

# Welcome to the Ozhaawashkwaa Animikii-Bineshi Aki Onji Kinimaagae' Inun, the Blue Thunderbird Land-based Teachings Learning Center, or the Aki Center for short.

Throughout the winter and spring of 2021, our grade 8 class has been investigating water and ecosystems health, access to clean water, and the role that water plays in our lives as humans. We've learned about how water is life for so many reasons. Another topic has been how prehistoric times and the rise of civilizations, have impacted where we are today. We were interested in how the land has changed so vastly over time, and here we are in the year 2021 making efforts to restore it as it could have been thousands of years ago.

Through a variety of sources such as teachings from Elder Dan, Alex and Alexis at the Aki Center, and Waterlution (a national water organization), we've also become interested in how storytelling shapes how we relate to the land and each other.

This is a tour of the Aki Center that looks at the special role each of the places here has on our prairie ecosystem. Our learning looks at where we've come from, and where we are going. There are 18 stops in total. We encourage you to spend time at each one, or visit a few every time you come!

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**You can follow the tour using any of the following ways:**

- **Bring this paper copy with you**
  - **[Google Maps](#)**
  - **Use a QR Code detector to hear us tell you about each special place**
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## I: Welcome to Seven Oaks School Division land-based teachings (by Jake)

*The Great Plains are a vast expanse of tallgrasses and fertile soil located in central Canada and Northern U.S.A. I thought that I would tell the story of the landscape's history, but I'm going to tell it in a way that will make you say "What am I looking at?" We are going all the way back to 4.5 billion years ago in the past..*

*I'm bored.*

*I'm all alone.*

*I have no one to talk to.*

*I'm lonely here all by myself, everything else is smaller than me, I have nothing to do.*

-Said by Zeeb, that's me!

*(TIME: Exactly 4.5 billion years ago.)*

That was said by me, 4.5 billion years ago, before I found out I had a special power. I looked at the planets as I was lounging in a nebula and threw an asteroid at it, and it blew the planet up! I had immense power that no one had ever had! I decided to create a place full of tiny people, like me, but smaller so that I could observe them. I took a big rock and shaped it into a ball that I called earth. It was difficult and took a while! I ended by throwing some asteroids with a collecting of my spit, so my people could drink to survive.

*(TIME: When Lake Agassiz was created.)*

I left for about... I think it was a few days, and I came back to find Earth had turned a shade of blue! The wildest part was that this one area was like a lighter shade of blue, in the part where it was coldest, and it seemed to be rock hard! It was like the asteroids caused a chain reaction that had almost flooded the earth into a big blanket of what used to be my spit! I called my spit "Water", and the solid version of the Water "Ice." I wanted to know what happened if it broke, so I tried heating it up with my breath. I kept breathing, and the ice melted from the top of the mountains into some kind of really big pool! As it drained into pools, it looked like a network. The weird thing was how it inexplicably all went to the exact same place: it would always end up in the really big blanket of water, which I called an 'Ocean.' I would later find out that this network was named 'Lake Agassiz' by the people who I found out would live there. This Earth was a wondrous place of beauty! The last thing I did was throw a single lock of hair into the ocean, and I left for a second time.

*(TIME: Around the period when people crossed the bering land bridge.)*

Many many years later, I returned to find that Earth had changed AGAIN! Am I causing a chain reaction or something? I noticed these two-legged creatures who littered the Earth and lived everywhere I could look. Some of them even crossed over on to where there used to be that giant network of water! I was surprised, the entire earth wasn't flooded anymore, it was like everywhere

you went was different than what it had been! The southern part of my network had become a sunny landscape of tall, golden plants that looked like my hair. I also noticed how the soil was very rich in many kinds of nutrients, the smallest of life. I wondered if these nutrients would be useful for anything later on. I tried to study how everything worked, and I found out something: Whenever water flowed through the “grasses” (what I called the hair-like plants), the grasses filtered the water in a way. It ran through these wetlands as it cleaned itself for the creatures to drink. I started to understand that the reason Earth was so different was because it was like a puzzle who has a solution for everything in a way. It had built natural ways to solve its own problems, without me! I was finally happy with my work, so I took a nap. After the nap, I tried creating some more earths that were a bit far away. I did get stuck however, and it took a while for me to find Earth again...

