

**Wetland Education and Accessibility:
An Interpretive Site for Young Learners at the Millard Learning Centre
(Galiano Conservancy Association)**

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ER 412/ES 471

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Project Overview

The aim of this project – *Wetland Education and Accessibility: An Interpretive Site for Young Learners at the Millard Learning Centre* – is to provide an on-site educational area that would enhance the knowledge of the importance of wetlands for young, visiting learners at the Millard Learning Centre at the Galiano Conservancy Association (GCA) on Galiano Island, British Columbia. The installation of a raised viewing platform and trail with multi-sensory, interpretive learning signage around an artificial wetland adjacent to the classroom would cater to the learning needs of young visitors; additionally, it would benefit the site by providing better programmed access greeting visitors upon arrival to the classroom area and bringing attention to the wetland. In addition to proposing an interpretive, educational, and accessible design for the area, this project will identify the importance of promoting ecological stewardship to young learners and the value of on-site, outdoor learning of wetlands that play a large part in the restoration of native species and promotion of cultural values.

Background

The Galiano Conservancy Association's (GCA's) mission statement is to “protect, steward and restore Galiano Island ecosystems by creating a network of natural areas where a healthy environment, learning and a love of nature flourish” (Galiano Conservancy Association, n.d.). In this vein, not only does the GCA undertake work restoring its sites' ecological features, but it also works to educate the public about its mission. In addition to several public events on its property throughout the year, many educational programs in/on diverse places and subjects (e.g., backcountry, marine/coastal, food/harvesting, renewable energy) are offered to a variety of age groups such as K-12 school groups, as well as postsecondary and adult learners. Its property

is an ideal place in which direct learning may occur, as sites like the food and forage forests educate visitors on the importance of native plants and permaculture, while its wetlands provide invaluable learning opportunities to the public about, perhaps, lesser known but ecologically rich habitats. In recent years, one such wetland was created, albeit artificially, next to the Millard Learning Centre's classroom and near the main entry point to the centre (see Appendix A for site photos); it is hoped this wetland may become an ecological hub by sustaining native species and even attracting absent and at-risk ones such as native Northern red-legged frogs (*Rana aurora*).

Currently, in terms of its younger learners, the Millard Learning Centre at the GCA welcomes school groups year-round from Grades 4-12, with the highest concentration of school groups in Middle School years (Francis, 2022). While activities exist in the office and learners are provided with on-site learning, while visiting, we did not observe any designated “kid-friendly” or child-stewardship sites on the property in terms of structures or signage (i.e., there are no designated children-based learning sites such as a garden or natural play area). Over several days during our stay at the Millard Learning Centre from June 10-18, in which we were enrolled in UVic's ER 412/ES 471 course, we made several walks of the property and observed signage and information sources for the various sites (e.g., Forage Forest, Food Forest). We observed that the majority of signage around the property for specialized sites is text-heavy, non-interactive, aimed at an adult audience, and in some cases, outdated and faded (see Appendix B to view current signage).

Finally, the artificial wetland area, a potentially rich ecological learning site and one adjacent to the classroom, currently lacks signage or proper access – not just for young learners, but for any visiting audience. Thus, given the lack of children's learning material and wetland signage/programmed access and its proximity to the classroom, we felt it an ideal educational site to engage/inform a younger audience (perhaps others will benefit as well). However,

improved accessibility by the addition of an entrance gate and trail diversion, as well as a viewing platform to bring attention to the site, is needed to better guide visiting learners.

Goals/Objectives

While our project's aims may seem relatively simple, potentially less "restorative", and perhaps more design-based (i.e., adding a bit of signage and programmed access of the Millard Learning Centre's wetland) compared to other projects that could be and are being undertaken at GCA sites, our project meets many targets in terms of goals and objectives for promoting ecological education and stewardship of young visitors. In reviewing our project's primary aims, we identified the following seven goals and objectives guiding our proposal:

1. Provide learning opportunities for the Millard Learning Centre's artificial wetland by providing informational signage
2. Inform a wider audience by contextualizing information/signs for school-aged children Grades 4-12
3. Promote stewardship and place-based learning opportunities for younger audiences, many of whom may not have regular access to/knowledge of wetlands and their ecosystems
4. Make learning opportunities at the wetland fun/interactive by providing multi-sensory (e.g., tactile, auditory, and visual) signage aimed at different learning strengths (e.g., artistic, mechanical, kinesthetic)
5. Improve perspective of the learning area (i.e., artificial wetland) by improving accessibility to/safety near the site through potential construction of an entrance gate with a diverted trail and viewing platform, thereby preserving wetland conditions by preventing trampling, etc.

6. Allow for continued knowledge-building following GCA visit by providing other on-site and post-trip educational opportunities/activities for school instructors and visiting students
7. Create potential for adolescent-driven sign creation at alternative sites at the GCA (e.g., fifth sign on Tranquility Bluff trail)

Research Questions

In order to better understand the basis of this project's goals and objectives, we had to identify why the purpose of this project held importance. To that end, we investigated three questions that we felt would better support and clarify our goals and objectives for this project. Below, we attempt to answer these three questions by drawing upon relevant research and innovative projects.

Why promote ecological educational opportunities to children?

