

SCIENCE 1206 COASTAL MONITORING PROGRAM



BONNE BAY/BAY OF ISLANDS AREAS

Join us from October 10th to November 5th, 2018, for a fantastic field trip experience in the Bonne Bay/Bay of Islands areas. Oceans Learning Partnership and Bonne Bay Marine Station are jointly offering this hands-on, field-based program that gives Science 1206 students and teachers a unique opportunity to discover the wonders of the coastal environment. The program is designed to readily align with many of the learning outcomes for Unit 1: Weather Dynamics and Unit 4: Sustainable Ecosystems (details on Pg. 2).

A video of the coastal monitoring program has been added as a suggested teacher resource for the new Science 1206 curriculum. You can access the video through the Professional Learning Portal at <https://www.k12pl.nl.ca/curr/10-12/science/science-courses/science-1206/teaching-and-learning-strategies/coastal-monitoring.html>.

An educator's guide that includes curriculum links, detailed description of activities and field trip requirements will be sent once the program is booked!

WHAT WILL THE PROGRAM COVER?

Get your students engaged in citizen science and connected to the coastal ecosystems in their own communities through our unique 2 hour project-based experience.

The program will allow students to learn about scientific monitoring and contribute real scientific data to ongoing research projects. They will learn valuable skills in data collection and use technology that measures different environmental indicators. They will collect data about the physical environment, including weather and water quality, discover the types of animals and plants present within their ecosystem, as well as investigate the impacts of humans on the coastal environment.

This program was developed in collaboration with Dr. Robert Gregory and his team at DFO in St. John's. Data collected by NL high school students will be used to increase baseline information and track changes over time to assess the health of coastal ecosystems in Newfoundland and Labrador.

LOGISTICS AND COST

- Location: Bonne Bay/Bay of Islands areas
- Time needed: Approx. 2 hrs
- Approx. 20 students maximum per program
- 1 chaperone per 15 students is recommended
- Cost: Free (pilot program)
- Must be scheduled in advance

HOW DO I SIGN UP MY CLASS?

For more details and to sign up, please contact Trevor Sparkes at trevors@coastalexplorers.ca



CURRICULUM LINKS

This program is designed to tie in to the Science 1206 curriculum, particularly for Unit 1: Weather Dynamics and Unit 4: Sustainable Ecosystems. Outlined below are the STSE, Skills and Knowledge outcomes that the students will gain through participation in this program.

GCO 1 - STSE

- 34.0** Illustrate how science attempts to explain natural phenomena
- 38.0** Describe examples of Canadian contributions to science and technology
- 51.0** Defend a decision or judgment and demonstrate that relevant arguments can arise from different perspectives
- 78.0** Compare the risks and benefits to society and the environment of applying scientific knowledge or introducing a new technology

GCO 2 - SKILLS

- 3.0** State a prediction and a hypothesis based on available evidence and background information
- 9.0** Use instruments effectively and accurately for collecting data
- 17.0** Compile and display evidence and information, by hand or computer, in a variety of formats, including diagrams, flow charts, tables, graphs, and scatter plots
- 20.0** Evaluate the relevance, reliability, and adequacy of data and data collection methods
- 21.0** identify and explain sources of error and uncertainty in measurement and express results in a form that acknowledges the degree of uncertainty
- 25.0** Communicate questions, ideas, and intentions, and receive, interpret, understand, support, and respond to the ideas of others

GCO 3 - KNOWLEDGE

- 31.0** Describe and explain heat transfers in the water cycle
- 33.0** Describe and explain heat transfer in the hydrosphere and atmosphere on the development, severity, and movement of weather systems
- 67.0** Explain various ways in which natural populations are kept in equilibrium, and relate this equilibrium to the resource limits of an ecosystem
- 71.0** Analyze the impact of external factors on an ecosystem
- 73.0** Explain how biodiversity of an ecosystem contributes to its sustainability
- 74.0** Explain why different ecosystems respond differently to short-term stresses and long-term changes

