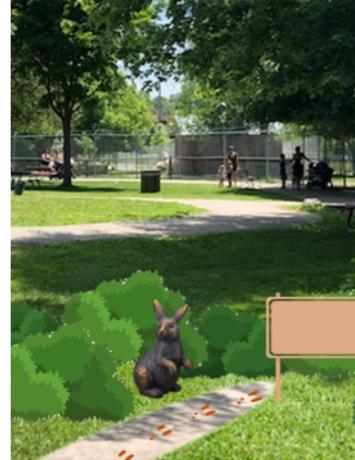


Waterloo Park: Reimagining the Farmstead

PRESENTED BY

DR. DANIELA O'NEILL (*PROFESSOR, UNIVERSITY OF WATERLOO*)
AND
**ASHLEY AVARINO, MADELINE CRICHTON, EMILY SHIU,
& SIOBHAN SUTHERLAND** (*GRADUATE STUDENTS, PSYCH 680 CLASS*)

WATERLOO PARK ADVISORY COMMITTEE MEETING - JULY 10, 2019



I am Daniela O'Neill, a professor of Child Development in the Department of Psychology at the University of Waterloo. In my graduate seminar this term, I wanted to provide my students with an opportunity to apply knowledge of child development and the learning of language, socio-emotional, thinking and problem-solving, and motor skills to an applied context in order to foster these types of learning in a fun and engaging way for children and parents.

I decided to focus on the farmstead and how its features could be enhanced to promote these kinds of learning, especially via talk and communication between adults and children as oral language ability is foundational to later developments in language, literacy, socio-emotional, scientific thinking and problem-solving skills.

In order to give the project more of a "real world" application, I got in touch with Anna Lee Sangster to see if there might be a possibility to present our ideas to those involved in the Master Plan for Waterloo Park, and that's how we've arrived at presenting to you today. We are thrilled to be here!

My four students presenting today are Ashley Avarino, Madeline Crichton, Emily Shiu, and Siobhan Sutherland and each of them will present their section.

Waterloo Park: “Jewel in the City”

- Waterloo is...
 - a benchmark community for child and youth wellbeing
 - a culture of innovation, creativity, discovery, and collaboration
 - a global hub for education and entrepreneurship
 - a city with the charm and character of a smaller rural community
 - a smart city
 - a place to “settle and belong”



Waterloo Park is known as the “Jewel in the City”. We began our exploration by looking at descriptions of Waterloo in order to retain these descriptions in mind as we began to think about new features for the farmstead that would be in keeping with the character of the city of the Waterloo and Waterloo Region.

Descriptions of Waterloo obtained from:

The City of Waterloo <https://www.waterloo.ca/en/things-to-do/waterloo-park.aspx>

Smart Waterloo Region <https://www.engagewr.ca/SWR>

Region of Waterloo <https://www.regionofwaterloo.ca>

Immigration Waterloo Region

<https://www.immigrationwaterlooregion.ca/en/index.aspx>

Photo credit: Unless otherwise stated, all pictures from farmstead taken by Daniela O’Neill

Cities where children can thrive

- Children are sensitive to whether or not an environment welcomes them
- UNESCO study, *Growing up in Cities* (2002)
 - Children value variety of interesting activity settings, safety and freedom of movement, green spaces
- UNICEF Child Friendly Cities Initiative



There is currently a global interest in creating cities where children can thrive. This initiative has been spurred by a UNESCO study and continued by a UNICEF Child Friendly Cities Initiative.

Chawla, L. (2002). Growing up in an urbanizing World. London: UNESCO & Earthscan.

Driskell, D. (2002). Creating better cities with children and youth: A manual for participation. London: UNESCO Earthscan

UNICEF, 2012. "What is a child friendly city?" Accessed July 8, 2019. www.childfriendlycities.org/overview/what-is-a-child-friendly-city

Photo credit: Daniela O'Neill

A city of learning opportunities

- If we make a city great for children, we make it better for all of us. (McLennan, 2011)
- Abundance of recognized teaching opportunities in both the natural and constructed environment...
 - help to address “language and knowledge gaps” that exist among some children entering school
 - impact the ability of children to thrive long-term

Renowned architect James McLennan has argued that when we make a city great for children, we make it better for everyone. A child-friendly city can incorporate an abundance of recognized teaching opportunities in the natural and constructed environment. *McLennan, J. F. (2011). To save our cities, put children first.* <https://www.yesmagazine.org/planet/to-save-our-cities-put-children-first>

