

Pre-service teachers invited to apply for teaching fellowships in ocean sciences and technology

Newly created Hibernia Teaching Fellowships in Ocean Sciences and Technology offer pre-service teachers hands-on field experiences and resources to integrate local ocean content into the curriculum and teaching practice

The OCEANS LEARNING PARTNERSHIP, in collaboration with Memorial University of Newfoundland and Labrador, is pleased to invite Expressions of Interest (EOI) for the 2017 Hibernia Teaching Fellowships in Ocean Sciences and Technology. The newly created Hibernia Teaching Fellowships in Ocean Sciences and Technology foster innovation in STEM teacher education through a field placement program for pre-service primary/elementary and intermediate/secondary school teachers enrolled at Memorial University's Faculty of Education.

Field Placement Program

Field placements are designed to promote the integration of local content about the ocean into the NL science curriculum and the addition of hands-on field trip experiences as a valuable supplement or extension to classroom instruction. Importantly, the field placements will help equip STEM teachers with a series of engaging teaching and learning tools to help them get students excited about ocean science while meeting curriculum outcomes.

Fellowships are based on 12-week field placements for six (6) hours a week at one of OLP's partner sites: Ocean Sciences Centre (Logy Bay), Johnson GEO CENTRE (St. John's), Manuels River Hibernia Interpretation Centre (Conception Bay South), Bonne Bay Marine Station (Norris Point) and Labrador Institute Research Station (North West River). Boat-based excursions in Conception Bay and Bonne Bay will also be a part of the field experience.

Fellows will be tasked with developing plans for school field trips that outline pre-visit preparation and post-visit in-class follow-up, and exploring best practices and protocols for field trips to OLP's partner sites. All Fellows will be connected via a collaborative platform to facilitate team communication, file sharing and exchange throughout the duration of the field placements.

Eligibility:

Teaching fellowships are open to students who plan to teach science in the NL school system and who have completed or are currently enrolled or will be enrolled in Science Methods courses in undergraduate primary/elementary or intermediate/secondary degree programs at one of Memorial University's three campuses in St. John's, Corner Brook or Happy Valley-Goose Bay.

Selected Fellows (up to 16 undergraduates in 2017) will receive the following:

- 1) \$1,500 stipend for 12-week, 72-hour field placement
- 2) Travel voucher (limited to out-of-town field sites)
- 3) A framed certificate upon successful completion of the field placement

Selection Process:

Interested candidates will be invited to submit an **Expression of Interest (EOI)** by the following date:
Tuesday, July 25, 2017

A shortlist of candidates will be selected and asked to submit supporting documentation and references from a faculty member or other teaching professional.

Final selection of candidates will be announced via e-mail and on the Faculty of Education website at the beginning of the Fall semester in September.

Experiential learning in the field is the cornerstone of OLP's educational programming. Candidates must demonstrate enthusiasm for engaging students in these types of active, dynamic, out-of-classroom learning experiences. Importantly, candidates must be willing to commit to collaborating with a team of peers and external educators and contribute to the development, field-testing and evaluation of the field placement program.

For More Information and Details

For details about the program, e-mail Sheri Roberts at sherir@mun.ca.

About the Oceans Learning Partnership

The Oceans Learning Partnership (OLP) offers a suite of boat-, shore- and lab-based field programs for students in the K-12 school at a network of partner sites around the province: Oceans Sciences Centre (Logy Bay), Bonne Bay Marine Station (Norris Point), Terra Nova National Park (Newman Sound), Johnson GEO CENTRE (St. John's), Manuels River Hibernia Interpretation Centre (CBS) and Conne River (Coast of Bays). OLP's flagship educational program is the **Coastal Explorers Field School**. Over 20 scientists, researchers, technicians, resource managers and graduate students affiliated with Memorial University, Parks Canada, Fisheries and Oceans Canada (DFO) participate in the delivery of the program.

For information about the Coastal Explorers Field School, go to: www.coastalexplorers.net.

Hibernia Teaching Fellowships in Ocean Sciences and Technology

Fostering Innovation in STEM Teacher Education

With the generous support of the Hibernia Management and Development Company Ltd, the Oceans Learning Partnership (OLP), in collaboration with the Faculty of Education and the Department of Ocean Sciences, will provide teaching fellowships for up to 16 students in primary/elementary and intermediate/secondary school degree programs starting in the fall semester 2017. Fellowships are based on 12-week field placements at one of OLP's field sites.

