

TURTLE ISLAND  
CONSERVATION PARTNERSHIP  
**WALKING WITH  
MISKWAADESI**

CURRICULUM WRITTEN BY  
WAHGEH GIIZHIGO MIGIZI KWE



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ways of knowing partnership  
**TURTLE ISLAND**  
conservation

## ACKNOWLEDGEMENTS

The Toronto Zoo's Turtle Island Conservation programme respectfully acknowledges the wisdom and guidance of all First Nation Elders and Traditional Knowledge Keepers. The sacred turtle teachings this curriculum is based upon have existed since the beginning of time and are shared to foster and guide generations to come. It is with good hearts and minds we honour these original teachings so that each one of us walks that good red road our ancestors had planned for us. We respectfully acknowledge with infinite gratitude all First Nation Elders, First Nation community members, Traditional Knowledge Keepers, First Nation advisory group members, funding partners, First Nation authors, Benny Michaud, Candace Maracle, Barbara Fillion (previous programme coordinators) & summer students, Toronto Zoo staff and the many children & youth who continue to inspire us for generations to come! We apologize for any oversights.

We would like to say Chi Miigwetch (thank-you) **Wahgeh Giizhigo Migizi Kwe** (Eileen "Sam" Conroy) for your tireless dedication, passion and great love all of which made this project possible. We honoured by your contribution! With your wealth of life experience and commitment to those who have come before us, you have gifted us all with Elder wisdom, carefully planting seeds of knowledge for future generations!

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**Available online at:**

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

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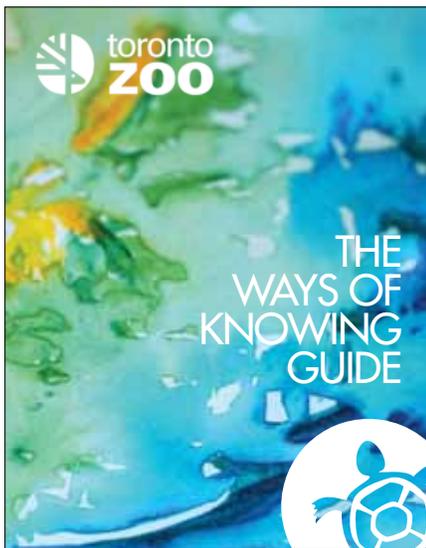


## AS THE JOURNEY BEGINS

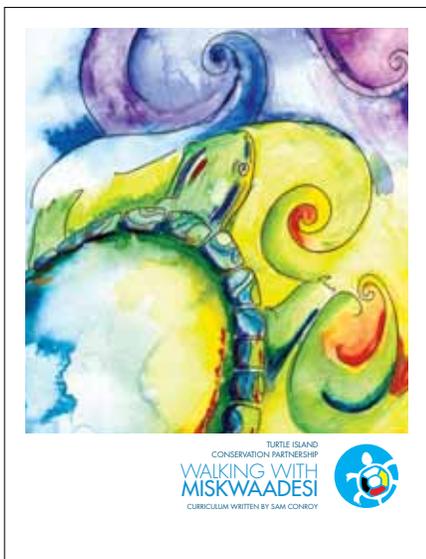
The Ways of Knowing Guide and the Walking with Miskwaadesi Curriculum have been compiled and written to complement each other, and so we are invited to begin our journey in learning by reading the Ways of Knowing Guide, and to revisit it in smaller sections while we are Walking with Miskwaadesi, exploring the 13 challenges that she gives us. Reflecting upon the worldview, values, beliefs and stories that are shared within the Guide will assist us in developing an awareness of Anishinaabe and Haudenosaunee Traditional Knowledge Worldview that is necessary if we are to successfully respond to the challenges and if we are to truly understand the interconnectedness of life on Turtle Island and our role and responsibilities within this beautiful web of life.

We are asked to walk along a pathway, in the footsteps of Miskwaadesi, the Turtle and to learn about the environmental issues that confront the plant and animal members (in particular those who have been designated as Species-At-Risk) of the water world. The invitation to share in the journey is given to us both as educators and as learners and we are reminded that we will be learning, along with our students, from the land, the water, and the other members of creation throughout the journey.

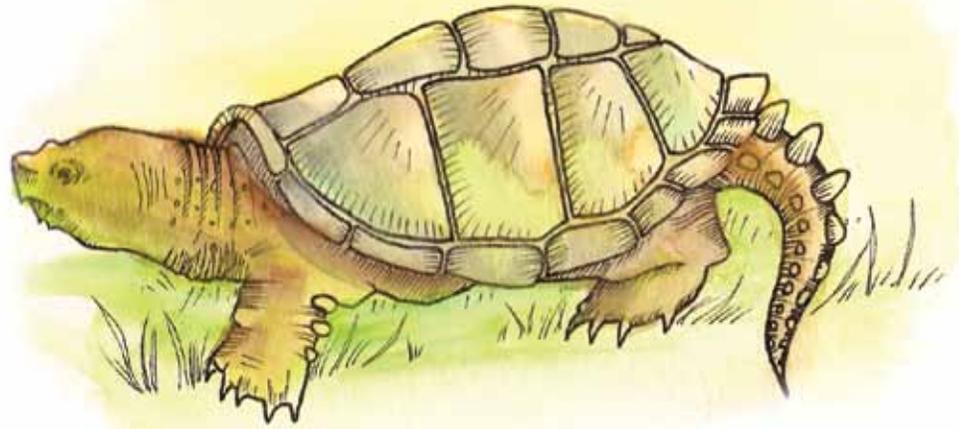
As we begin our journey with Miskwaadesi we become increasingly aware that those paw prints, marks and steps that we see are not just turtle tracks - the pathway we follow contains the imprint of all plants and animals that share the environment with the turtle. We reflect that as our footsteps make imprints on the pathway they mingle with all those other prints and we come to understand that we have an impact on all other members of creation just as they have an impact upon us. We are reminded to be respectful of all members of creation and to honour them, and so we walk in a gentle and careful manner, sharing our space on the pathway, being mindful of the need to make room for the footsteps of the next seven generations to follow.



When we walk beside Miskwaadesi, we begin to understand our relationship to her and to those other life forces that are part of the pathway. Our footsteps become interwoven with those other prints and marks and we start to see, hear, breathe, and feel our interdependence as we move along on our journey. Our pathway takes us outdoors, to the land and the water where the teachings are given, and where we can be closer to all of those teachers in nature - the plants, animals, and elements.



As we walk this pathway with Miskwaadesi in one hand we carry with us the Ways of Knowing Guide, stopping along the way to re-read sections that pertain to each of the 13 challenges. In our other hand we carry the Walking With Miskwaadesi challenges. The Ways of Knowing Guide shows us where the pathway has come from as it helps us to keep our focus and attention while we engage in the learning of each challenge, respecting the footsteps of other life forms who walk with us. The Walking with Miskwaadesi challenges provide us with opportunities to practice and to demonstrate our learning as we become actively involved in making an environmental difference today. Combining the two documents together enables us to follow the pathway, picking up teachings and new understandings. Grounding ourselves in the worldview, traditions, beliefs and stories of the Anishinaabe and Haudenosaunee Nation will give us the background we need to deal with the issues of today and our individual and group actions will make a positive difference to our environment, providing sustainable solutions that will be carried forward to the next seven generations... and the old turtle will smile upon us as we honour the Dish with One Spoon agreement to share the land, the water, and the resources in a good way!



“Challenges are met with great honor especially when we know it is for a deep purpose - the betterment of all, especially our Mother Earth. We are guided by vision and dreams, but most of all we are guided by our Spirit and Spirit Helpers.”

JOSEPHINE MANDAMIN'S JOURNAL - MOTHER EARTH WATER WALKERS

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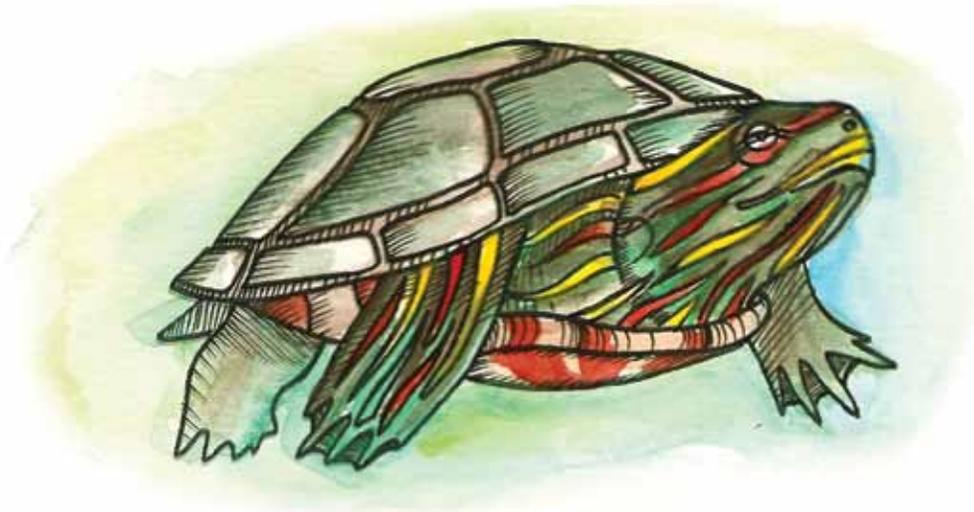
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# WALKING WITH MISKWAADESI

## GENERAL INSTRUCTIONS FOR EDUCATORS

The *Walking with Miskwaadesi* curriculum and *The Ways of Knowing Guide* were developed to respond to the needs of our Turtle clans who are experiencing great stress due to loss of habitat and increasing levels of pollution in the water, air and land of their traditional territories around the Great Lakes, and to the requests by youth for ways to make a positive environmental difference in their communities. As the Old Turtle instructed, 13 challenges have been given - responding to these challenges will result in positive benefits for the plant and animal life within our wetlands and for the human life that lives within the Great Lakes watershed as well. Our Turtle clan numbers will grow again. Our youth will develop a sense of empowerment and accomplishment as they begin to know and understand their land, water, and air.

It is the Turtle that leads us on a journey through her world, presenting each challenge through a story. The challenges begin with an overview page that lists those [Expectations](#) of the Ontario Curriculum that may be addressed through the activities. As well, several First Nations communities have developed their own value and cultural expectations that may be included in the challenges. A [Links to Other Curriculum](#) page will provide suggestions for additional hands-on activities that are suited for each challenge.

The Challenge is divided into three sections - in the first section "[Practicing the Learning - FOLLOWING THE FOOTSTEPS](#)" the learner is invited to walk down a pathway, following the turtle's steps. Several activities are suggested in this section and teachers may choose those that will suit their class. As well, teachers are encouraged to use the activities from the Links page to help the students become familiar with the challenge.

The Second Section of each Challenge is titled "[Demonstrating the Learning - MAKING YOUR OWN FOOTSTEPS](#)", and teacher and students select from several possible actions that will demonstrate their understanding of the challenge. There is a student journaling/reflection that accompanies this section. Teachers are encouraged to modify or choose a separate action that will demonstrate that the class has accomplished the work of the challenge.

The Third Section of each Challenge "[ONE STEP MORE](#)" is designed for individuals who would like to explore the challenge even further. It provides suggestions and ideas for investigating issues and is meant to be the starting point for individual action.

### SUGGESTED TORONTO ZOO RESOURCE LINKS TO BOOKMARK



|                                 |   |
|---------------------------------|---|
| Turtle Island Conservation      | <a href="http://www.torontozoo.com/adoptapond/tici.asp">http://www.torontozoo.com/adoptapond/tici.asp</a>                         |
| Adopt-A-Pond                    | <a href="http://www.torontozoo.com/adoptapond">http://www.torontozoo.com/adoptapond</a>   |
| Native language signs           | <a href="http://www.torontozoo.com/adoptapond/tici.asp?opx=2">http://www.torontozoo.com/adoptapond/tici.asp?opx=2</a>             |
| Adopt-A-Pond Turtle Curriculum  | <a href="http://www.torontozoo.com/adoptapond/turtleCurriculum.asp">http://www.torontozoo.com/adoptapond/turtleCurriculum.asp</a> |
| Ontario Turtle Tally            | <a href="http://www.torontozoo.com/adoptapond/TurtleTally.asp">http://www.torontozoo.com/adoptapond/TurtleTally.asp</a>           |
| FrogWatch Ontario               | <a href="http://www.torontozoo.com/adoptapond/FrogwatchOntario.asp">http://www.torontozoo.com/adoptapond/FrogwatchOntario.asp</a> |
| Native language Frog call CD    | <a href="http://www.torontozoo.com/adoptapond/tici.asp?opx=cds">http://www.torontozoo.com/adoptapond/tici.asp?opx=cds</a>         |
| English Turtle Identifier Guide | <a href="http://www.torontozoo.com/adoptapond/turtles.asp">http://www.torontozoo.com/adoptapond/turtles.asp</a>                   |
| Ojibway Turtle Identifier Guide | <a href="http://www.torontozoo.com/adoptapond/tici.asp?opx=4">http://www.torontozoo.com/adoptapond/tici.asp?opx=4</a>             |
| Mohawk Turtle Identifier Guide  | <a href="http://www.torontozoo.com/adoptapond/tici.asp?opx=3">http://www.torontozoo.com/adoptapond/tici.asp?opx=3</a>             |
| English Frog Identifier Guide   | <a href="http://www.torontozoo.com/adoptapond/frogs.asp">http://www.torontozoo.com/adoptapond/frogs.asp</a>                       |





Each challenge contains a selection from [Kokom's Journal](#) - in each journal entry, Kokom Annie and Miskwaadesi, the Turtle provide teachings and stories; and they share information students need to understand to successfully complete the challenge. [Kokom's Journal](#) entries are meant to be used as Literacy selections throughout the document. It is anticipated that teachers may refer to [Kokom's Journal](#) several times as each challenge is undertaken, and some may wish to make [Kokom's Journal](#) into a booklet for student use.

Each challenge contains a section titled [Teacher Background](#) to provide additional information for instructors. As well, there are suggestions for links to other Adopt-a-Pond; and Turtle Curriculum ( <http://torontozoo.com/adoptapond/turtleCurriculum.asp> ) activities as well as special sections from the Ways of Knowing Guide ( [http://www.torontozoo.com/pdfs/stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/stewardship_Guide.pdf) ) that will provide traditional and cultural knowledge that has been shared.

[Student Worksheets](#) accompany each section of the Challenges and are meant to enhance student learning. An attempt has been made to include a hands-on activity and an outdoor component to each of the challenges, because it is understood that we learn best from the land, the water, and the air.



The 13 challenges have been set up to follow each other so that student learning builds upon each challenge, leading to the action project and the celebration of the Turtle. Teachers and leaders are encouraged to complete as many activities from the challenges as they can within their classrooms. Some challenges will prove to be more difficult than others, and classes are encouraged to seek out the help of their Elders and community members as they solve each challenge.

Some parts of the challenges may be completed by small groups who would then report back to the class to share their learning. Several activities provide games and cards that can be set up within the classroom throughout the year. The 13 Challenges could be spread out throughout the year, and are set out in such a way that the first five challenges might be completed by the beginning of winter, and the remainder from January until the summer arrives. We are reminded that Challenge 6 is meant to be studied in the winter months when the Earth is asleep because that is the time for telling of stories. As well, a school may decide to use the Walking With Miskwaadesi and the Ways of Knowing Guide by introducing the first two challenges to the entire school, and then assigning a different challenge for each class to respond to; bringing the students back together to share their learning in a school-wide celebration of the turtle (challenge 13).

Before our journey begins we will share knowledge of special places in our community. This will engage youth/Elder dialogue and provide recognition of the unique places in our own communities and assist with our journey with Miskwaadesi. Let us journey with Miskwaadesi following in her soft prints, as we learn to walk in a new way, moving softly upon the Earth, in a respectful and kind manner. As all learners become aware that their steps need to blend again in a gentle way with the prints, marks, and footsteps of all the plants, animals, and elements, a new level of understanding will grow.

- Wahgeh Giizhigo Migizi Kwe



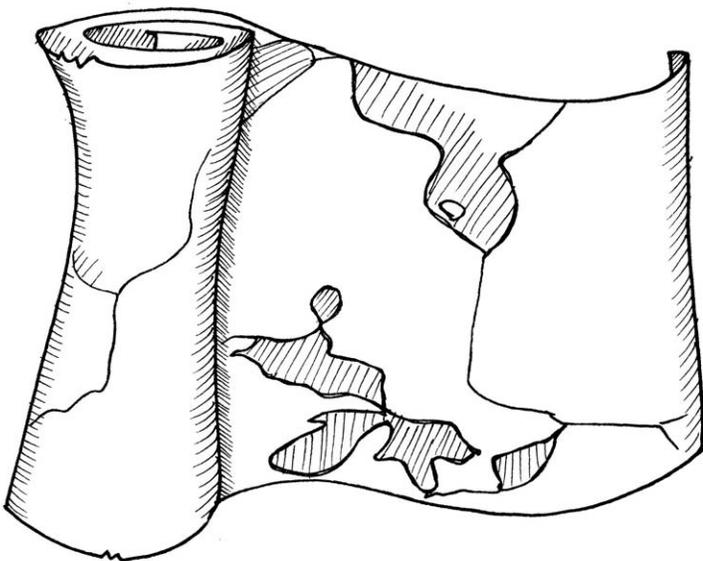


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## SACRED SPACES | SPECIAL PLACES

### MAPPING OUR COMMUNITY

- What does Migizi the Eagle see when he flies over your community?
- What does the land look like?
- What kinds of water can be found in your community?
- Where are those special places that are part of your traditions and culture?
- Where did your grandparents play and learn when they were little?
- Where do the medicine plants grow?
- Are there special places used for ceremonies?
- Do the black ash trees grow in the wetlands?
- Where is your house?
- What places are special for you?



Look at your community map and locate those places that you know. Share your map with your family - find out about those special places and spaces that are part of your family's memories. Record those places and what they were called in their native language. Respectfully ask your Elders what they remember of the special places. Share your learning with your class and create a community map!

# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

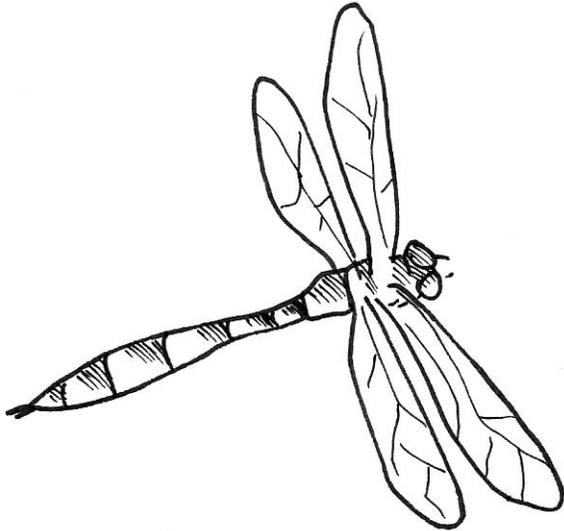
| TITLE OF ACTIVITY       | ONTARIO CURRICULUM EXPECTATION | WORKSHEET              |
|-------------------------|--------------------------------|------------------------|
| What's in my classroom? | 4z31, 4z34, 4z35, 4z37         | Class mapping activity |
|                         | 5z41                           |                        |
|                         | 6z16, 6z43                     |                        |
| Mapping my Room         | 4e54, 4e68, 4e69               | Individual map         |
|                         | 5z41                           |                        |
|                         | 6z16, 6z43                     |                        |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY             | ONTARIO CURRICULUM EXPECTATION           | WORKSHEET                        |
|-------------------------------|--|----------------------------------|
| Sacred Spaces, Special Places | 4z31, 4z34, 4z35, 4z39, 4z42, 4z43, 4z45 | Mapping the Community - Research |
|                               | 5z1, 5z5, 5z9, 5z13, 5z15, 5z41          |                                  |
|                               | 6z5, 6z11, 6z22, 6z36, 6z42, 6z43, 6z45  |                                  |
| Journal Reflection            | 4e44, 4z37                               |                                  |
|                               | 5z37                                     |                                  |
|                               | 6z5, 6z36                                |                                  |

**WORD WALL:** topography, ceremony, contour, characteristics, feature,

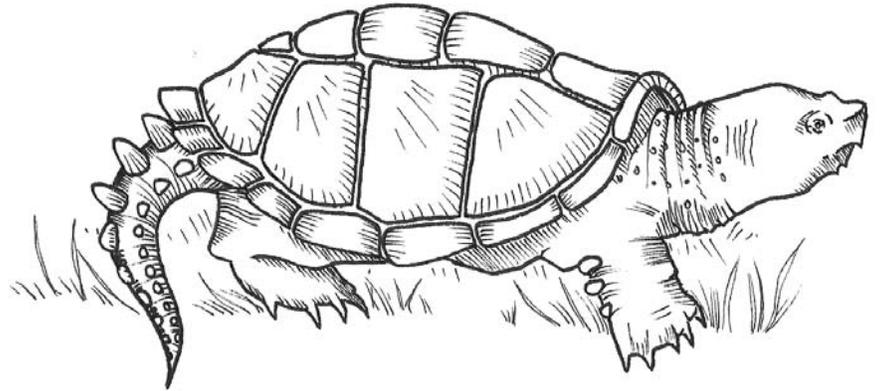
# LINKS TO OTHER CURRICULUM



## SACRED SPACES - SPECIAL PLACES

Ways of Knowing Guide – Responsibility – Community Mapping pg 94

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)



## TEACHER BACKGROUND

This activity asks students to become active participants in developing a unique community map that will honour the ceremonial places, original native language names, people, plants and animals, and the land and water where they live. Students are introduced to mapping by completing a map of their classroom using symbols and illustrations rather than words to describe the room. Students then create a map of their bedroom using only symbols to identify items such as their bed, bookshelf, window, door, closet, etc. The teacher obtains a map of the community, showing roads, waterways, buildings such as churches, schools, band office, Elders lodge, etc. and makes smaller copies of this map for each student to use in their research.

Following discussion of the community map, students take the map home and share it with their family, asking family members to add the locations and names of special places on their map. Most importantly, students may approach Elders to share in their knowledge of these special places. Students are asked to listen carefully to stories that are shared about the special places and spaces, and to bring their new knowledge back to the classroom to share with their classmates as a community map is created. Share this map with Turtle Island Conservation Programme, as they are “mapping” special places in all of Ontario’s First Nation communities. This computer based map and the knowledge it contains will only be available to the community as a resource that grows over time.

This activity has been designed to be shared by students in the Junior Division - grades 4 to 6. Curriculum expectations at these levels in the Social Studies area have been included. Teachers are also encouraged to think of language expectations that could be part of this activity.

# PRACTICING THE LEARNING

## MAPPING OUR COMMUNITY



### 1. WHAT IS IN MY CLASSROOM?

To introduce the mapping concept to the class, draw an outline of the classroom on the board or on a piece of chart paper.

With student assistance, map the classroom from a 'bug's eye view' looking down from the ceiling. Draw in the locations of student desks, teacher desk, bookshelves, windows, doors, the 4 directions, carpets etc.

Create a legend for the map and show the students how to use it. Remind them that symbols are used on the legend and on the map as a visual reminder of a special place or feature.

### 2. MAPPING MY ROOM

Provide each student with an 8.5"x11" sheet of blank paper. Students map their bedroom - also from a bug's eye view, showing the location of their bed, closet, window, door, dresser, etc. Students create a legend on their map. Students share their map with a friend, describing their room.

# DEMONSTRATING THE LEARNING



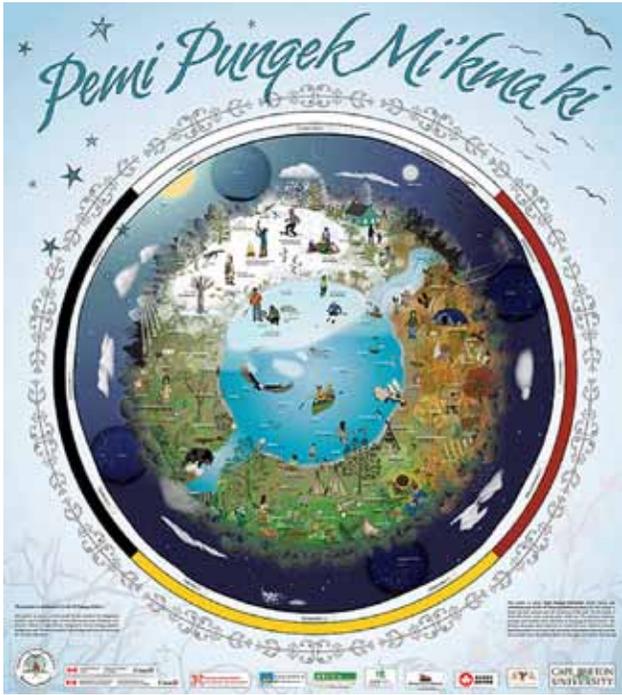
Our family members are great sources of information and oral history. Our parents, aunts, uncles, and grandparents may have information about their clans, relatives, traditional hunting and fishing spots, as well as plants and animals that may have lived in the community but are not there anymore. They also know the names of the places that describe their use or importance. In some cases we are in danger of losing the names of these events they describe. Parents and grandparents will have different stories and experiences than ours. It is important to listen to them while they share their memories and learn what it was like in our community when they were as young as we are.