Given that most children in recent times only experience nature in a *symbolic* or *vicarious* way (i.e., through screens or books physically removed from natural sites), opportunities for *direct* (unplanned, on-site, exploratory, and self-guided), nature experiences following *indirect*, or organized/planned/taught, natural experiences are necessary for promoting ecological awareness in youth (Khan & Kellert, 2002). While the wetland project would likely begin as more of an *indirect* nature learning experience for most school groups visiting the Millard Learning Centre in that learning will be planned or taught first in a classroom, doing so might provide opportunities or curiosity for *direct* and diverse encounters to occur later in the natural areas surrounding the Learning Centre. Opportunities for *cognitive biophilia* (Lawrence, 1993, as cited in Khan & Kellert, 2002), or the learning of nature through symbols and images, will allow

for increased emotional and intellectual development in the learners in visiting school groups. Moreover, the six stages of intellectual development and problem-solving using Bloom's taxonomy (i.e., knowledge, comprehension, application, analysis, synthesis, evaluation) can be more effectively fostered when nature encounters are *direct* (i.e., on site and unplanned). It is hoped that Kellert's (1996) ten values of nature, or those that signify how people interact with the natural world (e.g., moralistically, aesthetically, spiritually...), would also be instilled through our project. Finally, when children are allowed to experience nature in a *direct* way, place-based "roots" form, allowing for deeper connections with those sites that they spend time with.

Why use visual/interactive signage to promote learning/stewardship with younger students? →

Sensory exploration with fun, cartoon-like images paired with knowledge encourage school-aged children to engage with what they are learning. Using characters or comics in signage, playing inquiry games (e.g., "Who am I?"), or asking questions using tactile features such as flip-lid signage to answer them, encourages children's curiosity. Moreover, outdoor activities that encourage movement and play while acquiring knowledge foster multi-sensory, or *somatic*, awareness. Signage at outdoor sites with activities, as well as post-lesson activities are an ideal means of supporting a range of sensory learning processes. "Delight, elation, and affective engagement appear to form a crucible in which the child and later adult shape and mold an inclination for creativity and discovery" (Khan and Kellert, 2002, p. 127).

Although a sign is only a jumping off point and acts as an *indirect* teaching opportunity, its knowledge, if fun and engaging, may foster *direct* natural exploration at the Millard Learning Centre later. Furthermore, in modeling knowledge-based ecological signage to visiting school groups, it is hoped that future signage projects for areas of the Galiano Conservancy (e.g., Tranquility Bluff) might be researched and designed by the young learners themselves, as was

the case in the Kids' Creek Watershed project, in which interpretative signage for a watershed was designed completely by visiting students of the Traverse City West Middle School in Michigan (Nature Change, 2017).

Why use programmed access (e.g., platform structures, diverted trail with entry gate) with signage around the Learning Centre's artificial wetland? →

Incorporating accessible structures around wetlands have a vast range of uses such as encouraging education, safety, and inclusivity. These three factors are vital to the education of young learners because it can either enhance or limit the learning experience and what may be retained from the presented information. Installing an accessible structure (e.g., platform) can act as a focal point for learning while also preventing trampling or damage to the wetland ecosystem. Structures in environmental areas act as a visual magnet to draw visitors in thus creating a starting or focal point for learning (California State Parks, 2018). Establishing a learning point on a man-made structure can also act as a geographical reference so learners may explore on their own but have a reference to where a safe space is within the designated learning area. Having a designated learning area also can act as a meeting space in case of an emergency or a gathering area for post park exploration. Creating accessible structures is essential so all can participate; for example, some disabled learners may be unable to access some activities and sites throughout the property. Therefore, creating a structure adjacent to the classroom ensures that all learners are able to attend and provides equal learning opportunities and the opportunity to learn in new environments that may have not been accessible previously. As more learners are able to attend designated educational areas, it also increases the overall awareness of ecological stewardship throughout the community of learners.

The current flow of the trail and road leading towards the classroom results in safety and program access issues. The existing trail diverts into three separate directions leading visitors either along the road to the kitchen, along the middle path to the washroom, or along the highest path to the back of the classroom and towards the main entrance. Diverting walking access along the road and towards a new wetland platform or main entrance trail is essential to ensure safety and eliminate kitchen disruption upon arrival. Establishing a new trail head along the road to an arch way that directs traffic away from the road and towards the main entrance path reorganizes the flow of incoming traffic to better fit the needs of the visiting students while making the wetland platform a focal point from the entry gate.

Wetland Design

In order to meet a variety of needs and learning experiences, we propose two separate interactive wetland design experiences. Both designs in their approach focus on implementing an interactive educational learning experience for young learners but offer a different learning experience in each design. Both designs also focus on traffic flow and accessibility to increase interaction with the artificial wetland while providing separate experiences catering to alternative traffic flow resolutions. Listed below are additional measures to why we offer two different designs:

- Budget
- Interactive sign location placement
- Building equipment and sources
- Design spillover (Possible damage to the wetland depending on building options)
- Accessibility routes
- Vehicle and visitor access