Field Placements

The field placements will provide exceptional learning opportunities and engage Fellows in exploring how ocean themes and topics and field trip experiences can be integrated as an addition and extension to classroom instruction and curriculum units. Fellows will:

- Learn about research being conducted in the waters off the coast of NL and connect directly with DFO and MUN scientists and researchers;
- Be paired with marine educators, interpretation staff and graduate student mentors at partner sites to deliver the school program and examine links to curriculum units;
- Contribute to the development of teacher resources for use in the classroom as part of the pre-trip preparation and post-trip, in-class follow-up;
- Collaborate with peers and marine educators affiliated with OLP and OLP partner sites in developing best practices and protocols to enhance field trip experiences;
- Assist in planning and staging interactive webcasts designed to share the live on-site experiences with students in classrooms in other regions of the province;
- Participate in field-testing a new coastal monitoring program, using OLP's proprietary data collection app and other research and teaching tools;
- Attend special presentations and seminars on current ocean research offered at the Ocean Sciences Centre and participate in STEM Days at local area schools;
- Examine how scientists "do" science as part of a workshop series on "planning field trips to enhance inquiry-based science" hosted by OLP and the Johnson GEO CENTRE.

Fellows will be connected via an online collaborative platform to facilitate team communication, file sharing and exchange throughout the duration of the field placements. Webinars will be scheduled to enable Fellows at more remote sites to participate and share the learning from and with other sites. Fellows will be expected to share their experiences and insights gained through their experiences at a symposium at the completion of the field placements.

Field Placement Sites

Field placements will be offered at five OLP partner sites in fall 2017:

Ocean Sciences Centre (Logy Bay)

Johnson GEO CENTRE (St. John's)

Manuels River Hibernia Interpretation Centre (Conception Bay South)

Bonne Bay Marine Station (Norris Point), and

Labrador Institute Research Station (North West River)

Boat-based excursions in Holyrood or Conception Bay South and Bonne Bay will also be a part of the field experience.

Ocean Sciences Centre (Logy Bay)



Lab-Based School Program: Secondary School Level

The Oceans Learning Partnership (OLP) and the Department of Ocean Sciences offer a lab-based program at Memorial University's Ocean Sciences Centre (OSC). The program targets Grades 10 and 11 Biology 2201 students. OLP and OSC staff piloted the lab-based program in fall 2013 with 130 students; in the fall of 2014 and 2015 the program reached an additional 700 students. Based on the very positive feedback received, the program was expanded in fall 2016 to reach a greater number of students; 556 students from 23 classes participated. Over the past two years, schools from the John's metro area and the following communities have participated: Avondale, Ferryland, Dildo, Placentia, Arnold's Cove, Foxtrap, Bonavista, Carbonear, St. Mary's, Bell Island, and Conception Bay South.

Johnson GEO CENTRE (St. John's)



Marine Biodiversity School Program; All Levels

OLP and the Johnson GEO CENTRE are offering a school program on marine biodiversity in collaboration with Fisheries and Oceans Canada (DFO). Programming is based on an exhibit, *Gardens of the Deep: Corals and Sponges of Atlantic Canada*, that launched at the Johnson GEO CENTRE in November 2016. The school program targets elementary and intermediate level students and high school students in Grade 9 (Science 1206). OLP and GEO CENTRE staff piloted the program in spring 2017 and will continue the pilot program in fall 2017.

Manuels River Hibernia Interpretation Centre (Conception Bay South)



Touch Tank and Coastal Monitoring Program; All Levels

OLP, Manuels River Hibernia Interpretation Centre (MRHIC) and the Ocean Sciences Centre, are jointly offering a marine biology program with a travelling touch tank full of live animals native to the area during the 2017 fall field season. In addition, OLP and MRHIC will be field-testing a coastal monitoring program at nearby Worsley Park that will be rolled out to schools across the province in 2018. The coastal monitoring program is being developed in collaboration with Fisheries and Oceans Canada (DFO) and Parks Canada.

Bonne Bay Marine Station (Norris Point)



School Program and Coastal Monitoring Program; Primary/Elementary Level

OLP and the Department of Ocean Sciences offer a boat- and shore-based field program at Memorial University's Bonne Bay Marine Station (BBMS) for local area elementary school students. During the 2017 fall field season, OLP and BBMS, in collaboration with Fisheries and Oceans Canada (DFO) and Parks Canada, will be field-testing a coastal monitoring program that will be rolled out to schools across the province in 2018.