*(TIME: Present day.)*

I found that people had become both smarter and sort of more stupid at the same time: They knew way more than they had already known, but they were also building their houses and cities over the places that were supposed to make sure that this place is clean. I mean, there are at least a few people that do indeed know the purpose of the grasses and the ‘wetlands’, so there’s that! These people try to often get their peers to preserve the Wetlands, which I hope grows as much as the grasses. However, I got a bit mad after I found out what these people were doing, so I flicked the earth with my finger. (This may have caused a pandemic to spread and a volcano to explode here and there...) Currently, that’s about it!

I’m still watching what they’re doing, but I can’t intervene because I’m too big and would cause destruction if I tried to fix anything. Speaking of which, there is one thing I would do more if I could start again: I would try to make sure I would stay right next to earth and I would guide the inhabitants to make sure that the people would know I exist, and restore the world back to the beauty and balance it had once been.

## 2: The Aki Center (by Kasey)

Walking into the Aki centre, natural light shining through the windows with a fresh smell of wood. The Aki centre is an enjoyable place that is here to help students learn the importance of environment, nutrition, and agricultural production. The Aki centre doors opened in April of 2019 by the Seven Oaks School Division. Many people find this building very calming and fun to be in. It is also very important because land based learning centres are proven to help mental, physical, and spiritual health. Our class has spent lots of time here, and we like how calm it makes us feel.

This is partially a green design building which is fantastic for the environment. You may ask “why is green design so good for the environment?” Well you see green design is an incredible thing

because it not only reduces negative impacts on the environment but it reuses resources to help minimize waste. The roof is on a slant so they can put solar panels on in the future. Solar power systems create clean and pure energy from the sun. Also you may notice the roof on the south side of the building has an overhang. In the summer the overhang helps block the sun to keep the building cooler and in the winter it lets the sun shine in to help the building stay warm. As you can see this building is unique in so many ways. Feel free to continue to look around.



### 3: The Student Gardens (by Maro)

Just imagine a world without gardens. We wouldn't last very long, as gardens and agriculture have allowed us to grow our own food in big amounts. Gardening and farming have been on Earth for thousands and thousands of years. New research shows that humans started farming actually 23 000 years ago. Before we were hunter-gatherers and spent most of our time picking or hunting for food. Civilizations formed because people had to stay put and tend to their plants. Gardens and farms in Ancient Egypt, BCE, were used even though they didn't have tonnes of water, but most of them were set up along the Nile River.

Fast forward thousands of years to today. Gardens are important today for growing and connecting to land. It is important for us to see nice fresh plants. And that's why there's the student growing area here. This site is a very unique spot. It has a lot of cool plants and can teach you a lot about the environment. In the summer, the gardens have many different plants. Students from the division plant many different things like shrubs, lettuce, kale, yams, and many different Indigenous plants.

This area can benefit our community in many ways, like helping us learn to plant, make us want to eat healthier, get us to buy and eat locally grown food, and motivate us to do things that help out the environment. Just imagine you went back in time to the agricultural revolution and saw the differences in our gardens from then and now. I think that would be pretty cool. Our farms are probably a lot bigger now because of technology. But I bet this garden could look a lot like what they would have been when agriculture was invented—small, local plants and feeding community.



Having Indigenous plants and food gardens can benefit the environment a lot. They help plants get a safe environment without being destroyed, they provide clean air, and they collect nutrients for the soil. Overall gardens are just a very good spot for a plant to be. Just imagine you were a plant in an ecosystem that's falling apart and needs help. You would want to live in a place like these gardens where it's much safer and helps you live longer and help plants be treated right by us humans.

#### 4: The Firepits (by Brady)

Almost all of us see a fire pit and immediately feel happy. Sitting around a fire with friends and family sparks a good feeling for most of us. Fire Pits may seem very boring and just a hole in the ground but it is actually really useful. The first fire pit was used in the paleolithic period. That was around 2 million years ago. In history, the discovery of fire helped humans develop our brains. It allowed us to cook some foods that we couldn't eat raw because of bacteria. Fires also helped people live a long time ago because fires kept people warm and did not let them freeze. Now we use them more for having fun or cooking food when we don't have electricity.

Fires were first made and they started by lightning hitting the ground. There is an important Anininabee story that shares how the raven invented fire by taking a branch and going to the sun and bringing it back to Earth. So when you see a Raven, thank it for the fire.

When you are around fire it is important to be safe because they can get out of hand. The most dangerous fires start from an earthquake. Lots of fires start when the grass is very dry, so make sure the fire is cleared from brush. It can spread incredibly fast. Did you know that there are 4 types of fires that have different purposes and dangers? The first is a fire made from wood and paper, and second is a fire that includes flammable stuff such as Diesel and gasoline, the third is involving gas such as propane and the fourth is a fire using metals.