This information will help us understand many things about why our community is special. For example, why did community members move to different areas during different seasons? When and where did our relatives fish? Where did ceremonies take place? What kinds of animals do our parents or grandparents remember seeing when they were young? Were there trapping, fishing, and hunting places and animal species that are not the same today? Why have these places changed? What places remain special to our family and community?

Look at a map of your community. Identify places you know from the map, such as school, churches, main roads, waterfront, band office, etc. Look for a legend on the map and think about why it is necessary to use symbols to identify places of interest on the map. Identify your own house on the map (if the map is going to remain in the classroom, use a sticker to mark your home location on the map).

Think about life in the community before the roads were built - how did people get from place to place? How did the community make use of the land and water features to help them get from place to place? What special and unique features can be found in the community? Begin to develop a list of unique and special places within the community. What were these places called in our language? Remember that the Elders have lived in the community much longer and may have knowledge of special places and their names.

You will be provided with a copy of the community map that you can use for your research. Take your map home and share it with your family members to help you expand your knowledge and understanding of the special places in your community.



Brainstorm as a class to decide.

1) Who in your family might be able to help you with the map activity and which questions to bring home and ask.

2) Record all responses as a special community learning.

From the list, choose those questions that will help family members focus on significant locations and memories (4 to 5 questions).

Remember you will need to note the names of the places identified as special and what the names mean. Try to find the names of the special places in your language.

Record the questions that have been chosen on your worksheet (see below).

Encourage each family member to use a symbol or to add a name and a dot on the map to show areas they are referring to. You may also like to colour coordinate each family member's stories and symbols on their map legend.

Take their maps home and complete the worksheet with family assistance and participation

Bring your map back to share the information you have gathered. Put a sticker or marker of symbol on the classroom map for each bit of information that you share. The sticker, marker or symbol should reflect the location and meaning of the place/space.

When the classroom map is completed have an Elder come and speak to the class about their knowledge of the places and events. Elders may provide more names or places from the past and their significance today.

(This will become a significant contribution by the children to the community map. The results of this exercise will become one of the layers of the community map that Turtle Island Conservation will return to your community.)

### JOURNAL REFLECTION



1. How will you share the information that you have gathered? Think of a variety of ways that you and your classmates can share your community map with the band council, with the Elders, with the health workers, etc.

Decide how you will present your information - practice talking about the map and the stories you have gathered.

Toronto Zoo's Turtle Island Conservation programme will add your map to a community map. Why is it important that this map & knowledge remain in our community? Think of Seven Generations.

2. What did you learn from interviewing your family? Are there places in your community that you would like to see? Which ones? Why?

3. What will you tell your children about your community?

# Student Worksheet

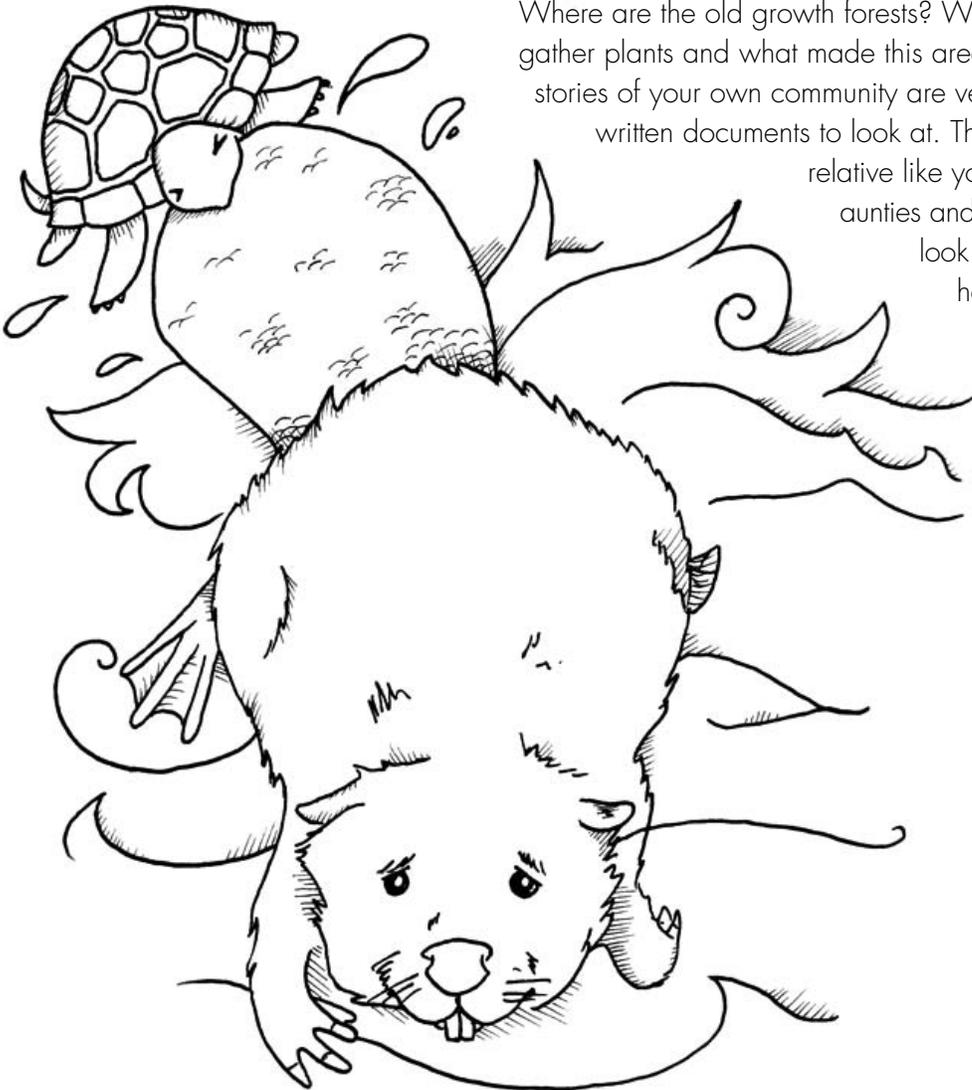
## MAPPING MY COMMUNITY 1/2



TAKE TIME TO EXPLORE THE IMPORTANT PLACES IN YOUR COMMUNITY. SHARE A STORY ABOUT YOUR COMMUNITY.

In each First Nation community there is a unique oral history of events that is recorded and remembered from generations to generation. These events hold different levels of importance. For example meadows where sweet grass used to grow may no longer exist because the water level has changed, so now community members have to go elsewhere to pick sweet grass for ceremonies. Where are the old growth forests? Where did we once hunt and gather plants and what made this area special? Sometimes these stories of your own community are very, very old and there are no written documents to look at. That is when it helps to ask a

relative like your parents, grandparents, or aunts and uncles. When we take a close look at where we come from and how we got there, it helps us to understand our own unique relationship to our place and family, clans, relatives, community and nation.



# Student Worksheet

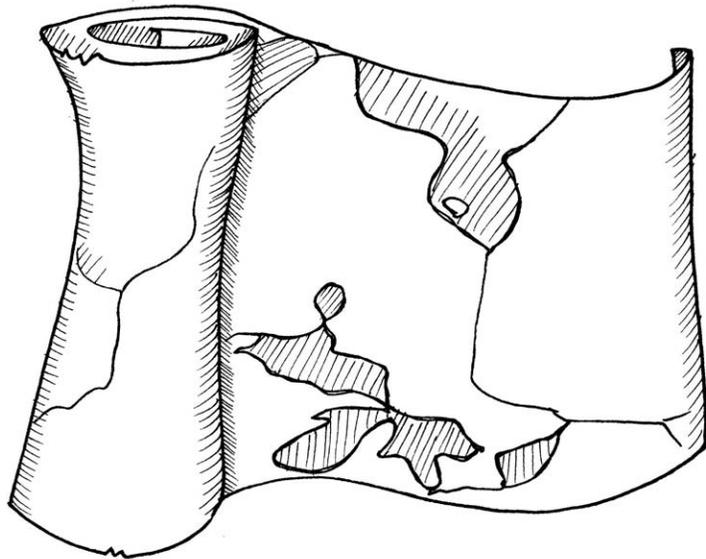
## MAPPING MY COMMUNITY (CONTINUED 2/2)



TAKE HOME YOUR COMMUNITY MAP.  
SHARE IT WITH YOUR FAMILY.

Ask them to answer the question that your class has written. Listen very carefully to their answers. Use the map to help you remember what they tell you. Use jot-notes to record their response to your questions so that you can share with the class. Mark your map with the places that have been special to your family.

Bring your map back to school to share with everyone. When you put all of the stories and information together you will have a wonderful history of your community drawn on the map! Turtle Island Conservation at Toronto Zoo will help you save your map for Seven Generations to come!



OUR CLASS QUESTIONS: WE NEED TO FIND ANSWERS TO THESE QUESTIONS:

1. ....  
.....
2. ....  
.....
3. ....  
.....
4. ....  
.....

# Student Worksheet

COLOURING PAGE





**THE FIRST CHALLENGE**  
WALKING WITH MISKWADESI

# THE FIRST CHALLENGE

## THIRTEEN MOONS ON A TURTLE'S BACK

Who is Miskwaadesi and what does she need?

How important is the Turtle to the people of the world?

Can you describe the year in your language or culture according to the 13 moons?

Will you accept Miskwaadesi's challenges and help to make your community and your wetland world a healthier place for everyone and everything?



*"...come and walk in my footsteps. Bring your grandchildren and great grandchildren, and learn about me and my clan brothers and sisters. Will you help me find a safe and healthy place for my clan brothers and sisters to live? "*

*"Will you tell the people that everyone needs to work together to make our space a healthy one again?"*

Miskwaadesi's 1st challenge.

# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY                        | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                 |
|--|--------------------------------|---------------------------|
| Introduction to Miskwaadesi's challenges | 4e4, 4e5, 4e26                 | 1a - 13 challenges        |
| Turtles of the World                     | 4z47, 4z35                     | 1b - Turtles of the World |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY               | ONTARIO CURRICULUM EXPECTATION | WORKSHEET  |
|---------------------------------|--------------------------------|------------|
| A Year of the Turtle - 13 moons | 4a43, 4a44, 4a45               | Calendar   |
| Journal Reflection              | 4a43                           | Cover page |
| Reflection no. 1                | 4e56                           |            |

## ONE STEP MORE (individual student optional adventures in learning)

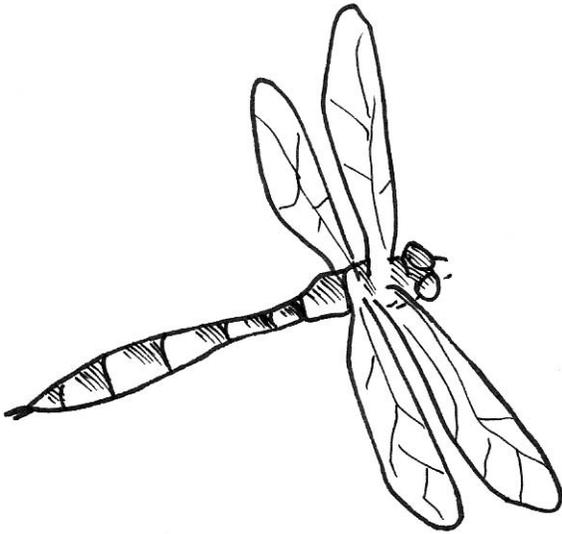
1. Research traditional teachings and stories about turtles

2. Tortoises of the World

### WORD WALL:

Miskwaadesi, calendar, challenge, tortoise, teaching, Pleiades, symbol, emblem,

# LINKS TO OTHER CURRICULUM



## 1<sup>st</sup> CHALLENGE

Ways of Knowing Guide – Relationship – the Sky World pg 75

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

Turtle Curriculum

<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>

# KOKOM ANNIE'S JOURNAL

## THE STORY BEGINS...



"...Ahniin my grandchildren,  
Are you coming to spend the summer with me and  
your cousins here at Wasauksing? I need your help  
with a special project. Everything is ready for you. I  
will meet you at the bus stop.

Kokom Annie"



Seegwun read the note over one last time as the bus turned off highway 69 and began to pull into the stop at Parry Sound. With a smile she put the piece of paper into her backpack, nudged her brother Nodin awake and gathered up her belongings - the adventure was about to begin!

Kokom was waiting and gathered the children up in her arms in a big hug of welcome. "Ahniin! Ahniin! My beautiful grandchildren - I am so glad that you have come. We will have a wonderful summer together!"



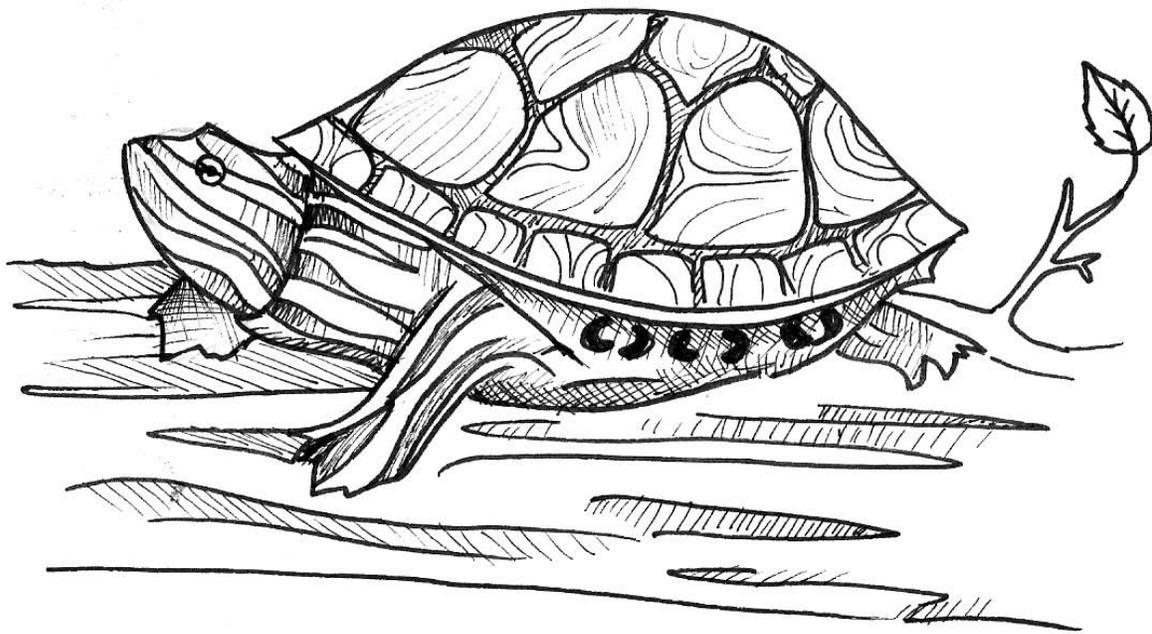
When Kokom Annie and her grandchildren arrived at Kokom's little house Auntie Lily was waiting for them with a fresh pan of baked bannock and some fish. There were fresh heartberries on the counter... mmm - it was going to be a great visit!

After supper everyone went out to sit and watch the sunset over the water. Auntie and Kokom talked quietly while the children played the listening game - how many different sounds could they distinguish as the birds and other members of Creation sang a good-night song to the sun. There were so many different sounds out here at Kokom Annie's place than there were in the city! Just as the mosquitoes started to buzz and frogs began to call, cousin Waubun drove up on his bike.

"Ahniiin Kokom Annie- are they here yet? Oh great - hey there Nodin - look how you've grown! Seegwun, what's new with you? Did your Kokom tell you about the good work she is doing this summer? Kokom is helping me down at the marsh. You should see her in her hip waders - you'd think she was a teenager again! Kokom - tell us about your dream again."

As the sky began to darken and evening arrived, Kokom Annie pulled her shawl up over her shoulders and settled into her favourite chair. Nodin and Seegwun curled up at her feet. Seegwun noticed that Kokom was wearing a nice pair of moccasins and there were turtles beaded on each one. She hoped that Kokom would help her make herself some new slippers to go with her regalia - the pow-wow was just a few weekends away. Lily sat beside Kokom, while Waubun leaned on the railing.

The first stars were beginning to sparkle in the night sky as Kokom began to tell her story.



"I had a dream in the late winter - right before Maple Moon, just as we were starting to get ready for change of seasons time. I dreamed that it was late spring, just before heartberry moon and I was down by the marsh looking for wea-kay root to use for medicine. I had put down my tobacco and I was talking to those medicine plants that grow along the edge of the marsh. I was about to ask the plants for their permission and help so that I could make medicine root tea for my community. While I was sitting at the edge of the water by that large mishomis (rock), a very old Miskwaadesi (turtle) - you know the clan I'm talking about - the turtle that has the colours of the sunset on its back - well, it came swimming up towards me. This Miskwaadesi was wearing a coat of algae on the edges of her shell, from spending the winter at the bottom of the pond. Her shell was marked and scratched. Very slowly and deliberately Miskwaadesi crawled out of the water and up onto a log. I thought at first that she did not see me, but once she was settled on the log she slowly turned and looked directly at me. I was so surprised when she began to speak."



*"Ah - ho - grandmother - Nokomis"* she spoke in a low, quiet, but tired voice. I had to listen very hard to hear all of Miskwaadesi's words. The turtle's words came slowly and she paused between each sentence.

*"Nokomis, I have been chosen to come and talk to you.  
We, the turtle clans need your help!"*

*The Miskwaadesi family and their clan cousins have lived in the waterways and wetlands of Turtle Island since Creation. Some of us have lived for over one hundred years.*

*As the keepers of the stories and knowledge of the water and the wetlands, we have responsibilities to our communities and to the Creator.*

*We have a responsibility to communicate between species who live in and around the water and with the Creator.*

*We are the keepers of the water in the wetlands.*

*We make sure that the edges of the wetlands are kept clean- we find and eat anything that is no longer living.*

*We help to control the numbers of insects and frogs and minnows that live in the wet places.*

*We live a very long life and we carry the story of our wetland and our watershed within us.*

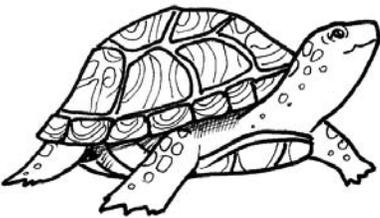
However, something is happening to our wetland homes. There are eight turtle clans in Ontario, but seven of the clans are in danger- every year there are less and less of my turtle clan cousins.

Many of the wetlands in our traditional homeland (the Great Lakes watershed) have disappeared - people have drained them, dumped their trash onto them, and sometimes have flooded them by building dams nearby.

New subdivisions and development have paved over all of the edges and covered those places where the turtle clans used to dig our nests in the springtime.

We are having trouble finding good places to sit in the sun to warm our shells.

The only places left to lay our eggs are along roadsides, and it is very dangerous for us to cross the roads to find nesting sites. Many of my turtle clan cousins are killed every spring trying to cross roads and streets.



Our eggs sit in water while they are underground, and the groundwater is full of pollution.

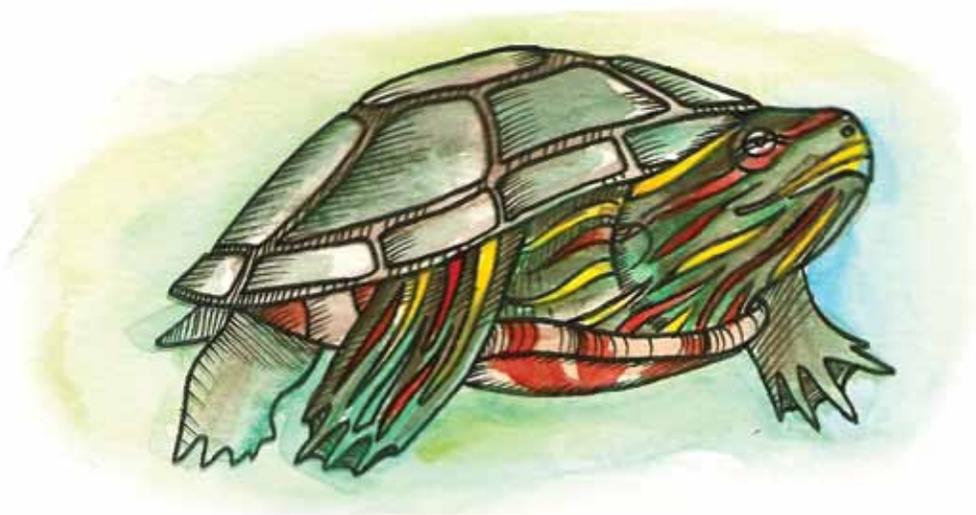
The water passes through the egg shells and it is hurting our turtle-babies as they grow.

Our turtle children cannot find healthy food to eat - the minnows, frogs, and small insects are getting sick.

In some places the worms are not even good to eat anymore.

We are getting sore eyes from the pollution in the water.

There are less and less of us to take care of the wetlands and water. Some of my turtle cousins - the turtle with the sun under its chin, the turtle that wears a watershed on his back, the turtle with the stars on his back are now called "species at risk" by western scientists.



*There are less and less of us to fulfil our responsibilities that were given to us by The Great Mystery.*

*When we are gone, who will take over our responsibilities?*

*Kokum Annie - can you help us? I am getting old and my voice is becoming more and more quiet -many of my turtle clan relatives have become silent. Who will speak for the turtle clans?*

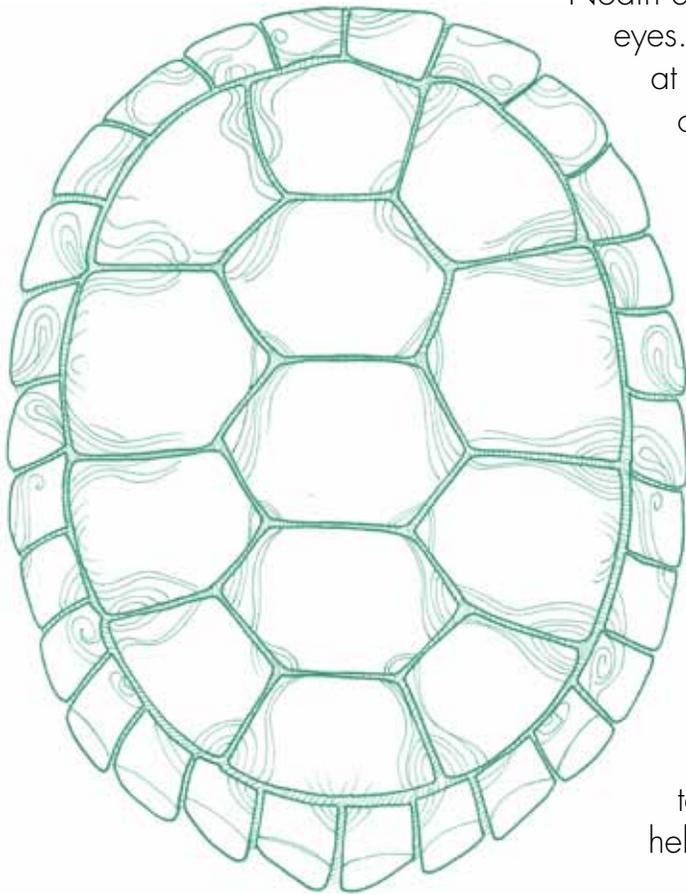
*Find some young ones from your community to walk with me, Miskwaadesi.*

*Kokom Annie - come and walk in my footsteps. Bring your grandchildren and great grandchildren, and learn about me and my clan brothers and sisters. Will you help me find a safe and healthy place for my clan brothers and sisters to live?*

*Will you tell the people that everyone needs to work together to make our space a healthy one again?"*

Kokom Annie paused for a few moments with her eyes closed, remembering the words and the sad voice that Miskwaadesi had used while everyone thought about Miskwaadesi's words. Kokom remembered the tears that had fallen from Miskwaadesi's eyes as the turtle pleaded for help.

Kokom told the children that she had been having the same dream several times throughout the early spring and she knew that she had to do something to help Miskwaadesi and the turtle clans.



Nodin and Seegwun looked at each other with troubled eyes. They had been learning about frogs and toads at school and they had an understanding of some of the problems that the amphibians were having. It sounded like the turtle clan was also having a hard time in the wetlands. Nodin tried to remember when he had last seen a turtle in the city...but even when his class went on their field trip to the nearby wet space in the park, there had been no turtles to be found.

"What are you going to do about the dreams Kokom Annie?" Asked Seegwun.

"Well my girl - the first thing I did was to talk to Miskwaadesi in my dream to let her know that I had understood her request and that I would walk with her. Miskwaadesi asked me to go to the school to talk to the kids and their teachers because she knew that I would need helpers."

"Miskwaadesi used her claws to draw a turtle shell in the soft sand at the edge of the marsh. She cut the shell into 13 parts. She reminded me that her shell is our calendar - the thirteen scutes remind us of the thirteen moons in the year and the twenty-eight little plates that go around the scutes remind us of the number of days in each moon."

"Miskwaadesi said that there were 13 challenges - one for each scute. Each challenge would help me to understand Miskwaadesi and her world and would help me come up with ideas for things I could do to make her world a better place. Miskwaadesi said that when her world becomes a healthier place, then our world will be healthier as well. She reminded me of how we are tied to the turtle and its world just as it is tied to ours. She said that she would come back to me in my dreams to tell me about the challenges."

Kokom Annie sat up straight in her chair, and reaching inside the pocket of her skirt, took out a little journal that looked very full. She opened the journal to a page marked with a piece of paper. Nodin and Seegwun could see the outline of a turtle shell on the page that was open.

