the judging standards, oversees selection of the CWSF Chief Judge, and works with the CWSF Judging Admin Team to organize the judging process.

The CWSF Chief Judge recruits judges and works with the National Judge-in-Chief, who oversees the judging process that selects the Special, Excellence, and Challenge Award recipients. A special Youth Science Canada panel selects the Grand Award recipients from the gold medal winners.

Awards are assigned to the best eligible project on the basis of ranking projects relative to others at the current CWSF.

Marc Roussel, PhD
National Judge-in-Chief

Ben Newling, PhD
Chief Judge

FROM INQUIRY TO INNOVATION

Established in 1966, Youth Science Canada fuels the curiosity of Canadian youth through science, technology, engineering and mathematics (STEM) projects. We work to ensure that Canadian youth have the capacity and skills to generate and answer questions and identify and solve problems.

To this end, we provide a variety of resources and opportunities for youth to get involved in exciting and imaginative inquiry and project-based STEM. More than 8,000 dedicated volunteers nationwide help us to achieve this. And thanks to these combined efforts, every year in Canada, more than 500,000 bright, inquisitive minds get involved in project-based STEM. These young STEM enthusiasts are Canada's next generation of innovators and entrepreneurs.

We are proud to play a key role in inspiring these emerging leaders to explore the world of STEM and to choose a career in STEM-related fields.

We are the leading youth STEM project organization in the country and the Canada-Wide Science Fair is the foremost annual youth STEM event in Canada. We encourage schools, teachers, parents, corporations, and governments across the country to join us in engaging, mentoring and supporting Canada's young scientists, engineers and innovators. We are firmly committed to building Canada as a discovery and innovation nation.

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smarter science éduca sciences

Students should be DOING science, not just talking about it! They need Smarter Science teachers.

Educators play a critical role in determining how students view and experience science. Smarter Science is Youth Science Canada's framework for K-12 science teaching and learning, and for developing the skills of inquiry, creativity, and innovation in any curriculum unit. Smarter Science workshops offer a simple and effective process for teachers to successfully implement scientific inquiry in their classroom – and prepare students for STEM fair projects. Our team has trained thousands of teachers, in every grade, from coast to coast.

We offer a series of three full-day workshops:

1. Introduction to Smarter Science
2. Assessment and Evaluation of Inquiry
3. Innovation and Creativity through Inquiry

Get started with Smarter Science:

BOOK a workshop – in English or French – for your school or district/board
ORDER classroom-ready posters, booklets, and resources
INVITE us to your provincial science teacher conference

To book a workshop or for more information, visit smarterscience.ca or call 866 341 0040.

TEAM CANADA-ISEF

Team Canada-ISEF competes against more than 1,800 top students and projects from 80 nations at the world's premier international competition, the Regeneron International Science and Engineering Fair (ISEF). The event offers nearly $4 million in scholarships, tuition grants, internships and scientific field trips to winning finalists. Team Canada-ISEF is generously supported by Youth Can Innovate.

Each year the team is selected through a national process that begins at the CWSF and concludes in March. For information about Team Canada-ISEF, including results for the 2025 team, visit tc.youthscience.ca.

Veronica and Vincent Guo – Vancouver, British Columbia
Dual-Purpose Biological Photovoltaic: Optimizing Power Output and Wastewater Treatment

Gurnoor Kaur – Kitchener, Ontario
SynaptiQ – Detection and Prevention of Hospital Induced Delirium

Tanvir Mundra – Vancouver, British Columbia
Saponin Surfactants: Novel extraction of environment friendly natural saponins, and their effect on bacterial inhibition and plant growth

Arushi Nath – Toronto, Ontario
NEPTUNE: Novel Exoplanet Prediction Technique Using N-body simulations, Bayesian Estimation, and Machine Learning

Yurui Qin – Saskatoon, Saskatchewan
A Novel Approach to Using Artificial Intelligence to Aid the Hearing and Vision Impaired

Rayne Wallace – London, Ontario
Sticky States and the Adhesion Effect: a novel model of directional evolution without Darwinian selection

Jason Zhao – Vancouver, British Columbia
JETSTREAM: Building the world's fastest drone

TEAM CANADA-SIYSS

The Stockholm International Youth Science Seminar is a multi-disciplinary seminar inspiring youth to science, highlighting some of the most remarkable achievements by young scientists around the world. The prestigious annual event takes place in Stockholm, Sweden, during Nobel week in December and includes a unique program of science and culture.