The fire here is used for storytelling, the cook food and learn about our history, and to feel like we connect with each other. It is so much more than a hole in the ground!

## 5: The Passive Solar Greenhouse (by Hanna)



Walking in the greenhouse, you smell the fresh scent of damp soil and the dewy, moist leaves. It is winter on the prairie, yet feels like summer in here. The temperature heightens because of the weather control used within the house. Looking all around, you see many kinds of different plants that can't be outside just yet, because of the cold or other varying weather conditions like rain, hail, and wind. This is called a 'Passive solar greenhouse' and it collects solar energy and stores heat from the sun to use at night or on cloudy days. It uses heat-storing materials to retain maximum solar heat in the winter. To store heat, people can place rocks, water, or concrete in line with the sun to absorb the heat. This means that in the summer, it can feel tropical in here!

You may think, "who uses greenhouses, and why is one at the Aki?" The answer is, a lot of people! In Manitoba, greenhouses can allow us to start plants early before putting them in the ground, and to grow even when the ground is still frozen. Even George Washington had one in his home to grow pineapple and serve it to his guests. As you see, this greenhouse grows kale and lettuce. The reason greenhouses were invented in the first place was to grow and feed a Roman emperor a

cucumber-like-vegetable all year round. Thousands of years ago, they put a clear material over a cart to trap the heat in from the sun. Of course the technology isn't what it is like today but that was essentially one of the first greenhouses!

Solar heated greenhouses ideally face south because that is where the sun's energy is the strongest. The south wall is made of transparent material to let the sun shine in. The north wall is not transparent at all and will have the heat collecting items to store solar energy throughout the day. Sometimes there are reflective materials on the north wall to reflect light back onto the plant and soil.

Passive solar greenhouses are great for the environment because they use solar energy instead of electricity like lights and other weather control. It also means that our fresh food travels less, so we don't have to get everything from California. The plants in this greenhouse eventually end up in the gardens here and at our school. Can you imagine if every house, or every school, had a greenhouse? We could eat cucumbers every day! I encourage you to take a look at your home or school to see if a greenhouse could work- even if it means growing food on a cart.

## 6: The Compost (by Ava)

As you look around, you may wonder what this giant spaceship is doing here. It's actually a biovator- a big machine that turns our food waste into compost. Do you compost at your school or at home? Some composts happen in smaller containers or backyard bins. Whatever the size, they are all important to reduce waste in landfills.

Composting can help with a lot of things. It can help farmers and gardeners plant and farm, by adding nutrients to the soil. Composting has been a big thing for a long time. Farmers and people who would garden would use compost in soil and other types of things to help grow their plants and crops. This kind of farming was actually first recorded on clay tablets in Mesopotamia back around 2300 BCE! It's also been recorded from way back in Ancient Greece, Rome, Egypt, and China, as well as by Indigenous groups here.

This compost machine is called a Biovator. A Biovator is usually made of a type of metal or steel. Biovators can be very expensive and cost a lot, considering it's made out of different metals. But the good thing about them are that they are very easy to use and good for the earth. Like instead of just crushing waste on your own or having it burned in a landfill, a Biovator will break down food then it will be turned into compost.

In Manitoba, 40% of our waste is organic waste, which is mainly leaves and yard waste, food waste and wood scraps. These materials are collected around the school division and brought here. So you put all your fruit, waste, peels, stems and any vegetables into it and out comes good compost!

Composting is also very good for our earth and the ground. It can help things grow faster and better for gardening and farming because it fertilizes the seeds.

You can learn more about composting online if you want to do it in your classroom or even at home. In our class, we have vermicomposting, which means that small red wiggler worms turn our food waste into rich nutrient soil! So we should all start composting more often to help out our earth.

## 7: Sweat Lodges (by Grayson)

In front of you is a very sacred space for Indigenous peoples on Turtle Island and here on Treaty One, called a sweat lodge. A sweat lodge is a dome-shaped structure made out of large branches and canvas, where heated rocks are added in the center when ceremony is happening. A sweat lodge is important because it is a spiritual and cultural place. They are used to connect with the creator and nature, and a place to restore balance in your life. It is a place where people come together.