Such opportunities can help address recognized “language and knowledge gaps” that can exist among children prior to entering school due to more disadvantaged circumstances and that can impact their ability to thrive long-term, given the foundational nature of oral language skills. *Hart, B. & Risley, T. (1995). Meaningful differences in the everyday experience of young American children. Baltimore, MD: Paul H. Brookes.* *Neuman, S. B. & Celano, D. C. (2012). Giving our children a fighting chance: Poverty, literacy, and the development of information capital. New York: Teachers College Press.*

In Waterloo Region, we know that children in some of our neighbourhoods are more vulnerable and weaker on foundational (e.g., language) as assessed by the Early Development Instrument completed by kindergarten teachers (results compiled by *Holliday, C. (2016). A community fit for children: A focus on young children in Waterloo Region. 3rd Ed. Ontario Early Years Waterloo Region.* http://www.earlyyearsinfo.ca/uploads/2/1/4/6/21464250/community_fit_2016.pdf

Play-learning environments

- Innovative, state-of-the-art initiatives to create outdoor city spaces
- Communication is fostered through play and exploration



Currently in the USA in particular there are very innovative, state-of-the-art initiatives taking place to transform and create outdoor city spaces where play and exploration are possible and fostered via talk that happens very naturally and in a fun way between adults and children. One such example, is the Urban Thinkscope Project in Philadelphia which is an innovative initiative to activate public spaces for playful learning.

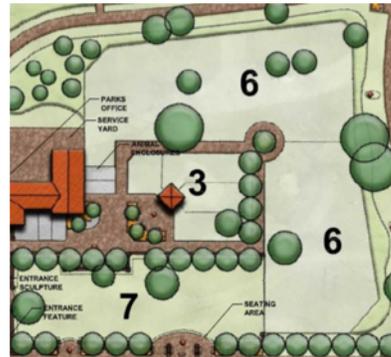
We have been exploring initiatives like this when gathering ideas for the farmstead. Many of these projects are more geared to playgrounds, but we found aspects that could be incorporated into a farmstead setting (the archways you will hear about are derived from this particular Thinkscope project in Philadelphia.).

(And in the future, students in other classes could work on aspects more related to playgrounds as we know you have new playground and splashpad spaces are in the Master Plan and such a playground could be an interesting complement to the more traditional and the new natural playground that already exist..)

Photo credits: <https://youtu.be/PkXQjkqJBjC> Urban Thinkscope Project

A more interactive farmstead

- Elements of play and other features integrated with the animal exhibits
 - Talk and play leads to learning while having fun
- Year-round features
- Accessible for a diverse population



In considering a more interactive farmstead we sought to include:

Elements of play and other features integrated with the animal exhibits

Talk and play leads to learning while having fun

Year-round features

Features that are accessible for a diverse population (e.g., multi-generational, multi-cultural, different physical ability levels)

We did so largely for the areas in the map shown here from the Master Plan document that are numbered 6 and 3.

Elements of our proposal

1. Animal tracks and sculptures
2. Signage
3. Entrance archways
4. Pathways
5. Seating
6. Outdoor classroom



There are 6 features we will present today.

Animal tracks and sculptures



Presented by Ashley Avarino

Photo credit: https://kaboom.org/play_everywhere/gallery/animal_tracks

Animal footprints in Kenilworth-Parkside



One great way to add interactive play to any neighborhood space is painting animal tracks on paths or sidewalks. This was done in Kenilworth-Parkside, a neighborhood in DC. This picture is a concept sketch for what the sidewalks would look like, and how children would use these tracks to play. You can see that children are hopping and stomping in similar ways that the animals would. Not only are they able to use their imagination, but they are able to make connections between the prints on the sidewalks and the animals they represent.

Animal Tracks: DC Promise Neighborhood Initiative, Washington DC. In KaBoom! organization Play Everywhere gallery at

https://kaboom.org/play_everywhere/gallery/animal_tracks

Image credit: https://kaboom.org/play_everywhere/gallery/animal_tracks

Animal footprints in Kenilworth-Parkside



Here you can see that the materials they used were simple and inexpensive. All that is needed are stencils of different types of animal tracks, and sidewalk/outdoor paint. In Kenilworth-Parkside, they even had the community come together and pitch in. Since this is not an labour intensive job, volunteers were able to help complete it.

Photo credits: https://kaboom.org/play_everywhere/gallery/animal_tracks

Duck sculptures at the Boston Commons

These ducks are the #1 attraction!