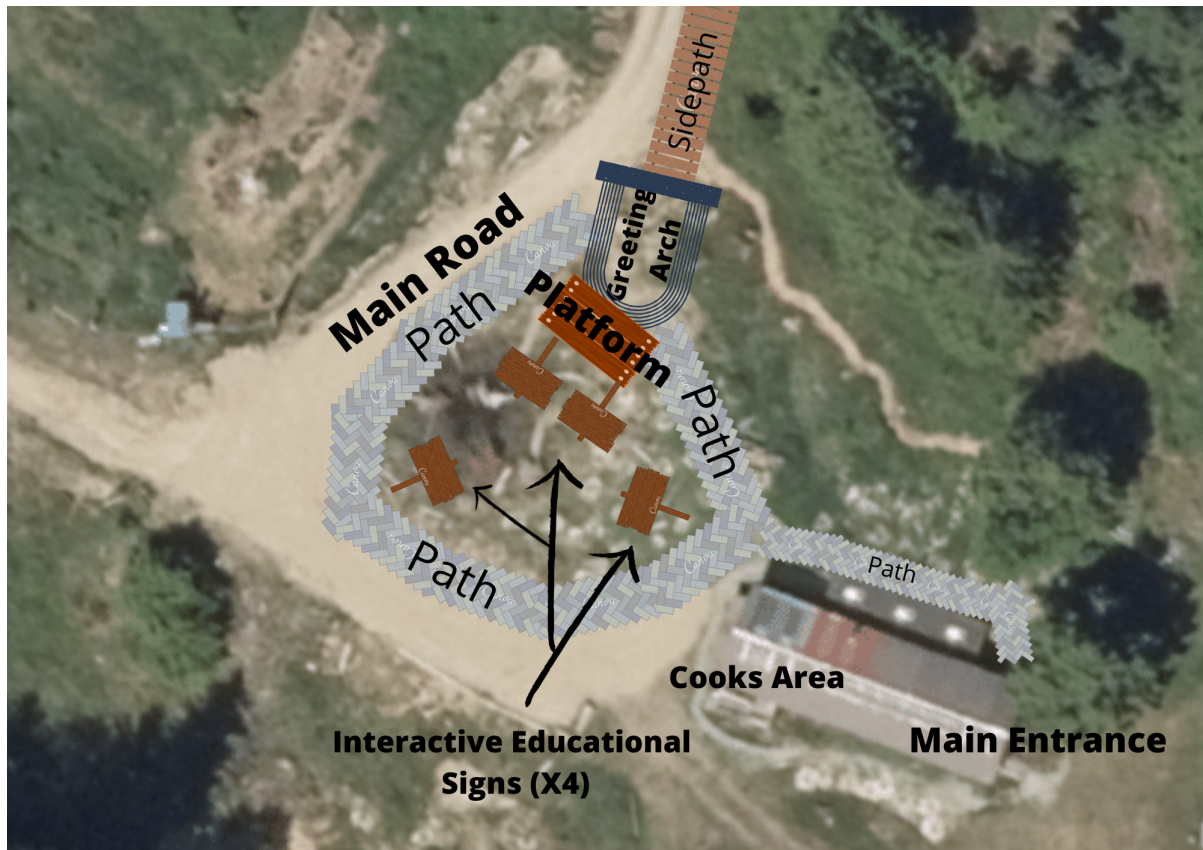
Presenting two designs offers different advantages and disadvantages to the wetland experience. One design focuses largely on visitor movement flow and access to the entirety of the wetland while the second design offers greater accessibility to the wetland and a central educational focal point. Offering two designs allows the Millard Learning Center to choose the best option for their educational and onsite purposes.

Both designs include four educational signs around the wetland including new safety precautions and path management to create greater traffic flow around the wetland. Each sign will include the same design, focusing on four specific educational approaches to meet all student learning abilities. One of each of the four signs will represent a learning ability being tactile, visual, auditory and kinesthetic.

Introducing a new traffic flow system and entrance will increase safety throughout the wetland and offer greater accessibility to increase all peoples learning experience. Offering greater accessibility to all ages will increase ecological stewardship thus promoting environmental initiatives to the greater community. Currently, the traffic flow towards the wetland and Millard Learning Center leads visitors onto the road past the wetland and towards the cook's kitchen and not the main entrance. Both designs include new traffic flow systems re-routing visitors towards a new entrance and along the wetland leading towards the main entrance. Both designs will include a boardwalk along or beside the wetland so all visitors can access the wetland and educational learning experience. Attached to the wetland in both designs will include a welcome arch and sidewalk along the road that leads to the Millard Learning Center. Providing a boardwalk, entrance, sidewalk and signage at the beginning of the wetland creates a focal point to all visitors upon arrival at the Millard Learning Center directing their attention immediately towards it.

Design 1

Design 1 focuses on utilizing the full area of the wetland offering various vantage points throughout. The design consists of a walkway beginning halfway down the road to the Millard learning center that greets visitors with a welcome arch. The welcome arch re-routes visitors away from the road and directly towards the wetland. Once past the arch the path splits into two directions, either to the left to a lifted platform consisting of one to two interactive educational signs or to the right looping around the wetland with two other interactive educational signs posted throughout. The trail around the wetland fully circles the wetland connecting the loop back to the platform and welcome arch. The trail diverts visitors away from the cook's area and around the back side of the Millard Learning Center to the front entrance.



Advantages of Design 1:

