

Image from PowerPoint 2022

Playful Learning at UW

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Playful Learning at UW aims to highlight areas on campus where families can spend time together and learn. Through this project we can show families within the Waterloo Region the many hidden gems on campus, and create an environment where families feel welcome to play and learn at the university.

Why Playful Learning?

Image from PowerPoint 2022

It is our hope that encouraging families to interact in locations such as this, which offer rich stimuli and value learning and discovery, will encourage conversation and language development. Early language development has been shown to have far reaching and long term impacts on children's school performance, literacy, and language. It is important to give families every opportunity for interactive and engaging conversation. Playful Learning gives families one avenue for getting out of the house and into rich environments that can spark excitement to learn

and explore together. This project highlights areas that can be enjoyed by children from toddlerhood to elementary. The two areas we have chosen to highlight within our presentation are Laurel Creek and the Earth Sciences Museum.



This area is located across the bridge from the SLC, by the university colleges. This area of campus is further from major roadways and offers an ideal location for children to safely explore. Specifically, the natural areas and wildlife in this location are one inspiration for play for children of all ages.

Amenities

- **Laurel Creek Area** highlighted
- Food options at **Funcken Café**
- Accessible washrooms
- Potential parking

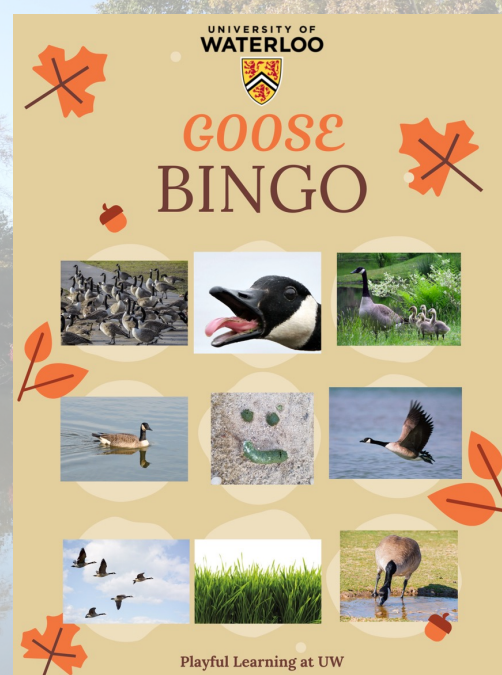


This provided map highlights an open, natural area by Laurel Creek which is ideal for families to gather in. Also highlighted is the Funcken Café, which offers families a place to rest, use the restroom, and purchase available food and drink. The St. Jerome's campus also features accessible entrances and ramps that are suitable for families using strollers. The colleges also have available parking for a small fee.

Image References

St. Jerome's University [St. Jerome's University campus map]. St. Jerome's University. <https://www.sju.ca/sites/default/files/Campus%20Map.jpg>

Activities for Toddlers (12-35 months)



Near Laurel Creek, a great activity for toddlers would be a picnic, as the location offers a lot of open space and beautiful scenery. A goose bingo has been created to give toddlers a chance to explore campus a bit further. The bingo features various geese including in a group, honking, with babies, swimming, goose poop, flying alone, flying in formation with others, goose food (grass), and a goose drinking. All of these are featured as pictures rather than in writing, so that toddlers do not have to rely on their parents to know what they are looking for when exploring campus. Toddlers and their

parents can try and get a line on the card to get bingo! If they are not able to see everything one day, they can always come back to campus again to try and complete it.