Another element of play that we already see in Waterloo park is sculptures. This is a picture of a mother duck and her ducklings in the Boston Commons. The sculpture is based on the picture book *Make Way for Ducklings*. You'll be surprised to know that this is actually the number one attraction in the park! Tourists and children and families love to come and play with the ducklings, sitting on each of their backs, observing the details of their feathers, and even feeling the smoothness of their beaks. All of these things are aspects of play, that without these sculptures would otherwise be absent.

Photo credit: <https://www.boston-discovery-guide.com/boston-public-garden.html>

Bringing the tracks and sculptures together in the farmstead



+



Currently, Waterloo Park has sculptures of pigs, which act as an element of play similar way to the ducks. We also noticed that in future plans for Waterloo park there is space set aside for a “sculpture garden.” While we agree this is a great idea, we are proposing a different layout for the sculptures that goes hand-in-hand with the animal tracks mentioned previously.

Photo credit left: <https://www.boston-discovery-guide.com/boston-public-garden.html>

Photo credit right: https://kaboom.org/play_everywhere/gallery/animal_tracks

Tracks at the entranceway



The walkways in the Farmstead are relatively bare, and as seen previously an inexpensive way to both brighten the walkways and add an element of play is to bring animal tracks to the park. Each animal will have a set of tracks and each set of tracks will be painted in a different color-- this allows the tracks to be easily discriminable even if they look similar. These tracks will begin at the entrance of the Farmstead, but will diverge in different directions and patterns so that children can choose an animal to “follow” and stick to this path. At the end of the path, the children will meet the animal they have been following.

- Each animal will have a set of tracks, and each set of tracks will be painted in a different color-- this allows the tracks to be easily discriminable even if they look similar
- These tracks will all begin at the entrance of the Farmstead, but will immediately diverge in different directions and patterns so that children can choose and animal to “follow” and stick to this path
- At the end of the path, the children will meet the animal they have been following

Animal track routes



For Waterloo Park, we are proposing to have both the tracks of the animals in the farmstead, as well as tracks of other animals children would see within the park typically such as rabbits, squirrels, and, of course, Canadian Geese.

The tracks for the farmstead animals will end at that animal's location. The animals that are not in the farmstead will still have a "meeting point" at the end of the tracks. This is where we want to integrate the tracks and sculptures. If the animal is not present in the farmstead then its "meeting point" will be a sculpture of that animal. This gives children an idea of what the animal looks like and adds an element of play, as seen with the Boston Commons ducks. According to our proposal, rather than there being a "sculpture garden" there will be sculptures throughout the Farmstead area that children can actively seek out. We are also proposing that each animal has an information sign,

We will have the tracks of the animals in the Farmstead (e.g. pig, chicken and Llama tracks) but we also want to include tracks of other animals children may see in the park (e.g. Canadian geese, rabbits, squirrels). We thought the Canadian geese sculpture could be fashioned along the lines of the one in Boston Commons and perhaps it will also become a beloved tourist and community attraction!



Example of a chicken; note here that Siobhan will go more in depth about the design of the signage.

Example of a Canada Goose

Boston Commons Make way for ducklings - #1 attraction in park for tourists

Example of a rabbit

Signage



Presented by Siobhan Sutherland.

The importance of signage



One way to enhance learning in parks is to use signage as talking points for parents and children to encourage conversation.

<https://stateofopportunity.michiganradio.org/post/these-playgrounds-are-designed-get-kids-and-parents-talking>

Sign on slide is from the Officer Willie Wilkins Park in Oakland, California

Image: Credit to Too Small to Fail on website where accessed

<https://stateofopportunity.michiganradio.org/post/these-playgrounds-are-designed-get-kids-and-parents-talking>

Reading signage is a foundation for reading print. Reading signs helps children to connect symbols with words. *Neuman, S. B. & Celano, D. C. (2012). Giving our children a fighting chance: Poverty, literacy, and the development of information capital. New York: Teachers College Press.*

For this reason, a good sign combines images and simple words that children can associate with one another. Speaking with children about signs helps them to hear new words and make these connections.

Current signage at Eby Farmstead



Currently, Eby Farmstead has several signs that offer a lot of information about the animals, but they could be enhanced in the following ways to allow for greater access and engagement.

Move closer

Signs moved closer to walkways



Moved closer to the walkways to enhance visibility.

Lower height



Lowered to allow greater access to children and people with diverse accessibility needs.

