



KOH-LEARNING IN OUR WATERSHEDS



Transforming education by connecting students, communities and waterways

DEAR KOH-LEARNING COMMUNITY,

The 'Koh-Learning in our Watersheds' project is a UNBC-SD91 education initiative that aims to foster Aboriginal Education as well as hands-on waterways learning. Since the Koh-Learning project's official launch nearly two years ago, we have come together in a number of ways to advance the Koh-Learning project and fulfill the vision of connecting students, communities and waterways in School District 91.

Although the COVID-19 pandemic has led us to adapt the way we gather and collaborate, the past six months have been full of exciting developments within the Koh-Learning project and across the Nechako watershed. We invite you to join us in exploring many of these developments throughout the following pages, including:

- (a) key activities and events that have taken place over the past 6 months;
- (b) updates on new and ongoing projects; and
- (c) looking ahead to upcoming events in 2021.

WHAT'S INSIDE:

- (A) Recent Events
- (B) Updates
- (C) Looking Ahead



Pictured Above:

(Top) Grade 8 students from Nechako Valley Secondary School (NVSS) engaging in water monitoring at Murray Creek, October 2020

(Bottom) Learning artifact created by Grade 8 student at NVSS during a reflection activity on experiences at Murray Creek and connections within the watershed, November 2020

(A) RECENT EVENTS

Koh-Learning Logo Workshops (June & September 2020):

Our logo design project, initiated at the 2020 Winter Gathering, is ongoing. In June, we held a district-wide workshop with SD91 students, teachers, and local Indigenous artist Clayton Gauthier to brainstorm logo design ideas. In September, we built on these ideas in an online workshop with the Two Rivers Art Gallery. There, students and teachers learned about key logo design principles, identified important values to portray through the logo, and developed logo examples. A student from NVSS is now integrating the efforts of attendees at both workshops to inform several design options, which will be brought back to students and teachers across the district.

Summer Gathering (August 2020):

On August 25th, teachers, students, SD91 staff, researchers, and community members gathered on Nak'azdli Whut'en territory at Fort St James Secondary School (FSJSS), as well as at the UNBC John Prince Research Forest on territory traditionally used by the Tl'azte'en and Nak'azdli Whut'en First Nations. For more insight into this experience, please check out our **Summer Gathering Report** at the end of this update.

Classrooms to Communities Conference (October 2020):

The Koh-Learning project was featured in a panel session at this year's annual [Classrooms to Communities](#) (C2C) Conference! The session, entitled *Koh-learning in the Nechako watershed: Honouring seasonal voices among youth, communities and waterways*, presented student, teacher and researcher perspectives on Koh-Learning and was very well-received.

Youth Video Project Workshop (October 2020):

In partnership with the Nechako Watershed Roundtable, we have been working on a youth video project with local film producer Jonathan French. At our first workshop in October, youth shared their experiences in the watershed and developed a storyboard for the project. In the coming months, we will continue to be guided by youth voices of the watershed as we hold another workshop, offer virtual youth engagement activities, and begin the production process for the film! To learn more, please contact Jordan at cranmer@unbc.ca.



Pictured Above:

(Top) Local artist Clayton Gauthier at our first logo design workshop, June 2020

(Middle) Participants at our Summer Gathering, August 2020

(Bottom) Youth video project workshop at the Omineca Arts Centre, October 2020

(B) UPDATES

Environmental DNA Pilot Project:

In June 2020, we began a joint UNBC/SD91 pilot project, funded in part by the [Pacific Salmon Foundation](#), that uses environmental DNA (eDNA) to examine the use of streams in the Nechako Watershed by juvenile salmon. We were fortunate to have Jorja Cranmer, a grade 11 student from NVSS, join us as a summer research assistant. Jorja worked closely on all aspects of the project, including trapping juvenile fish, collecting and processing water samples, and working closely with [Dr. Brent Murray](#) and Caitlin Pitt in the eDNA lab at UNBC.

Geopaparazzi App:

Jaclyn Boyes and Kelley Inden (Koh-Learning team members at FSJSS) and their Geography and Environmental Science (GEOES) learners in grades 11 and 12 have recently been trying out the [Geopaparazzi app](#), using it to pinpoint some locations for snow profile monitoring. This class has been actively observing and reflecting about their local environment and recently set up their first trail camera! We look forward to future Koh-Learning connections as this class takes their Geopaparazzi activities a step further in the spring of 2021.

New Team Member:

Tavia McKinnon, a graduate student in UNBC's School of Social Work, joined our Koh-Learning team in October 2020 as a research assistant. With a background in youth work, outdoor education and experiential learning, Tavia will be providing administrative and event planning support within the team.

Research Ethics:

Our research team submitted a proposal to UNBC's Research Ethics Board (REB) in October 2020 and received a response at the end of November. We are currently working on revisions as requested by the REB.