Image References (From Left to Right and Top to Bottom)

Charles Welch, "A Gander", Flickr. Accessed October 4th 2022
<https://www.flickr.com/photos/charleswelch/38771360205>

VinesauceWiki, "Geese", Accessed October 4th 2022
<https://vinesauce.fandom.com/wiki/Geese>

BCSPCA, "Help keep ducklings and goslings safe this spring" Accessed October 4th 2022
<https://spca.bc.ca/faqs/can-help-ducks-geese-nesting-roof/>

Wikipedia, "Canada Goose (Branta Canadensis)", Accessed October 4th 2022
[https://en.wikipedia.org/wiki/File:Canada_Goose_\(Branta_Canadensis\).jpg](https://en.wikipedia.org/wiki/File:Canada_Goose_(Branta_Canadensis).jpg)

Reddit, r/mildlyinteresting, Accessed October 4th 2022
https://www.reddit.com/r/mildlyinteresting/comments/6hlq63/this_happy_goose_poop/

Britannica Kids, "goose", Accessed October 4th 2022
<https://kids.britannica.com/kids/article/goose/390124>

Varment Guard Wildlife Services, "Where Do Geese Migrate?", Accessed October 4th 2022
<https://varmentguard.com/blog/why-geese-migrate>

Country Living, "The Best Grass Types for Your Most Luscious Lawn Ever", Accessed October 4th 2022
<https://www.countryliving.com/gardening/g19783061/different-types-of-grass/>

Dreamstime, "52 Beautiful Photo Canada Goose Drinking Water Stock Photos" Accessed October 4th 2022
<https://www.dreamstime.com/photos-images/beautiful-photo-canada-goose-drinking-water.html>



The other pages designed for this area are an I-spy and nature challenge. The nature challenge encourages children to spot various items and also collect them. The second activity is an I-spy challenge of their surroundings. These activities are useful for developing children's concentration skills. Having a list of simple words can guide children and help them stay focused on their surroundings, as well as give them a challenge. This is ideal for younger children or children that may have a very limited vocabulary.

For Elementary School Children



Tree Identification

Directions: Match the leaf with the tree name that corresponds in the Saint-Jerome's yard.

- Hoopsi Blue Spruce
- Red Maple
- American Elm
(EXAMPLE-Not Found in Yard)
- Swamp White Oak
- Red Oak

Images: Missouri Department of Conservation; Hydro Canada

In the green space in front of St. Jerome's, there are various trees that are already conveniently identified on plaques as shown on the left hand side of the slide. This activity allows elementary aged children to get out in nature and inspect the different trees to try to match up the leaf shape with the name indicated on the plaque, and fill out the activity sheet to match.

Image References (From top to bottom)

American Elm: Missouri Department of Conservation, <https://mdc.mo.gov/discover-nature/field-guide/american-elm>

Red Oak: Missouri Department of Conservation, <https://mdc.mo.gov/discover-nature/field-guide/northern-red-oak>

Hoopsi Blue Spruce Image: Hydro Quebec, <https://arbres.hydroquebec.com/page->

[tree-shrub/4770](#)

Red Maple: Missouri Department of Conservation, <https://mdc.mo.gov/discover-nature/field-guide/red-maple>

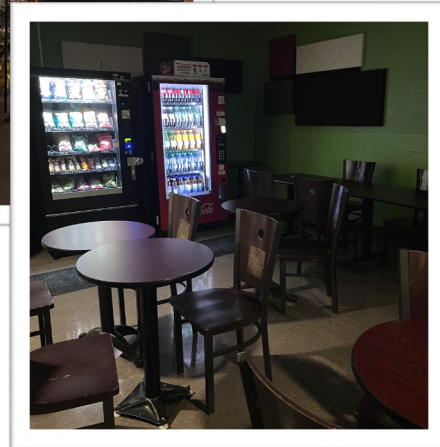
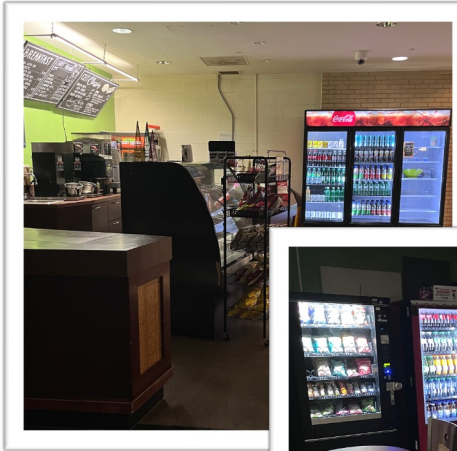
Swamp White Oak: Missouri Department of Conservation, <https://mdc.mo.gov/discover-nature/field-guide/swamp-white-oak>



Our second location is the Earth Sciences Museum. The existing exhibits here can be enriched through the additional activities we have planned for this area. The many different areas of the museum are brought into focus, and explored in ways that are appropriately challenging and fun for children of all ages.