"When I woke up, I wrote down everything that I could remember of what Miskwaadesi told me. I drew a turtle shell on my page and divided it into the thirteen scutes that the turtle carries on its back."

"Miskwaadesi gave me 13 challenges to accomplish as I walk with her..."



**The First Challenge** - "Bring your grandchildren and great grandchildren and learn about me and my clan brothers and sisters."

**The Second Challenge** - "Go and find young people who have heard our Creation teaching and remind them of kindness, love and caring..."

**The Third Challenge** - "Who are the turtle clans in Ontario and why are they a Species at Risk?"

**The Fourth Challenge** - "Find out what turtle needs to thrive and survive."

**The Fifth Challenge** - "Who are my friends and neighbours in the watersheds?"

**The Sixth Challenge** - "Find out some First Nation teachings and stories about my turtle clan."

**The Seventh Challenge** - "Find out about my clan members that live far away."

**The Eighth Challenge** - "Walk for the water, for the turtle, for yourself and your future."

**The Ninth Challenge** - "How much water is there?"

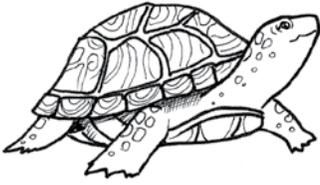
**The Tenth Challenge** - "What do my frog neighbours say and sing about?"

**The Eleventh Challenge** - "How many turtle species live in the water near us?"

**The Twelfth Challenge** - "What will you do to help the turtle family?"

**The Thirteenth Challenge** - "Celebrate with a Feast for your Turtles."

# MISKWAADESI'S 13 CHALLENGES



**The First Challenge** - *"..come and walk in my footsteps. Bring your grandchildren and great grandchildren, and learn about me and my clan brothers and sisters. Will you help me find a safe and healthy place for my clan brothers and sisters to live? Will you tell the people that everyone needs to work together to make our space a healthy one again?"*

We are asked to find out how important turtles are to many Nations and peoples around the world. The challenge asks us to learn the names of each of the 13 moons of the year. Miskwaadesi and her clan carry our calendar on their back and she reminded me that we need to find out about each of the 13 moons because each one has a challenge for us! We need to talk to our language keepers to find out what the Elders call each of the moons. The first challenge asks us to create a calendar for our community, using the 13 moons and recording the important things that happen in our community on the calendar.



**The Second Challenge** - *"Grandmother - your 2nd challenge is to go and find young people who have heard our Creation teachings. They will have some understanding of the responsibilities that were given to the Turtle Clan People and they may have some knowledge of how humans and turtles are connected. Talk to the young ones about our Creation teachings and remind them to be grateful and thankful for the beautiful gifts that The Great Mystery has provided. Remind them of the kindness and love and caring that were part of the creation of all life forms."*

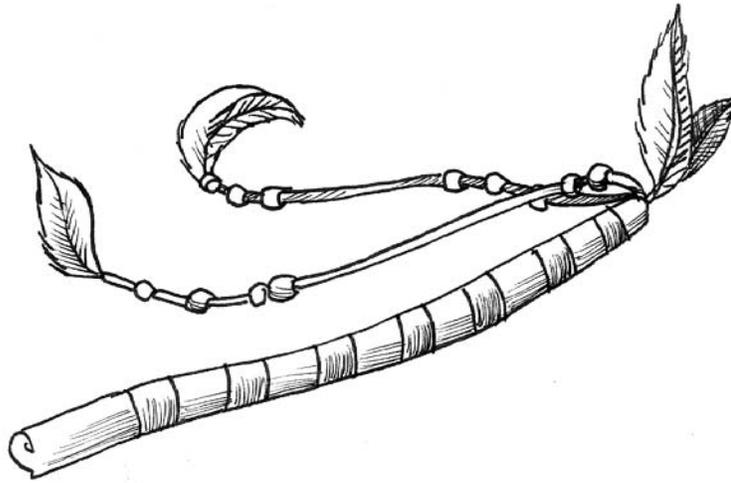
Remember The First Nations CREATION STORIES and the importance of the Miskwaadesi People to all First Nations. Remind everyone about TURTLE CLAN RESPONSIBILITIES. Learn about the Thanksgiving Address of the Haudenosaunee People and the morning prayer of the Anishinaabe because they will teach us to be grateful for the wonderful gifts of Creation and they will remind you of the responsibilities of all members of Creation.



**The Third Challenge** - The old turtle's voice sounded out the 3rd challenge. *"Who are the turtle clans in Ontario and what do they look like? Where can you find them? Why are my turtle clan family members on the Species at Risk list?"* Meet and greet the 8 turtle clan cousins that are living in Ontario now. Some of them are in great danger because of loss of habitat and bad food. All of them are getting sick from the water that they live in.

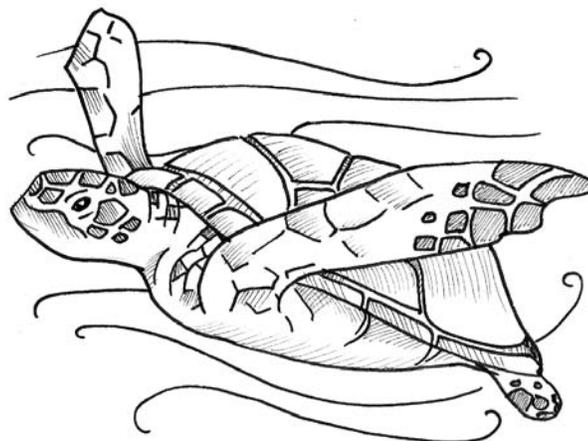
**The Fourth Challenge** - *"My 4th challenge asks you to find out what turtles need to thrive and survive. What does a healthy habitat look like for a turtle? Do you think that the habitat in your community is a healthy one for me?"* Learn about what our 8 MISKWAADESI CLANS need for good habitat, and see if you can find good habitat where the clans can live. Find other groups and organizations that are working to make wetland habitats healthy again.

**The Fifth Challenge** - *"My 5th challenge to you is to find out who are my friends and neighbours in the waters and watersheds? All the animals and plants are woven together in the web of life and I need all of them if I am to be healthy and well. How are all the plants and animals related?"* The 8 Turtle clans have NEIGHBOURS AND FRIENDS who live in the wetlands with them. Many of these neighbours and friends depend upon the turtles and the turtles depend on their neighbours and friends. We are all related.



**The Sixth Challenge** - *"My 6th challenge,"* said the old turtle, *"asks that you find out some of the teachings and stories about my turtle clan. Every Nation has stories and teachings that include turtles. Which ones do you know? Can you retell one of the stories?"* Many of the First Nations have TEACHINGS and STORIES about turtles. Ask the Elders and the teachers to help you find out about the teachings. Listen to the stories and learn from them. Share the stories with other people so that they will become familiar with the teachings. Make a talking stick to help you remember the teaching.

**The Seventh Challenge** - *"The 7th challenge will be a difficult one. You will need to find a helper. I want you to find out about my clan relatives who live far far away. They swim where the waters are salty and they nest where there are warm winters and summers. First Nations and Aboriginal peoples throughout the world have close relationships with turtles, tortoises and terrapins - we are all the same big family. Look for stories and teachings and share what you find your children and grandchildren. My sea turtle clan cousins are in great danger and they are asking for help!"* Use the library and computer to study the life story of turtles all over Turtle Island and beyond. Find out about other Miskwaadesi clans that live in the oceans. Are they also endangered? Share what you learn with others who are also completing the challenges. Have some fun playing games and puzzles about Turtles!



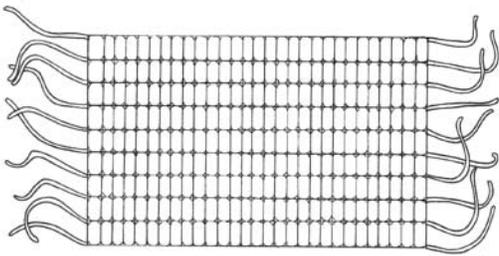
**The Eighth Challenge** - *“My 8th challenge - walk for the water, walk for the turtle, walk for yourself and your future.”* The Turtle clans need a good supply of clean water if they are to survive. Find out about water in your own backyard. Participate in a WATERWALK somewhere in your own watershed. Follow in the footsteps of Miskwaadesi and of Josephine Mandamin who has walked around each of the Great Lakes. Get acquainted with your water by carrying a bucket around your wetland, stream, pond, river, lake, or bay.

**The Ninth Challenge** - *“It’s all about the water that humans use for themselves. Find out how much water you use in a week”* came the soft voice from the turtle on the log. *“What do you use water for?”* How much water do YOU use every day? Find out how big your PERSONAL WATERMARK is. How much can you conserve? String the beads and make a commitment string to remind yourself that you are making a life decision to protect the water.



**The Tenth Challenge** - *“My 10th Challenge - who else is living in my wetland? What do my frog neighbours say and sing about? Write a report card for my wetland”* Who is living in your neighbourhood wetland? What song(s) are being sung by the frog people? Go out and listen for frogs and record when you hear them welcome the new season with their songs. Complete the pond study and give your wetland its very own health report card.

**The Eleventh Challenge** - *"Come down to the water and visit with me and my relatives. This is my 11th challenge- count all of the turtle species in your waters. Come down to the water, Kokom. Bring your young ones with you."* Take part in the Toronto Zoo's annual Turtle Tally. Search out nest sites. Protect nesting turtles. Put up turtle crossing signs.



**The Twelfth Challenge** - *"My 12th Challenge is this - what will you do to help my turtle family? Can you work with your class to create a project that will make things better for the turtles of the seven generations to come? What will you do with the information that I have shared with you? Create a project to help the turtles in your community watershed and you will improve the health and wellness for not just the turtles but for everyone and everything. Plan, organize, act, and report!"* Plan and complete a project to honour the turtle. Use the information learned to improve the

health and wellness of the turtle population. Start your own group to look after your wetland. Make a poster, write a poem or a story, let everyone know how important your wetlands are and how we need to welcome our turtles and their wetland friends.

**The Thirteenth Challenge** - FEAST YOUR TURTLES! Celebrate - when you have finished all the other challenges, take some time to celebrate what you have learned and done, and to have a feast to honour the turtles in your community. What will you remember about the turtle?





"Then, I talked to some of the other grandmothers and the aunts because it is women who have the responsibility for looking after the water, and it seems as though one of the biggest issues Miskwaadesi has is with the quality and the amount of water that is available to the turtle clans. As a group, we decided to go and visit the Environmental staff at the Band Office. We asked for a map of Wasauksing and we decided to look at the wetlands and wet spaces right around here. We asked Waubun to help us because he is young and stronger than we are! We want to go and look at all the wetlands on the reserve and find out who lives there. We are going to find out how clean the water is because we get most of our medicine plants from in and around the wet places. The water has to be clean not just for Miskwaadesi but for us as well. Then we are going to tell everyone that we have to start looking after our water so that all the animals and plants will be healthy.

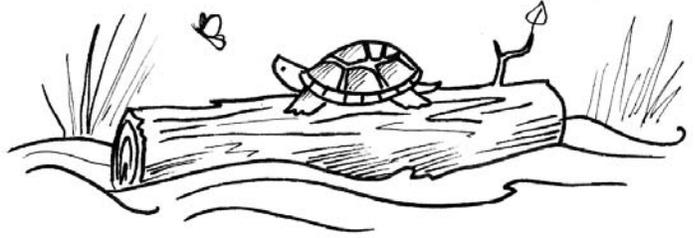
There are some very large wetlands around our community and we need help to complete our challenges. Waubun has some students from the school who will work with him through the summer and I thought that you, Nodin and Seegwun, would be good helpers as well. So - are you ready to accept Miskwaadesi's challenges?"

Nodin and Seegwun agreed at once. "When do we start?" Asked Seegwun.

"Tomorrow morning - let's meet at the Environmental Office and we'll start looking at the turtle posters. See you right after breakfast. Be on time because the wildlife biologists from the Toronto Zoo are here to help us!" And with that, Waubun took off on his bike. Auntie Lily helped Nodin and Seegwun unpack and get ready for bed.

It was going to be a great adventure! Imagine - a whole summer to spend with Kokom Annie, and a chance to walk with Miskwaadesi too!!

# TEACHER BACKGROUND



Turtles have a special place in the history of the world. Turtles have been walking and swimming on planet earth for at least 250 million years! Many Nations and cultures have a special relationship with the turtle and the turtle is very important in the traditional teachings of many Nations.

One of the interesting teachings concerns the lunar calendar - the 13 scutes and the 28 plates on the upper shell of the turtle represent this calendar and have been used from ancient times to teach the calendar and time. Teachers are encouraged to share the following short video with their class as Jan Longboat, an Elder from Six Nations shares her understanding of the calendar on the back of the turtle -

[http://www.dodemkanonhsa.ca/videos/turtle\\_teaching.htm](http://www.dodemkanonhsa.ca/videos/turtle_teaching.htm)

Most Turtle species and many tortoises as well have become endangered and are considered species-at-risk for many reasons. Turtles are associated with water and because they are a species that is unique in their ability to live both in water and on land, they are very special. Turtles need clean water and healthy habitats for survival, just as we, the youngest members of Creation, need clean water and healthy habitat. If the turtles cannot survive in their present environment, it will not be long until we are unable to survive as well.

It is very important that we develop an appreciation and understanding of the role the turtle plays within the environment because we depend upon the turtle and upon all of the other members of Creation for our own health and wellness.

In North America, turtle habitat has been negatively impacted as wetlands have been drained and water tables degraded, lowered, and changed through development and pollution.

First Nations people who live in present-day Ontario have a long traditional relationship with the turtles that have made their home in the wetlands, woodlands, and waters of the Great Lakes region south of the boreal forest of the north. In traditional times before the arrival of settlers and explorers from other countries, the First Nations people could see turtles throughout their environment on a daily basis, because the early roads were the waterways, and most pathways followed the edges of the water. Turtles could be seen sunning themselves, hunting for food, laying eggs, and going about their turtle business every day from spring until late fall.



First Nations teachings were shared with the children and youth in the winter time when the snow blanketed the earth, and the teachings began with a re-telling of the Creation story (see the 2nd challenge). The turtle has been given special responsibilities in creation and we are asked to be grateful to the turtle for continuing to honour its responsibilities. The turtle carries the Earth on its back - the origins of Turtle Island talk about the great kindness and love that was expressed by the turtle in agreeing to carry the soil, the plants, animals, and the humans on its back after the great flood. First Nations peoples have the turtle as one of their clans and honour the turtle in rock paintings and in the Petroglyphs. The characteristics of the turtle are remembered in the teachings that are passed on during special ceremonies and celebrations and feasts.

Miskwaadesi is one turtle species that is often recognized by children - the painted turtle who beautifully wears its colours is the only one of Ontario's turtles that has not yet been named to the endangered species list. As such, it was Miskwaadesi who has been chosen to speak on behalf of her turtle clan members and cousins.

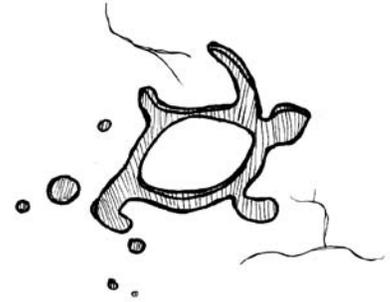
Teachers and leaders using these challenges are asked to provide their children with a reflective journal to use with each challenge to record observations and questions and 'I wonder' ideas. Students will also need a duo-tang or notebook where they can keep their worksheets organized and neat.



Teachers are encouraged to complete as many of the challenges as they can within their classrooms and to invite those students who become interested in pursuing a challenge on their own to enjoy the 'One More Step' activities and ideas. Some challenges could be done by small groups who would then come back to the class to report upon the learning.

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. INTRODUCTION TO MISKWADESI'S CHALLENGE

Read the challenge story that introduces the unit. With the class discuss the story and the challenges.

Make a chart of the 13 challenges and provide students with a blank chart to copy each challenge onto.

Create and post a large copy of the turtle shell outline in the classroom to record the completion of each challenge. When all work on this 1st challenge is completed, decide upon symbols or illustrations that will represent the completion of the 1st challenge. Place these symbols/illustrations on one of the scutes on the turtle shell.

Students will decide upon their own individual way of recording the completion of their 1st challenge and they will place it on the cover page of their journal when this challenge is completed. See page 54 and 55 for turtle shell templates. The template can be copied for students to use and can be enlarged to help create a posters-sized shell for the classroom.

### 2. TURTLES OF THE WORLD

Materials: "Turtles of the World" worksheet - one per student, outline map of the world - one per student, atlas - one per group or pair of students.

Many Nations and cultures around the world have a special respect for and understanding of turtles and they honour the turtle in a variety of ways. Introduce the students to some of these understandings and traditions with the information on the student worksheet - "TURTLES OF THE WORLD". Read through the facts. Identify the characteristics that people identify with turtles.

Ask students to work in pairs or small groups with an atlas and the worksheet. Find the countries that have a special relationship with turtles and record them on the world map. Create a legend on the map to identify the various places and nations.

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. A YEAR OF THE TURTLE - 13 MOONS

Take a look at what Jan Longboat, an Elder from 6 - Nations says about the turtle and you will learn about the calendar that is found on the turtle's shell.

[http://www.dodemkanonhsa.ca/videos/turtle\\_teaching.htm](http://www.dodemkanonhsa.ca/videos/turtle_teaching.htm)

There are 28 small plates around the edge of the turtle's shell - one for each day in the lunar month. As well, there are 13 scutes or sections on the turtle's back - one for each of the moons in the year.

Each First Nation has a unique understanding and a description of the 13 moons. Learn about the 13 moons that make up the calendar for your culture.

Ask your Native Language teacher to help you learn the names of each moon and find out why the moon has that particular name. Take a look at the chart on [Student Worksheet 1c](#) - can you read the names of the Anishinaabek moons from Wasauksing and of the Haudenosaunee moons from Tyendinega - what does your community call the 13 moons? Fill in the chart (student worksheet 1c) and use the information to complete the activity on the 13 moons after you have looked at the book "Thirteen Moons on Turtle's Back, A Native American Year of Moons" by Joseph Bruchac to get an idea of some of the different names that have been given to the moons of the year by some of the Nations who have walked and lived on Turtle Island. Each page in Joseph's book has a beautiful illustration and a poem that describes the moon. Think about how you might illustrate the moons.

Use your best language (vocabulary) to describe each moon. Illustrate each moon on a scute on the turtle shell from the second page of the student worksheet 1c to make your own personal calendar.

Compare your calendar with the calendar of another First Nation community. How are they the same? Why might some of the moons be called by a different name? The traditional calendar of the Saanich Nation on Vancouver Island reflects the environment and the life of the people and is different from the Anishinaabe and Haudenosaunee calendars of the east - see <http://www.racerocks.com/racerock/firstnations/13moons/13moons.htm> and click on the Wsanec link. The site also shows illustrations of each moon using west coast art.

Work together with your class to create a moon calendar for your community. Design an illustration for each moon. List all of the important dates that will occur during each moon - pow-wows, ceremonies, important gatherings, birthdays, etc. Publish your calendar as a fund-raiser for your class!



## 2. MY TURTLE JOURNAL

Begin your journal today - Make a copy of the turtle shell outline from [student worksheet 1c](#) to use as a cover page, or make your own cover page that looks similar to the worksheet - make sure there are 13 scutes and 28 plates on your turtle shell.

Paste the worksheet into your journal and record what you have done to solve the challenge. As you complete each challenge, make a drawing or symbol to represent the work that you have accomplished.

Make a copy of student worksheet 1a - Miskwaadesi's Challenge for your journal. Use the worksheet to briefly summarize the challenges, and to record your own personal responses to the challenges as you complete each one.



## 3. JOURNAL REFLECTION

Think about these questions and respond to them in your journal.

What is your favourite moon? Why?

Look at the map of the world that you have completed. Were you surprised to discover that many cultures and Nations of the world have a special relationship with the turtle?

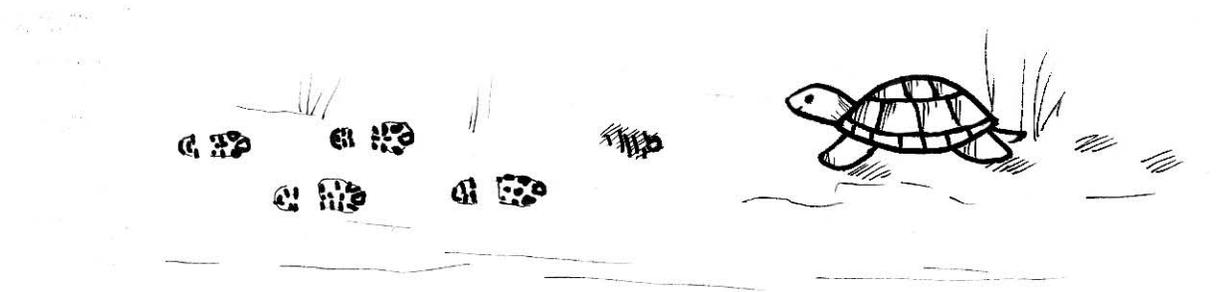
Why do you think so many peoples have these teachings in their traditions?

What more would you like to learn about turtles? Write down your questions here and see if you can find the answers within Miskwaadesi's 13 challenges.

# ONE STEP MORE

## DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

1. Look at the map of the world again. The turtles of the world live along the waterways of the world. Pick a country that you have not yet identified on your map. Do some research and find out if the people of that country have traditional stories and legends about turtles. When you find something new, add it to your map and record the information in your journal. Share what you have learned with your class.
2. Research the tortoises of the world - they live in the land areas that are dry and do not seem to have the need to be so close to water. What can you find out about the tortoises of the world? Do the countries in desert areas have stories about tortoises?
3. What is your own cultural background? Are there teachings, stories, or legends about turtles? What do they say?



# Student Worksheet

## 1A - MISWAADESI'S CHALLENGES



MISKWAADESI'S CHALLENGES

WHAT I DID TO MAKE A DIFFERENCE

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.



# Student Worksheet

## 1B - TURTLES OF THE WORLD 1/2



### 1. NORTH AMERICA

"Turtle Island" - In many First Nations creation stories, the turtle has the responsibility for carrying the Earth on her back.

Turtle Island - Iroquois and Anishinaabeg peoples - The great turtle that holds up the earth is a symbol of wisdom and kindness. Turtle rattles used in ceremonies.

### 2. INDIA

The tortoise is supported by the elephant and the elephant holds up the world.

### 3. CHINA

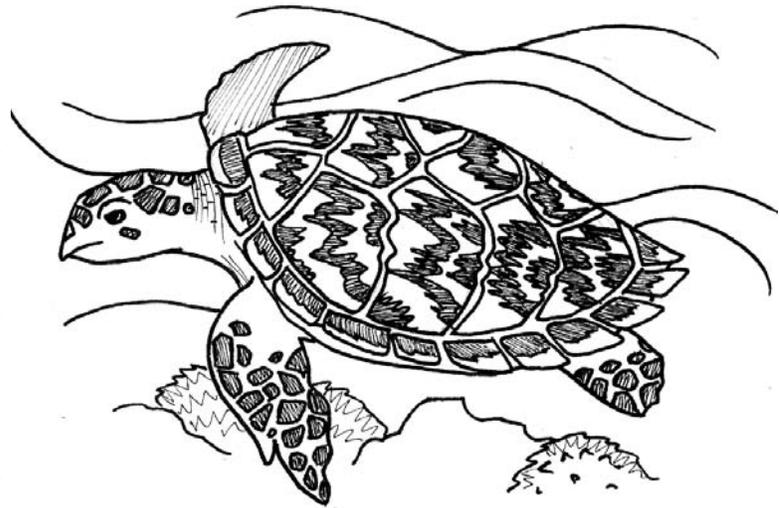
The turtle represents strength, endurance, slowness, long life, fertility, and it is shown on the imperial banner as an emblem of protection in war.

### 4. JAPAN

The sea turtle represents Kumpira, the protector of sailors.

### 5. AFRICA

Tortoise is an emblem of protection and is a masculine symbol of fertility.



### 6. GREECE

In ancient times, turtles were emblems of Aphrodite because the turtle was associated with females and water.

### 7. MAYANS (ancient Mexico)

The turtle was associated with water, land, and thunder.

### 8. TONGA

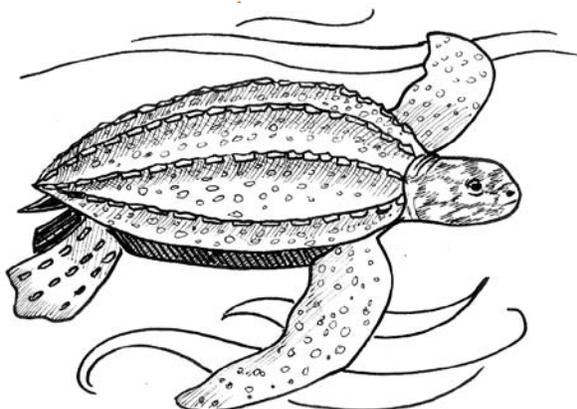
Sea turtles - Special symbol of longevity and good fortune and fertility.

### 9. SAMOA

Sea turtle is a graceful swimmer and also represents freedom.

### 10. NEW ZEALAND

Sea turtle - Unique because it has flippers instead of feet but it must still leave its 'home' in the ocean to crawl ashore, dragging its great shell without complaining or hurrying to lay its eggs. Perseverance, patience, and virtue are also identified with sea turtles.



