

Fall 2021

Wetlands field program

September - October, 2021



Thank you to our funding partners for making this season possible!

Introduction

After a hiatus from in-person field programs, Inside Education was thrilled to offer wetlands programs for students across the province. Launching our new wetland field programs in Edmonton and Calgary, we hosted students at local natural wetlands, naturalized wetlands, and stormwater ponds.

The serendipity of outdoor field programming, from spotting an invasive goldfish, to watching a muskrat navigate carefully on ice, to discovering a pair of deer meandering in and out of the early morning fog, are experiences impossible to achieve within an indoor classroom setting. Throughout our booking process, program delivery, and follow-up, both teachers and students alike expressed how important it was for them to be together again outside, with directed educational opportunities and the chance to have fun!

“Honestly, the kids loved the program, felt engaged and had nothing but good learning to talk about on the bus back. I wasn't with the kids for the program, but my colleague said it was really effective in the balance of learning and hands-on activity. I honestly wish it could be extended to a full day program.”

Joanna Hardy, Sir John A MacDonald, School



Grade 5 students from Summit West Independent School celebrate wetlands at Griffiths Wood Park, in Calgary.

Students made memories through hands-on experiences not possible within an indoor classroom

The Programs

This year saw the creation of two brand new wetlands programs with a third to be unveiled in Spring 2022. Each field program is approximately two hours in length, and can host two classes at a time.

Grade 5 Wetland Ecosystems

“How do we know if a wetland is healthy?”

By comparing and evaluating their wetland study area against other types of wetlands, urban stormwater management ponds, and rural wetlands, students are better able to assess the health of the wetland through a lens of biodiversity. Using a variety of activity styles, students play games, solve riddles, match story cards, and use all their senses to learn and have fun! Of course, no wetland field trip is complete without looking at aquatic invertebrates! Insects are examined for their specific adaptations and their role in the ecosystem’s energy web.

PROGRAM THEMES

- *Wetland types and comparison*
- *Evaluating biodiversity*
- *Species and types of wetland plants*
- *Terrestrial and aquatic animal adaptations*
- *Invasive species*
- *Food and energy webs*
- *Values of wetlands*

Grade 8 Freshwater Systems

“How is water quality affected by land use?”

Students move through three major activities to evaluate physical, chemical, and biological indicators of water quality in their waterbody. Ammonia, nitrite, phosphorus and pH levels are tested, prompting students to consider what natural features and land uses affect these parameters. Physical indicators are explored through a filtering activity and an assessment of wetland function. Lastly, students use the tried and true Ephemeroptera, Plecoptera and Trichoptera (EPT) aquatic invertebrate test to compare biological indicators to the other indicators.

PROGRAM THEMES

- *Wetland types and comparison*
- *Aquatic invertebrates as indicators of ecosystem health*
- *Land management for water quality*
- *Point source and nonpoint source pollution*
- *Wetland ecosystem services*
- *Wetland construction, restoration, and reclamation*
- *Nutrient Cycles and pH*
- *Water Chemistry*
- *Water Quality*

COMING SPRING 2022: Senior High Aquatic Study

Building on the learning from the elementary and junior high programs, high school students will expand their understanding of wetland ecosystems through plot study observations, water chemistry, and the considerations of mimicking natural wetland function in constructed, restored, or reclaimed wetlands.



The Participants

Inside Education is pleased to have received high interest for wetlands field trips, which equal interest in both elementary and junior high programs.

Field Programs Delivered	Number of classes	Number of elementary students	Number of junior high students
6	16	125	177

- Edmonton Christian Northeast School** | Matt Berry, Calgary
- Saint Elizabeth Seton School** | Hidden Valley, Calgary
- Sir John A. Macdonald School** | Huntington Hills, Calgary
- Summit West Independent School** | Foothills County
- Win Ferguson Elementary** | Pineview, Fort Saskatchewan
- W.O. Mitchell School** | Silver Springs, Calgary

One of the goals of the urban wetland program is to engage schools within the cities of Edmonton and Calgary at wetland locations near their school. Each site was rich with plant and animal life, and the students were able to have meaningful outdoor experiences within a short bus ride or walk.

Calgary

- Bowmont Park
- Griffith Woods Park
- Pearce Estate Park
- Beddington Trail naturalized wetland

Edmonton

- Hollick Kenyon Ponds



“Thank you so much for all your hard work and support. The kids had a blast and learned tons.”