Julien-Pierre Houle – Quebec
Recursive Method for Quantum Computer

TEAM CANADA-LIYSF

The London International Youth Science Forum (LIYSF) is an opportunity to represent Canada and participate in an immersive STEM learning program. LIYSF will run from July 23 – August 6, 2025 in London, UK.

INTERNATIONAL PROGRAMS

TEAM CANADA-EUCYS

Since 2008, Youth Science Canada has selected Canada's representatives to the European Union Contest for Young Scientists (EUCYS). EUCYS 2024 took place from September 8-14, 2024 in Katowice, Poland. Angela Cao and Ann Wang represented Canada, thanks to the generous support of Youth Can Innovate.

Ann Wang of Vancouver, BC won second prize and Angela Cao of Vancouver, BC won third prize. Canada was the only country to win two Core Prizes. Subject to EUCYS eligibility rules, the two CWSF 2025 Best Project Award (Discovery and Innovation) winners will represent Canada at EUCYS 2025 in Riga, Latvia from September 15-20.

Angela Cao Ann Wang

EU Contest for Young Scientists Katowice 2024

TEAM CANADA-ISTF

The International Swiss Talent Forum (ISTF) is an annual event in Switzerland that brings together talented young individuals from around the globe to develop innovative solutions to global challenges through workshops and networking with experts. The ISTF25 focused on "The Future of Work," highlighting the need for human skills, flexibility, lifelong learning, and increased responsibility for employees as long-term jobs become less common. Youth Science Canada selected Catherine Diyakonov to represent the country.

Catherine Diyakonov

TEAM CANADA-MILSET

MILSET Expo-Sciences International (ESI) is a weeklong international youth STEM project exhibition, bringing together 1000 youth from around the world, with a focus on communication, cooperation, networking, and sociocultural interchange, rather than competition.

In addition to the project expo, the participant program includes cultural and scientific visits, leisure activities, workshops, presentations, lectures, as well as opportunities for youth to address global STEM-related issues. National youth STEM program leaders meet during the event to share and discuss best practice in STEM promotion and education.

MILSET ESI is held every two years. The next event will be held in Abu Dhabi, United Arab Emirates from September 27 to October 3, 2025. Eligible finalists and delegates will be invited to apply after CWSF 2025.

TEAM CANADA-TISF

At the 2024 Canada-Wide Science Fair in Ottawa, Youth Science Canada selected Ann Wang and Tanvir Mundra, both from Vancouver, to represent Canada at the 2025 Taiwan International Science Fair (TISF). Tanvir won first prize in Earth and Environmental Sciences for her project "Reviving Resources: Harnessing Soap Nut Greywater for Sustainable Plant Growth". Ann won second prize in Medicine and Health for her project "Eradicating Cystic Fibrosis Biofilms by a Novel Non-Toxic, Multi-Pathway Salicylate Therapy".

Tanvir Mundra Ann Wang

THE ACTUARIAL FOUNDATION OF CANADA AWARD

Sponsor: The Actuarial Foundation of Canada

An outstanding project that demonstrates effective use of one or more of mathematics, database manipulation and statistical analysis, combined with written and oral communication skills and creativity to investigate or solve a complex problem. Preference may be given to projects that quantify potential losses or design creative ways to manage or reduce the likelihood or impact of undesirable events.