Aki means land in Ojibway, but each sound also means how the world is visible, constantly separating and coming together. Elder Dan Thomas says, “so the world is fully visible. The land is separated from the sky. You see water separating from lakes and rivers (by evaporation) then regrouping as clouds, separating as rain, regrouping as rivers and lakes. Birds separate from trees, from water and fly. They are seen in action. Grass is growing, the elements from the earth are visibly seen separating and regrouping as stems and leaves. The sun is visible as it separates from the eastern horizon and travels across the sky to regroup with the earth in the west as it sets. Everything is alive and is seen in action. This is who Aki is.”

Sweat lodges are built by digging a hole and making a place in the center for the heated rocks, called Grandfathers. Large branches are curved over the hole, then canvas is placed over the wooden structure. During ceremony, Grandfather rocks are heated by the fire, and boiling water is poured over, sometimes with medicines, to generate steam and increase heat. They benefit people because they cleanse your body and spirit, boost your energy, and relax your body and mind. If you were to go in a sweat lodge you would spend around 5 hours there with a knowledge keeper guiding you through it. Sweat lodges have been a major part of Indigenous communities on these lands for a very long time. They are important to Indigenous communities today and they symbolize cultural resilience.

## 8: The Tipi (by Kyron)

Towering over you is a tipi, one of the oldest structures that still is used today in Manitoba. This is about everything you need or want to know about tipis. The tipi was made to be a portable shelter



way before the world was as connected as it is today, around 10,000 BCE. This was when people were more nomadic and moved their homes more. The tipi was very important because it was easy to take down and put back up, and Indigenous people needed that because they were always hunting for food. The tipi was made out of usually 15 poles to make the shape of a cone then buffalo hide would be placed all around to then be tied up the poles to create a sheltered tipi. The tipis source of heat would be a firepit near the entrance so that whoever was staying in it could sleep at the back without having the worry of getting lit on fire in their sleep.

The tipi was built first by Indigenous groups such as the Cree, Ojibwe and Dakota in the Northern Canadian prairies. The tipi would usually be placed in grasslands and would always face east because of the strong winds coming from other directions. Tipis are shaped like perfect cones but traditional tipis are more leaned back, so like a deformed cone.

The smoke that goes up the center hole from the fire represents our prayers getting sent up to our creator. There are 15 poles total that represent the full circle of the year: 13 moons and 2 poles for night and day. Tipis were used lots all the way up to the 1800s, because that is when other sources of shelters were being made.

## 9: The Tree Nursery (by Gabe)

Welcome to the tree nursery, where a diversity of trees grow and will eventually make their way to our school yards. This story is titled, "A Tree's Journey".

I remember the first day that I became a growing seed; it's actually the first thing I remember. It was my first time breathing in the fresh soily air. Fast forward 2 weeks and I was growing roots. That's when I knew that I was becoming a tree. While just a seedling, I already anticipated fully growing fully because... how cool would that be!?

Fast forward 3 weeks and I grow a stem to collect and store nutrients from the sun- these can be useful in the future, sort of like how having a good breakfast can keep giving you humans energy throughout the day. For a few days I just chill in the soil, breathing in the CO<sub>2</sub> until I start growing leaves, which feel a bit painful and uncomfortable but think, "I'll get through it." When I was planted a few weeks ago, it was late August, therefore that means it is now fall. Fall is not the best season from what I have heard from the other trees, but it doesn't seem that bad... until I started losing my leaves. Before the leaves started falling off, they changed colors, a few brown, some red and the rest were yellow. I guess that means our days are getting shorter now.

During the process of my leaves leaving my body I saw that the other trees were very calm and collected. I was over here stressing out thinking, "I'm going to die!" As the weeks went on I realized I was getting bigger and bigger, trying to get as strong as I could before the ground froze. The

weather was getting colder and colder, but thanks to my growing trunk it was bearable. The other trees assured me that I wasn't going to die, just going into a long sleep.

My winter nap went so quickly I didn't even notice it ended as spring arrived! There are a few signs that it came: the snow turned to rain, the flowers started blooming and my leaves began growing back. It all started with these tiny green buds sprouting off my branches.

It has been a long time since I was planted. As time goes on, I see other trees from this place that I call home be taken away. I have always wondered where they went until it was my turn. I see more of my family being uprooted from our home and loaded onto this box like thing. Just when I think most of my friends are gone, I feel something that I have never felt before, it was movement! I am being moved into a container screaming for help, but no one hears me. It is dark. I communicate with my friends asking them where we were going (yes, we can talk through our roots), but they know as much as I did. Nothing.

We finally arrive at our destination and I am delightfully surprised. We are in a big field with human seedlings running around. I get planted back into my new soily home, a place I will be forever. I feel like my uprooting was a dream, even though I don't know where I am exactly, I feel safe and at home with hearing laughter all around me.