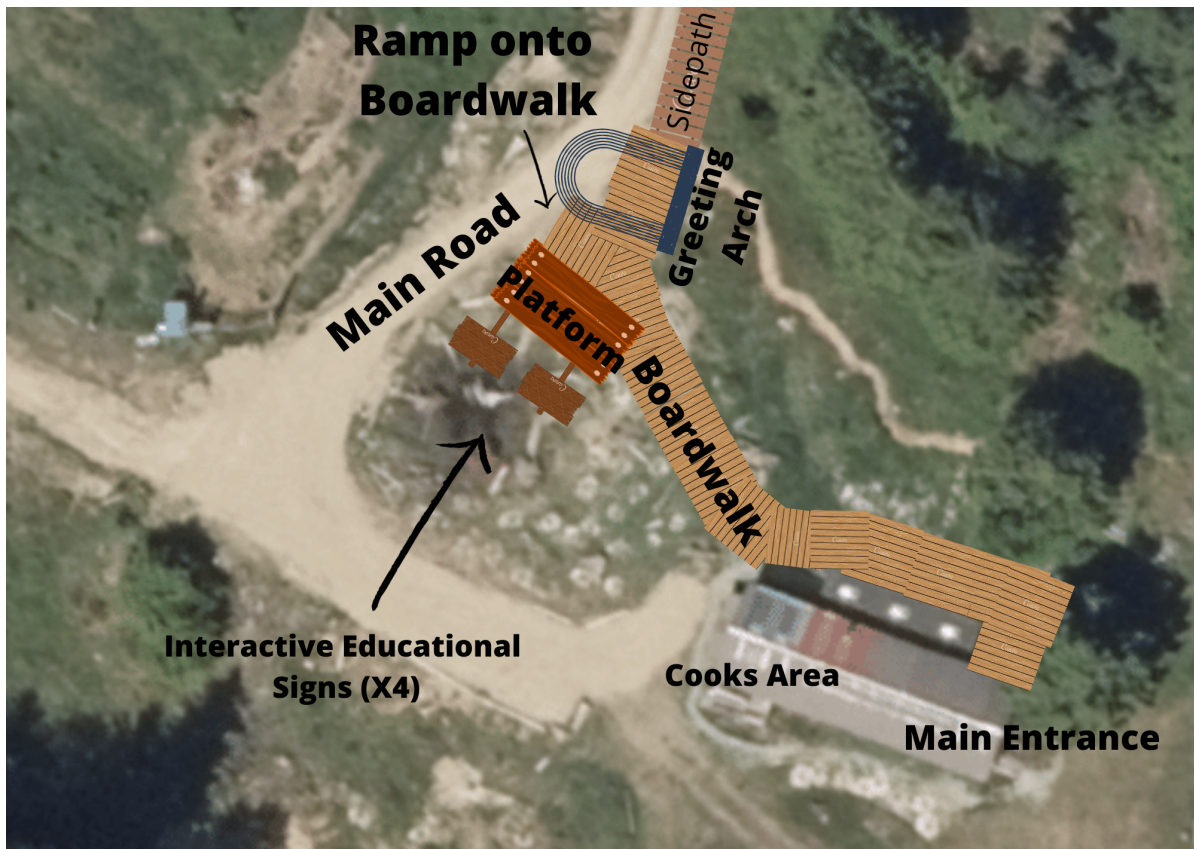
- Various vantage points to view the wetland
- Offers different levels to signage
- Greater space capacity and adventure around the entirety of the wetland
- Diverts visitor's attention towards the wetland and educational purposes
- Prevents trampling of vegetation with new constructed pathways
- New safety routes removing visitors from walking on the road

Limitations of Design 1:

- New trail head still presents the option of visitors diverting from the path and towards the cook's area instead of the main entrance
- Spread out learning area, may be difficult to have a focal learning spot for educators
- Trail head remains close to the road leading towards the Millard Learning Centre

Design 2 (image on following page)

Design 2 focuses on accessibility and visitor flow. There will be a pathway adjacent to the road leading towards the Millard Learning Centre and a welcome arch. The welcome arch will be located just off the road and directing visitors towards the wetland. Once through the arch, there will be a boardwalk and viewing platform on the northern side of the wetland for easy visitor access. The viewing platform will consist of three to four interactive educational signs. The boardwalk will continue past the viewing platform, towards and past the washroom to the main entrance.



Advantages of Design 2:

- Accessibility for all visitors
- Focal learning point at the platform viewing area - all signage located in one spot
- Directs all visitor traffic towards the main entrance and away from the road - eliminates the possibility of entering at the cook's area
- Less annual maintenance and areas that could be affected by construction compared to Design 1

Limitations of Design 2:

- Greater budget needed to construct the boardwalk
- Limited vantage points to view the wetland compared to Design 1

Energy Reference Maps

Listed below is the current energy flow map to visitor access and the updated energy flow for Designs 1 and 2.

Current Energy Flow:

Leads multiple pathways towards the cook's area and away from the main entrance. Draws little attention to the wetland and contains no marked paths or signage.



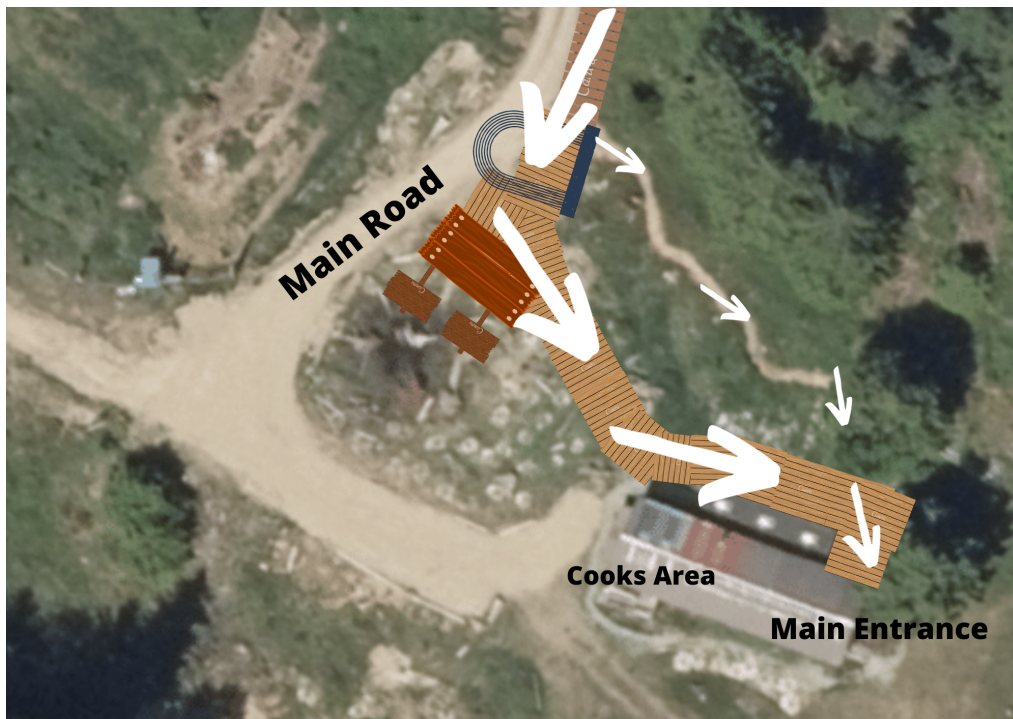
Design 1 Energy Flow (image on the following page):