Junior: $500 cash and certificate
Intermediate: $750 cash and certificate
Senior: $1,000 cash and certificate

THE BEATY CENTRE FOR SPECIES DISCOVERY AWARD

Sponsor: Canadian Museum of Nature

An outstanding project that increases our knowledge and understanding of biological, mineralogical or paleontological species, or species as indicators of change in the natural world. This includes species discovery and diversity, invasive species, economically important species, species at risk, conservation of species, etc.

Junior: $500 cash, certificate and one-year Canadian Museum of Nature family membership
Intermediate: $750 cash, certificate and one-year Canadian Museum of Nature family membership
Senior: $1,000 cash, certificate and one-year Canadian Museum of Nature family membership

CANADIAN ACOUSTICAL ASSOCIATION AWARD

Sponsor: Canadian Acoustical Association

An outstanding senior project related to acoustics, the science of sound.

Senior: $1,000 cash and certificate plus a subscription to the Canadian Acoustical Association's quarterly journal

CANADIAN ARTIFICIAL INTELLIGENCE ASSOCIATION AWARD

Sponsor: Canadian Artificial Intelligence Association

An outstanding junior project in artificial intelligence or machine learning.

Junior: $500 cash and certificate

CANADIAN NUCLEAR LABORATORIES FUSION AWARD

Sponsor: Canadian Nuclear Laboratories

Fusion can combine two or more things to create something stronger. In nuclear science, fusion combines two light atomic nuclei to form a heavier nucleus, which releases a lot of energy along the way! In the same way, tackling technical challenges effectively requires the collaboration of various scientific disciplines, each contributing valuable insights to find a solution. This award recognizes an outstanding project that exemplifies this multidisciplinary approach and successfully addresses a complex problem by integrating multiple scientific disciplines.

Senior: $1,000 cash and certificate

CANADIAN NUCLEAR LABORATORIES VISIONARY AWARD

Sponsor: Canadian Nuclear Laboratories

Visionary leaders can often see what no one else sees, imagining the future and finding potential and opportunity in a time of change. This award recognizes outstanding projects demonstrating a forward-thinking approach and delivering an innovative solution to tomorrow's most pressing issues. These projects must propose new and creative scientific solutions to potential real-world challenges that might arise in the years ahead.

Junior: $500 cash and certificate
Intermediate: $750 cash and certificate
Senior: $1,000 cash and certificate

CANADIAN NUCLEAR SOCIETY NUCLEAR SCIENCE AND TECHNOLOGY AWARD

Sponsor: Canadian Nuclear Society

Nuclear science plays a huge role in our everyday lives – from powering homes to advancing cancer treatments. This award recognizes an outstanding project related to atomic and nuclear science, including applications such as energy production, using radiation to enhance health and safety, medical imaging or materials science that demonstrates creativity, scientific excellence, and a drive to push the boundaries of nuclear science and technology.

Intermediate: $750 cash and certificate
Senior: $1,000 cash and certificate

CANADIAN SOCIETY OF CLINICAL CHEMISTS AWARD

Sponsor: Canadian Society of Clinical Chemists

An outstanding senior project related to the use of laboratory testing to better patient care.

Senior: $1,000 cash and certificate

SPECIAL AWARDS

CANADIAN STOCKHOLM JUNIOR WATER PRIZE

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

Outstanding senior projects related to one or more of: stormwater, water and wastewater quality, water resource-management, water protection, water or wastewater treatment, water education and other social or science related aspects of water.

Up to three projects selected at the CWSF will be required to submit a written report of their project for final selection. One winning project will be chosen. The two runner-up projects will each receive a $300 cash prize.

Senior: Winning project to represent Canada at the International Stockholm Junior Water Prize Competition, August 24-28, 2025 in Stockholm, Sweden.

CANADIAN VETERINARY MEDICAL ASSOCIATION AWARD

Sponsor: Canadian Veterinary Medical Association

An outstanding senior project related to animal health, animal welfare or veterinary public health.

Senior: $1,000 cash and certificate

CAP PHYSICS PRIZE

Sponsor: Canadian Association of Physicists

An outstanding project related to the science of physics.