It is now summer, many years later. At this point I am growing really tall at quick speeds and I can also support heavy weights. There are a mix of children, tiny humans with little roots and branches. Some are using me as a hiding spot, and others using their imaginations as they run around me. Finally, you have the one that climbs me which really hurts, to be honest.

It is fall again, and I am much older. It has been years since was brought here from the Aki. The falls and winters have not been as harsh as they used to be, I was told from the Elder trees. I feel like I belong here now, as I grow stronger and watch my seeds dance in the wind. I take a big breath of carbon dioxide from the sun, and exhale oxygen so the human seedlings can grow too. I feel home.

## 10: Eco-buffers (by Marco)

What you see in front of you may look like a couple of trees. But it is so much more. Imagine ten years from now, where you're standing, you'll see a beautiful wall of trees protecting you from the wind, and providing a healthier ecosystem. Eco-buffers can play a big role in nature and I'm here to talk about it. Hello, I'm Safari Gym and welcome to the Aki walking tour stop at the Eco-buffers. I will be starting with what ecobuffers do. The eco-buffers house many Indigenous plants and trees. Because of this, it attracts wildlife, including tiny insects, birds and other wildlife. Eco-buffers are biodiverse because they have many different trees therefore different plants and animals.

## 11: The Bus Depot (by Anthony)

Welcome to the Seven Oaks Transportation Center, the place where all our buses are serviced and parked. The bus depot is the main building here and stands out because it was the first thing built. I live down the road and remember when this place was just a field and now look at it. It has come a long way. Now the Aki Center is here to bring in so many people who don't know much about the land, like me. At first I remember thinking, "I don't really care about the earth and low prairies and wetlands." But now I do thanks to the people here.

I really like that the bus depot is on the outskirts of the city. The old bus depot was really in the way in the city and now there is so much space. The old place was really beat up and didn't look pleasing to the eye, but this one sure does.



The buses that we currently use are diesel and gas, but there is a growing movement in schools to have more sustainable transportation. This means using more renewable resources and less fossil fuels. One option is electrical buses. Could you believe how much electric buses cost compared to diesel? The biggest problem with diesel is using the batteries and fossil fuels.

The very first bus to be invented was in 1886 they were called school trucks. I was told how many buses are at the depot and around 30-50 take thousands of kids to school every day. Buses have two batteries and are hard to start when it is cold. Can you believe they still can run on days when it hits -50 degrees celsius!?

## 12: The Trails of the Aki (by Marc)

*In front of you here are 3 km of trails that weave in and out of tallgrass prairie, ponds, gardens, hills and ditches. Right now is early to start to make the ecosystem healthy again, but in years from now it will start looking like it did after the last ice age. Here is a story to get you thinking about the place from the perspective of a deer.*

One day I was just sitting in the tall thick grass in the bush after almost getting attacked by a grey wolf. I was just sitting there until the wolf came back and he was about to take me to his pack. Just when I thought that I was a goner, this old farmer in a big tractor came by and got out of the tractor and rustled through the bush to come and save me. He brought me home and fed me and gave me a place to stay in his barn.

When I got all better and my wound went away, the man told me this: “I don't know if you can hear me but can you promise me one thing? That you will look after the fields ‘till the day you die.” He seemed worried about the prairie, about me, but also about the wolf.

After that I went and left his barn and I decided to keep his request. I sat there and watched over the huge field. One day I chose to go for a walk through the forest along the river, called the riparian. I saw all sorts of things. I saw the cities, lakes and all the people. Just when I was heading back I could not find the path I took, I was searching for a way home for hours upon hours. Just when I thought I found it I looked and I was just going in circles! I was lost!

Years passed as I tried to find the tall thick grass that I called home. One day, I emerged into a huge field and I saw that there was a bunch of prairie grass on the fields- yum- and a bunch of trails through all the fields. I saw kids walking and biking down the trails. I took a little walk around and saw that there were a bunch of gardens full of big bluestems and goldenrods. I went a little further and I saw even more trails that felt like they went on for eternity. The fresh air calmed my heart. Where was I, with all of these smiling humans?

I realized that I was back where I started, home! I walked a little further and I saw a bunch of trees and a greenhouse with thick air to keep vegetables warm. After all my years of trying to find my home, so much had changed. I thought to myself and I realized that all of this was probably for the better because all of the human kids could get outside and have better immune systems. I started walking away from all of the grass and trees and looked back and said to myself, “this is what the old farmer would have wanted. He would be happy that everything is alive.” I smiled and walked away, as the children watched my silhouette fade into the sun.