Amenities

- Washrooms with changing station
- Café: Food, drinks, and seating
- Easy accessibility
- Close to UW ION station



This location offers accessibility for families with children of various ages. Changing tables are available in the washrooms in the museum, as are elevators and ramps for families using strollers. Food options are available on the second level of the museum as well.



The Earth Sciences Museum website offers step-by-step instructions on how to reach the museum from public transit and available parking lots. It also provides a labeled map showing the entrances to the museum. We can direct families to this information by providing the link alongside our introduction to the area.

Image References (from left to right)

Earth Sciences Museum, (n.d.). [Map of Earth Sciences Museum]. Retrieved 12 Nov 2022. https://uwaterloo.ca/earth-sciences-museum/sites/ca.earth-sciences-museum/files/styles/body-500px-wide/public/uploads/images/screen_shot_2020-02-07_at_12.25.46_pm_0.png?itok=3tijetUV
 Department of Earth and Environmental Sciences. *Visit us* [screenshot]. Earth

Sciences Museum. Retrieved 12 Nov 2022. <https://uwaterloo.ca/earth-sciences-museum/visit-us>

Activities for Preschoolers



Our first activity in this area is centered in the Dino Pit, and was designed for preschool children.

Dinosaur Detective!





Match the dinosaur to its name! 🔍

Albertosaurus
"I am the biggest dinosaur here! Can you stomp like me?"

Triceratops
"I'm the only herbivore here. " Hint: I'm the same colour as plants."

Velociraptor
"There are two different models of me. What is different about us?"


Troodon
"I have stripes like a lizard and was named for my teeth!"

BONUS!


Dimetrodon

I am from before the dinosaurs!
What do you think I used the spikes on my back for?



Can you guess?

This is not a dinosaur!
What animal do you think this was?



Images: Earth Sciences Museum

Dinosaur Detective asks children, with the assistance of parents or older siblings, to match the different dinosaurs on display with their proper name. Physical descriptions are provided to help kids match the different exhibits. This activity brings families beyond a passing glance at the dinosaurs, and encourages them to engage with the exhibits and learn together. The suggested activities, such as “can you stomp like me?” encourages families to loosen up and fully enjoy the space.

Image References (top to bottom, left to right)

Earth Sciences Museum (n.d.). [Dinosaur pit Velociraptor]. ESM virtual tour, 3DVista. Accessed 9 Nov. 2022. <<https://storage.net-fs.com/hosting/6282594/0/>>

Earth Sciences Museum (n.d.). [Dinosaur pit Albertosaurus]. ESM virtual tour, 3DVista. Accessed 9 Nov. 2022. <<https://storage.net-fs.com/hosting/6282594/0/>>

Earth Sciences Museum (n.d.). [Dinosaur pit Troodon]. ESM virtual tour, 3DVista. Accessed 9 Nov. 2022. <<https://storage.net-fs.com/hosting/6282594/0/>>

Earth Sciences Museum (n.d.). [Dinosaur pit Triceratops]. ESM virtual tour, 3DVista. Accessed 9 Nov. 2022. <<https://storage.net-fs.com/hosting/6282594/0/>>