Senior: $1,000 cash and certificate

DEUTRAMED CHEMISTRY AND INNOVATION AWARD

Sponsor: deutraMed Inc.

An outstanding junior project that demonstrates an innovative and/or creative approach to a question or problem related to chemistry.

Junior: $500 cash and certificate

ENGINEERING INNOVATION AWARD

Sponsor: Engineering Institute of Canada and Canadian Society of Senior Engineers

An outstanding senior project related to engineering demonstrating an innovative, creative and well-tested solution to a real world problem.

Senior: $1,000 cash and certificate

EXCELLENCE IN ASTRONOMY AWARD

Sponsor: Royal Astronomical Society of Canada

An outstanding project related to astronomy – observational, instrument construction or other.

Junior: Telescope and certificate plus a one year youth membership in the RASC
Intermediate: Telescope and certificate plus a one year youth membership in the RASC

FIRST NATIONS UNIVERSITY OF CANADA AWARD

Sponsor: First Nations University of Canada

An outstanding junior project that celebrates Indigenous people's accomplishments and traditional knowledge by showcasing, exploring, reinforcing and expanding intersections between Indigenous knowledge and Western science.

Junior: $500 cash and certificate

HARVEY'S TRAVEL AWARD

Sponsor: Harvey's Travel

An outstanding intermediate project related to transportation.

Intermediate: $750 cash and certificate

HYDROGEN OPTIMIZED GREEN ENERGY AWARD

Sponsor: Hydrogen Optimized

An outstanding senior project that demonstrates a focus on energy sustainability and/or the social benefits of an energy innovation.

Senior: $1,000 cash and certificate

INTACT CLIMATE CHANGE RESILIENCE AWARD

Sponsor: Intact Financial Corporation

An outstanding project that demonstrates a practical solution to managing the impact of climate change. Eligible projects include those related to home, school or community infrastructure; flood prevention/management; forest fire prediction/prevention and minimizing the effects of extreme weather events.

Junior: $500 cash and certificate
Intermediate: $750 cash and certificate
Senior: $1,000 cash and certificate and a virtual tour of the University of Waterloo and the Intact Centre on Climate Adaptation, Canada's leading research centre on climate change resilience, in Waterloo, Ontario.

RENEWABLE ENERGY AWARD

Sponsor: Ontario Power Generation

An outstanding project related to both energy and air quality with a demonstrated interest in environmental stewardship.

Junior: $500 cash and certificate
Intermediate: $750 cash and certificate
Senior: $1,000 cash and certificate

S.M. BLAIR FAMILY FOUNDATION AWARD

Sponsor: S.M. Blair Family Foundation

A project that merits application for a patent. According to the Canadian Intellectual Property Office... in order to be eligible for a patent, an invention must meet three basic criteria:

1. The invention must show novelty (be the first in the world).
2. It must show utility (be functional and operative).
3. It must show inventive ingenuity and not be obvious to someone skilled in that area.

Junior: $500 cash and certificate
Intermediate: $750 cash and certificate
Senior: $1,000 cash and certificate

SHAD CANADA SCHOLARSHIP AWARDS

Sponsor: Shad Canada

Six enthusiastic intermediate finalists who demonstrate a strong desire to attend Shad (a STEAM and entrepreneurship enrichment program) and interest in pursuing their potential as a Change Maker, with preference given to finalists from rural or remote areas.

The program will take place in July 2026. Every July, 1,200 grade 10 and 11 students from across Canada attend Shad, a month-long STEAM program hosted by a Canadian university.

This award is a $1,000 scholarship towards the program fee to attend Shad in July 2026.

STATISTICAL SOCIETY OF CANADA AWARD

Sponsor: Statistical Society of Canada

An outstanding project in statistical theory, or one that makes use of sound statistical techniques in experimental or observational design, data collection, analysis, and data presentation.