Carlos Plata, W.O. Mitchell School

Program Impact and Feedback

Inside Education is incredibly pleased with the feedback and impact of our wetlands programs. Students and teachers alike enjoyed the themes, activities, and beautiful locations of our programs.

Being able to provide local programming at wetlands near the school also contributed to the value of the program. Reduced busing time means more time in the field, and more flexibility for junior high bell schedules.

Surprisingly, our second biggest point of feedback was on the length of the program - many teachers expressed an interest in a full day program rather than two hours. This desire is indicative of the importance of bringing students outside to experience their lessons in the landscape of study. Water chemistry, wetlands conservation and construction, animal adaptations and indicator species all become that much more real when they are experienced first-hand.

“All of it was amazing and so exciting to be able to stay close to school to do it as well!”

Andrea Cote, Edmonton Christian Northeast School

“It was so cool to see the goldfish while talking about invasive species. I find the instructors’ positive energy such a treat.”

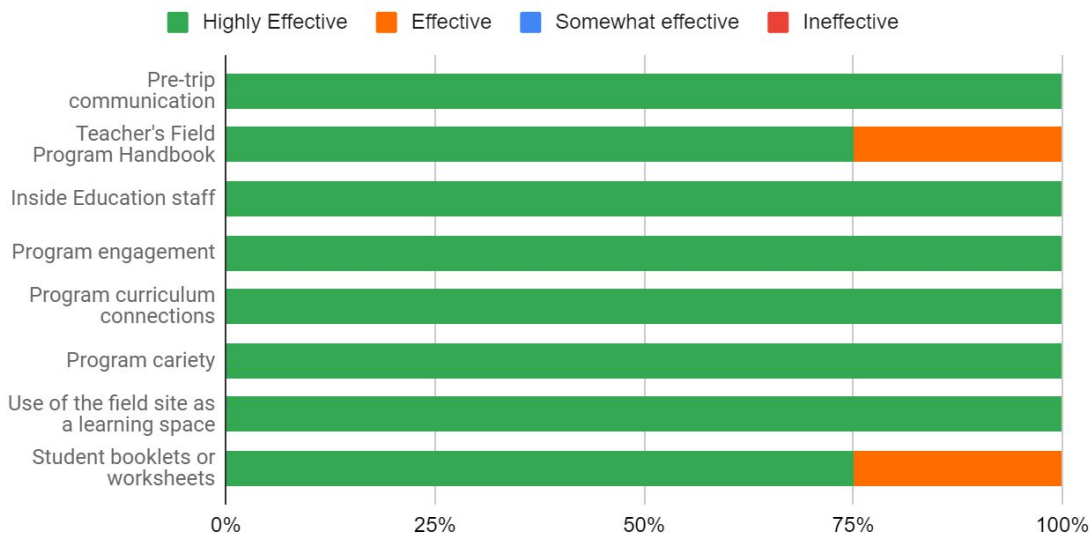
Science teacher, Sir John A MacDonald School

“YOU ROCK!!! - All of our grades 4-6 students were soooooo happy, and want to do more work with you asap. That was the best trip they had ever experienced.”

Nicole Hauck, Summit West Independent School

On a scale of 1-10, 100% of teachers rated the program as 10

Please rate the effectiveness of the following program areas in providing an educational experience for your students or helping you coordinate the field program:



“We would love to have more time in the field. Ideally a day trip so kids can have more time to explore then complete all of the activities! It would also lend time for some interpretation potentially or even a chance to do the full suite of water quality tests.”

Lisa Corbett, Rundle College

Summary and Futures

Expanding our two-hour wetlands program into a full day field trip is an interesting idea, but would require thoughtful deliberation and planning to ensure a balance struck between working within bell schedules and providing longer opportunities for learning. Complimentary classroom programs or indoor components might be a better option for junior high school students, while full day field programs could be explored for elementary students.

We continue to see demand for urban-based wetland programs, especially as we expand our offerings to include senior high programming in the spring of 2022. We are committed to developing high-quality learning opportunities to support water science education, showcasing the innovation and technology in wetland reclamation and restoration and stormwater management.

Current requests for spring 2022 programming, as of Dec 1, 2021

Number of total field program requests	Number of Calgary-region requests	Number of Edmonton region requests	Number of Rural Requests
80	22	28	30

Contact

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