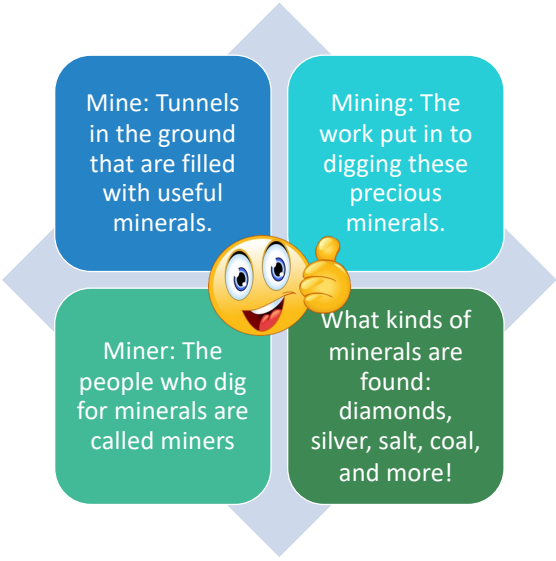

Earth Sciences Museum (n.d.). [Dinosaur pit Dimetrodon]. ESM virtual tour, 3DVista. Accessed 9 Nov. 2022. <<https://storage.net-fs.com/hosting/6282594/0/>>

The Mining Tunnel



The mining tunnel in the Earth Sciences Museum is a child-friendly area that is good for pretend play for preschoolers. There are infographics that are displayed on the walls before entering the tunnel that could be used to inform kids and parents on a general background of mining and what it is.

**Mining:
What is it?**



Mine: Tunnels in the ground that are filled with useful minerals.

Mining: The work put in to digging these precious minerals.

Miner: The people who dig for minerals are called miners

What kinds of minerals are found: diamonds, silver, salt, coal, and more!

Images from PowerPoint 2022

Here we provided a bit of background knowledge on mining for kids that they can explore before going to this area. This quick and easy teaching on mining can help parents come up with questions for their children, which can help to encourage conversation. We came up with a few suggested questions which we will show in the next couple slides.

Become a miner and explore with us!



What do you think these carts were used for?



What kinds of things do you think a miner would find?



Images from PowerPoint 2022

In this area, parents can suggest to their kids to pretend to mine or be a miner. In the bottom picture, we see mucking carts towards the end of the tunnel. There are a few questions that parents can ask their children in order to influence or push their imagination when it comes to pretend play. A few suggested questions could be:

“What do you think these carts were used for?”

“What kinds of things do you think a miner would find?”

Become a miner and explore with us!



(cont'd)

“What tools will you need to become a miner?”

“Imagine yourself in a cold, dark tunnel. How does that make you feel?”

These questions can spark conversation between children and their parents, and may introduce new words to their vocabulary. These prompts allow children to think about and explore their own feelings and personal experiences.

There is also equipment on display that children can explore and use as props for their pretend play. One example is the detonator at the end of the hall,

which is available for interaction and sounds a loud boom when pushed.

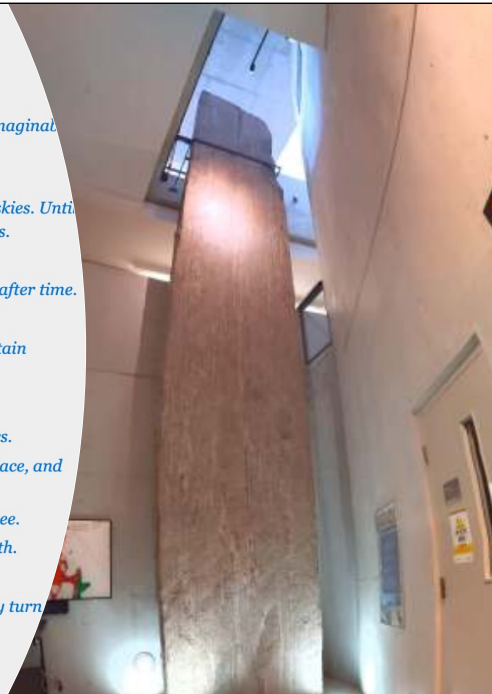
Explore the Rock Displays!

- Can you find the biggest rock in the building?
- HINT: The building was built around this rock!
- Take a picture with it and tag @u.waterloo on Instagram!