Presents two options to view the wetland when entering the area but still provides access to the cook's area if visitors diverge from the path. The energy flow brings greater attention to the entirety of the wetland.



Design 2 Energy Flow:

Eliminates the possibility of entering the cook's area as the boardwalk leads away from the kitchen area and towards the main entrance.



Design recommendations

Moving forward, we recommend using Design 2. Design 2 features a more inclusive atmosphere with a central learning area. The platform acts as the central learning spot as it contains all signage making it easier for educators to draw in students' attention. The boardwalk allows for all students and visitors to view the wetland due to the walk on ramp. The boardwalk also changes the current energy flow in one direction towards the main entrance of the Millard Learning Centre instead of in various directions. For these reasons we recommend Design 2.

Signage

Despite the choice of design and whether the signs surround the wetland or remain together on the platform, we are proposing four signs that would provide knowledge of wetlands, their features, and their species, but also engage young learners by providing visual, kinesthetic, auditory, and inquiry-based engagement. While we hope this signage will inform and educate young learners, we aim to keep the information simple as to best engage younger learners through sensory interaction; our hope is also that pre-visit or follow-up activities may accompany this signage. While these four signs are by no means limited, we designed them as such as we felt the information provided is most relevant to the site. Descriptions of each, as well as a mock-up for a potential sign design, are provided below (initial sketches of sign designs may also be found in Appendix E).

Sign 1: "What is a Wetland?"

This sign would introduce children to general wetland characteristics, as well as distinct types of wetlands (e.g., marsh, swamp, bog) and their features. It also informs young learners

that wetlands can be created, or artificial, as is the case of the one they would be observing directly from the platform. Our aim of identifying this wetland as “artificial” is to inform learners that a human-created wetland may not be any less valuable than a natural one, and that this practice of creating wetlands may be a necessary one in the future as a means of successfully hosting/conserving species and helping mitigate effects of climate change.

The design of this sign would include four tactile lift inquiry signs asking learners to identify the type of wetland they are observing. Although the first three wetlands would not be representative of the one they are observing onsite, by lifting the signs to find the answer, we hope they will gain some knowledge of the difference between a marsh, swamp, and bog. We hope the tactile, guessing-game characteristics of this sign would be fun for active young learners. Follow-up activities for the learners’ instructors might include a research activity of other types of wetlands or else, visits to nearby wetlands, perhaps even the other ones on the GCA property itself. This activity also lends itself well to an activity associated with our next sign, which introduces wetland species.

Sign 2: “Who Lives Here?”

Our second sign would introduce young learners to the species that a wetland hosts and attracts. We hope to demonstrate that a diverse array of species can be found in a thriving wetland ecosystem. This sign would identify three observed species in the wetland – perhaps a bird, an amphibian, as well as an insect, reptile, or small mammal (the choice of these species may best be left to the educational coordinator at the GCA, as we did not have the opportunity to observe distinct species in the wetland during our visit). Our hope is that an auditory component for these three species could also be included, so that the children may hear what the wetland

species sound like; we feel this would be an engaging interactive feature accessing a different sensory element.

This second sign would also serve to introduce at-risk species that the GCA hopes to find on-site or attract through the creation of the wetland – species that have been observed on the property in an extremely limited capacity but ones that are hoped to return. During our visit to the Millard Learning Centre, we learned that both the Northern red-legged frog (*Rana aurora*) and the sharp-tailed snake (*Contia tenuis*) are two such species. We feel this sign would be a good opportunity to introduce the children to these “missing” (or at-risk) species by asking “*Who doesn’t live here?*” Finally, a potential imagination activity, such as “Imagine a day in the life of...”, in which young learners make guesses at what a particular wetland species might eat, where they live, what they do, who their friends are, etc., would be a great follow-up instructional activity to continue building upon knowledge and fostering inquiry of this topic.

Sign 3: “Silly Stumps!”

A third sign would highlight a striking visual feature of the artificial wetland: two very large stumps that are situated upside-down near the proposed platform area. Given their proximity to the platform and potential signage area, we felt it beneficial to highlight them as a learning point. Our third sign would offer a very simple introduction to coarse woody debris (CWD) and explain its importance in an ecosystem in terms of the habitat it can provide for animal and plant species. We immediately point out the fact that they are upside-down as means of getting students to not only question why they may have landed in this position, but also offer a chance for kinesthetic engagement. Learners might perform yoga postures, headstands, etc. should space allow for it. Additionally, on the sign, we also offer two questions to the young

learners: a.) Who might like to live in CWD like a stump? and b.) How they might design their own stump home? These questions piggyback well with the previous species sign: instructors would be allowed to expand upon this with a follow-up art/design activity in the classroom where students design a stump house for some of the species they have already learned about. This could be a tactile art activity done with a variety of materials (e.g., modeling clay, papier-mâché), but with the aim of instilling knowledge of CWD's importance in an ecosystem of providing habitat to species.