# Student Worksheet

## 1B - TURTLES OF THE WORLD (CONTINUED 2/2)



### 10. FIJI

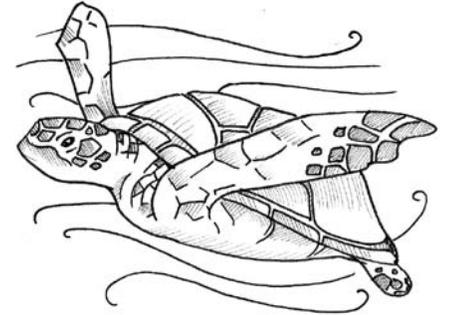
Baby sea turtles represent determination and bravery in their struggle to survive - they must take their first steps, defenceless, across the sand, facing danger from many predators as they make their way to the sea. The baby turtles are also associated with the star constellation the Pleiades (the Seven Sisters) because the constellation first appears in the predawn time as the baby turtles are hatching, helping to guide them to the sea. The Pleiades constellation is also a very special group of stars for First Nations in North America who believe that the Pleiades is the doorway to the star world.

### 11. POLYNESIA

Many peoples who live in this group of islands wear tattoos of turtles to honour the sacredness of the turtle to their culture, and have ancient carvings of turtles as symbols of leadership and fertility.

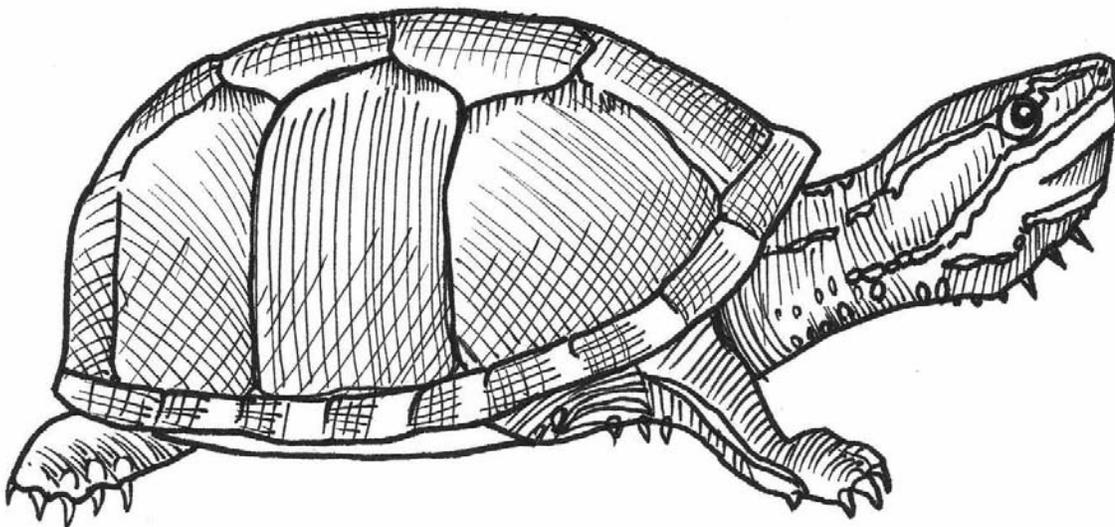
### 12. HAWAII

The green sea turtle is especially honoured because one of the ancient teachings tells how a Hawaiian turtle could transform itself into a human form if needed, to protect children playing at the ocean's edge and to provide good drinking water.



### 13. AUSTRALIA AND TORRES ISLAND

Coastal communities in Northern Australia have honoured the turtle for its leadership, patience, fertility, and determination to find its way home during nesting time, and have depended upon it as an important source of food. Turtle oil is used as a medicine.

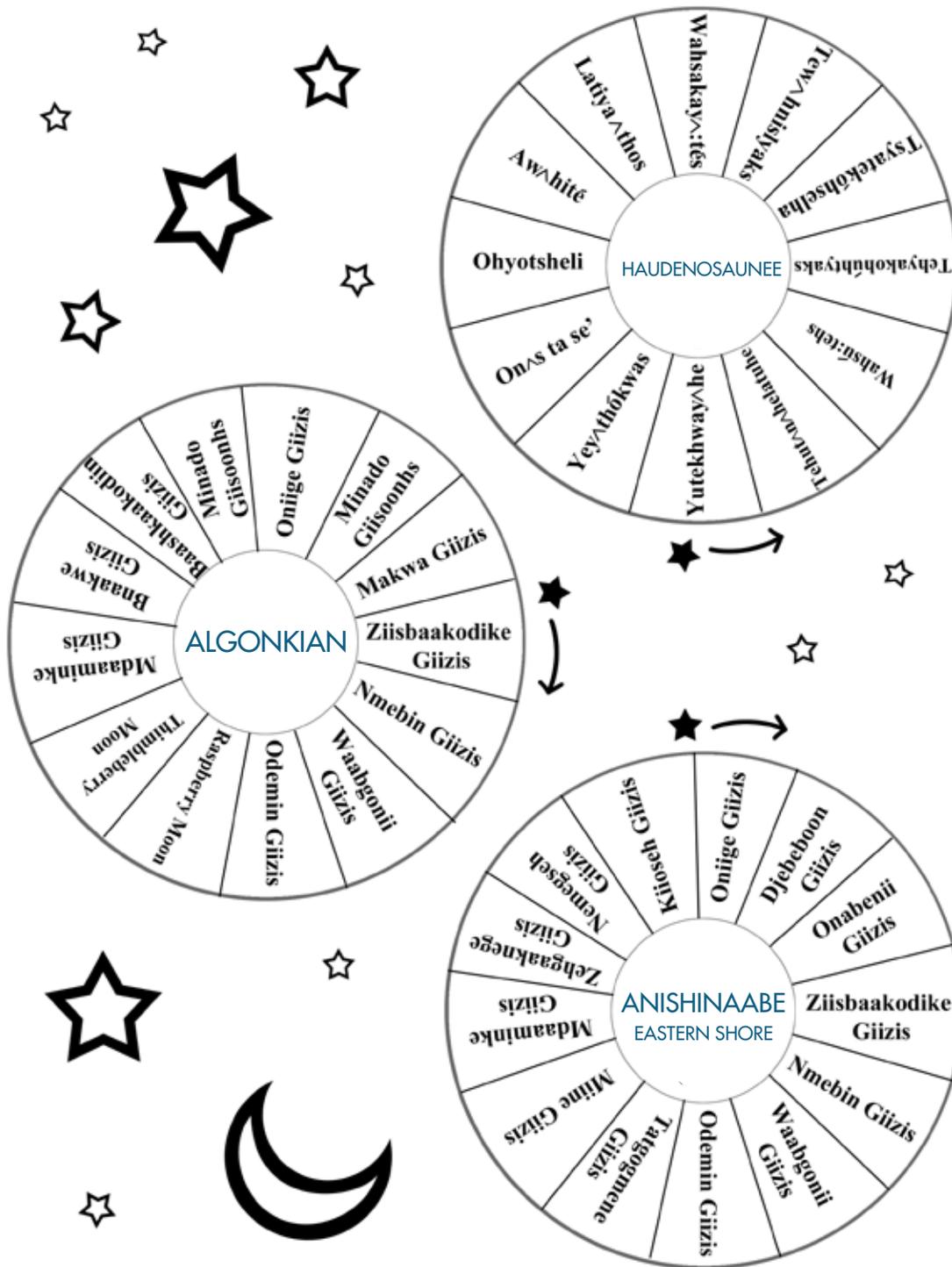


# 13 Moons



# Student Worksheet

1C - 13 MOONS ON A TURTLE'S BACK 1/4



The Haudenosaunee year begins with the Mid-winter ceremonies. Mid-winter ceremonies take place over several days in January.

# Student Worksheet

1C - 13 MOONS ON A TURTLE'S BACK (CONTINUED 2/4)



A large circular diagram with a central circle containing the text "MY COMMUNITY MOONS". The outer ring is divided into 13 equal segments. Surrounding the circle are several star patterns and constellations, including a large five-pointed star at the top, a constellation of stars forming a triangle and other shapes, and several smaller stars scattered around. The entire diagram is set against a background of faint, light-colored stars.

# Student Worksheet

1C - 13 MOONS ON A TURTLE'S BACK (CONTINUED 3/4)



*Mid-Winter* is a multi-day ceremony for the beginning of the New Year. The ceremony that follows is Giving Thanks to the Maple as it is taught that the Maple tree is the leader of all the trees in the natural world. The running of the Maple sap marks the re-awakening of Mother Earth after her long winter sleep.

The *Thunder Ceremony* is held when we hear the first thunder in Spring, to welcome back our Grandfathers - The Thunder Beings, so that they may resume their task of cleansing the air and replenishing the waters of Mother Earth.

*The Seed Ceremony* is to give thanks to the seeds whose power provides food for the people. *The Strawberry Ceremony* occurs in June, when the wild strawberries are ripe. The Strawberry is recognized as the leader of all of the medicine plants.

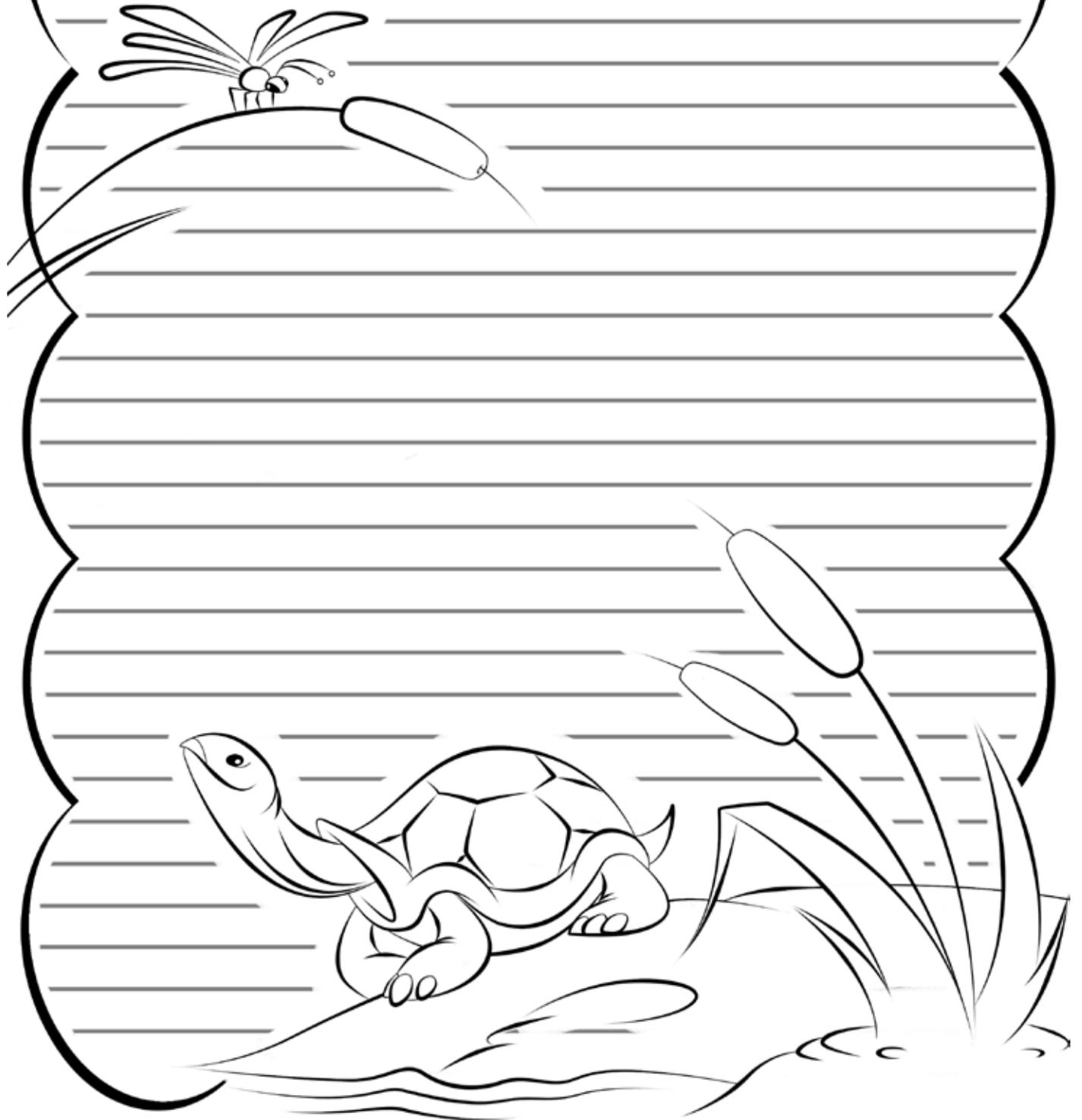
*The String Bean and Green Corn Ceremonies* are held next. Beans, Corn and Squash are the staples of our traditional diet and are known as *The Three Sisters*. *The Harvest Ceremony* marks the end of the ceremonial cycle.

At that time, we acknowledge our Mother the Earth for providing us with all that we need to survive as all of our ceremonies revolve around giving thanks for the gifts that we have been given.



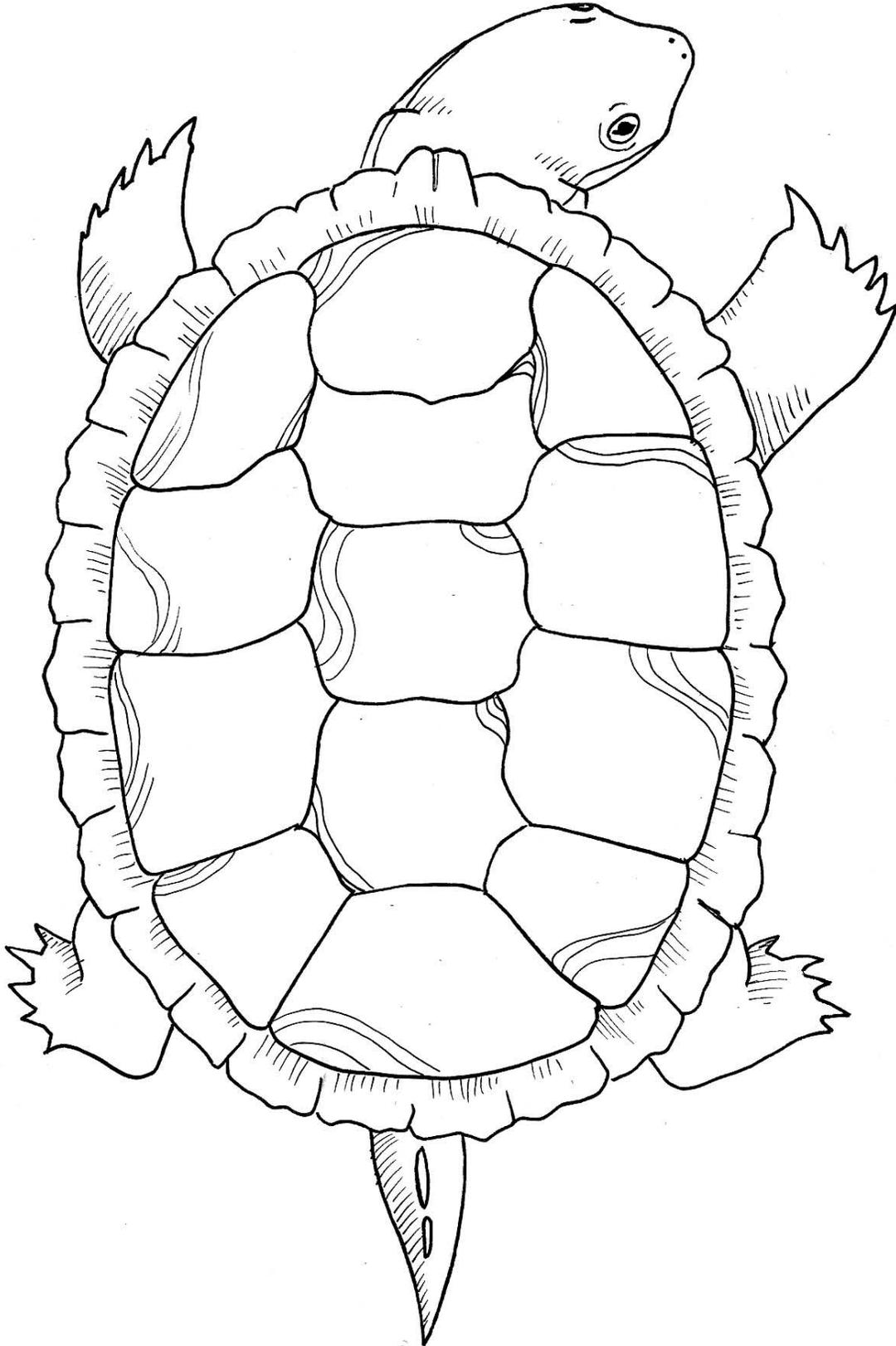
MY JOURNAL

CHALLENGE:



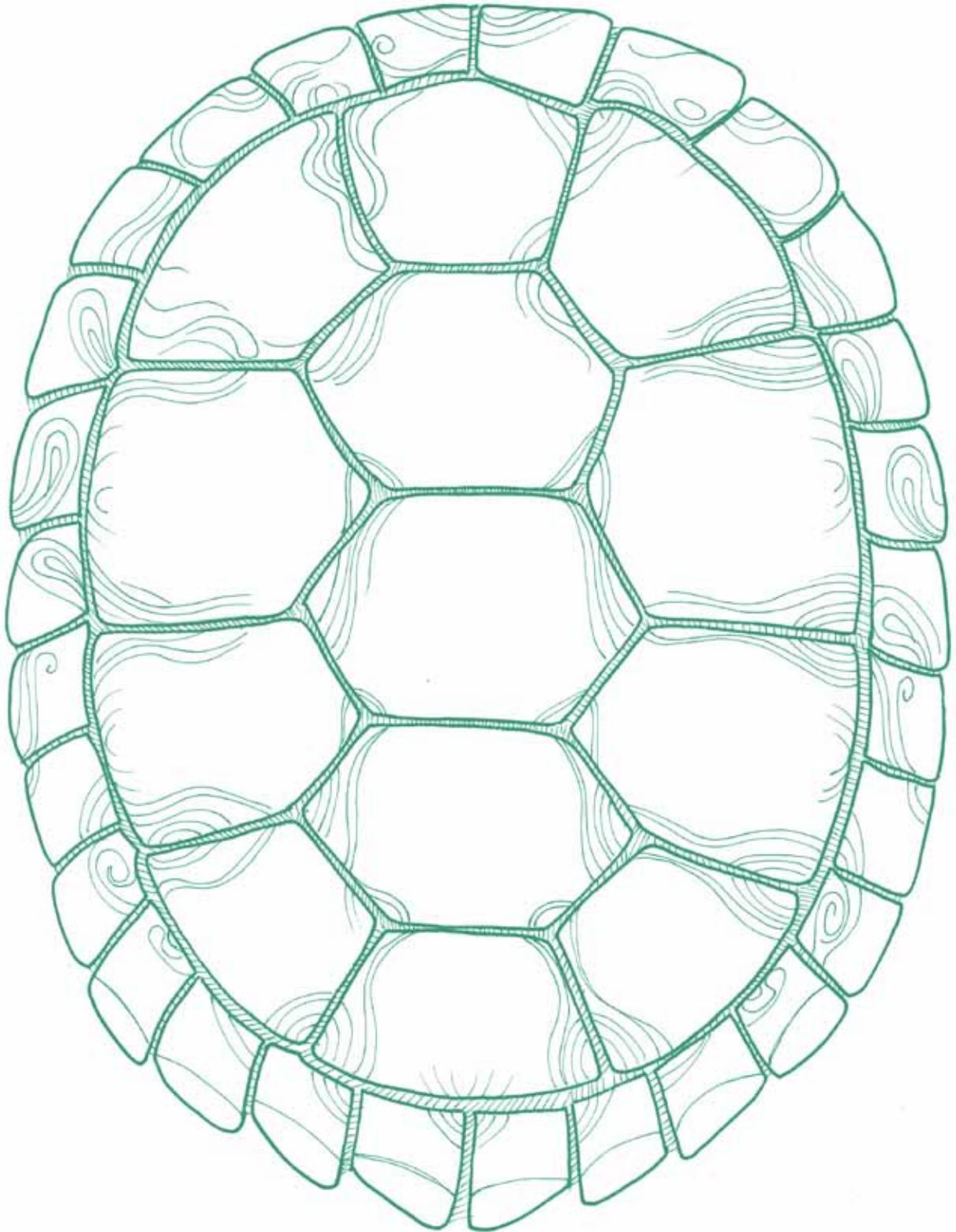
# Student Worksheet

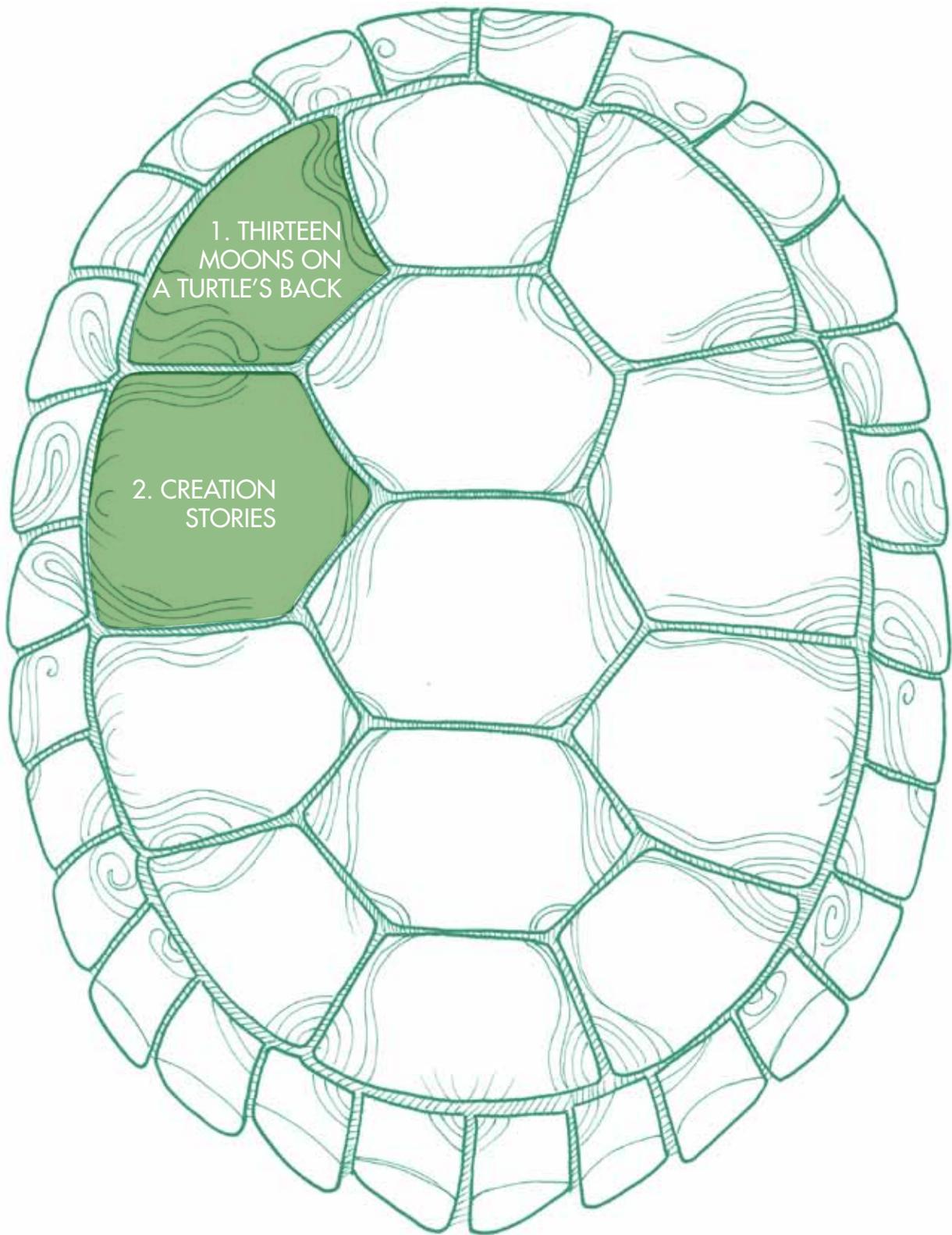
1C - 13 MOONS ON A TURTLE'S BACK (CONTINUED 4/4)



# Student Worksheet

OPTIONAL STUDENT TITLE PAGE





## THE SECOND CHALLENGE

WALKING WITH MISKWAADESI

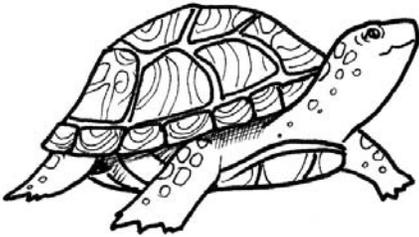
# THE SECOND CHALLENGE

## CREATION STORIES

How important is the Turtle to First Nations cultures?

What do our Creation Teachings tell us about Turtles and their Responsibilities?

Have you remembered to be grateful today?