The Rock

*I was created ...
over 1,000 million years ago.
Movement of elements and compounds; under unimaginable
forces of heat and pressure.
Deep in the Earth.
The mountains, snow-capped, stretched to the skies. Until
they were scattered, to the winds and the seas.
Seas wherein dwelled strange animals,
perished and vanished, in cycles repeated, time after time.
For aeons of aeons
I remained hidden. And, finally, another mountain
... of ice ...
exposed me to the stars.
A cloak of earth shrouded me for 10,000 years.
Again I was revealed, torn from my resting place, and
transported.
Now, I stand in an unnatural place, for all to see.
A pillar of time, one quarter as old as the Earth.
A monument.
The forces that shaped our world. And I wait, in my turn
return to my origins, In the cycle of life.*

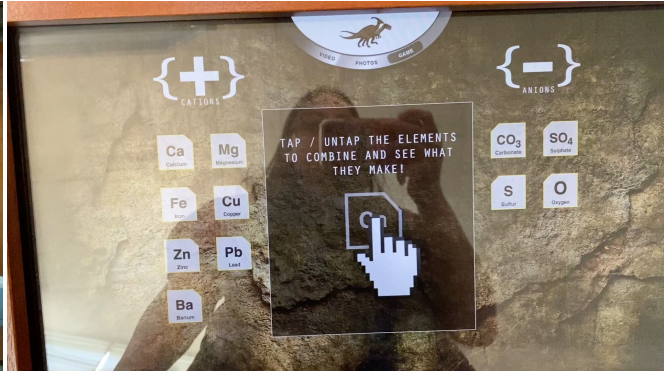
Alan Morgan



This activity suggests an open ended prompt: “can you find the biggest rock in the museum”. This will allow children to freely explore the museum, comparing different rock sizes and discovering different areas of the museum. A hint is provided for if they get stuck, that the building was actually built around the biggest rock! Once they find the Gneiss monolith, there is a poem which parents can read to their children and engage in a type of “book sharing” activity. We have also suggested that children take a picture with this rock to compare their sizes and tag @uwaterloo on instagram.

Explore the Rock Displays!

- Combine elements on screen to create different rocks!
- Can you find the rocks you created on the display?
- Do any of these remind you of rocks you've collected?



There is a tablet in the Earth Sciences Museum that is low to the ground and perfect for children. Here, they can combine elements to create different rocks, as demonstrated in this video. This activity suggests that children combine elements and then search for the rocks they created on the display. If they aren't yet tall enough to see some of the rocks on this particular display, there are tons of other rocks displayed at lower levels throughout the museum for children to observe. The final prompt, "Do any of these remind you of rocks you've collected?" has children think back to their previous

experiences and make connections to what they are doing right now.

For Elementary School Children



EARTH SCIENCES MUSEUM

GAME SHEET: WHAT AM I?

Hint: Use the digital touch screen to help!



1. I am a green rock, with many cool designs on me. I start with the letter M, and am made up of COPPER and CARBONATE.

WHAT AM I? _ _ _ _ _

2. I am a white and colourless rock, and you can not see through me. I start with the letter B, and am made up of BARIUM and SULPHATE.

WHAT AM I? _ _ _ _ _

3. I am mixed with different colours, usually bright red or orange. I have many streaks, and start with the letter Z. I am made up of ZINC and OXYGEN.