Sign 4: "What's in a Landscape?"

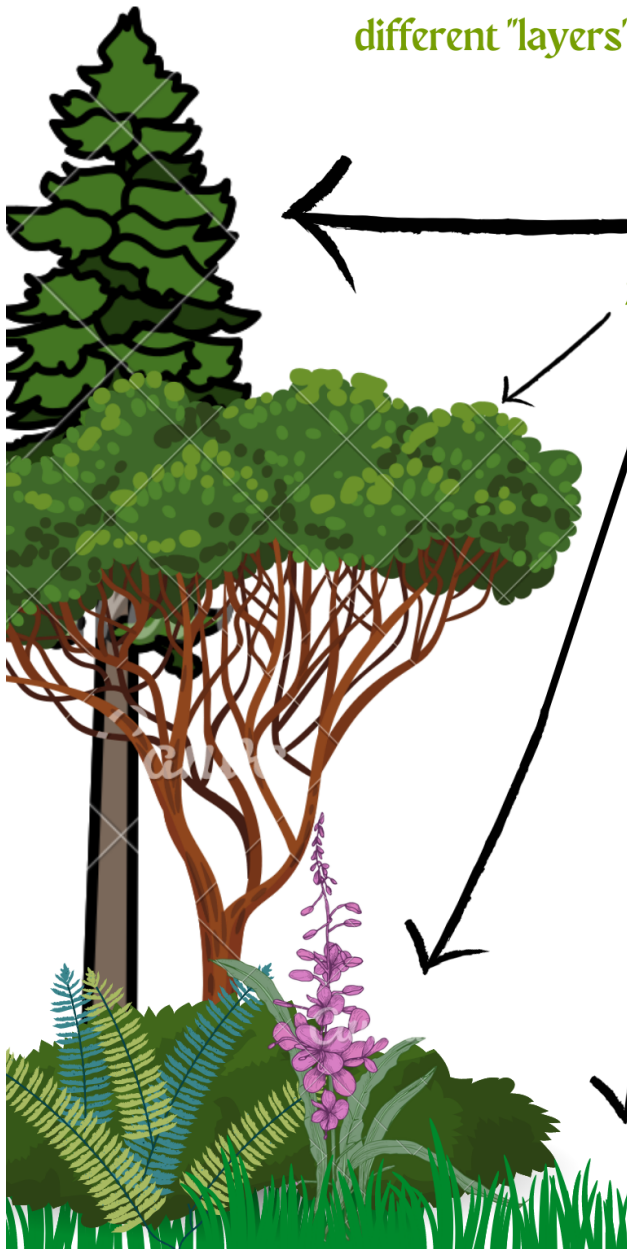
Finally, a fourth sign would introduce young learners to plant layers and plant identification of their surroundings. From the vantage of the far side of the wetland (Design 1) or the platform itself (Design 2), signage would teach children about tree, shrub, plant, and grass species, and the layers they create in a landscape (or *canopy*, *midstory*, *understory*, and *ground*, respectively). Additionally, from its vantage point, this sign could simultaneously introduce the learners to one or two plant species within each layer.

This visual inquiry sign could easily lend itself to a diagramming activity in which the learners sketch or take a photo of a landscape perspective in order to identify what they observe in the landscape; subsequent activities on plant identification might also lead to a fun and engaging plant identification scavenger hunt activity around the Millard Learning Centre, in which learners search for various trees, shrubs, etc. Lastly, for older learners, the practice of repeat landscape photography in a restoration context could be taught and practiced following introduction to the signage.

Signage example:



A landscape has many different grass, plant and tree species found at different "layers" or heights



Canopy Layers:

1. Canopy
2. Sub-canopy or "midstory"
3. Shrubs or "understory"
4. Ground/Grasses

Can You match the species to its layer?

1. Douglas Fir
2. Arbutus Tree
3. Sword Fern
4. Fireweed

FUN

Activity

Take a photo or draw a picture of the landscape you see

How many layers can you see?

What kinds of layers are they?

What makes them unique?

Further Considerations and Discussion

Promoting ecological stewardship at the Millard Learning Centre is one of the primary attributes of the Galiano Conservancy Association, and having had the incredible opportunity to learn there ourselves, we see great potential in the educational programs visiting learners are offered there, especially those aimed at younger audiences. That said, while enormous potential lies at the various sites around the property, making them more relevant for these younger audiences is paramount for engaging them – especially those that may only be experiencing nature without any kind of *direct* experience.

While our project may seem simple in its design, its motivations are rooted in a desire to offer learners what we ourselves experienced during our week at the Millard Learning Centre, and it is our hope that a learning area dedicated to younger children, such as the classroom wetland, might inspire future generations to pursue stewardship and restoration. Considerations for the budget of platform construction and signage design, volunteer and work efforts (perhaps towards the building the platform and diverting trails), as well as upkeep and maintenance, would certainly need to be made should the project move forward. But these costs are small when weighing them against the potential benefits of a site that not only informs of an important wetland ecosystem and its species and characteristics, but one that engages as well.

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Appendix A: Photos (the site)

Artificial wetland site (Current accessibility and unofficial entry point from road)



Aerial view of wetland site and Millard Learning Centre classroom:



Appendix B: Current signage – Millard Learning Centre, GCA property

Text heavy; limited multi-sensory interaction; aimed at adult audiences:



Protecting Groundwater at Home

Galiano Conservancy Association

Water and Climate Crisis

The forecast for the Salish Sea

The Southern Gulf Islands are threatened by sea level rise and warmer waters. This means the groundwater beneath the island is at risk. This means the groundwater beneath the island is at risk. This means the groundwater beneath the island is at risk.