Simplify



Simplified text



Simplified text and larger images so that people from diverse age groups and backgrounds can easily understand the sign's meaning, such as newcomers to Canada who may be newly learning English.

Photo squirrel sign: https://kaboom.org/play_everywhere/gallery/animal_tracks

Simple informational signs



This is an example of the type of sign that could be used at the end of the animal tracks activity or at the animal enclosures. Notice that it uses large images and simple text to describe the animal, combined with one interesting feature of the animal - the shape of its paws. The text is simple enough for a young child to associate with the animal and can serve as a discussion point between parents and children.

Children of different ages can engage with the signs in different ways for example, a parent might ask a one year old “what colour is the skunk?”, while a 3 year old could be asked if they notice any differences in the front and back paws.” an older child could even try to walk like a skunk.

Photo: https://kaboom.org/play_everywhere/gallery/animal_tracks

Intermediate informational signs



This is an example of a sign at the Cincinnati zoo where they are trying to promote literacy through signs. This sign has some additional features for added interest and engagement. Along with large text and images, it includes simple phrases that convey an interesting fact about the animal as well as an activity relevant to the animal that children can try.

Photo credit Shasta Bray in article Meek, K. (2016, March 11). Six Ways the Zoo Can Stimulate Your Kids' Interest in Reading [Blog post]. Retrieved from <http://blog.cincinnati.org/2016/03/11/six-ways-the-zoo-can-stimulate-your-kids-interest-in-reading/>

Enhanced activity

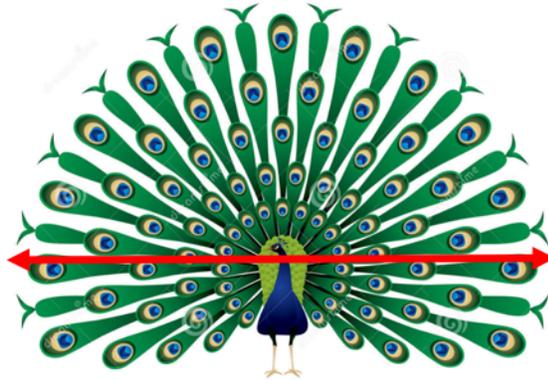
- “Can you match the orangutan’s snacks?”



A sign with a more enhanced activity is shown here where children have to find the 2 matching tiles for the snacks eaten by orangutans.

Photo credit: https://kingdomproductions.net/portfolio_page/cincinnati-zoo-jungle-trails/

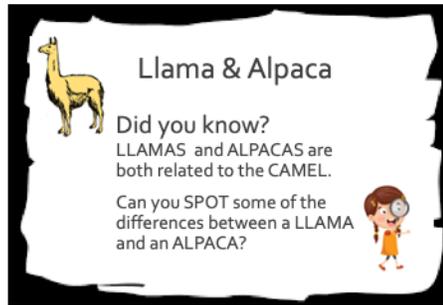
Informational signs



Using an example from the Eby Farmstead, an activity could be included that incorporates one fun fact or activity about each animal .

Image credit: <https://www.dreamstime.com/royalty-free-stock-photography-peacock-raise-his-feathers-image19036647>

Informational signs



THIS IS A
llama



THIS IS AN
alpaca

Using an example from the Eby Farmstead, an activity could be included that incorporates one fun fact or activity about each animal (e.g., Llamas can grow as tall as 6 feet!) or children can be asked to spot the differences between a llama and an alpaca (a list of key differences could be provided).

Photo credit: <https://forums.enmasse.com/tera/discussion/4894/the-new-mount>

Age-related learning opportunities

1-2 Years

- Following
- Hopping
- Imitating
- Colour-learning

2-3 Years

- Shapes
- Pretend play
- Matching
- Questions

4-6 years

- Memory
- Reading
- Animal facts

7-8 years

- Teaching siblings about the animals



One important key feature of the elements for the farmstead that we've been considering is that they present children with many different learning opportunities across different ages as a result of how children can interact and use the features.

For example, here we show some of the ways that the animal tracks and signage could provide different learning opportunities for motor, language, social, problem-solving and literacy skills across ages for children. For example, the youngest 1-2 year old children may interact in largely motor ways, trying out different ways of moving with different tracks.

Older toddler age children will be able to notice the shapes, begin to guess the animal, pretend to be the animal, and ask questions about the colours, shapes. Older preschool age children will be able to try to remember which animal they lead to, try to read the signs, or remember the fun facts. And even older children can pass this knowledge on to younger children. But all, at all ages, can have fun with the "hide and seek" and following nature of the hunt for animals.

