



Nova Scotia Institute of Science

Student Science & Technology Communication Competition

Information for High School Authors

The Nova Scotian Institute of Science (NSIS) is extending its annual Student Science and Technology Communication Competition to High School students! The competition is open to all grade 10-12 students enrolled at a public or private school in Nova Scotia in 2024-2025.

A minimum cash prize of \$300 will be awarded to the best high school essay. Prize amounts may increase depending on competition sponsorship.

The winning student will be featured on the NSIS website (with parent/guardian permission) and may be invited to submit their essay to the *Proceedings of the Nova Scotian Institute of Science*, a peer-reviewed, Atlantic Canadian journal. Winning essays submitted to the Proceedings are subject to the journal's normal editorial and peer review process.

Topics and General Guidelines

The competition is open to any science or technology topic. Possible topics include: climate change, Earth's ecosystems and cycles, the environment, human health, sustainable development, renewable energy, digital technology, artificial intelligence, innovations in space exploration, communications, mathematics, and statistics. These are only suggestions and other topics within science and tech will be accepted.

Competition entries must be an original essay that:

- Provides a thorough review of a science or tech topic, including why it is important/ relevant
- Represents your own analysis and opinion based on research from peer reviewed sources such as scientific journals, books, and reputable science magazines (e.g. Scientific American, Smithsonian Magazine, and The New Scientist)
- Includes a list of at least six references from peer-reviewed science or technology sources
- Explains the topic in a way that is accessible/ easily understood by a general audience

Avoid using highly specialized or technical terms and acronyms in your essay. If technical terms are necessary you must define or explain them.

Essay Format

The essay should include the following:

- **Title Page** - include your Essay Title, your name, school name and grade (required)
- **Introduction** (required)
- **Methods** (if applicable)
- **Results** (if applicable)
- **Discussion** (required)
- **Conclusions** (required)
- **Acknowledgements** (if applicable)
- **References** (at least 6)

Do not include your name, school name, or other personally identifying information in the body of the essay, this should only be placed on the title page.

Aim for 1200-1800 words in the body of your essay. Word count should not include the title page, figures/tables (including their captions), or references.



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APA reference format is preferred. Formatting such as that used by Proceedings of the NSIS or a prominent generalist science journal (e.g.: Nature) can serve as an example of suitable reference formatting.

Use 1.5 line spacing with standard 1-inch (2.54 cm) margins. Font choice should be an easy-to-read (sans serif) font such as Calibri, Arial, or Open Sans and should be size 12 font. Number all pages, not including the title page.

Authorship, Acknowledgements, and Copyrights

You must be only author/ creator of the essay. If any others play a role in supporting preparation of your essay, it should be minimal such as minor editorial suggestions from a teacher, parent/guardian or fellow student and they should be mentioned in an acknowledgements section.

If you use original photos or data from a science fair or class project that was completed with other people, you must recognize the peers that you completed that work with in the acknowledgments section.

Please respect copyrights if you need to use an illustration, graph, chart etc. from a journal or book. You must have permission from the original publication to reproduce their figures.

All essays will be screened for plagiarism and use of AI using software. Plagiarism or AI assisted writing such as ChatGPT will result in immediate disqualification.

Registration

Registration Deadline: Students must register on or before **December 16, 2024** by emailing the Competition Coordinators at the e-mail address below.

The following information should be included in your registration email:

- Your name
- The name of your school
- What grade you are in
- The topic of your proposed essay, and a tentative title
- Parent/guardian e-mail and phone number

Personal information such as name, school, and contact information will be kept confidential and will only be seen by the competition coordinators.

Essay Submission

Email submission is strongly preferred. Please submit an electronic copy of your article as a Word (.doc or .docx) or Adobe (.pdf) attachment to the Coordinators at the e-mail address below.

Email: nsis.1862.competition@gmail.com

If electronic format is unavailable to you, please contact the Coordinators to arrange drop off or mailing of your essay before the submission deadline so it is received by the deadline.

Submission Deadline: Submit your final essay to the Coordinators by: **January 17, 2025.**



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Judging

All essays will be judged according to the following criteria:

- **Significance and relevance of the subject** -What are the advantages of exploring this topic further and does it address an important current or future need?
- **Comprehensiveness, accuracy and analysis** - have you done significant research of peer-reviewed sources, providing a depth of ideas and support your main points with evidence?
- **Scientific or technical correctness** - have you explained the subject accurately?
- **Clarity of presentation** - Is your purpose clear? Is the essay well- explained with a logical flow of ideas that work together to come to a strong evidence-based conclusion? Is your language concise (avoiding run-on sentences) and easy to read for a general audience?
- **Writing Mechanics** - Is your essay free of spelling and grammar errors? Is it formatted properly according to the guidelines provided? Does it have a properly formatted reference section?
- **Overall impression of the paper** - did the essay have a significant impact to the reader? Did they learn something new, or were swayed by your persuasive and well supported argument? Would they recommend your essay to someone else to read?
- **Bonus Points** will be awarded if you clearly and thoroughly explain why your topic is of specific relevance, importance, or benefit to Nova Scotia with supporting evidence.

Our panel of 5+ judges come from a wide variety of scientific and technological backgrounds and perspectives and may include professors, teachers, senior scientists, graduate students, post-docs and those currently working in Science and Tech industries. To make the judging process as fair and unbiased as possible, judges work from a scoring rubric with the above criteria and essays are subject to a blind review process. This means your name, school, and grade will be removed before sharing your work with the judges. Judges will only be aware that you are a high school student since we also have a university/college category. Decisions made by the panel of Judges are final and not subject to appeal.

Winners and Presentation of Awards

The winners of the competition will be contacted through parent/guardian's email and/or phone on or before **March 15, 2025** and the winning entries will be announced on the NSIS website.

Presentation of the awards (certificates and cheques) will take place at the NSIS Public Lecture on **Monday, April 7, 2025**.

Winning students who are unable to attend the awards presentation in person in Halifax, may join us on Zoom to be recognized virtually and their award will be mailed out to a location of their choosing.

Competition Coordinators

Have a question about the competition/ guidelines? Reach out to the coordinators:

Dr. Shannon Ezzat, Associate Professor, Cape Breton University
Dr. Jinshan Xu, Physical Scientists, Bedford Institute of Oceanography
E-mail: nsis.1862.competition@gmail.com