WHAT AM I? _ _ _ _ _

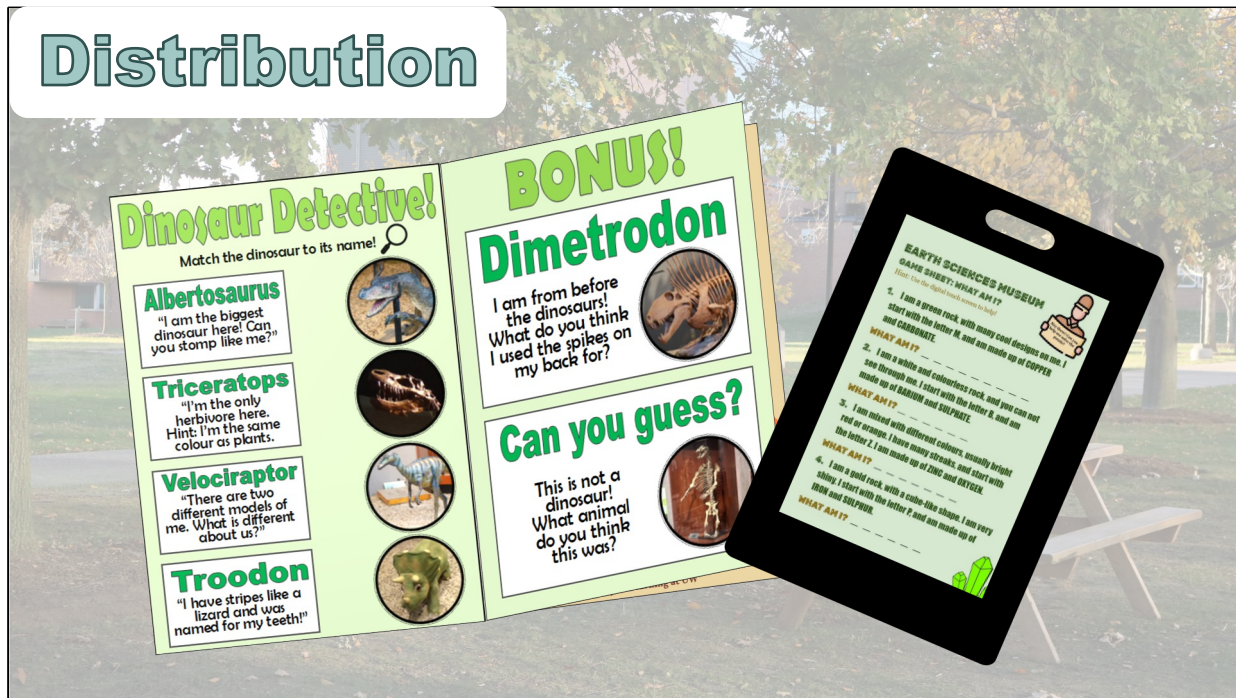
4. I am a gold rock, with a cube-like shape. I am very shiny. I start with the letter P, and am made up of IRON and SULPHUR.

WHAT AM I? _ _ _ _ _



For children in elementary school, we created a guessing game called *What am I?*. It is composed of four prompts in which one has to guess the name of the rock. This game sheet can be completed using the digital tablet displayed in front of the rock displays. This activity allows children to explore new knowledge, and can also encourage children to ask questions related to the things they've learned or would like to further explore.

Distribution



We hope to have our planned activities distributed in two different forms: a small booklet and a webpage. The booklet would allow families that are not aware of the project to use our materials on a trip to the university, and bypasses the concern that parents may not want their kids to play with their devices while out. Having the information online as well ensures that it is available from home for families to plan their days before arriving. The physical resources could be distributed in the Earth Sciences Museum and in buildings by Laurel Creek, such as the St. Jerome's Academic Center and

Student Life Center.

Conclusion & Next Steps

- This is only the first step to inclusivity!



Image from PowerPoint 2022

These are just two of many rich and engaging areas that families could be invited to enjoy on campus. Providing these activities to get families engaged with their surroundings is one avenue to get parents talking with their children, and creating memories that can be called back to years down the road. This project, however, is just the first step toward making campus a family-friendly environment. If we hope to reach families all across the Waterloo Region, there are a few extra programs we could put in place.

To begin, we could incentivize families in

need to use the learning resources we are offering by ensuring that their children get a healthy snack if they come to visit. Many grocery stores offer fresh fruit to children while they shop, and a similar program could be devised on certain areas of campus where families can spend time together.

Further, parking costs at the University can range from \$2-\$10 and may dissuade some families from visiting. The alternative of public transportation in the region does not save much, as a trip to the university and back for just one parent would likely cost \$6.50. One way to bypass this would be to set up a “free parking for families” system. On certain days, families could park in designated lots for free, encouraging them to make the trip out.

Finally, our choice of outreach regarding this project is important in order to reach the Waterloo Region as a whole. Advertisements on the university’s social media or webpage may not be accessed by those that are not already involved with the institution. It is important to extend our reach by advertising within public spaces used by all, such as libraries or childcare centers.



Thank you!

That concludes our presentation today. Thank you all for being here and listening to our ideas. We are happy to take any questions you may have.