Pathways and Archways



Presented by Emily Shiu

Pathways

- Looped pathways are associated with higher levels of physical activity
 - Children prefer circular motion over straight pathways
 - Inspires running and riding activities



Even something as simple as the shape of pathways is something that children can find to be very novel. There's something about curves that children find very novel and attractive and that promotes discovery and exploration. Curved and circular pathways also help very young children to develop motor skills, because it requires a sense of balance to be able to make turns while walking!

Zamani, Z. (2017). Young children's preferences: What stimulates children's cognitive play in outdoor preschools? Journal of Early Childhood Research, 15(3), 256–274.
<https://journals.sagepub.com/doi/10.1177/1476718X15616831>

Photo credit left: https://naturalearning.org/wp-content/uploads/2017/09/Designing-Pathways_InfoSheet.pdf

Photo credit right:
<https://www.externalworksindex.co.uk/entry/121818/URBASTYLE/Architectural-concrete-park-seating-LOre-du-Bois-F/>

Pathways



Curved pathways are a simple way to add more physical activity and stimulation for children. When there are curved or looped pathways present, there are actually higher levels of physical activity in children compared to straight paths. Even if pathways need to be straight for planning purposes, there are options you can do, such as making a more curved pathway with cobblestone or animal footsteps patterns within the straighter paths.

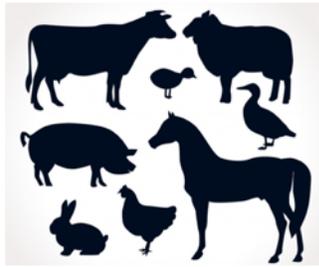
Cosco, N. G., Moore, R. C., & Smith, W. R. (2014). Childcare Outdoor Renovation as a Built Environment Health Promotion Strategy: Evaluating the Preventing Obesity by Design Intervention. American Journal of Health Promotion, 28, S27-S32<https://journals.sagepub.com/doi/abs/10.4278/ajhp.130430-QUAN-208>

Photo credit left: <https://fitt.co/dallas/articles/ride-best-bike-trails-paths-dallas>

Photo credit right: https://www.yelp.com/biz_photos/select-paving-clontarf?select=4pm-Xpm9T3oxghVajfGjpA

Entrance archways

- Archways would include hidden shapes/silhouettes of farm animals



Another simple structure type that could be installed is creatively-styled archways. The archway in blue is from the Philadelphia Urban Thinkscape project and provides parents and children an opportunity to look for hidden figures and play with the shadows created.

For the Eby Farmstead such archways could be placed at the entrance gates, or just a single one somewhere within the farmstead space. It could have animal shapes or silhouettes hidden in the design of the archway that pertain to the farmstead or even Waterloo Region. Like hidden picture colouring pages, children could seek out the animals in the wireframe!

Photo credit left: <https://youtu.be/PkXQjkqBJc> Urban Thinkscape Project

Archways



This is another example of a creative archway from the University of Wisconsin. It's a pretty interesting one in that you can see these trees, and some animals among the plants. Something like this for children can actually foster a variety of different skills, such as language skills, spatial skills, and their sense of curiosity. For example, a child might see an archway like this, and imagine a story involving the trees and animals in the scene, fostering storytelling skills.

Photo credit: <https://www.mywisconsin.space.com/2018/02/kaleidoscope-image-of-path-entrance-archway-uw-arboretum-madison-wi/>

Age-related learning opportunities

1-2 Years

- Looking at shadows
- Following adult points to animals



2-3 Years

- Finding animal shapes on their own
- Naming
- Jumping in shadows

4-6 years

- Talking about the animals
- Making up a story

7-8 years

- Helping siblings find the animals



As mentioned earlier, one important key feature of the elements for the farmstead that we've been considering is that they present children with many different learning opportunities across different ages as a result of how children can interact and use the features.

For example, here we show some of the ways that the archways could provide different learning opportunities for motor, language, social, and problem-solving across ages for children and promote curiosity and discovery.