*“Grandmother - your 2nd challenge is to go and find young people who have heard our Creation teachings. They will have some understanding of the responsibilities that were given to the Turtle Clan People and they may have some knowledge of how humans and turtles are connected. Talk to the young ones about our Creation teachings and remind them to be grateful and thankful for the beautiful gifts that The Great Mystery has provided. Remind them of the kindness and love and caring that were part of the creation of all life forms.”*

Miskwaadesi’s 2nd challenge.

# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY                   | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                     |
|-------------------------------------|--------------------------------|-------------------------------|
| The Words that Come Before All Else | 4e4                            |                               |
| Interview an Elder                  | 4e4, 4e6, 4e9                  | 2a - Interview an Elder Chart |
| Creation Stories                    | 4e18, 4e26                     |                               |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY           | ONTARIO CURRICULUM EXPECTATION | WORKSHEET       |
|-----------------------------|--------------------------------|-----------------|
| Gratitude and Giving Thanks | 4e53, 4e52                     | Journal Entry 2 |
| Journal Reflection          | 4e53                           |                 |

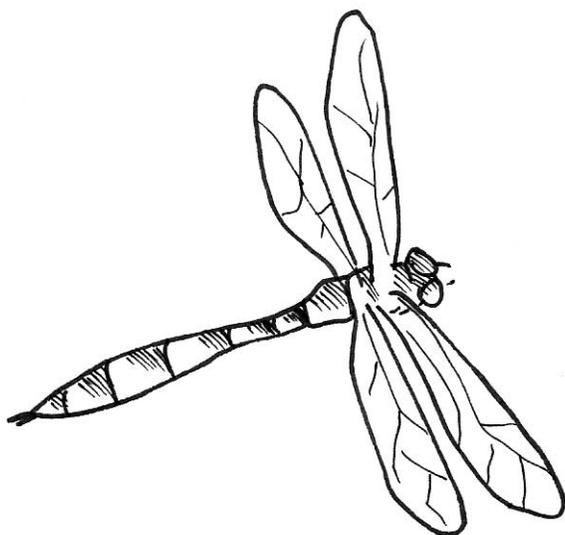
## ONE STEP MORE (individual student optional adventures in learning)

1. Creation Stories of Other First Nations

2. Giving Thanks

**WORD WALL:** Creation, gratitude, thanksgiving,

# LINKS TO OTHER CURRICULUM



## 2<sup>nd</sup> CHALLENGE

Ways of Knowing Guide – Respect – pg 15

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

Turtle Curriculum website – Section2: Legends of the Fall - the Earth on Turtle's back"

A retelling of the Creation Story by Michael J. Caduto and Joseph Bruchac

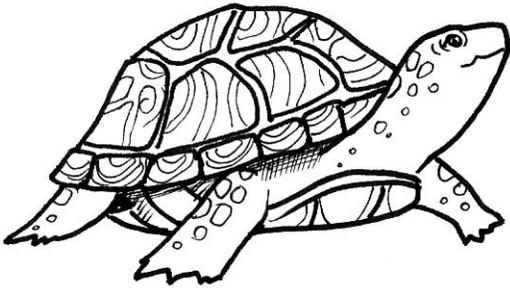
<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>

Haudenosaunee Creation Story – Tom Porter – <http://www.fourdirectionsteachings.com/transcripts/mohawk.html>

Anishinaabe Creation teachings – [http://natedrums.ca/index.php/Stories/The\\_Creation?tp=a&bg=1&In=e](http://natedrums.ca/index.php/Stories/The_Creation?tp=a&bg=1&In=e)

# KOKOM ANNIE'S JOURNAL

## TURTLE CLAN RESPONSIBILITIES

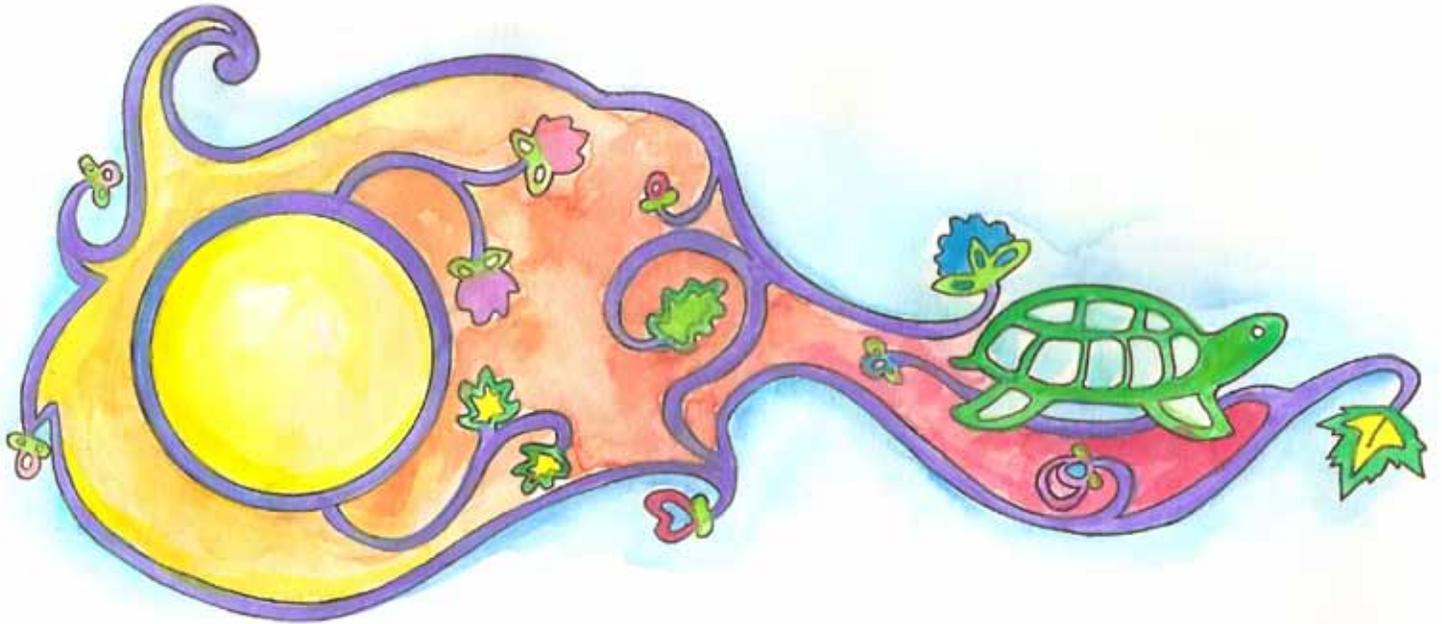


*"Grandmother - your 2nd challenge is to go and find young people who have heard our Creation teachings. They will have some understanding of the responsibilities that were given to the Turtle Clan People and they may have some knowledge of how humans and turtles are connected. Talk to the young ones about our Creation teachings and remind them to be grateful and thankful for the beautiful gifts that The Great Mystery has provided. Remind them of the kindne and love and caring that were part of the creation of all life forms."*



"I opened my eyes... I had been dreaming about Miskwaadesi. The ancient turtle with the so very quiet voice had given the second challenge! The early morning light was just beginning to fill the Eastern sky. MorningStar (beedabahn) was calling the sun back for another day's journey across the sky. It was time to get my drum and sing a morning song to greet all of Creation. As I got ready I thought about Miskwaadesi's second challenge - I will go by the school later and talk to the kids in my daughter's grade 4 class. They are always so welcoming when I go to visit. I will ask them for help..."

I got to the school just in time to hear the morning announcements and to listen to the students saying the morning greeting - they were using a morning prayer that they learned from my friend Shirley - "



# *Anishinaabe Morning Prayer*

## **Kitchi-manidoo!**

Miigwetch noongwa wabdaamaa miinwaa ngoding giizhigak.

Miigwetch kina gego gaa-miizhiyaang,  
kina kiig gaa-tooyin aw sa Nishnaabe wii-miigkadaawsod.

Miigwetch newiing nekyaa mebimiseg,

Miigwetch, newiing nekyaa mebiniseg,

Miigwetch wesiinyag gii-miizhiyang wii-wiisiniyang,

Miigwetch bineshiinyag noodoonogwaa nagamwaad,

Miigwetch nbi biinaakizigoyang,

Miigwetch gii-miizhiyang nokiiwin!

Miinshinaag mina-de'ewin, wii-mina nokiitaadiyang,

naadimooshinaag wii-ni-mosaadimaang.

Miigwetch Kitchi manidoo! Miigwetch! Miigwetch! Miigwetch!



Last week when I was visiting at Tyendinega I went over to the school to say hello to the children. I got there at the beginning of the day. It was so beautiful to hear two students reciting the Thanksgiving Address on the speakers... their voices sounded so wonderful - I closed my eyes and thought about how it must have been in the old times long ago when all Haudenosaunee greeted the morning with the Thanksgiving Address... the students gave me a copy of "The Words That Come Before All Else" to bring back home.

On my way home I was thinking about how much alike our Anishinaabe morning greeting and the Thanksgiving Address are. The Haudenosaunee Thanksgiving Address reminds me of the Mohawk Creation Teachings, and their teachings remind me of our own Anishinaabe Creation stories and teachings. I can remember, when I was just a very little girl, my nokom teaching me to say our morning prayer and telling me how important it is for us as humans, to be grateful and thankful for the many gifts that have been given to us because we are the last ones to be created and so we are the youngest ones. She told me that we depend upon everything else in Creation for our daily life and for that we are to be grateful and thankful.

One morning I was looking out the window at the little birch tree in her yard and I asked my nokom how I depended on that tree. She said that with every breath I take in comes some of the oxygen that the tree gave to me as a gift. With every breath that I breathe out, some of the carbon dioxide goes right back to the birch tree as my gift to the tree, and the carbon becomes part of the tree. One of the responsibilities of the trees is to take up our carbon and store it in their bodies (trunks) so that the air will be clean and healthy and when we need fire to keep warm, we will have the carbon from the trees to make our fire! Some of the other responsibilities of the trees is to make oxygen and put it into the air, to make the air cooler in the summer, to make shade for the earth so it won't get too hot, to make food for the bugs that like to munch on birch leaves, to give itself as a home to the birds, to lend its skin (birchbark) so that we can make good baskets, containers, homes (wigwams and sweatlodges) and in traditional times, to wrap our elders in when they passed over.



She also told me about the good medicine that comes from the birch tree (tea from the buds and the bark, syrup and sap) and how it helps me to stay healthy and she told me a story about the birch tree too. I can remember running outside to hug that tree and it felt like the tree was hugging me back. I put down a little bit of tobacco at the bottom of the tree and said 'miigwetch' to that beautiful birch tree.

Miskwaadesi's second challenge reminds me of how connected we human-kind are to everything else in creation. I will have to think about ways that I can explain to the children how important it is to find out about our turtle friends and to make sure that they are healthy in our wetlands. We have a strong connection to them and to the wetland and if they are healthy we will be healthy too! We share the need for clean air with our Miskwaadesi cousins and neighbours. We share the need for clean drinking and washing water. We share the need for healthy plants in our wetlands - Miskwaadesi needs the plants for food and we need the plants for our medicines and also for our food. We share the need for a healthy living space. Yes, we have a lot of things in common and we should show respect and gratitude for the gifts of creation that are everywhere around us.

# TEACHER BACKGROUND



Teachers are invited to visit the Turtle Curriculum website (Section 2: Legends of the Fall - "The Earth on Turtle's Back", a retelling of the Creation Story by Michael J Caduto and Joseph Bruchac) for a short version of the Haudenosaunee Creation Story.

<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>

A shortened version of the Kanian'kehaka (Mohawk) Prayer of Thanksgiving (The Words That Come Before All Else) can be found below and shared with students.

Tom Porter, Haudenosaunee Elder retells the Creation Story on this website:

<http://www.fourdirectionsteachings.com/transcripts/mohawk.html>

The website contains both an audio version and an html version and teachers are encouraged to preview this site and to share it with their students.

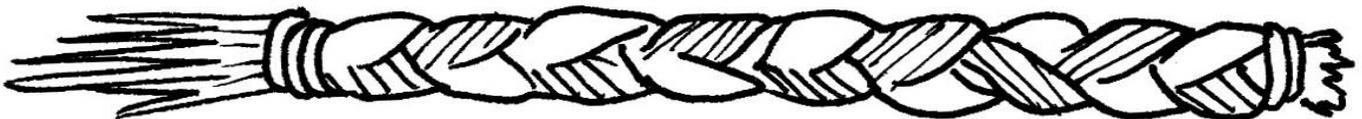
Teachers may also view a version of the Anishinaabe Creation teaching at this website -

[http://native-drums.ca/index.php/Stories/The\\_Creation?tp=a&bg=1&ln=e](http://native-drums.ca/index.php/Stories/The_Creation?tp=a&bg=1&ln=e) or in the book "The Creation of Turtle Island" by Ken Ense. Shkimawtch Project, Kenjgewin Teg, M'Chigeeng, ON.

As well, teachers are encouraged to introduce the students to the following website to hear the words of Anishinaabe Elder Lillian Pitawanakwat who describes the medicine wheel teachings (listen/read the section on the East to hear Lillian discuss the morning prayer.

<http://www.fourdirectionsteachings.com/transcripts/ojibwe.html>

The Four Directions website will also provide teachers and students with background information on the Micmaq, Cree, and Blackfoot traditions.





KANIAN'KEHAKA (MOHAWK)  
**THANKSGIVING  
ADDRESS**

A GOOD MORNING MESSAGE

To be a human is an honour, and we offer thanksgiving for all the gifts of life.

We are reminded of Mother Earth, we thank you for giving us everything we need. We are grateful that you continue to follow your original instructions and responsibilities.

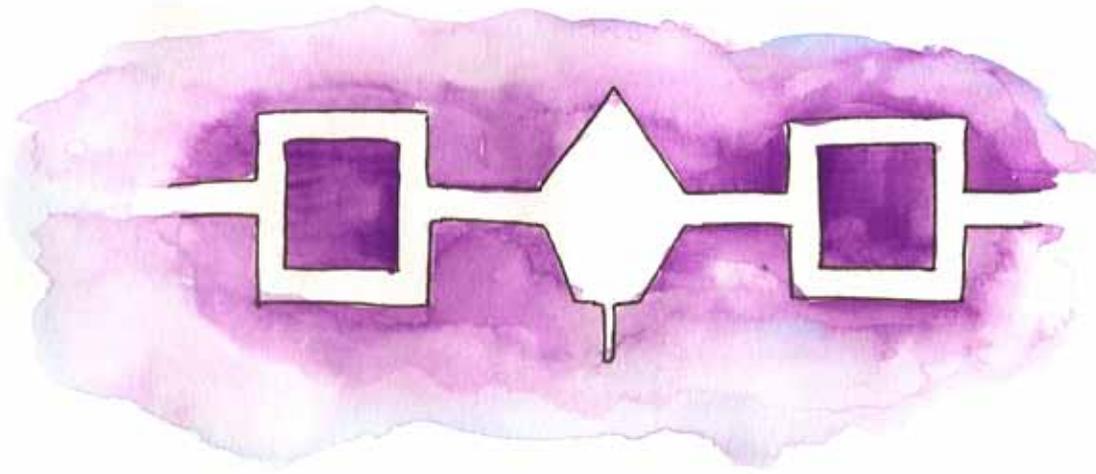
We Thank you deep blue clean waters around Mother Earth, for you are the force that takes thirst away from all living things. We are grateful that you continue to follow your original instructions and responsibilities.

We give thanks to green, green grasses that feel so good against our bare feet, for the cool beauty you bring to Mother Earth's floor. We are grateful that you continue to follow your original instructions and responsibilities.

Thank you, plants, good foods from Mother Earth, our life sustainers, for making us happy when we are hungry. We are grateful that you continue to follow your original instructions and responsibilities.

Fruits and berries, we thank you for your colour and sweetness. We especially think of the heartberry, the first berry to offer us fresh fruit every spring. We are grateful that you continue to follow your original instructions and responsibilities.

We are thankful to good medicine herbs, for healing us when we are sick. We are grateful that you continue to follow your original instructions and responsibilities.



## THANKSGIVING ADDRESS CONT...

Thank you, all the animals of the world, the swimmers, crawlers, walkers and fliers, for keeping our precious forests clean and for sharing themselves with us as food and clothing. We are grateful that you continue to follow your original instructions and responsibilities.

All the trees and shrubs of the world, we are thankful for the shade and warmth you give us. We are grateful that you continue to follow your original instructions and responsibilities.

Thank you all the birds in the world, for singing your beautiful songs for all to enjoy. We are grateful that you continue to follow your original instructions and responsibilities.

We give thanks to you gentle four Winds, for bringing clean air for us to breathe from the four directions. We are grateful that you continue to follow your original instructions and responsibilities.

Thank you, grandfather Thunder Beings, for bringing rains to help all living things to grow. We are grateful that you continue to follow your original instructions and responsibilities.

Elder brother Sun, we send thanks for shining your light and warming Mother Earth. We are grateful that you continue to follow your original instructions and responsibilities.

Thank you Grandmother Moon, for growing full every month to bring light to the night sky for children, and for looking after the flow of the sparkling waters. We are grateful that you continue to follow your original instructions and responsibilities.

We give you thanks twinkling stars, for making the night sky so beautiful and sprinkling morning dew drops on the plants. We are grateful that you continue to follow your original instructions and responsibilities.

Spirit Protectors of our past and present we thank you for showing us ways to live in peace and harmony with one another. We are grateful that you continue to follow your original instructions and responsibilities.

If we have forgotten to be grateful for anything in Creation, we acknowledge it now and give thanks.

And most of all, thank you Great Spirit, for giving us all these wonderful gifts, so we will be happy and healthy every day and every night.

*These beautiful words that come before all else have been adapted from a Translation by Chief Jake Swamp.*

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. THE WORDS THAT COME BEFORE ALL ELSE

Begin by sharing the words and story from Kokom Annie's journal with the class. Discuss the Anishinaabe Morning Prayer and the Thanksgiving Address (The Words that Come Before All Else). Discuss Kokom's memories of her childhood.

Post a copy of Shirley's morning greeting of thanks in the classroom. Post a copy of "The Words That Come Before All Else" in the classroom.

Provide the class with a copy of the Anishinaabe morning greeting and also with "The Words That Come Before All Else" (The Thanksgiving Address).

Use The Thanksgiving Address and read each section together every morning until students become familiar with it and can speak to each element and member of Creation that is mentioned in "The Words That Come Before All Else" in their own words. Discuss with the students why it is important to show gratitude and to be thankful for the gifts that we are given.

Students complete the reflection in their journal "Gratitude and Giving Thanks."

Prepare a display of each section of the Thanksgiving Address and ask pairs and small groups of students to illustrate the section for the display. Students may also illustrate each section of the Address in their journal on a smaller sized copy of the Thanksgiving Address.

### 2. INTERVIEW AN ELDER

Prepare one copy of the worksheet for each student ([Worksheet 2a](#)). Before you watch the interview with the Elder, talk about how to make jot notes (point form, short phrases, summarizing information, etc). As you watch the interview, use a jot note format to record the information that is important. When you have finished, compare your notes with a partner. Did you remember something different from your partner? What information did you both write down? With the help of your partner, fill out the table that compares what the two elders have said about turtles. (See [student worksheet 2a](#) )



Go to <http://www.torontozoo.com/adoptapond/tici.asp>

Watch the interview with the Elders. You will find two elders (one Haudenosaunee and one Anishinaabe) discussing the importance of turtles to their culture. They will talk about their creation stories and also will share information about the turtle. Students watch and listen to the interviews, using jot-notes to record their learning. They will then share their learning with a partner or in a small group and transfer the information to the worksheet ([2a](#)).

## REFLECTION



### 3. CREATION STORIES

Read both Creation stories to the class. Students may wish to research other creation stories that are told by First Nations across Turtle Island. Ask students to illustrate one part of the creation story that appeals to them in their journal for the 2nd challenge. Ask students why they chose that particular part. Students may record their responses in their journals.



### 4. JOURNAL REFLECTION

Visit the large copy of the turtle shell outline that was created to record the class responses to the challenges. Briefly review the 1st challenge and the symbol(s) or illustration(s) that were placed upon the outline.

Discuss the organization of the student journal with the class - turtle shell outline cover page, a index page, two pages of the journal (minimum) for each challenge, with one page set aside for illustrations or symbols of the challenge; place for worksheets to be added or attached.



Decide as a class what symbol(s) will be used to signify that the 2nd challenge has been completed. When the challenge has been complete, place the image(s) on the large turtle shell and remind the students to complete their turtle shell in their journal and to fill in the 2nd challenge outline in their journal (See [student worksheet 1a](#)).

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



## GRATITUDE & GIVING THANKS

### 1. GRATITUDE AND GIVING THANKS

Complete this "Gratitude and Giving Thanks" activity for your journal.

Take a blank sheet of paper. Think about the following three questions. Answer them in your best words.

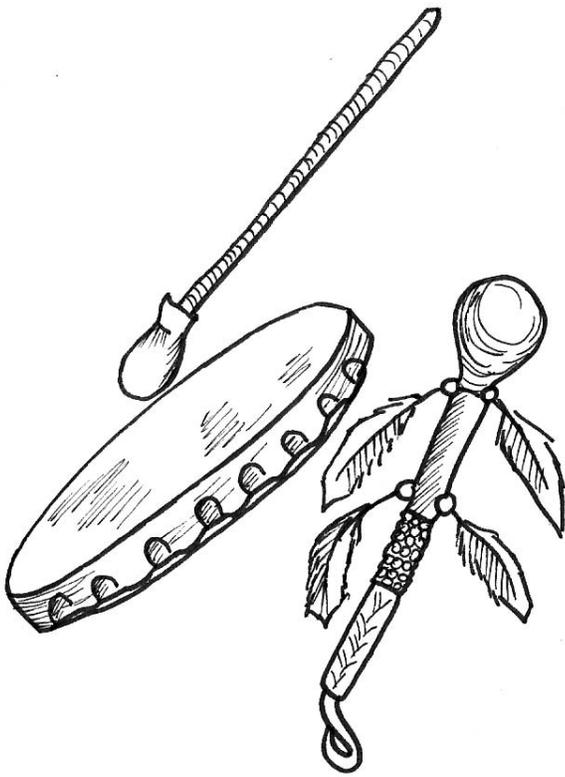
1. What does the word gratitude mean to you? What colour is gratitude?
2. Why do you think that it is important to show gratitude for kindnesses that have been shared?
3. How do you feel when someone is thankful or grateful to you for something good that you have done? Do you think that the Creator feels the same way when we say the Thanksgiving Address or when we greet the day with a special thanksgiving reflection/prayer?

Illustrate some of the things that you are grateful for as a frame around this page. Use colours to make your page look beautiful.

Did you complete the illustration of one part of a creation story? Did you remember to give the illustration a title? Complete the reflection - why did you choose this particular part of the creation story to illustrate?

When you have completed this challenge, remember to draw a symbol or picture to represent your learning for the 2nd challenge on the turtle shell and fill in the 2nd challenge on your original worksheet...Good work!

# ONE STEP MORE



## DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

1. Creation Stories of other First Nations - retell the Creation Story of your Nation using song, drama, a diorama or other visual that will explain the story to a younger grade. Share what you have made with an Elder.
2. Giving Thanks - use a sheet of poster board to make your own reminder of the thanksgiving address if you are Mohawk - create a visual reminder for each section of the address and link the visuals together to show how everything and everyone is connected.
3. Your own idea(s) about the 2nd challenge...



# Student Worksheet

## 2A - INTERVIEW AN ELDER



HAUDENOSAUNEE

ANISHINAABE



SOMETHING THAT I REALLY ENJOYED ABOUT THE INTERVIEW WITH AN ELDER WAS:

.....

.....

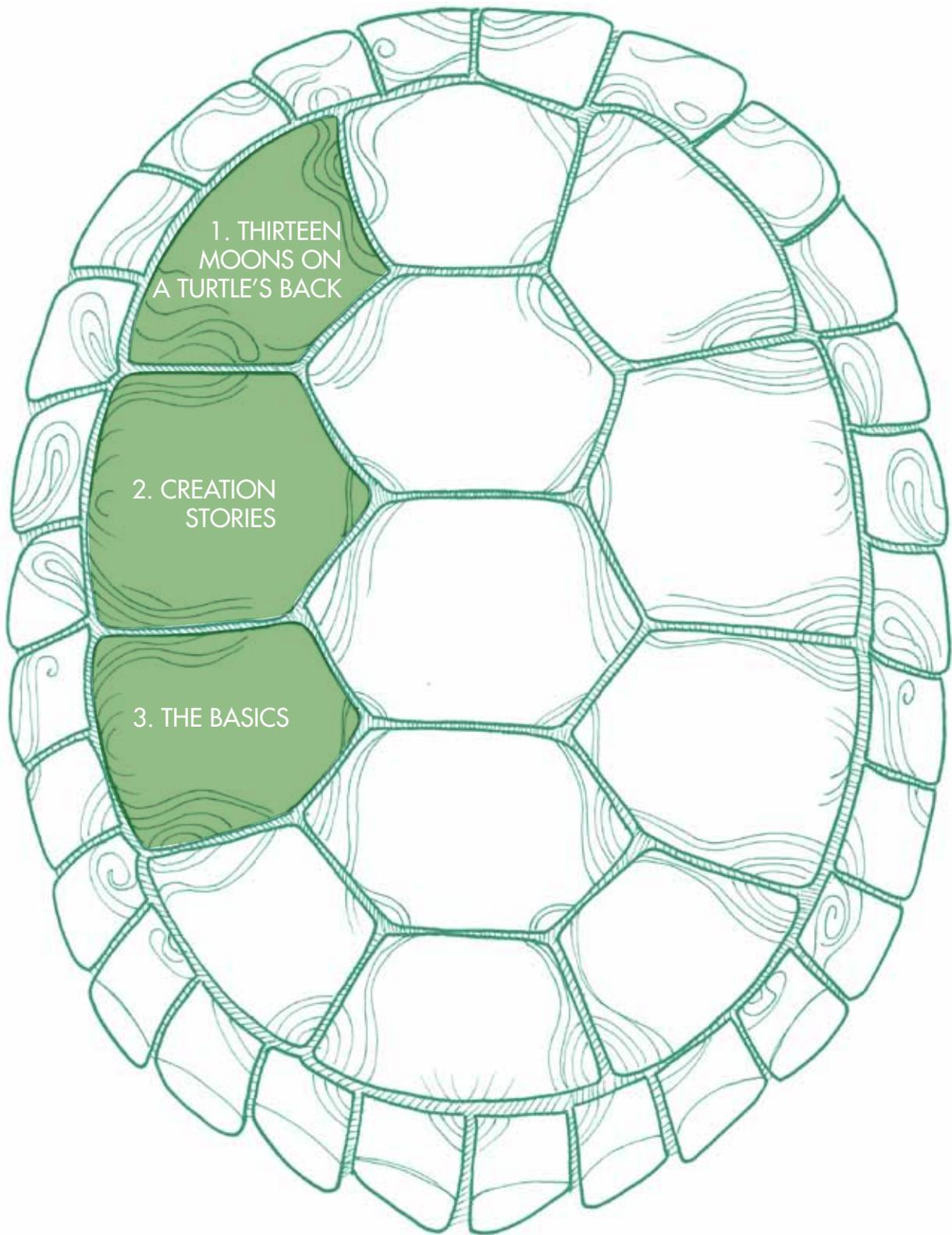
.....