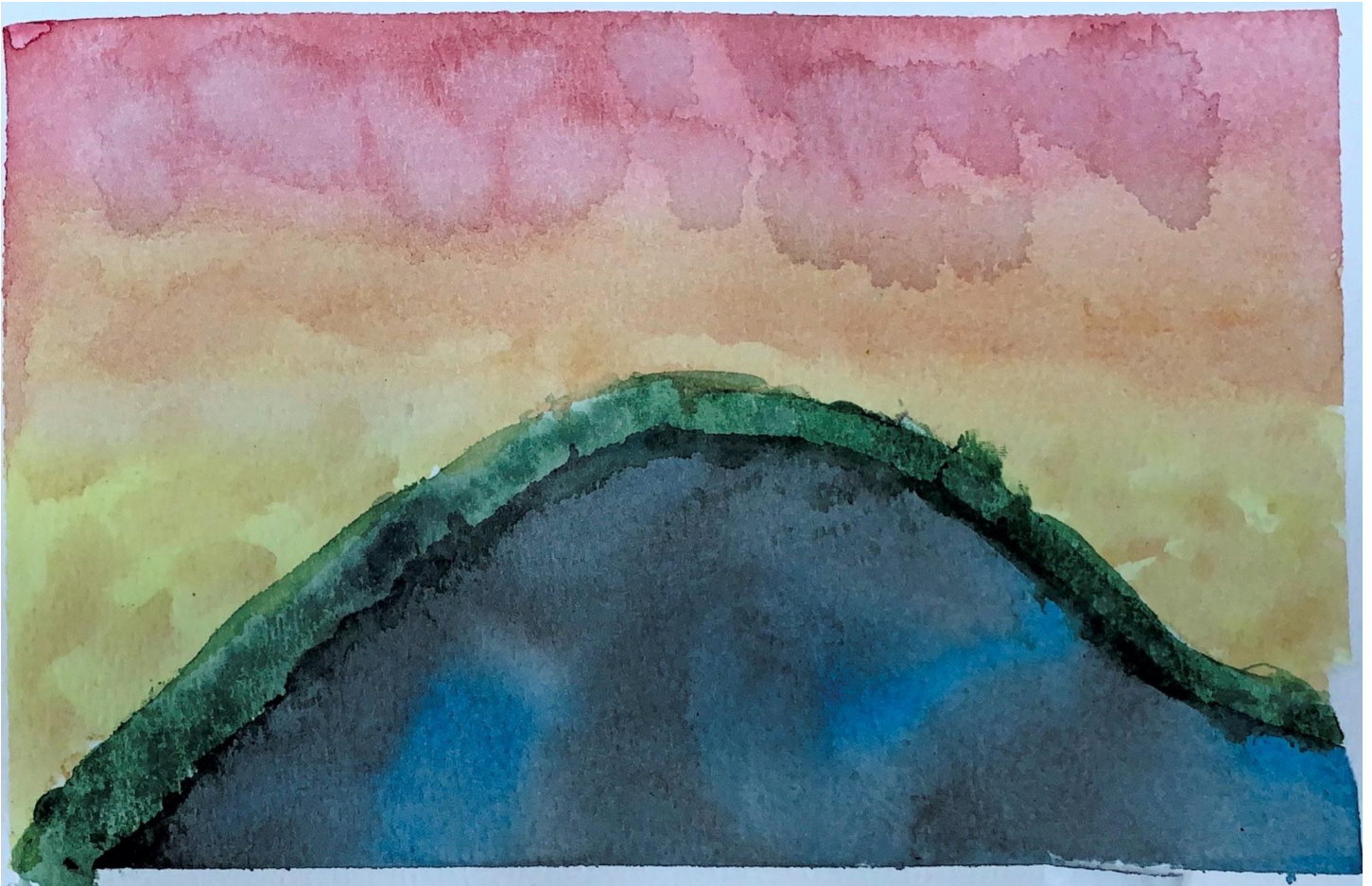
### 13: The Hill/ Mountain (by Tatyana)

The hill before you is one of the most popular places at Aki. When most of our ground is flat, many of us flock to a hill in any season. This hill makes the land more interesting and is a place for us to toboggan in the winter and roll down in the summer. The top is relaxing in the summer because you can hear the wind more, and the sound of the city is softer. It is a place where you can be open-minded and think clearly, while the wind blows in your face and the warm heat beams down on you. You can really feel peaceful and alone up there.