Harvesting Rainwater

Matching purpose to purpose

One way to capture and store rainwater is to harvest it from rooftops. This is done by installing a rainwater harvesting system. This is done by installing a rainwater harvesting system.

Reducing Water Needs

In the home

The easiest way to reduce water use is to fix leaks. This is done by checking for leaks in the home. This is done by checking for leaks in the home.

Constructed Wetlands & Bioswales

Storing water in the landscape

Constructed wetlands and bioswales are designed to mimic natural wetlands. This is done by installing a constructed wetland or bioswale.

Greywater Re-Use

Choosing the right system

Greywater is water that has been used in the home. This is done by installing a greywater re-use system.

Ecological and Edible Landscaping

Galiano Conservancy Association

Visit our Nursery Annex

Nursery Hours: Mon-Fri 9am-4pm / Sat-Sun by appointment

Check out our exciting selection of native and edible species for your landscape. This is done by visiting our nursery annex.

FireSmart Design

We live in a fire ecology

This means that our ecosystems in the Coastal Douglas fir (CDF) biogeoclimatic zone are adapted to fire. This is done by using fire-resistant plants.

Naturescaping with Native Plants

Landscaping for Resilience

A resilient landscape conserves water, acts as a fire break and provides habitat for a range of species. This is done by using native plants.

Incorporate Edible Species

Start with native species

Here in the Salish Sea, a huge variety of edible, medicinal and useful native species thrive. This is done by incorporating native species into your landscape.

Nuts'a'maat Forage Forest

we're all one - working together with one heart, one mind

Basin

qwa'quhup - Pacific Crabapple
qey'uhup - Cascara
hila'uhup - Salmonberry
t'uqu'um - Thimbleberry
t'u'uxu'um - Osoberry
t'h'u'w'uhup - Bed Elderberry
kwé'á'shen - Springhank Clover

South Slope

qanahup - Arbutus
tushatens - Saskatoon Berry
ayus qw'il'muhw - Evergreen Huckleberry
halat'uhup - Tall Oregon Grape
sunil'uhup - Dill Oregon Grape
q'q'un'san'uhup - Columbian Manzanita
Kinnuknik / Bearberry
sp'w'up'ut'us - Red Huckleberry
huy'w'ik'uhup - Blue Elderberry
swewum - Soapgallie
meth'uhup - Black Hawthorne
'rege' - Salal
spw'il'muhw - Trailing Blackberry
Yerba Buena

North Slope

tuxwa'tuhup - Pacific Yew
c'm'eh'w - Wild Gooseberry
hwi'w'uk'uhup - Pink-flowered Currant
qet'uhup - Baldhip Rose
q'uhup - Bracken Fern
sisi'yu - Wild Strawberry
kwulula'uhup - Red Alder
t'á'hw - Grand Fir
t'u'sey' - Douglas-fir
x'p'ey' - Cedar
q'u'm'uhup - Bigleaf Maple

Core & Garry Oak

ph'w'uhup - Garry Oak
sp'eh'uhup - Camas
q'u'm'is - Barenten Biscuitroot
Nodding Onion
Yarrow
p'uh'q'uyasuhup - Snowberry

Welcome to the Nuts'a'maat Forage Forest!

Not long ago, this valley was a mature western redcedar forest, filled with towering trees and decaying logs. In the aftermath of clear-cut logging, all that remains of that forest is the Grandmother Cedar, standing alone amidst compacted soils and introduced weeds.

Today, what lies before you is a regenerating managed forest of edible, medicinal, and useful native plants. This collaborative effort between members of the First Nation, community volunteers, and the Galiano Conservancy is part of an effort to heal the divisions between our communities and the natural world. So please explore, inquire, and (once you learn how to identify native species) sample the delicious diversity of our native ecosystem!

Guidelines for Ethical Foraging

Before harvesting, ask yourself:

- Is this an appropriate place to harvest? Whose territory are you on? Is this area public? Private? Is harvesting allowed in this location? If so, under what circumstances? Is pollution a concern?
- Am I sure that this is an edible/medicinal species? Don't experiment! Foragers sometimes misidentify species. Are you 100% confident in your ID? Are you familiar with poisonous species in the area?

How much do I need? How much is available?

It is easy to take too much. Never take more than you can use, and never take more than 20% of what is available, especially if you don't know the area well.

What impact will this have on the ecosystem?

Never harvest a rare species, and be mindful of the disturbance you are creating. Are you causing unnecessary damage to the ecosystem?

How am I giving back? What can I offer in return?

Practice reciprocity with the ecosystem and communities you forage in. How can you help ensure that others will be able to harvest, now and in the future? Have you formed relationships with the First Nation whose territory you are on?

