

Envirothon NB

Experience Nature's Classroom!

A Natural Resource Encounter for the Next Generation

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"The Envirothon competition was the best trip I've ever been on.

Most of all, I've formed lifelong friendships with like minded people from around North America.

I strongly recommend/encourage all high schoolers interested in environmental science to enroll in Envirothon!"

***Liam MacDougall, Leo Hayes High School
NCF-Envirothon 2022 Team NB***



What is Envirothon?



Envirothon NB is an environmental and natural resource education program and competition that encourages students to think critically and creatively about the natural world and their place in it.

In-class curriculum learning with hands-on outdoor field experiences where students can learn natural resource management techniques from natural resource professionals.





Supporting EECD Science Curriculum and Climate Change Framework





Getting Involved

IMPACT!

Teachers' Benefit:

- Work with highly motivated students who take pride in conservation of our natural resources.
- Gain knowledge and resources from professionals, and other teachers during workshops and competitions.
- Gain experience in teaching experiential information; show students how to learn through problem-solving by using critical thinking skills.



**GENE
ACTION**

SCIENCE EAST



Getting Involved

- Create an Envirothon NB School Club
- Coach a Team (Teams = 5 students)
- Access Workshops, Lesson Plans, Activities
- Connect with Natural Resource Professionals
- Professional Learning opportunities
- Attend Field Trips, Presentations Available to Middle and High Schools
- Participate in the provincial Competition May 7&8, 2023 Mount Allison University, Sackville





Education Goals

- Students should be able to demonstrate a basic knowledge of concepts in natural resource management and ecology, especially in the areas of soils/land use, aquatic ecology, forestry, wildlife, and current environmental issues.
- Students should be able to analyze soil, aquatic, forestry, wildlife, and current environmental issues in problem-solving activities involving resource issues.





Education Goals



- To promote stewardship of natural resources and to encourage the development of the critical thinking, cooperative problem-solving, and decision-making skills required to achieve and maintain a natural balance between the quality of life and the quality of the environment.
 - Listen with comprehension;
 - Collect, organize, and analyze information;
 - Frame appropriate questions to guide their investigation;
 - Use a range of resources and technologies in addressing questions; and,
 - Critically examine information from a variety of sources.





Education Goals

- To provide students with experience in environmentally-oriented activities, enabling them to become environmentally-aware, action-oriented citizens.
 - Students should be able to evaluate the impact of their own actions affecting a particular environmental problem and devise alternative actions to work towards improving environmental conditions.
 - Students should be able to work independently and/or collaboratively to solve environmental problems.

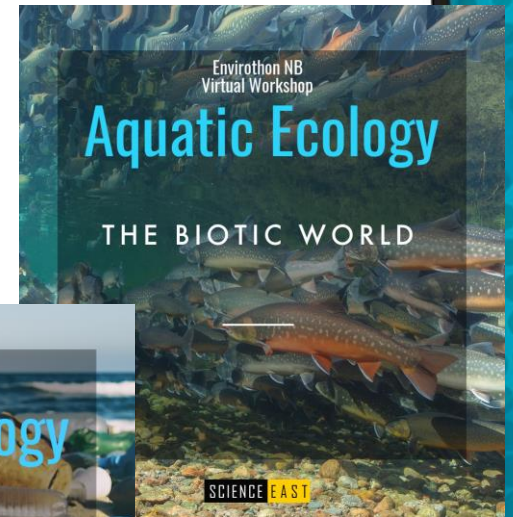




Themes

Learning Objectives / Study Resources available on EnvirothonNB.ca

- ▶ Abiotic Factors
- ▶ Water Cycle
- ▶ Hydrologic Cycle
- ▶ Watersheds
- ▶ pH and the Environment
- ▶ Water Quality Testing
- ▶ Biotic Factors
- ▶ Energy Flow & EcoSystem Function
- ▶ Water Use
- ▶ Aquatic Species – Dichotomous Key
- ▶ Aquatic Environments
- ▶ Ground Water, Wetlands and Riparian Zones



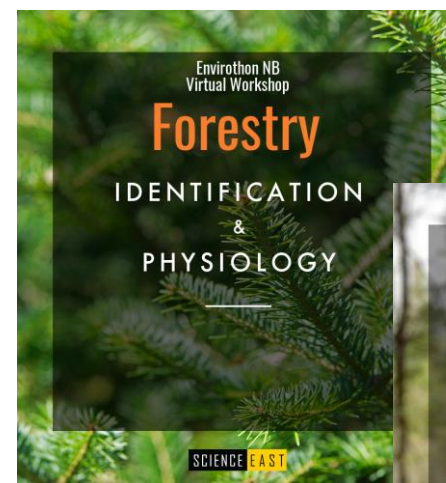


Themes

Learning Objectives / Study Resources available on EnvirothonNB.ca



- Climate Change and Canada's Forests
- Knowledge of the impacts of climate change on Canada's forests
- Canada's forests in a changing climate
- How our forest could look in the future
- Mitigation
- Adaptation
- Duty to consult with Aboriginal Peoples
- Ecosystem services
- Forests and earth's carbon balance
- Sustainable forest management
- Aerial photographs, Tree measurements, LiDAR
- Biodiversity, Native insects and diseases, Invasive species
- Knowledge of the importance of forestry in New Brunswick and how this resource is managed.