In the winter, imagine many giggles and rosy cheeks as kids like to toboggan down the hill, over and over and over again. Tobogganing, or sledding, likely was first started in the Arctic by the Inuit peoples. The purpose was to transport people or materials. Dog sleds were a method of transportation and some archeologists expect they go back to 1000 CE. Now, toboggans are mainly used for having fun!

If there was no hill, what do you think you would see? There would be a flat space there, with more prairie grasses. Hills are not just fun but also good for the earth because it holds all this moisture in it from water run-off. One big thing is that the hill and the open prairie field keeps the animals around and their habitat.

The hill is made out of the mud that was dug out when creating the water retention pond. The top of the hill is the windiest place here. Go to the top and see if you can feel it for yourself. Can you guess why?



## 14: The Migratory Birds (by Evan)

As you walk around you may see that the pond is home to many species of birds that migrate over the winter. Even if it is winter, you can still imagine how busy it will get in the spring. All types of birds live in the pond all live here. The pond is a place for sustainable life. A pond can provide food for birds and clean water as long as the pond is clean.

The water is always still and calm and a pond is a safe place for birds to make a nest, lay eggs and grow baby birds. But when winter comes they need to fly south because the water freezes and they need open water. Then the birds fly south to find open water.

The birds that had no babies travel back north in summer and the ones that did have babies will stay until the baby birds can fly back. When birds migrate they use the earth's magnetic field to determine where they are headed. Cool fact- In World War I and II they would use pigeons to send messages behind enemy lines back home and to other platoons.

If you didn't know why birds come back north to be in Canada it is because the birds need to. Nutrients are here to grow their feathers and make their wings strong. After a period of time birds feathers start to fall off and they need to grow some more so they come back and eat the nutrition they need. The pond is a safe haven for birds. See if you can walk around and find a fallen feather.

## 15: The Retention Pond (by Allie)

Hi my name is Doug, I am the mallard duck that lives at this pond and I heard there was going to be a tour coming around so my job today is to tell people about my life at this pond. There are many different types of pond but the one we live at is man made retention pond. It all started years ago at this very pond when my 4 siblings and I were born. When us 5 were born our mother and father left us one day to get some food but never came back so we were left all alone and expected to live on our own. We weren't sure where we'd live because more and more giant buildings were going up around us.

It wasn't until these weird two legged walking creatures came over to our pond and gave us more clean water and a good looking piece of land that surrounded our pond. The land around us had very tall green grass with tiny insects and plenty of trees that we could walk around. Our life has been very different from the day we were born to now and it all started when new people came and gave us a better place to call home.

Other than us ducks there are not a lot of other animals. The only animals that come around some times are geese that end up pooping everywhere (including our pond itself!). We also see rabbits, coyotes and even deer. When I was born my mother and father told us ducks that if we didn't like this area because it wasn't a good place for us to live, then we should stick together as we search somewhere else that has plenty of clean water, natural habitat, and safe from predators. They said that if we all stayed together then we would be able to walk to a better place with plenty of food, like seeds, roots, bulrushes and mosquito larvae... I hear that those two-legged don't like mosquitoes, so they are probably happy about that one.

About three years ago we were considering it, as more buildings went up around us, until the humans came along and protected the land around us. We have clean water to drink, clean air to breathe, and all the critters that we Us ducks are very happy that these humans gave us this chance to live a happy life, and now we are happy to share our home with them, and all of the other creatures around us.

## 16: The Remnant Prairie Ditches (by Zach)



In front of you is a ditch. At first you would think nothing of it but there are actually over 60 different indigenous plant species in this very ditch! Ditches are home to most indigenous plants in Canada. It has been burned which is helpful to promote more growth and better soil cycle. It also can kill off serious pests and diseases. Also to redistribute seeds among the field. In this ditch you may see a stiff goldenrod, which is yellowish. Stiff goldenrod thrives in all kinds of soil and can survive even really cold winters. It is also nectar for pollinators like monarchs, my favourite butterfly. In any season, how many different types of plants can you find? Can you find seed pods?

## 17: The Water Table (by Sam K)

Right now under where you are standing, below the grass, the soil and the rock, is a body of water. That is called a water table, and it is apart of many, many other bodies of water in something called a water shed. No, watersheds are not little sheds that have bottles of water. They are a system that connects mountains to creeks, rivers, lakes, ponds, and eventually, the ocean. In fact watersheds are everywhere and they are huge. Can you guess how big the watershed is that you are standing on?