Outdated/faded signage:



Appendix C: Site Photos with design proposals

Current closest access point (from road):



Proposed trail/entry gate site - parallel to road (looking south towards focal point of platform site):



Proposed trail site - parallel to classroom building (looking east from platform site):



Proposed platform site w/signage (looking westward):



Proposed platform site (looking south; facing wetland):



Proposed platform site - clearing behind blue barrel (looking eastward):



Current wetland view from platform site:



Elevated view (desired perspective from platform):



Appendix D: Interpretative Signage Points (From platform: Design 2)

Sign 1 (front left side of platform facing wetland): “What’s a wetland?” - Lift/tactile Inquiry activity)



Sign 2 (front right side of platform facing wetland): “Who lives here?” – *A day in the life of...* Imagination activity:



Sign 3 (right side of platform - facing west): “Silly stumps” – Art or kinesthetic activity:

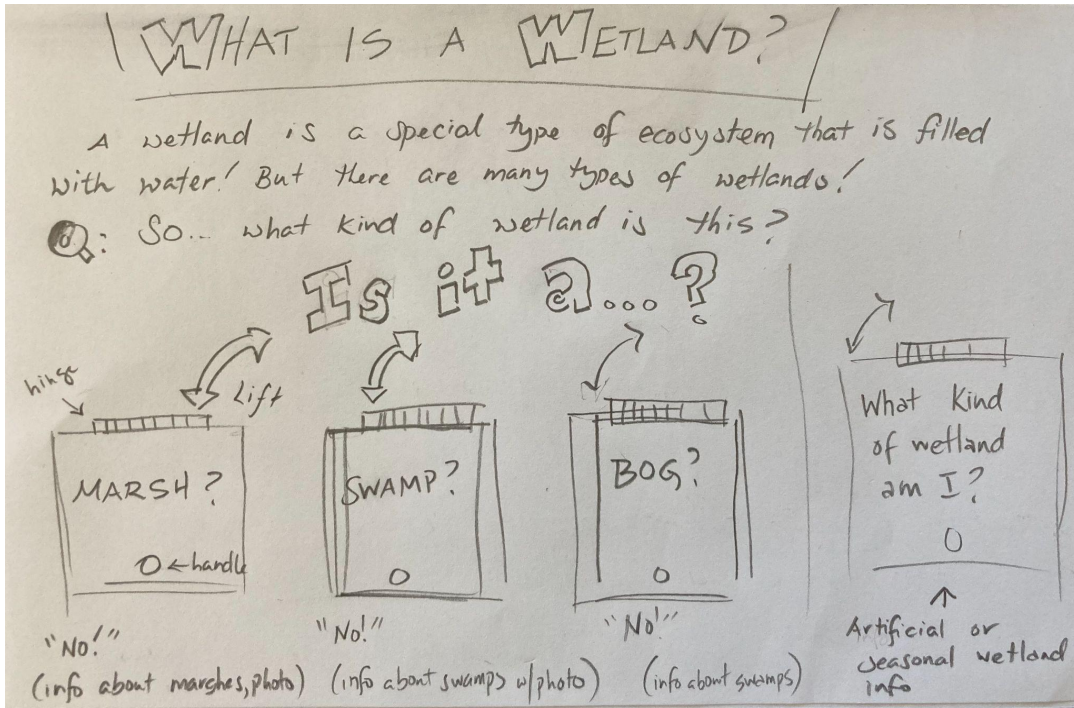


Sign 4 (left side of platform looking east): “What’s in a Landscape?” Plant Layers, ID, Scavenger hunt activity:

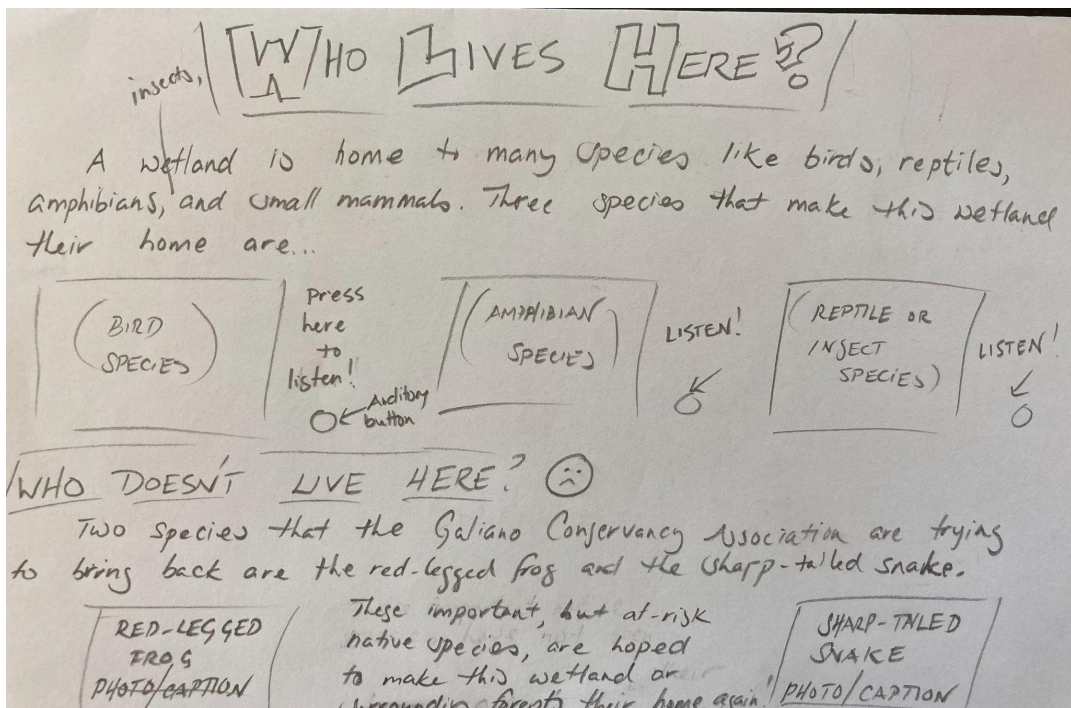


Appendix E: Initial Sign Design Sketches

Sign 1: "What is a Wetland?"



Sign 2: "Who Lives Here?"



Sign 3: "Silly Stumps"



Sign 4: "What's in a Landscape?"