Labrador Institute Research Station (North West River)



Program in Development; Primary/Elementary Level

For more information about the Coastal Explorers Field School and partner sites, go to:

www.coastalexplorers.net
www.mun.ca/osc
www.geocentre.ca/exhibits/corals/
www.bonnebay.ca
www.manuelsriver.com
www.mun.ca/labradorinstitute/about/locations/nwr/

Expression of Interest (EOI)

Hibernia Teaching Fellowships in Ocean Sciences and Technology Fostering Innovation in STEM Teacher Education

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Eligibility

Teaching fellowships are open to students who plan to teach science and technology in the NL school system and are currently enrolled or plan to enroll in science methods courses in undergraduate primary/elementary or intermediate/secondary school education programs at one of Memorial University's three campuses in St. John's, Corner Brook or Happy Valley-Goose Bay.

Field Placement Program

Fellowships are based on 12-week field placements for six (6) hours a week at one of OLP's partner sites: Ocean Sciences Centre (Logo Bay), Johnson GEO CENTRE (St. John's), Manuels River Hibernia Interpretation Centre (CBS), Bonne Bay Marine Station (Norris Point) and the Labrador Institute Research Station (North West River). Boat-based excursions in Conception Bay and Bonne Bay will also be a part of the field experience. Teaching fellowships are available as follows:

- St John's Campus: 8 intermediate/secondary level: 4 primary/elementary
- Corner Brook Campus (Grenfell): 2 primary/elementary
- Labrador Institute/Nunatsiavut: 2 primary/elementary

See the accompanying FACT SHEET for more information about each field placement.

How to Submit the Expression of Interest (EOI)

1. Provide a 200-word/half-page written reply to EACH of the following three questions:
 - a) What do you feel is the value of field trip learning experiences?
 - b) What do you hope to gain personally and professionally from this opportunity?
 - c) What skills and competencies have you gained through your university courses that can be applied to your work in the field placement program?
2. Submit your EOI by **Tuesday, July 25, 2017** via e-mail to the following address:
Sheri Roberts at sherir@mun.ca.

A shortlist of candidates will be selected and asked to submit supporting documentation and references from a faculty member. Final selection of candidates will be announced via e-mail and on the Faculty of Education website at the beginning of the Fall semester in September.

Learning on and from a field trip is no longer seen as simply an extension or improvement of classroom teaching, but as a valuable supplement and

addition to classroom instruction, as well as an excellent way to prepare students for future learning.

(Hofstein & Roseffeld, 1996; Orion & Hofstein, 1994; Storksdieck, 2006)

About Us

Experiential learning is the cornerstone of OLP's educational programming. Our flagship program is the **Coastal Explorers Field School**. We offer a suite of boat-, shore- and lab-based field programs for students in the K-12 school at a network of partner sites around the province. Over 20 scientists, researchers, technicians, resource managers and graduate students affiliated with Memorial University, Parks Canada, Fisheries and Oceans Canada (DFO) participate in the planning and delivery of the field program.

What We Do

We support learning in the classroom about the ocean by providing locally relevant resources concentrated on Newfoundland and Labrador and the broader North Atlantic basin; fostering linkages among ocean scientists and STEM educators as a strategy for bringing NL- and North Atlantic-specific ocean content to the classroom; and facilitating the integration of real-world ocean sciences research being conducted in the North Atlantic into the professional development of pre-service and practicing STEM educators. Through our field programming, we aim to provide STEM educators with tools to help them get students excited about ocean science and to make the results of scientific research meaningful and relevant to their lives.

Our Collaborators

Our collaborators in the teaching fellowships/field placement program are like-minded informal science educators affiliated with:

Ocean Sciences Centre (Logy Bay)

Johnson GEO CENTRE (St. John's)

Manuels River Hibernia Interpretation Centre (Conception Bay South)

Bonne Bay Marine Station (Norris Point)

Labrador Institute (Happy Valley-Goose Bay) and the Nunatsiavut Government (Nain)

About Our Team

The OLP team is a group of young professionals with backgrounds in marine sciences, marine, technology, informal science education, indigenous education, and science communication. All are passionate and committed educators.

Check Us Out

For more about us, our programming and our partner sites, go to:

www.coastalexplorers.net