NVSS Interpretive Sign Project:

In collaboration with Ducks Unlimited Canada, the Vanderhoof Fish and Game Club, and UNBC Koh-Learning team member Barry Booth, teachers at NVSS are developing a process that will enable students to provide up to 6 signs for wetlands in the Vanderhoof area. We are very excited by this opportunity that will enable students to participate fully in sign development that will reflect the importance of wetlands in their community.



Pictured Above:

(Top) Jorja Cranmer and Barry Booth trapping fish at Murray Creek as part of the eDNA project

(Middle) Jorja Cranmer in UNBC's eDNA lab
(Bottom) Wetland signs. Students will be developing signs for wetlands in the Vanderhoof area.

UPDATES (CONTINUED)

Ella Parker, a graduate student at UNBC, has been busy over the past 6 months working on her research project and with the Waterways Mentor program. She shares the latest developments on her work, below:

Research Project: Linking School-Based Monitoring to Land and Water Decision-Making

The goal of my research is to work with Koh-Learning students, teachers and decision-makers to co-design monitoring tools that can inform decision-making. Over the summer I spent time researching monitoring techniques, scoping potential sites, and engaging with the Saik'uz First Nation and other partners in Vanderhoof and at NVSS. Together with NVSS teachers, and with the help of Koh-Learning research assistant and NVSS student Jorja Cranmer, we engaged a group of Grade 11 students this fall to become Waterways Mentors. The mentors were trained in the water monitoring protocols and then became leaders by helping to design and conduct four water quality monitoring sessions with Grade 8 students on Murray Creek. Following the monitoring sessions, I am now conducting interviews with students, teachers and decision-makers. Based on the interviews and what we learned from the fall monitoring sessions, we will be adapting the monitoring plan and running the program again in Spring 2021! By connecting Koh-Learning activities to decision-making, we hope to learn about how to provide more meaningful learning experiences for students.



Pictured Above:

(**Left** and **Right**) Waterways mentors learning about water monitoring in Sept. and visiting UNBC in Oct. 2020
(**Middle**) Grade 8 students from NVSS engaging in water monitoring at Murray Creek, Oct. 2020

Waterways Mentor Activities: Visit to UNBC

As part of the Waterways Mentor program, mentors took part in a visit to UNBC on October 23rd. The main goal of the visit was to visit the UNBC NALS Lab (Northern Analytical Laboratory Services) where water quality samples had been sent during our monitoring sessions. Additionally, students visited the lab of Dr. Brent Murray where eDNA samples for the eDNA project are processed. Finally, students also had the opportunity to meet and see demonstrations from researchers from the Integrated Watershed Research Group and the NSERC/Rio Tinto Industrial Research Chair program.

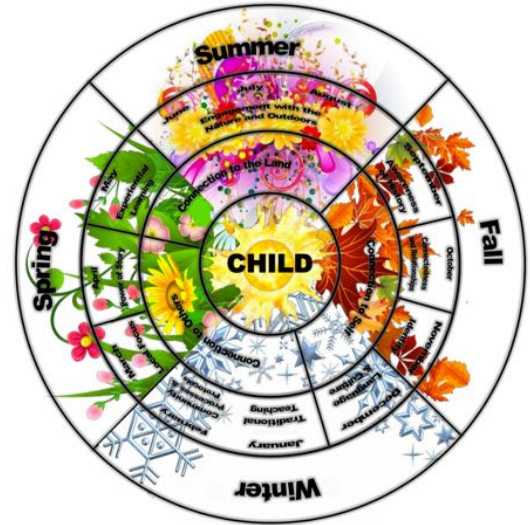
For more information about Ella Parker's research, please contact her at parkere@unbc.ca.

(C) LOOKING AHEAD

Guided by the seasonal rounds diagram for education, we have established a seasonal rhythm to gather SD91 teachers, students and community partners for four key events throughout the year. As we enter the new year, we are looking ahead to our upcoming annual winter gathering.

Winter Gathering Week

February 25, 2021 marks two years since the Koh-Learning project's official launch! This year our winter gathering will unfold throughout the last week of February. Over the course of the week, multiple events and opportunities will be hosted across the district by university and community Koh-Learning partners. More information will be forthcoming as details are confirmed. In the meantime, if you would like to learn more or get involved, please reach out the Koh-Learning team at koh-learning@unbc.ca.



Pictured Above:

The seasonal rounds diagram for education, used to help guide Koh-Learning activities. Developed by Leona Prince, District Principal of Aboriginal Education.



This update was put together by the Koh-Learning team at UNBC, thank you so much for your interest.

To learn more about the Koh-Learning project, please check out our website:

<https://www.unbc.ca/integrated-watershed-research-group/koh-learning-our-watersheds>

If you have any further questions about the Koh-Learning project, feel free to contact us:

koh-learning@unbc.ca

vancouver
foundation

This project receives funding from the Vancouver Foundation