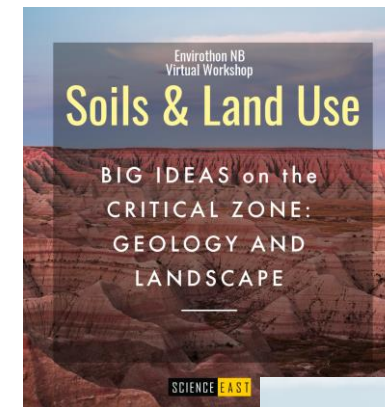




Themes

Learning Objectives / Study Resources available on EnvirothonNB.ca

- Why is soil important
- Hydrologic, Carbon, and Nutrient Cycles
- Soil Ecosystems
- Chemical Properties of Soil and Soil Fertility
- Soil Erosion Causes and Effects
- Geology: Identify unique geological features
- Geology: Describe the role of tectonic plate movement to create landforms and geologic events (such as earthquakes and volcanic eruptions) and how it impacts soil formation.
- Geology: Identify and describe the layers of the Earth (crust, mantle, outer core, inner core) and how they were formed.
- Geology: Describe the characteristics of the three major types of rocks (igneous, sedimentary, and metamorphic)





Themes

Learning Objectives / Study Resources available on EnvirothonNB.ca

- Climate Change and Wildlife
- Knowledge of Wild Birds and Mammals
- Animal Scat – CSI- Wildlife (Tracks, Scat)
- Bird wing identification
- Identify general food habits using skull morphology and/or teeth.
- Habitat requirements for wildlife and the factors that affect wildlife suitability.
- Understand the difference between an ecosystem, community and population.
- Benefits of Biodiversity
- Canada's Species at Risk Act, COSEWIC, Invasive species in Canada
- Habitat Loss & Degradation

Wildlife





Themes

Current Environmental Issues



- 2023 – Adapting to a Changing Climate
- 2024 – Renewable Energy

Past Topics with available resources and scenarios

- Waste to Resources
- Water Resource Management - Watersheds
- Agriculture & the Environment Knowledge-Technology to Feed the World
- Invasive Species
- Salt and Fresh Water Estuaries
- And more...



ADAPTING TO A CHANGING CLIMATE

2023 Current Environmental Issue STUDY RESOURCES

Part A



Resources and Opportunities



- **Envirothonnb.ca** (NB – Provincial Program)
 - Read, Watch, Engage
 - Learning Objectives and Study Resource Guides
 - Online Activity sheets / Lesson Plans
 - Virtual Presentations
 - Social Posts - EnvirothonNB Facebook, Instagram
 - Competition information
- Workshops (online and in-person)
- Field Days (in-person, outside hands-on, use tools and equipment)
- Connect with field professionals and experts





Resources and Opportunities



Forests Worth Knowing:
Atlantic Teachers' Tour
[TeachersTour.com](https://www.teachers-tour.com)
Online Resources
Teacher Professional Learning



The stories profile both established Indigenous professionals in the forest and conservation sector and young people who have just begun their green career pathway.



Industry Tours
Career Resources





Provincial Competition



- Sunday, May 7 & Monday, May 8, 2023
- Mount Allison University, Sackville
- High School Teams & NEW! Middle School Teams
- Pilot year – recommended for grade 8
- Teams of max. 5 students work together
- 4 Field Stations
- Scenario Oral Presentation
 - 20 minutes (high school)
 - 10 minutes (middle school)



May
7 & 8
2023

Experience Nature's Classroom
ENVIROTHON NB
Provincial Environmental and Natural
Resource Education Competition

Save the date!

   EnvirothonNB.ca





Provincial Competition



Participants are eligible to receive

- Certificates for Portfolios
- Medals & Prizes
- T-shirts & Swag
- A unique experience while developing skills and knowledge!

Registration

- Early Bird Registration \$300/team by Dec 1, 2022
- Final Registration \$400/team Deadline February 15, 2023
- Online Registration – EnvirothonNB.ca
- Field Training Days (mid-Feb, mid-march, mid-April) – Additional workshops and presentations available upon request.





Ready to Inspire and Support!

Thank you



On behalf of the Envirothon NB Steering Committee
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Envirothonnb.ca



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