.....

A QUESTION I WOULD LIKE TO ASK IS:

.....

.....



1. THIRTEEN  
MOONS ON  
A TURTLE'S BACK

2. CREATION  
STORIES

3. THE BASICS

**THE THIRD CHALLENGE**

WALKING WITH MISKWAADESI

# THE THIRD CHALLENGE

## THE BASICS

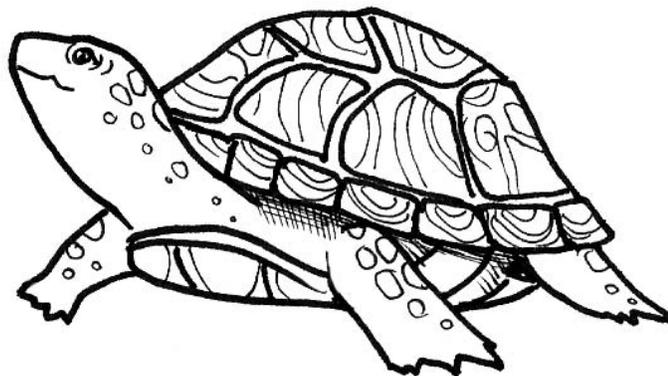
Who are the turtle clans in Ontario and what do they look like?

What does it mean to be a species at risk?

Why are our turtle clan members on the Species at Risk list?

*“Who are the turtle clans in Ontario and what do they look like?  
Where can you find them? Why are my turtle clan family members on  
the Species at Risk list?”*

Miskwaadesi’s 3rd challenge.



# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY             | ONTARIO CURRICULUM EXPECTATION | WORKSHEET   |
|-------------------------------|--------------------------------|---|
| Who's Who in the Turtle Clan? | 4s15, 4s17                     | K-W-L chart,<br>Chart, Card Games                       |
| Species at Risk               | 4s15, 4s17                     | Field Trip<br>Literacy Reflection                       |
| O Turtle, Where are You?      | 4e51, 4e52                     | Fill in the blanks,<br>Card Games,<br>Make a Game Board |

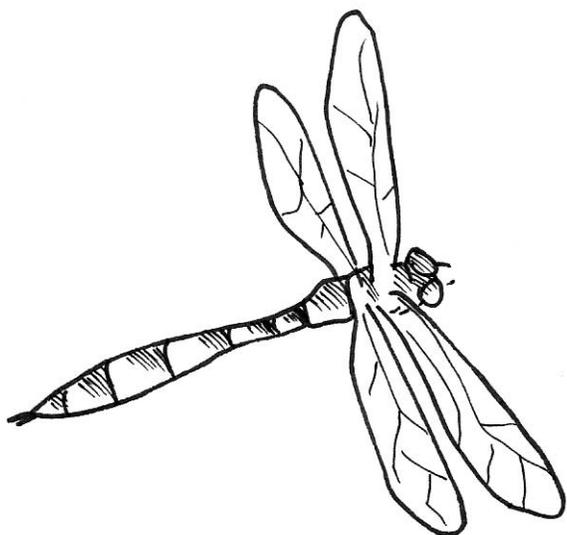
## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY                                       | ONTARIO CURRICULUM EXPECTATION | WORKSHEET          |
|---|--------------------------------|--------------------|
| Oh Turtle, Where are You? Quiz                          | 4s17, 4s15, 4s4, 4e49          | Quiz,<br>Paragraph |
| Journal Reflection - Reporting on Research 3 New Things | 4e67, 4e50, 4s11               | Reflection         |

## ONE STEP MORE (individual student optional adventures in learning)

**WORD WALL:** Biodiversity

# LINKS TO OTHER CURRICULUM



## 3<sup>rd</sup> CHALLENGE

Ways of Knowing Guide – Relationship – pg 46

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

<http://www.torontozoo.com/adoptapond/turtles.asp>

<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>

## TURTLE CURRICULUM LINKS

Activity 1 – Turtle Trading Cards

Activity 2 – Turtle Identification

Activity 3 – One of These Things is Not Like the Others

Activity 4 – Guess Who?

Activity 5 – Camouflage



<http://torontozoo.com/adoptapond/turtles.asp>

<http://torontozoo.com/adoptapond/tici.asp?opx=4>

Turtles of Ontario Identifier Poster

<http://www.bonnecherepark.on.ca/images/pdfs/turtles-info-sheet.pdf>

Turtle fact sheet that also explains the endangered species labels

<http://www.carcnet.ca>

Canadian Amphibian and Reptile Conservation Network

<http://www.turtleshelltortue.org>

Turtle S.H.E.L.L.

<http://www.kawarthaturtle.org>

Kawartha Turtle Trauma Centre  
rbowles@rogers.com - Kids for Turtles website

<http://onnaturemagazine.com/field-trip-turtles.html>

Article about our endangered turtles in Southern Ontario

[http://www.sararegistry.gc.ca/default\\_e.cfm](http://www.sararegistry.gc.ca/default_e.cfm)

Environment Canada's Species at Risk website

[http://www.sararegistry.gc.ca/sar/listing/schedules\\_e.cfm?id=1](http://www.sararegistry.gc.ca/sar/listing/schedules_e.cfm?id=1)

Listing of all Canada's Species at risk

<http://www.hww.ca/hww2.asp?cid=4&id=232>

Hinterland Who's Who - Species at Risk website

# KOKOM ANNIE'S JOURNAL

## SPECIES AT RISK



"Good morning Kokom Annie," said Nodin as he bounced into the kitchen. He gave his grandmother a hug and pulled out a chair to sit at the table beside her. "What are you working on today?" Kokom was sitting at the kitchen table with her journal, a turtle poster and a few pamphlets beside her cup of tea.

"Good morning my boy. Did you sleep well? Here - take a look at this poster from the zoo. It shows our turtle clan animals and the words are in our language! Can you recognize any of the turtles in the poster?" I have been thinking about what Miskwaadesi said to me and I am wondering about those turtle clans that are disappearing."

"Ooh Kokom - look there's Miskwaadesi! I saw that beautiful coloured turtle here last summer when we were playing down by the creek. I like the way we call him the turtle who carries the sunset with him - he sure does have lots of red, orange and yellow on his shell - and I like the stripes on his neck and feet! He likes to sit on a great big log that sticks out in the water. And I have seen those snapping turtles on the edge of the road down south - mom said that they were trying to lay their eggs - I always wondered why they wanted to put their eggs along a road instead of someplace safer. I don't remember ever seeing those other ones. I wonder where they live?" Nodin pointed to the wood turtle on the poster.

Kokom Annie followed Nodin's gaze. "Hmm - I remember seeing some of them when I was young - we used to go down to the big marsh and the other wet places in the summer to pick medicine plants and in the fall we dug roots there as well. For many years your uncle trapped muskrat and beaver in the big marsh with his grandfather. They knew almost every trail and waterway through the cattails, and I think that Uncle Buddy probably knows about some of the other turtle clans that have lived around here. We will have to go and talk to him later. When we see him ask him about Miskwaadesi - I think I remember him saying that he always knows it's time to get ready for hunting season when he does not see Miskwaadesi sunning on a log in the fall because Miskwaadesi is one of the first turtles to dig down into the mud at the bottom of the ponds and creeks to begin its winter sleep.



Let me see that poster again - now that I think about it, I haven't seen the pretty turtle with the stars on its back or that flat turtle either for a long time. There are mikinaakun in the big marsh out by the bay and I can remember seeing them laying their eggs in the soft gravel near the edge of the marsh just at the beginning of strawberry moon."

"Kokom Annie this poster says that seven of our turtle clans are at risk. What does that mean?" asked Nodin.

"I wondered about that S.A.R. thing as well, Nodin, so I went to find out exactly what that means. S means Species. A stands for at and the R is for risk. Here are some pamphlets that talk about species at risk. I was reading them and thinking about what that means to us - you know, to be at risk or threatened. Our people have been endangered and threatened with extinction for some time now too! Maybe we have some of the same problems as the turtles do. I wrote some ideas down in my journal...do you want to hear them?"

'Our People believe that the Great Mystery (Creator) gave each life form a special place and role and responsibility within creation. All life forms, no matter how tiny, have their own special niche and all play a significant and important role in nature. There is supposed to be room for everyone and everything - I think that they call that biodiversity today. If a life form disappears, the entire community suffers and will never be the same again."

You know, Nodin, my Auntie Sadie once told me that no life form is able to change its habitat at will. Changes within the community of life can happen but they take place over long periods of time so that the life forms can adapt. That means that we can't just move one animal or plant to someplace new to live if it's threatened or endangered, and expect it to thrive and survive. All life forms are interdependent. That means that everything is connected together.

I understand what that means. From thousands of years of watching, listening, and thinking about the world around us, we Anishinaabeg have come to an understanding that some life forms are pretty flexible within their own little habitat and are able to adapt to changes; while other life forms are very limited in their ability to change or adapt.

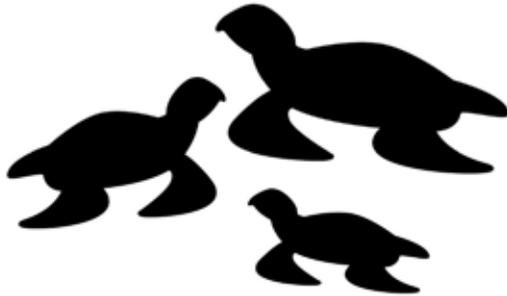
Do you understand?

"I kind of do."

"Nodin, do you remember when we found that pretty monarch butterfly sitting on the milkweed plant? That monarch butterfly is a life form with a very limited ability to change - the monarch baby, (the larva), will eat only milkweed leaves, so if there are no milkweed plants because they have been sprayed then there will be no food for the baby monarchs. The monarch butterfly goes all the way to Mexico in the fall because it can't survive up here in the ice and snow. It will only sleep in the oyamel forests (I think those trees look a lot like our spruce trees). The oyamel trees are being cut down for their wood -soon there may be nowhere for the monarchs to spend their winter and we won't have those beautiful monarchs dancing in our fields and yards."

Some plants and animals can adjust to seasonal weather changes, like our brother the deer that puts on an extra coat of fur for the winter, while others must move away, like the geese and ducks do in the fall, or leave behind a seed for next season like some plants do.

Some animals, plants and even the elements are under stress from loss of space, shelter, nutrients, or clean water. Those life forms that cannot adapt quickly to change are what science today calls species-at-risk. It is good that science has begun to acknowledge how fragile our ecosystem is. We have had that understanding for thousands of years - that is one reason why we are asked to be respectful of all other life forms.



"Here Kokom Annie - take a look at this pamphlet. Here is what it says - listen to this! Many of the species at risk in Canada today are species that are found near and in water and wetlands in particular. The pamphlet says that over 70% of the wetlands in our Great Lakes watershed have been drained - yet many of our fish that we use as food grow from eggs to young fish in a wetland (it's a great nursery area!); there are 68 bird species that are either totally or partially dependent on the wetlands of the Great Lakes; 16 different mammals and 20 reptiles also depend on the wetlands of southern Ontario. Wow! I guess we should all be worrying about that loss of wetland habitat. I never realized how important wetlands are" said Nodin.

"When you think about it, our wetlands are particularly important for our health and wellness, especially because many of our medicine plants grow in and around wetlands. My Nokom and her sister ahead of her spent a lot of time harvesting the healing plants from the marsh and swamp near our place - I still go there when I need to make tea for someone who needs good medicine. Our medicine plants depend on the animals in the wetlands to help them grow and stay healthy. When the scientists say that mtigwaakiing knizi mshkinkenh (wood turtle), is a species at risk in Ontario it means a lot to our people because the mtigwaakiing knizi mshkinkenh has a role and responsibility within the wetland to keep the water clean by looking after animals that have died, and by eating some of the insects that grow and reproduce in the wetland.

Our turtle brothers and sisters who are identified as being species at risk tell us that our wetland communities are also at risk because we understand that the turtle is at the top of the food chain within the wetland.



When I see our turtle clan cousins on a poster like this one from the zoo, it makes me sad because it is not just the turtle clan that is threatened, or endangered or 'of special concern' - it's the entire community that the turtle lives in, and it is me as well..., and my family... and my community...and our Nation - we all depend on one another."

Nodin sat very quietly, thinking about Kokom's reflection. "What is Miswaadesi's 3rd challenge for us?" he asked.



*The old turtle's voice sounded out the 3rd challenge. "Who are the turtle clans in Ontario and what do they look like? Where can you find them? Why are my turtle clan family members on the Species at Risk list?"*

Nodin nodded his head as Kokom repeated Miskwaadesi's words. This was going to be a big challenge!

"Kokom Annie, I don't think we can learn just about the turtles - we will have to find out about water, wetlands, communities, and more if we are to have a good understanding of how we are all connected. This is going to be a big challenge!" said Nodin.

Kokom gave Nodin a big hug - "You are so right, my boy! I'm so glad that you are here to help us. Now I understand why Miskwaadesi has come to see me. There is a lot of work to be done!"

# TEACHER BACKGROUND

## SUMMARY

### 1. WHO'S WHO IN THE TURTLE CLAN?

Students work in groups with the turtle poster and play card games to help them learn about Ontario's 8 turtle species as they research a turtle species to report on.

The activities in this challenge are meant to be shared with the language teacher in the school. Turtle names and I.D. can be taught in the language.

Students discuss the Species-At-Risk and describe the endangered status of Ontario's turtles- use chart paper or a white board to make a list of why the turtles have become endangered.

### 2. O TURTLE, WHERE ARE YOU?

Several card games are used to help students learn to recognize Ontario's turtles, their physical characteristics and their individual habitat requirements and needs.

Teacher/leaders are encouraged to visit the government of Canada's Species at risk website to learn about the various designations under the Species-At-Risk legislation.

[http://www.sararegistry.gc.ca/default\\_e.cfm](http://www.sararegistry.gc.ca/default_e.cfm)

**Special Concern** - means a wildlife species may become endangered or threatened because of a combination of factors, identified threats and biological concerns.

**Endangered** - means a wildlife species that is facing imminent extirpation or extinction.

**Species at Risk** - means an extirpated, threatened, endangered species or a species of special concern.

**Threatened** - means a species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

**Extirpated** - means a species no longer exists in the wild in Ontario but may exist elsewhere in the wild.

**Extinct** - means a wildlife species no longer exists.

From this homepage teachers can click on the link to see a listing of all of Canada's species at risk. Students should be made aware of the large number of our plant and animal relatives who are at risk due to habitat loss and human interference.

## SEVEN OF ONTARIO'S EIGHT TURTLE SPECIES CAN BE FOUND ON THE LIST

- Spotted Turtle - endangered
- Stinkpot Turtle - threatened
- Wood Turtle - threatened
- Northern Map Turtle- special concern
- Blandings Turtle - threatened
- Spiny Softshell Turtle - threatened
- Snapping Turtle - special concern

### WHY ARE ONTARIO'S TURTLES AT RISK?

Many things have contributed to the listing of 7 of Ontario's turtle species. Turtles are dependent on wetlands for their life. In Southern Ontario, over 75 % of their wetland habitats have been drained, for many reasons. Early settlers did not have the same understanding as the First Nations peoples about the benefit of wetlands - they feared the quiet waters were nesting sites for mosquitoes that carried diseases. They did not realize that the wetland purified the water in the watershed and served as a home for more than just buzzing insects. They did not see the medicine plants that grow in and around the edge of a wetland. They forgot that a wetland soaks up water in spring rains especially, and holds it just like a sponge, helping to retain moisture through the summer and fall. The settlers saw the value in draining the wetlands to use as good farm land because the soil in the wetlands is very rich and nurturing to plants. Often roads were built through wetlands because the land was lower and flatter.



Turtles have been given the responsibility for keeping the wetland healthy and clean. They do this by making sure that any insects or small animals that die are eaten so the water will not become contaminated.



Turtles help to keep the tadpole, flying insect, snail, and minnow populations at a reasonable amount by dining on those that they can catch.



Turtles also eat plant material, often biting off the top of a plant, helping it to spread out over a larger area.



Turtles move with great deliberation and care upon the Earth. Sometimes other members of creation have made fun of the turtle for its slowness and cautious habits. However, this particular responsibility gives the turtle a great understanding of its surroundings. It has a great memory for the wetland within which it lives and it will travel great distances to return to its own nesting site to lay its eggs.



Turtles live very long lives and have been given the responsibility for remembering and speaking for for all the animals and plants in the wetland environment.



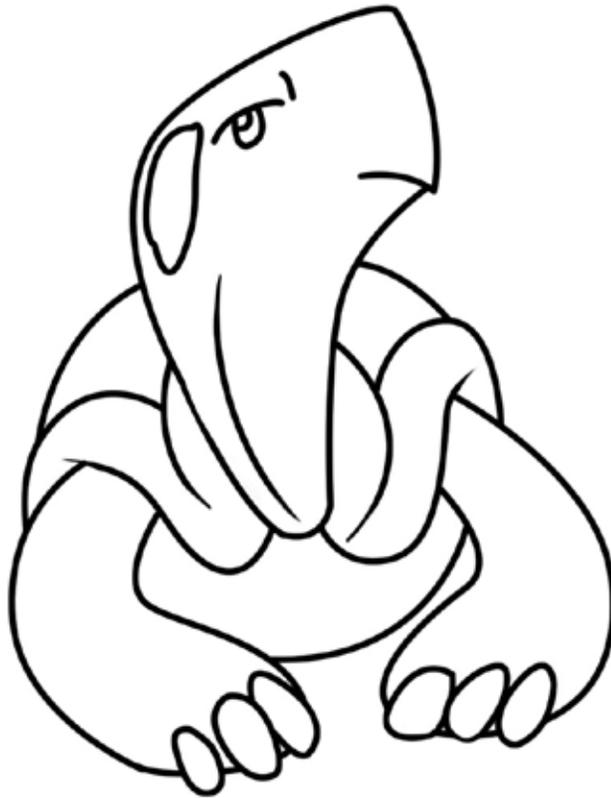
# TURTLES DO NOT MAKE GOOD PETS.

Most students are able to recognize one or two of Ontario's turtle species. To become more familiar with all eight species, students are provided with decks of cards to use in playing a card game - "O Turtle" (similar to 'go fish') and by becoming familiar with the turtle hall of fame cards.

The card game can be used at an activity center or with a small group of 4-5 students. Teachers are encouraged to photocopy the card sheets onto card stock to have multiple copies for student use.

The Turtle Hall of Fame card set is intended to be used to help students become familiar with the individual turtle species and their special adaptations and roles and responsibilities in the wetland world. These cards could be enlarged and posted in the classroom for student reference.

Students should be aware that turtles do not make good pets. They are often captured as young adults and taken from their homelands. In captivity, turtles need a great amount of space, but often they are sold from pet store with tiny basins or small aquariums that are not suitable habitats. Often a captive turtle does not want to eat, or is fed the wrong kind of food and it becomes sick. Turtles should be viewed in their wild habitat and left there where they are familiar with their surroundings.

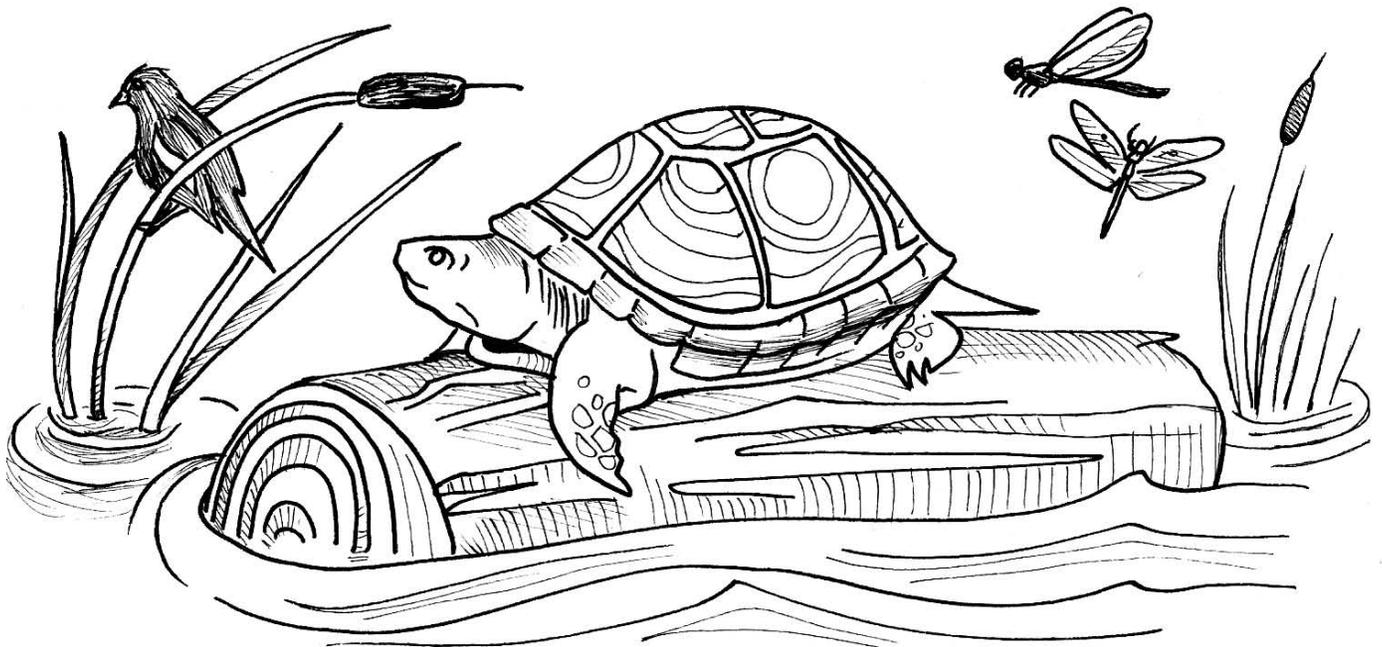


## RED-EARED SLIDER: SPACE INVADER

Students should also be made aware of an 'invader' turtle species - the red eared slider is the turtle commonly found in pet stores. Many times, a turtle is purchased as a pet, although turtles do not make good pets. Too often the turtle that has come from the store is released into a pond or wetland where it does not belong - the 'invader' competes for space and food, shelter, and water. Red-eared sliders are not native to this part of Turtle Island and they would prefer to be left in the wild where their home can be found in the Southern and Eastern areas of the United States.

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. WHO'S WHO IN THE TURTLE CLAN

Work in small groups brainstorm to discover what everyone knows about turtles, and record everyone's ideas. After 5 minutes, share each group's list to develop the class K-W-L chart *Walking With Miskwaadesi - K-W-L*. Post the chart for use throughout the *Walking With Miskwaadesi* study. Discuss the physical appearance of a turtle - students complete the worksheet to include in their notes.

## 2. SPECIES AT RISK

Use the Toronto Zoo's Turtles of Ontario poster to introduce the turtle species that can be found in Ontario's wetlands and watersheds. Discuss the Species at Risk information that is included on the poster and note that seven of our turtles are part of the at-risk program. Ask students to think about why most of our turtle brothers and sisters are at-risk.

Provide students with a copy of Field Trip: Turtles ([Student worksheet 3c](#)) or project a copy of the worksheet. Read the report and respond to the questions, completing the chart. Provide students with a copy of the worksheet "Who's Who in Ontario's Turtle Clan?" Chart. Divide the class into 8 groups and assign each group one turtle species to research. Provide students with the turtle website to research their turtle. Each group completes one section of the chart and prepares a presentation for the class. Provide the groups with enough time to develop a rap song; poem; story; advertisement; news report etc to describe their particular turtle.