Photo credit left: <https://youtu.be/PkXQjkqBJc> Urban Thinkscape Project

Photo credit right: <https://www.mywisconsin.space.com/2018/02/kaleidoscope-image-of-path-entrance-archway-uw-arboretum-madison-wi/>

Seating and Outdoor Classroom



Presented by Madeline Crichton

Photo credit: <http://www.laurelgardenmagazine.womensbest.ru&p=737278-16-trendy-garden-bench-under-tree.html>

Seating

- Benches give caregivers a place to sit and watch children play
- More accessible
- Benches can be play elements in themselves
 - Benches could double as sculpture elements related to park themes



Seating and benches can give parents and other caregivers such as grandparents a place to sit. For those with more limited mobility, benches and seating provide a nearby place for them to sit and watch children, and for children to be able to see them (a secure base) and yet explore on their own from a little ways away.

Benches and seating can even provide an element of play coinciding with park themes or doubling as sculpture. Instead of a swan, perhaps imagine a

llama, peacock or goose!

Photo credit: <https://ebuild.in/innovative-urban-park-benches-outdoor-seating>

Seating

- Benches could have intricate designs with things to find and talk about
- Integrated with park themes



Benches could have more traditional design augmented with detail. The designs could include hidden animals from the farmstead for families to talk about work together to find and relate to real life. This provides an activity to do even when stopping for rest or snack or for adults with more limited physical abilities to engage in with children,

Photo: <https://www.homedepot.com/p/Garden-Decorative-Outdoor-Bench-with-Animal-Band-design-HD6010-AP/206805562>

Seating

- Benches can encourage play and motor development



A curved design can encourage play & motor development. Child love to walk along curves and raised benches/walls and in doing so would be practicing balance & coordination. So benches and seating could do triple duty of function, developing motor skills , and encouraging learning through talk and discovery.

Photo credit: <http://www.laurelgardenmagazine.womensbest.ru&p=737278-16-trendy-garden-bench-under-tree.html>

Arts and culture stage

- Place for community engagement and programming
 - e.g. Burnside Park in Providence
- Stage – multifunctional
 - Music, dance, plays, story time, poetry slams, smaller talks, summer camp/school activities



In the master plan, is a proposal for an outdoor classroom, we're calling imagination station, based on an example in Burnside Park in Providence.

This area would include a smaller shed-like or simple structure along with a small stage area (that doubles as seating) and further seating (benches or portable chairs, cushions).

It would be a place for community engagement & programming on a smaller more intimate scale (to the larger bandshell area in the park). Some possibilities might be:

- Smaller music or dance events (e.g., trio or duo), children's music (e.g., Eric Traplin), informal, spontaneous events (e.g., piano available to all)
- Dramatic events (small plays, children's spontaneous plays)
- Library events such as storytime
- Poetry slams
- Smaller talks on topics of interest to the community
- Use by summer camps or education/school programming

- Anything promoting creativity and self-expression!

Photo credits: Project for Public Spaces: <https://www.pps.org/places/greater-kennedy-plaza>

Reading area and informal use

- Stage would still have functions when not in formal use
 - Outdoor reading area
 - Little free library
 - Spontaneous uses
 - impromptu use by children to put on play



Even when not in use for formal programming, taking inspiration from Burnside Park, a very popular activity for the community has been using it as a reading area for families. Beanbags are supplied from the shed structure, and there is a take a book/leave a book type program similar to Little Libraries which are dotted around Waterloo Region.

The stage area would also lend itself to impromptu and spontaneous creative and self-expressive activities, such as a group of children making up a play on the spot; musicians playing, etc.

<http://provparksconservancy.org/visit/family-programming/>

The future of the farmstead

Our proposal addresses the following goals outlined in the master plan:

- Children's play and learning
- Healthy living
- Address needs of diverse groups
- Support local art & culture
- Educational opportunities

Based on master plan section 2: Vision, Guiding Principles & Objectives, our proposal addresses several of the goals mentioned.

For example:

Goal:

- Children's Play and Learning: the whole park becomes an integrated area for play and learning rather than just a few designated play areas
- Healthy Living: the animal tracks activity, curved benches & imagination station activities promote healthy living through physical activity
- Addresses needs of diverse groups: by making signs more accessible to different ages and heights lower English literacy levels
- Support local arts and culture: many different smaller types of arts events, planned and impromptu, could be performed at the imagination station
- Educational opportunities: Signs will educate visitors about animals, reading area and imagination station would support general education, activities and exhibits (e.g., animal tracks) promote many learning opportunities

Thank you for your time and attention!

We learned a lot in preparing this material and Daniela O'Neill and students would be willing to continue to work on ideas presented or new ones. Just get in touch!

Daniela O'Neill

doneill@uwaterloo.ca

Dept. of Psychology, University of Waterloo

<https://uwaterloo.ca/psychology/people-profiles/dr-daniela-oneill>

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