Intermediate: $750 cash and certificate
Senior: $1,000 cash and certificate

UNIVERSITY OF OTTAWA UNDERGRADUATE RESEARCH SCHOLARSHIP (URS)

Sponsor: University of Ottawa, Faculty of Science

An outstanding senior project by a finalist (or finalists) in grade 11 or grade 12 (Secondary V, CÉGEP I or CÉGEP II in Quebec) who is planning to, or who has applied to pursue university studies in science at uOttawa and who demonstrates a strong capacity to serve as an undergraduate research assistant. In the case of a team project, each finalist will be eligible to receive a scholarship.

The recipient will work with scientists and take part in important scientific discoveries during two consecutive summers. In the summer preceding the first year of studies in an undergraduate program at the Faculty of Science, University of Ottawa, the recipient will earn $5,000 as a research assistant to one of the world class professors. By succeeding in the first year of studies, the research experience will be extended to a second summer, during which he/she will earn $6,500.

Senior: $11,500 scholarship and certificate

EXCELLENCE AWARDS

Excellence Awards recognize science, technology, engineering, and mathematics (STEM) excellence. The judging is a relative process, with medals awarded based on the ranking of consensus scores for all projects within a grade category.

BRONZE MEDALS

Sponsor: Youth Science Canada

Medal and certificate
Junior
Intermediate
Senior

SILVER MEDALS

Sponsor: Youth Science Canada

Medal and certificate
Junior
Intermediate
Senior

GOLD MEDALS

Sponsor: Youth Science Canada

Medal and certificate
Junior
Intermediate
Senior

CHALLENGE AWARDS

The Youth Science Canada Challenges target issues that are important to Canada's youth, the future of our country and the world. They reflect the trend in Canadian science, technology and innovation to focus on multi- and interdisciplinary global, national and provincial issues. The Challenge Awards recognize the top project in each of the nine Youth Science Canada Challenges in each grade category.

Sponsor for the "Disease & Illness" challenge:
Sanofi Canada

Sponsor for all other challenges:
Youth Science Canada

Junior: $500 cash and certificate
Intermediate: $750 cash and certificate
Senior: $1,000 cash and certificate

AEROSPACE

An outstanding project that helps advance atmospheric or space science, aviation or aerospace technologies, or enables humans to explore and live in space, on the Moon, or beyond.

AGRICULTURE, FISHERIES & FOOD

An outstanding project that helps ensure food security, sustainability or competitiveness in agriculture, fisheries or food production

CURIOSITY & INGENUITY

An outstanding project that helps improve our understanding or addresses a problem in an area of STEM not covered by the other challenges

DIGITAL TECHNOLOGY

An outstanding project that helps improve our quality of life or transforms existing products and services through digital devices, methods or systems

DISEASE & ILLNESS

An outstanding project that helps enhance our diagnosis, treatment or understanding of disease, or the management of physical or mental illness

ENERGY

An outstanding project that helps improve our use of current energy sources, enables the transition to alternative energy sources, or reduces our energy footprint

ENVIRONMENT & CLIMATE CHANGE

An outstanding project that helps ensure the quality of water, air, soil or the diversity of living things, or manages the impact of climate change

HEALTH & WELLNESS

An outstanding project that helps prevent disease or promotes physical, social, emotional, spiritual, environmental, occupational, or intellectual wellbeing

NATURAL RESOURCES

An outstanding project that helps ensure the sustainable management, use, reuse or recycling of Earth's finite or renewable natural resources

MUSICAL ACT — THE BIG FUN DUO

The Big Fun Duo (Stephen Lewis and Jason Merrill) is a high energy, funk/dance band from New Brunswick, Canada. They are well known for captivating audiences and exploding dance floors on the world's music festival circuit. The band has toured across the globe and taken their BIG FUN to world renowned festivals like Glastonbury (UK), Burning Man (NV), Mountain Jam (on The 1969 Woodstock Music Festival site), The Boomtown Fair (UK), The Harvest Music Festival (CAN), and dozens of others across Canada, America, and Europe.