Provide groups with time to construct a model turtle - using modeling clay; paper mache; paper plates; etc. The model will become part of the class display of turtles and wetlands. Teachers may also like to download the outline of the painted turtle from this website for students to use in constructing a life-sized painted turtle:

<http://www.ducks.ca/resource/education/wetlands-world/3d-models/>

If the class has a white board, each group may use the whiteboard in their presentation, to introduce their turtle and its characteristics to the class. All students complete the chart with the information they have received from the other groups.

### 3. O TURTLE...WHERE ARE YOU?

One set of Turtle Hall of Fame cards

One deck of Turtle Cards per group of students

Poster of Ontario's Turtle species for reference

Gameboard - for each group of 4 students - 2- 11x17 pcs of poster paper or one sheet of Bristol board, decorated to resemble a wetland with a pond in the middle and basking sites- logs, stones, shoreline around the edges - see illustration

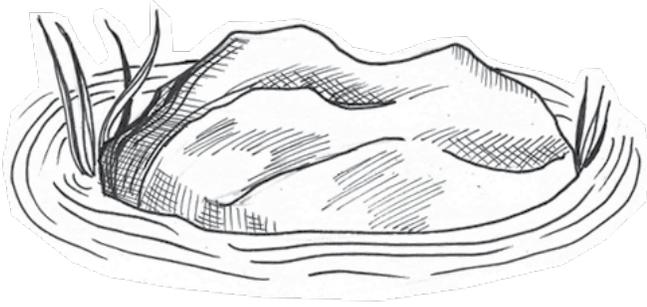
Use the Toronto Zoo's Ontario Turtles poster and/or the student-made clan charts to review the various species with the class, briefly discussing similarities and differences between the turtle clans.

Divide the class into groups of 4 students. Briefly discuss the needs of a turtle for survival - a source of food; shelter from the weather and from predators; clean and drinkable water; a suitable space to live within. Students brainstorm what a good wetland habitat for turtles might look like and share their own experiences of visits to wetlands and ponds. Following their determinations, create a list on the board of ideas for students to reference.

Provide each student group with 2 11x17 sheets of paper, taped together. Students in the group must design a wetland with a pond in the middle. Around the edge of the wetland, on each side, students need to provide basking sites for turtles (old logs, rocks and stones, shoreline areas). Encourage each group to draw and design food, plant life, etc for their wetland habitat. When students have completed their wetland, it could be laminated and used for future games and activities.

Download and/or photocopy the game cards, providing one set for each group of students. It is suggested that card stock be used and then laminated. Remove the food, habitat, and turtle helper cards from the deck- use only the turtle picture cards for this game.

Download a copy of the "Who's Who in the Turtle World?" quiz sheet and prepare one for each student or produce an overhead for student review following the activity.



DISCUSS THE RULES THAT WILL BE FOLLOWED IN THE GAME WITH THE CLASS, OR FOLLOW THE SAMPLE RULES

1. Each player has an area of the wetland with basking places - logs, stones, rocks, or shoreline in front of them. This area will be used to display their turtle families.
2. The dealer shuffles cards and deals seven cards to each player. Remainder of cards are placed face down in the middle of the wetland in the pond.
3. Players group identical cards together in their hand.
4. Player one, sitting to the left of the dealer asks player two for a particular turtle species card; it must be a species already in player one's hand. Player two must give all of the cards of that species in his or her hand to player one. If player two does not have any of the requested cards, he or she says "O Turtle" and player one must draw a card from the deck.
5. When a player gets three cards of the same species, the cards form a basking site and are laid down face up in front of the player. Any other player who has the fourth card of the species can lay it down in front of their part of the wetland when it is their turn.
6. The game ends when one player runs out of cards or when the pond is empty and all the turtles are basking on logs and rocks.
7. When the students have completed the card game, quiz them on the different turtle species using the "O TURTLE WHERE ARE YOU?" quiz sheet- either make an overhead of the sheet or use the whiteboard if you have one, or prepare a sheet for each student to complete.
8. Play the card game "O Turtle" in the classroom.
9. When one round of the game has been completed, ask groups if they would modify or change any of the rules and let them play again.

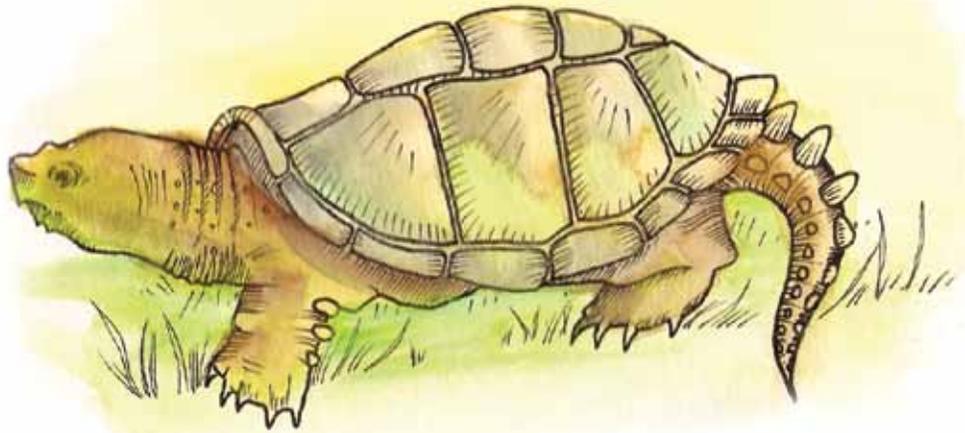
#### 4. JOURNAL REFLECTION

Students complete a journal entry for their Walking with Miskwaadesi booklet (see evaluation for ideas).



# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. O TURTLE, WHERE ARE YOU?

Use the "O TURTLE, WHERE ARE YOU?" quiz sheet. Complete the worksheet individually, and write a paragraph about the turtle you have studied, or orally describe the turtle you have studied, commenting on description, habits, habitat, and responsibilities.

Now have some fun with the colouring pages that follow. Please see pages 98, 100 and 102. Can you colour each species of Ontario's turtles accurately? Use the poster and the playing cards to help you. Remember to shade your colours and blend them together so that your turtle will be camouflaged in its environment!

### 2. JOURNAL REFLECTION

Complete a journal entry to describe what you have learned by commenting on three new things you now know about turtles, briefly report on the turtle you studied, and record any questions you may have that you would like to research.



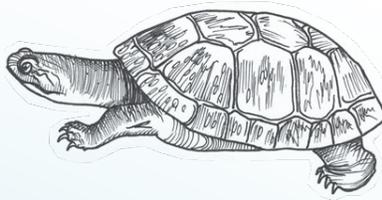
### 3. REMEMBER

To create a suitable symbol to attach to the cover of your journal to show that you have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 3rd scute on the turtle shell poster.

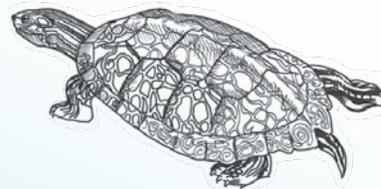
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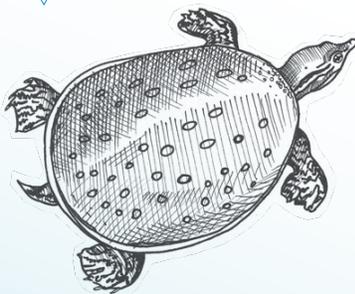
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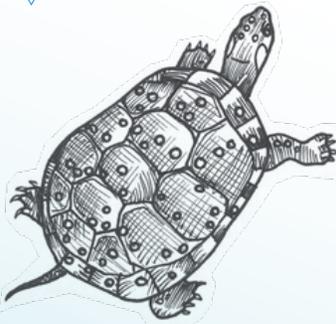
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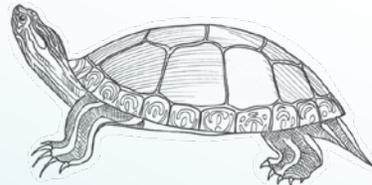
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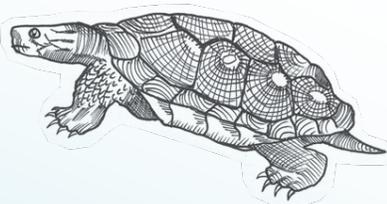
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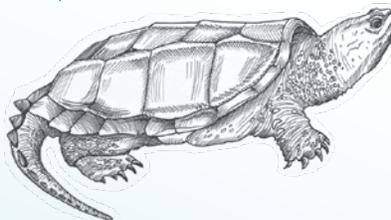
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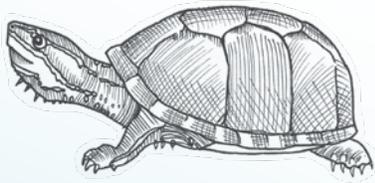
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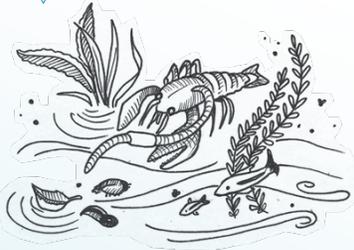
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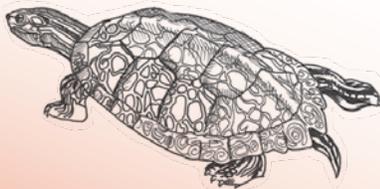
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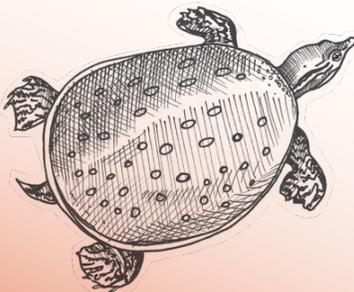
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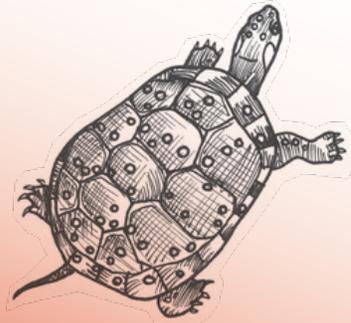
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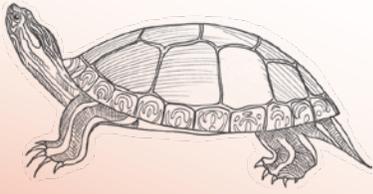
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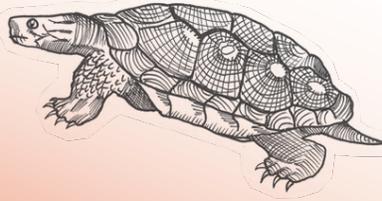
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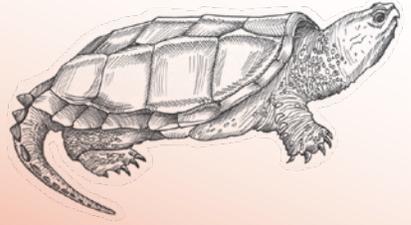
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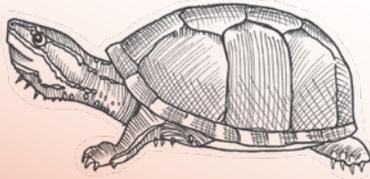
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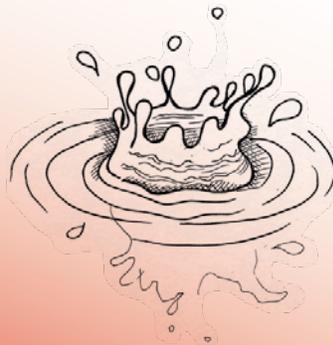
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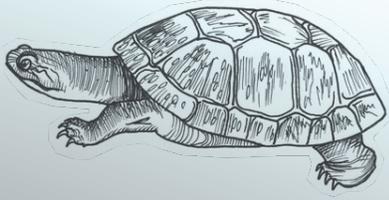
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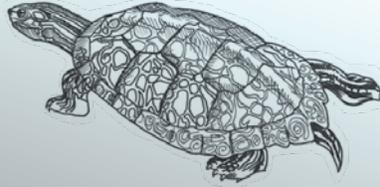
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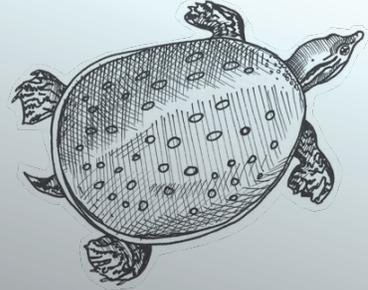
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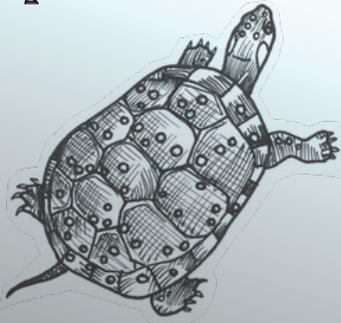
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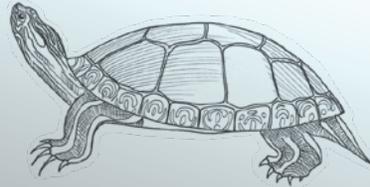
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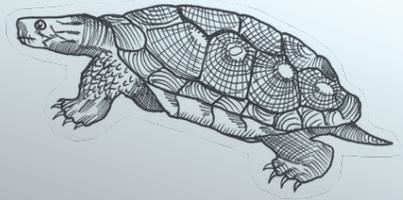
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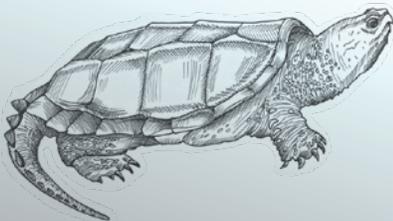
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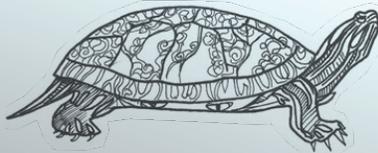
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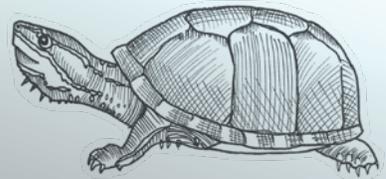
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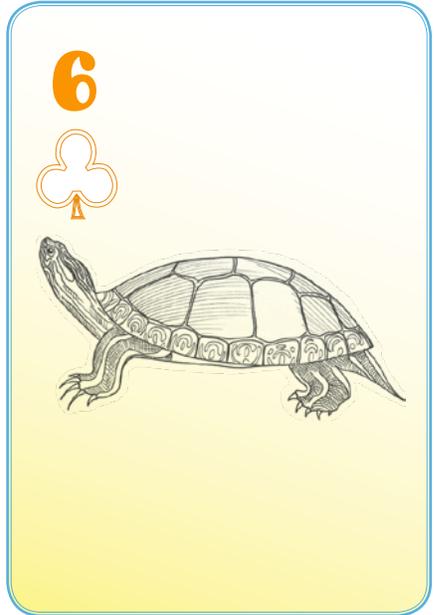
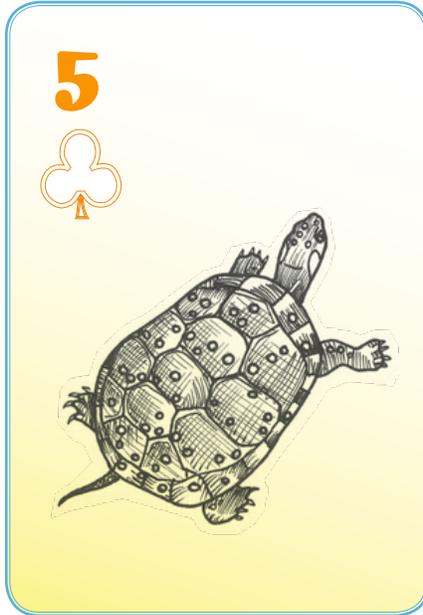
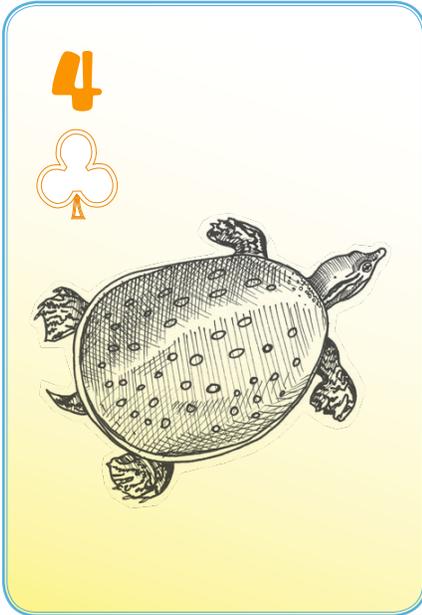
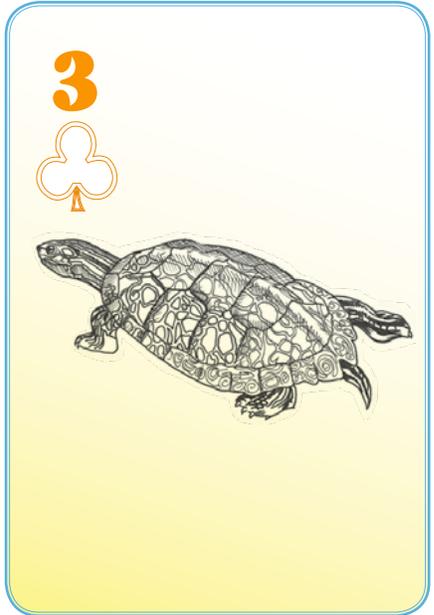
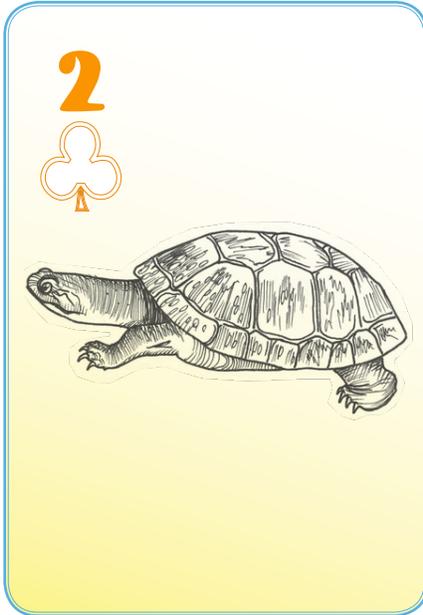
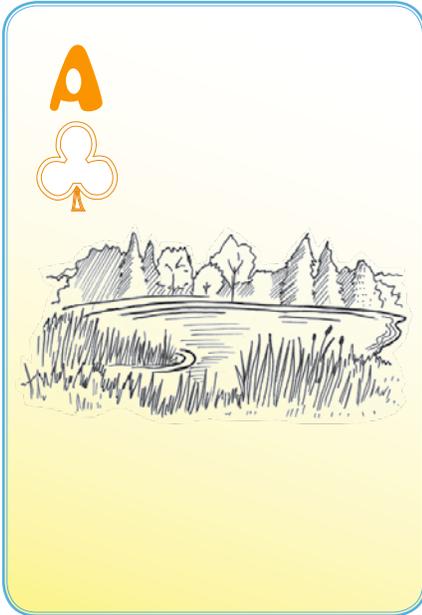
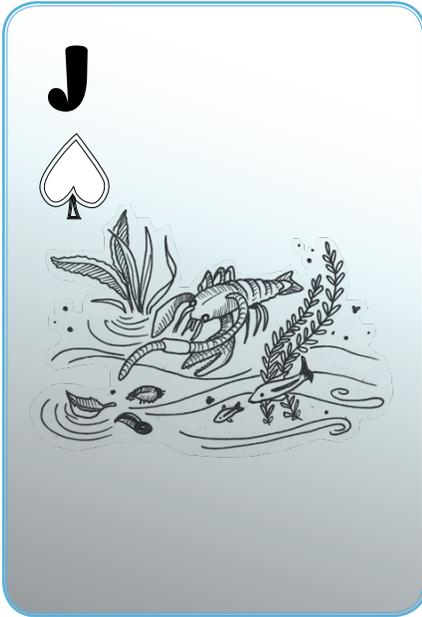


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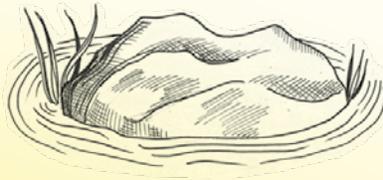




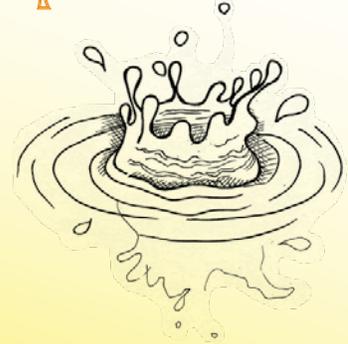
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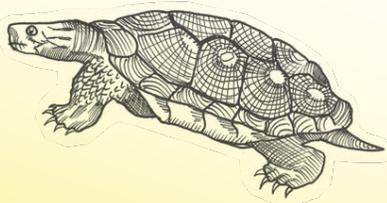
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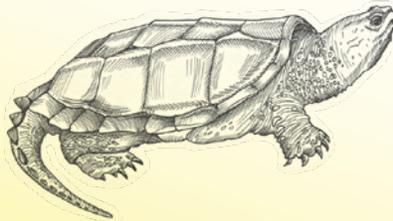
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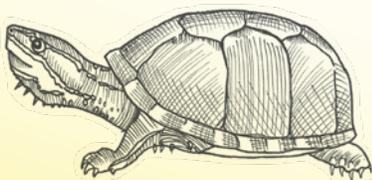
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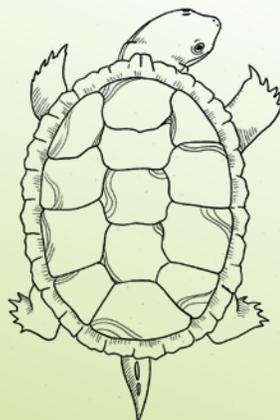
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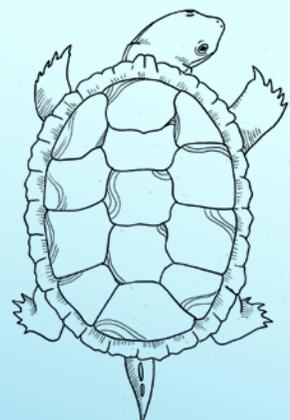
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# Student Worksheet

3A - KWL



**K**

What do you **know** about turtles?

**W**

What do you **want** to know about turtles?

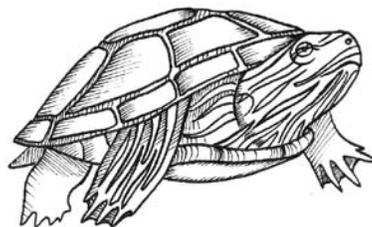
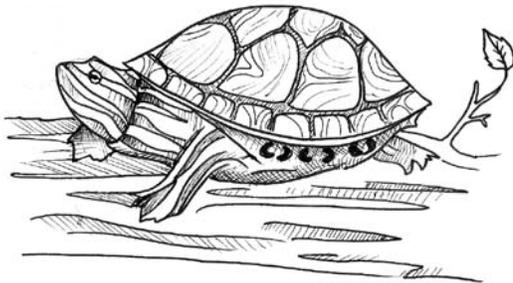
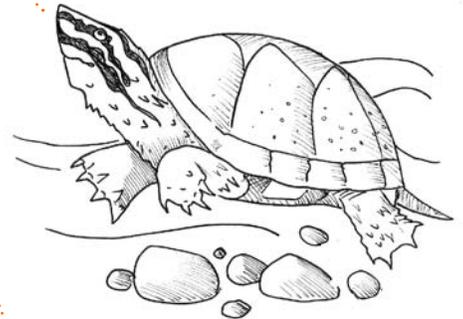
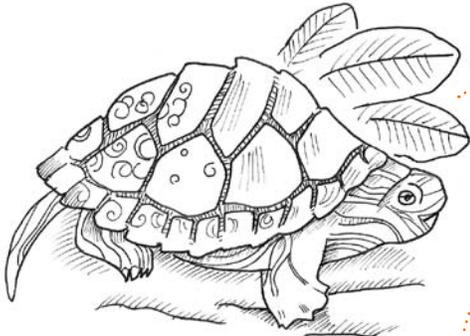
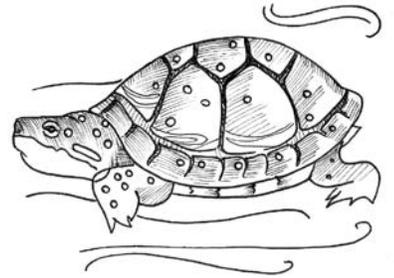
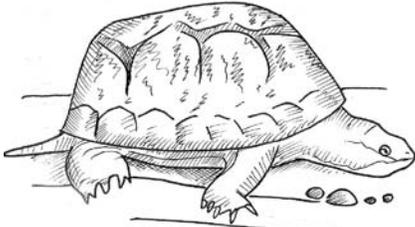
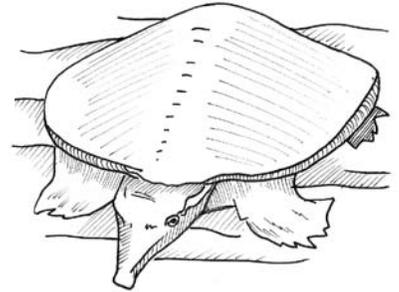
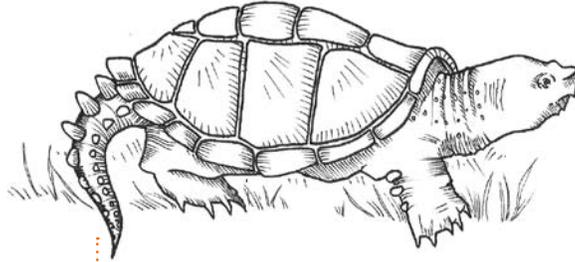
**L**

What did you **learn** about turtles?