It is over 1,000,000 KM<sup>2</sup> and it covers many provinces and the States.

So what do watersheds do? Well it funnels water underground called aquifers, and over ground through rivers and creeks all the way to one big collection area. You are standing on the Lake

Winnipeg Watershed. Our ending point of our watershed is Lake Winnipeg, just an hours drive north of here. If you were to head up there now, how long would it take for the water from the Red River down the road to meet up with you?

Watersheds are so big that a lot of water comes from glaciers and snow on mountains. Once water gets into the ground from these, the water table begins to rise, and once it gets to ground level it turns into a stream, river, pond, or lake where it is one of the areas to access water. A flood is usually because there has been too much precipitation or snow melt, and the water table can hold it all, so the water has nowhere to go.

Some people in history and even today can't access surface water or it may not be safe to drink, so they have created wells. Wells are dug all the way underground until they hit the water table. This way people can access clean water if they aren't by a body of water. Wells were invented around 7,000 to 10,000 BC and are still used today.



Water tables are the very top layer of water on the watershed. Can you guess what percentage of usable fresh water comes from water tables and watersheds? Around 95% of our water comes from water tables so what we do to the land, good or bad, is important. Water tables and watersheds are so very important because they are the main way to get fresh clean water for our personal use. For example, if someone in North Dakota, our closest American neighbour, were to dump a pollutant in their waters, then this pollutant could eventually get in our water. That is why everyone needs to be careful what they do with the water because it could affect many people, animals and nature.

## 18: The Tall Grass Prairie Restoration Area (by Sami)

*You are looking at the tallgrass prairie restoration. It is here to return this land and ecosystem to back to what it was 10 000 years ago. This is a fictional story inspired by the prairie landscape and stories.*



Today is the day, the day that I can no longer be called Janice of the Prairies. I have called the prairie home for 40 years as I have cared and restored the grasses before you, but it is now the time to pass this responsibility on to my son who I know will care for it too. My time is coming to an end, and while a part of me is ready, there is one more thing left to do.

I get dressed as usual and get in the car. I drive and as I arrive at the tallgrass a tear slowly drops from my eye to my cheek. I wipe it away as I know it will continue to be taken care of by my son, and hopefully generations to come. I get out of the car and he is not here yet so I decide to take a stroll for one of the last times. Before me is the model prairie restoration, a place that I was a part of revitalizing 40 years ago. It took a lot of patience, love, and many hours of observation.

The grass is tall and a grey-greenish colour that you can see for miles. The smell of a mix between fresh soap and buttered popcorn floods my nose. As I walk around I look to my left and see a family of burrow owls chatting or rather loudly chirping with songbirds. I make sure to stay on the path as I don't want to step on any native plants or insects. I decide to sit down on a path but be careful as I see a hole. A butterfly lands on me and for a moment all is good, until to my surprise a long tailed weasel swiftly jumps out of said hole but runs off. I jolt for a second making the butterfly fly away. As I am about to get up I spot a purple aster, my favourite flower, on the ground. I decide to pick it up and put it in my hair and walk off.

As I get back to the car I see him leaning on it.

“Hey mom, you ready?” he sighs with a sympathetic look on his face.

“No, but let's go anyway, amor,” I declare as I started walking towards the tallgrass. I get a whiff of that smell again and a smile takes over my face.

“Are you sure about this mom?” he exclaims in a calm way.

“Like I said last week, I know you will take care of it.” My lip starts shaking as I talk and my smile turns into a frown.

He pulls me into a hug as he starts whispering, “the kids love it here, and they will always want to lend a helping hand.” He is taller than me now. He's grown just as tall as the grasses have.

“Okay.” I pull myself out of this hug and start walking towards the prairie once again, but this time I keep going.

I explain the duties and schedule to revitalize the prairie as I show him the different plants. Animals run by to greet us as I tell him about everything. “Don't forget to burn it either every 3-7 years or when it gets too thick for this prairie and you NEED to mow and trim to cut back all those invasive species...we don't want that thistle around here!”

He cuts me off as per usual. “Mom, I've got this, don't worry. I know the seeds can last for 10-15 years in the soil without sprouting, I know to cut the weeds right as they are blooming. I know to respect the land, the water, the air as it is living too. I know everything.”

We get back to the car and I drive off and for the first time, I feel free. Free to finish this life without worrying about the prairie, free to relax, free to live, and free to die.