Jason and Stephen have also been nominated for Innovators of the Year at both Music NB and ECMA in 2022/23 - for both their efforts in live streaming during the pandemic and in career adaptation.

GRAND AWARDS

YOUTH CAN INNOVATE AWARDS

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation

Exceptionally innovative and original science, technology, engineering and mathematics (STEM) projects that demonstrate a practical application in advancing the economic, medical, social or environmental well-being of society.

Junior: Four projects each receive a $500 cash award and certificate

Intermediate: Four projects each receive a $750 cash award and certificate

Senior: Eight projects each receive a $1,000 cash award and certificate. Four will be announced as winners of an additional $7,000 cash award

PLATINUM AWARDS

Sponsor: Youth Science Canada

Two of: Best Junior, Best Intermediate and Best Senior Project in each of Discovery and Innovation

Crystal award and certificate

TAIWAN INTERNATIONAL SCIENCE FAIR AWARD

Sponsor: Youth Science Canada

Two outstanding intermediate or senior Platinum Award winners selected for their excellence in science communication and their ability to represent Canada.

All expenses paid trip to the Taiwan International Science Fair in Taipei, Taiwan in January/February 2026.

BEST PROJECT AWARDS

Sponsor: Youth Science Canada

Best Project in each of Discovery and Innovation

Crystal award and certificate. Subject to eligibility requirements, both winners will represent Canada at the 2025 European Union Contest for Young Scientists (EUCYS) in Riga, Latvia from September 16-20.

DALHOUSIE UNIVERSITY FACULTY OF SCIENCE ENTRANCE SCHOLARSHIP

Sponsor: Dalhousie University, Faculty of Science

A Dalhousie University Faculty of Science entrance scholarship of $5,000 is offered to each gold medal winning senior finalist. A Dalhousie University Faculty of Science entrance scholarship of $2,500 is offered to each silver medal winning senior finalist.

MOUNT ALLISON UNIVERSITY ENTRANCE SCHOLARSHIP

Sponsor: Mount Allison University

An entrance scholarship of $5,000 is offered to each senior and intermediate winner of a gold medal, $4,000 to each senior and intermediate winner of a silver medal and $3,000 to each senior and intermediate winner of a bronze medal.

These scholarships can be applied to the first year on top of any other scholarships, financial aid and awards offered.

UBC SCIENCE (VANCOUVER) ENTRANCE AWARD

Sponsor: The University of British Columbia (Vancouver)

A UBC Vancouver Science entrance scholarship is offered $4,000 to each senior gold. To be eligible for the scholarships, finalists must be admitted to the UBC Faculty of Science (Vancouver campus) B.Sc. program and register directly from secondary school. Winners who are in grade eleven may defer the award for one year.

A CWSF finalist is eligible to only one UBC science entrance scholarship. If a finalist receives multiple scholarships, at the regional or national level, s/he is entitled to claim the scholarship with the greater monetary value (if there is a difference).

UNIVERSITY OF NEW BRUNSWICK CANADA-WIDE SCIENCE FAIR SCHOLARSHIP

Sponsor: University of New Brunswick

A University of New Brunswick Canada-Wide Science Fair scholarship is offered to senior medalists of the 2025 Canada-Wide Science Fair. $5,000 is offered to each gold medal winning senior finalists; $2,500 to each silver medal winning senior finalist. Recipients must be enrolled in a UNB undergraduate degree program as a full-time student in Fall 2025.

UNIVERSITY OF OTTAWA ENTRANCE SCHOLARSHIP

Sponsor: University of Ottawa

A University of Ottawa entrance scholarship of $4,000 is offered to each gold medal winning senior finalist; $2,000 to each silver medal winning senior finalist; and $1,000 to each bronze medal winning senior finalist.

WESTERN UNIVERSITY ENTRANCE SCHOLARSHIP

Sponsor: Western University

An entrance scholarship of $4,000 is offered to each recipient of a gold medal, $2,000 to each recipient of a silver medal and $1,000 to each recipient of a bronze medal.

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Canadian Nuclear Laboratories

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