# Student Worksheet

## 3B - WHO'S WHO IN THE TURTLE WORLD



# Student Worksheet



## 3C- FIELD TRIP - TURTLES 1/3

### FIELD TRIP: TURTLES

By Tim Tiner

Reprinted from Ontario Nature

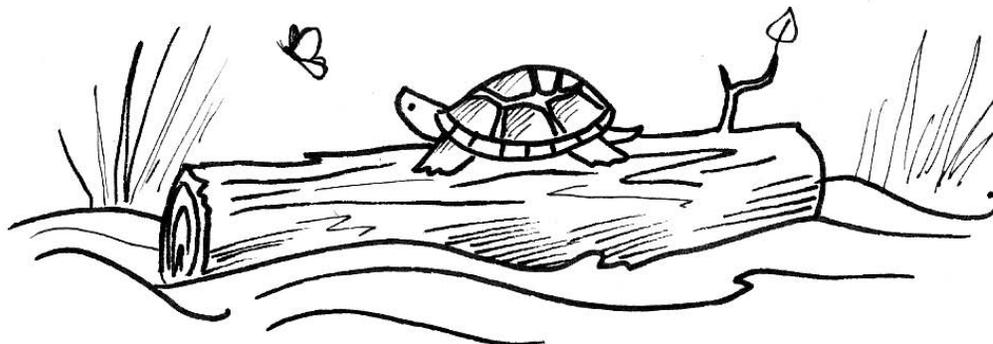
<http://onnaturemagazine.com/field-trip-turtles.html/2>

In the mid-1990s, Ministry of Natural Resources (MNR) biologist Tim Haxton made a disturbing discovery while doing a survey of snapping turtles in the Haliburton area. Nearly one-third of the 279 turtle sightings he tallied were roadkills. He also encountered hostility toward the ponderous reptile. "It is a big issue up there. A lot of people like to swerve off the road and run them over," recalls Haxton.

While turtles may not account for a large proportion of animal fatalities on Ontario's roads, their biology is such that these mortality rates have a huge impact on a population's long-term survival. Already six of Ontario's eight hard-shelled turtle species are designated as at risk and rarely seen by most residents. No other single order of animals in the province, and probably in the world, is so imperilled. After 250 million years of soldiering through mass extinctions that felled, among many other species, the dinosaurs, turtles are now facing a similar fate.

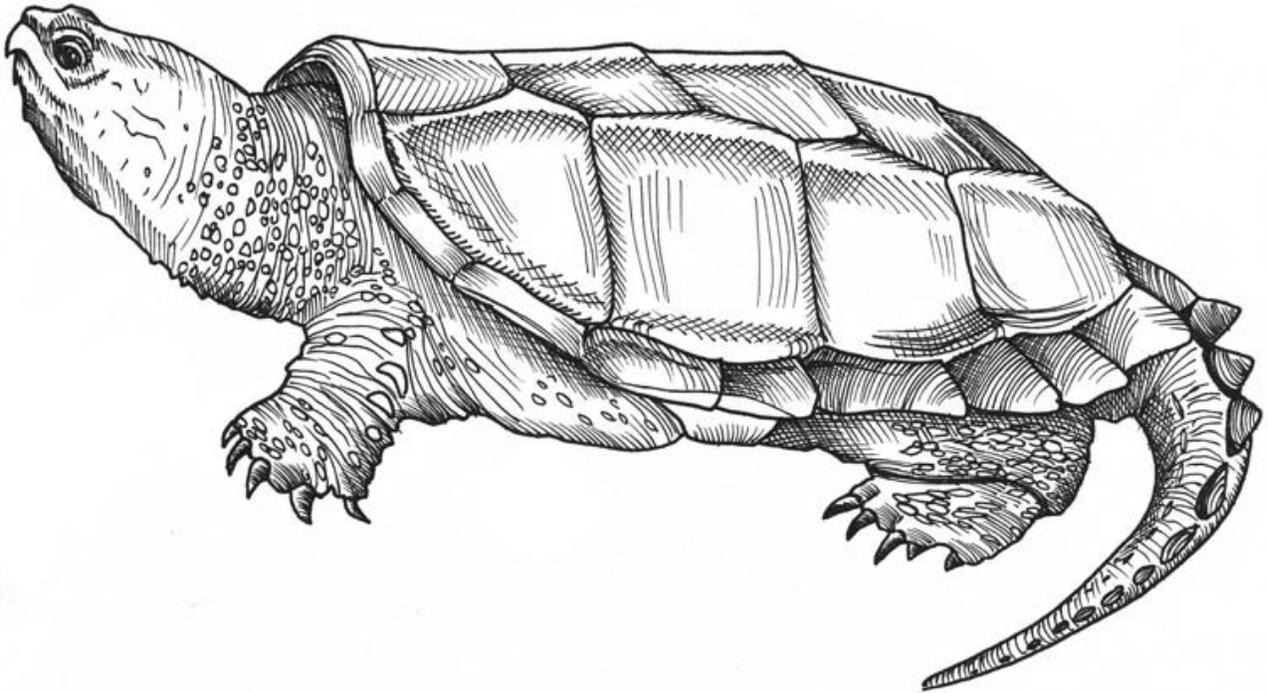


Most Ontario turtles range little beyond the southern edge of the Canadian Shield, making their home in the most intensely developed region in Canada where only some 30 percent of the original wetlands remains. Agricultural pesticides and industrial pollutants contaminate what's left of viable, albeit fragmented, turtle habitat. Body counts along the 3.6-kilometre causeway at the base of Long Point, on Lake Erie, have turned up 160 to 200 squashed turtles annually, including threatened and endangered species.



# Student Worksheet

## 3C- FIELD TRIP - TURTLES (CONTINUED 2/3)



Turtles cannot spring back from heavy losses. The annual rate of reproductive success for these animals is extremely low, as a long list of predators raid nests and prey on hatchlings.

On the other hand, a turtle's lifespan is long. Studies suggest that snapping turtles can live for more than a century. Many Ontario turtles first lay eggs when in their teens, and continue breeding for the rest of their lengthy lives, evening the odds that eventually some offspring will survive. Conversely, an additional annual loss of even 1 percent to 2 percent of adult females can have catastrophic consequences for the whole population.

"Turtles seem like they'll last forever," says Bob Johnson, curator of reptiles and amphibians at the Toronto Zoo. "But [the dynamics] are in place that could see this blip of extinction, which could have been addressed if we saw what was happening."

Johnson is part of a team of leading turtle biologists who have drafted the Ontario Multi-Species Turtles at Risk Recovery Strategy that is being used to guide funding for ongoing research - as well as nest habitat creation and protection - by conservation authorities, universities, parks staff and the Toronto Zoo.

# Student Worksheet

3C - FIELD TRIP - TURTLES (CONTINUED 3/3)



1. Read the article. While you read it, highlight 5 new words or phrases.
2. Use a dictionary to find the meaning of the words you highlighted. Write down the words and their meaning. Use each word in a new sentence.
3. Look at the last paragraph again - what does the last sentence mean to you? Think of some changes that humans can make and list them.
4. Complete the chart below to summarize the article.

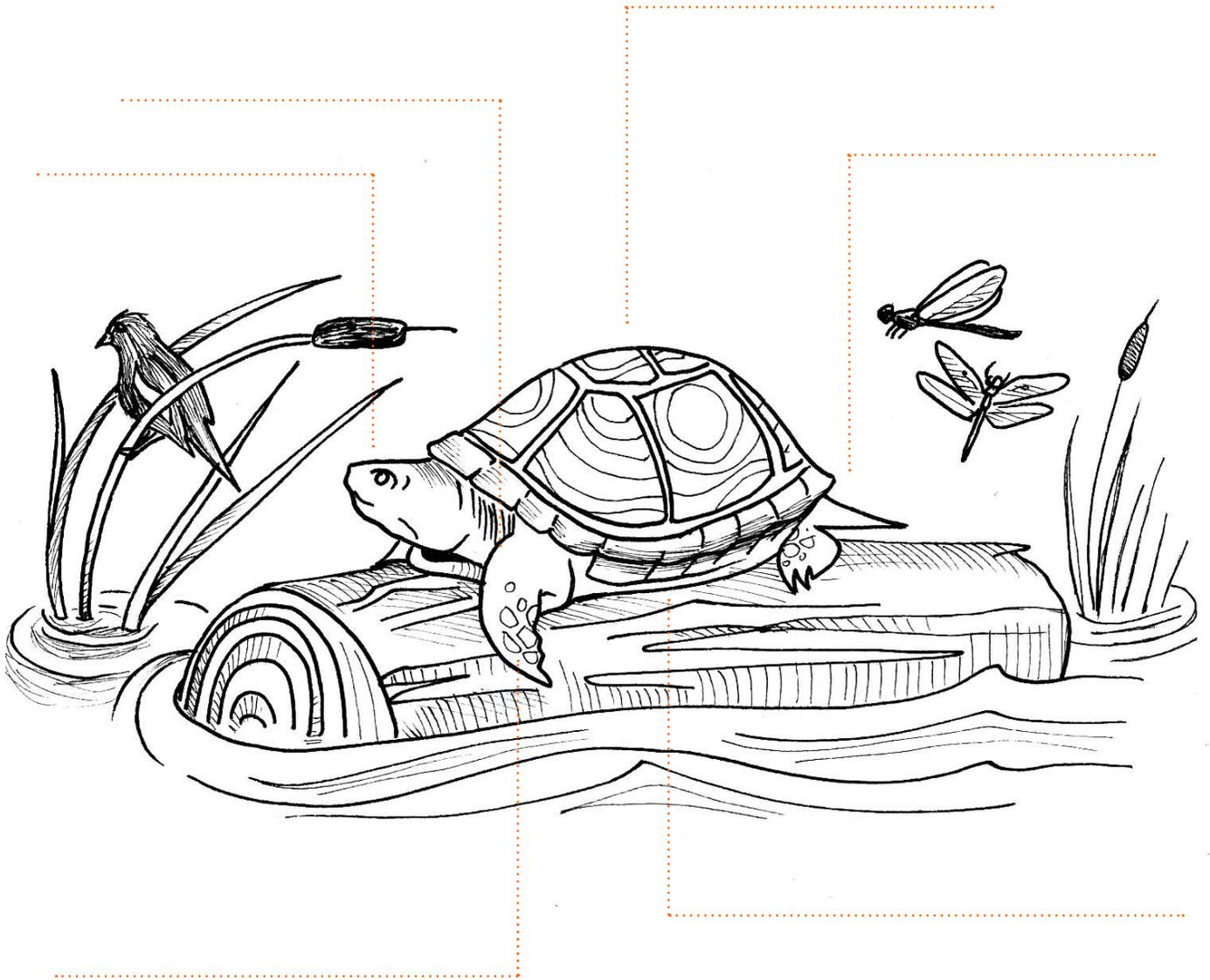
DANGERS TO TURTLES  
(describe each briefly)

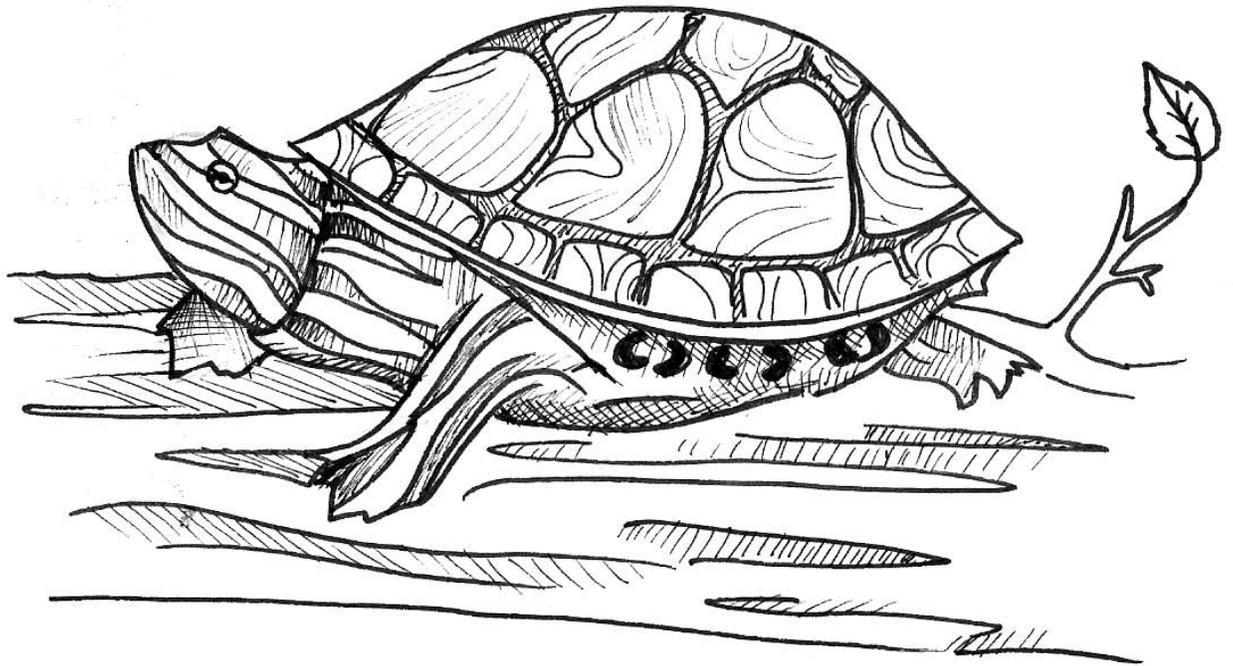
TURTLE HELPERS AND PROGRAMS  
(describe each Briefly)

|  |  |
|--|--|
|  |  |
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# Student Worksheet

3D - HOW DO I LOOK





## PAINTED TURTLE

*(Chrysemys picta)*

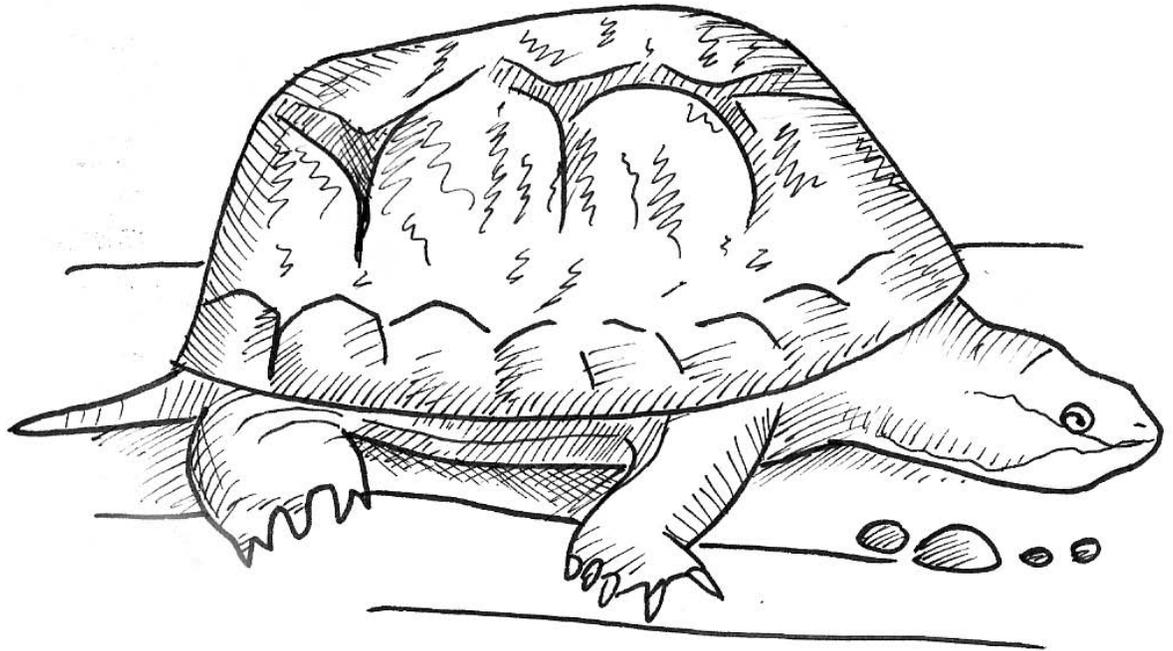
Painted turtles are adaptable and can live wherever aquatic plants, insects, snails or tadpoles are abundant and some logs or rocks are available for basking. Though they are by far the most common turtles in the province and can live for more than 40 years, losses of painted turtle nests and young are high. Mortality on roads and habitat degradation have caused the disappearance of these turtles in many areas.

**DESCRIPTION** Olive, black or brown shell with pale yellow lines and red dabs on edge; dark grey skin with red and yellow streaks on head, neck and legs; yellow lower shell with dark centre blotch

**SHELL LENGTH** 10-25 cm

**RANGE** Southern Ontario to about Temagami and Wawa. Western painted turtle subspecies from around White River to Lake of the Woods and Red Lake

**STATUS** Secure provincially and nationally. Western painted turtle considered uncommon provincially



## BLANDING'S TURTLE

*(Emydoidea blanding)*

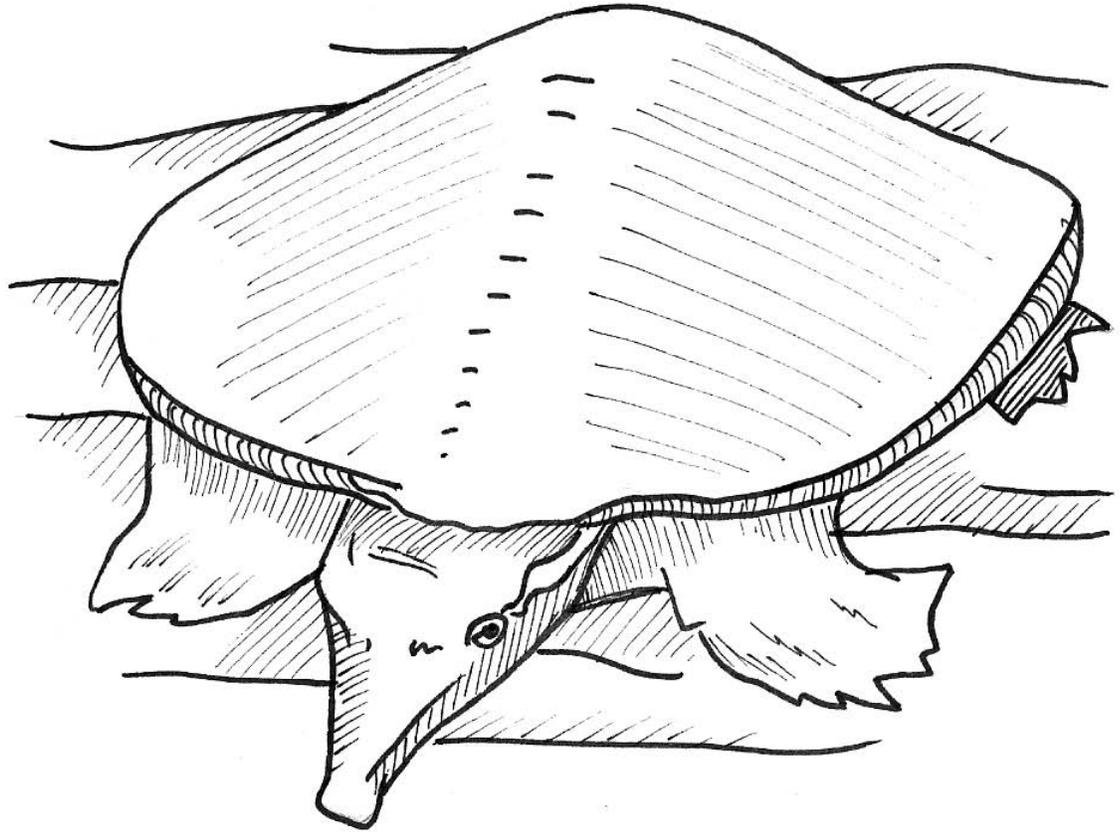
The high-domed Blanding's turtle can live for more than seven decades - females do not even start breeding until they are between 20 and 25 years old. This species is usually the last turtle to finish nesting, in late June or early July, often moving far from water to find soft sand beneath a log or sparse vegetation for their clutches of six to 11 eggs.

**DESCRIPTION** Black or dark brown shell with faint yellow or tan specks; dark brown or blue-grey head and legs; deep yellow throat and chin; yellow lower shell with black splotches

**SHELL LENGTH** 15-25 cm

**RANGE** Discontinuous populations scattered throughout southern Ontario to about North Bay, Sudbury and Manitoulin Island

**STATUS** Threatened provincially and nationally



## SPINY SOFTSHELL TURTLE

*(Apalone spiniferus)*

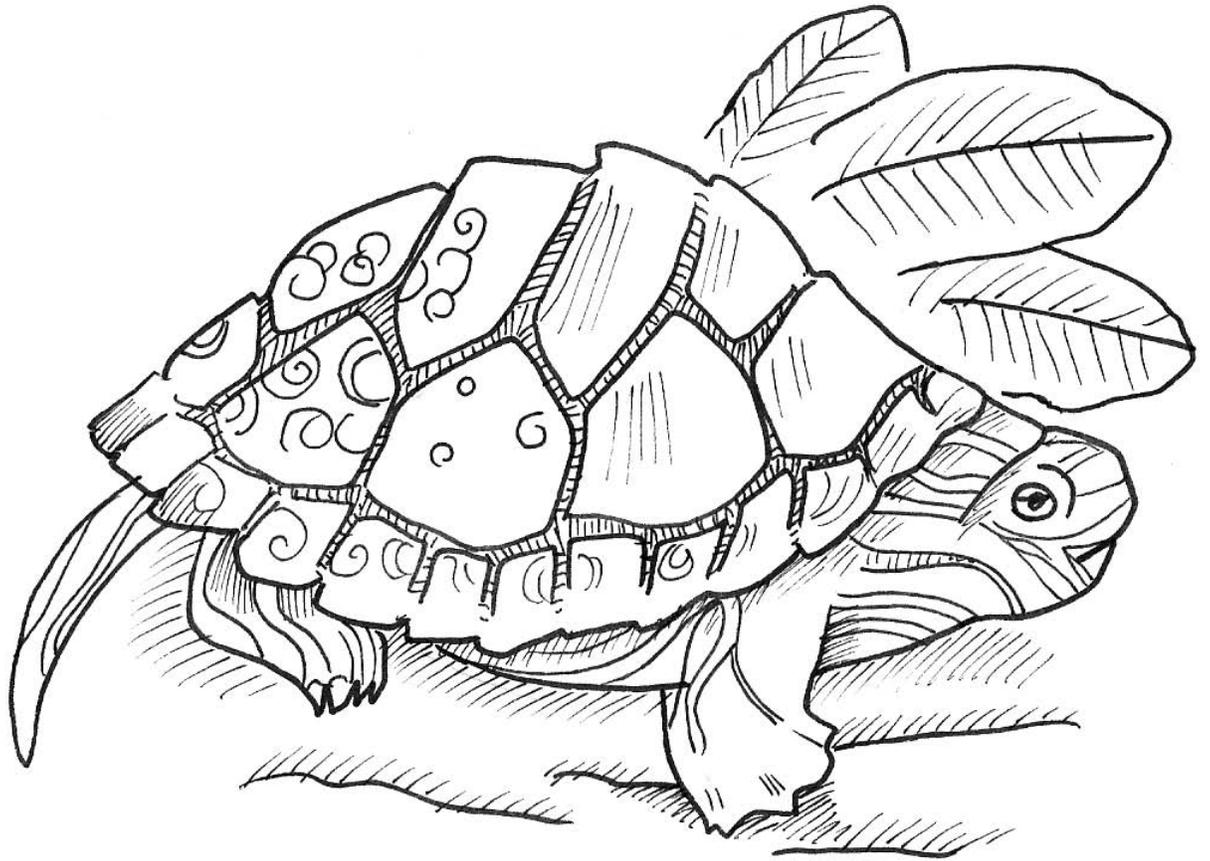
Almost completely aquatic, spiny softshells probe beneath rocks, logs and roots for snails, crayfish and aquatic insect larvae or bury themselves in the silt and await their prey. The historic range of this species is the most limited of any Ontario turtle and, unfortunately, corresponds with the most heavily populated parts of the province. Softshell turtles have disappeared from most of the Ottawa Valley, around Lake Ontario and in the upper Thames River watershed.

**DESCRIPTION** Flat, grey-brown shell with black-bordered spots (faint on females); grey or brown skin, with a dark-edged light stripe on each side of the head; very long, narrow snout; webbed feet; yellow lower shell

**SHELL LENGTH** 17-45 cm

**RANGE** Far Southern Ontario to about Hamilton and The Pinery Provincial Park; Thames River Long Point on Lake Erie; an isolated population near Pembroke

**STATUS** Threatened provincially and nationally



## MAP TURTLE

*(Graptemys geographica)*

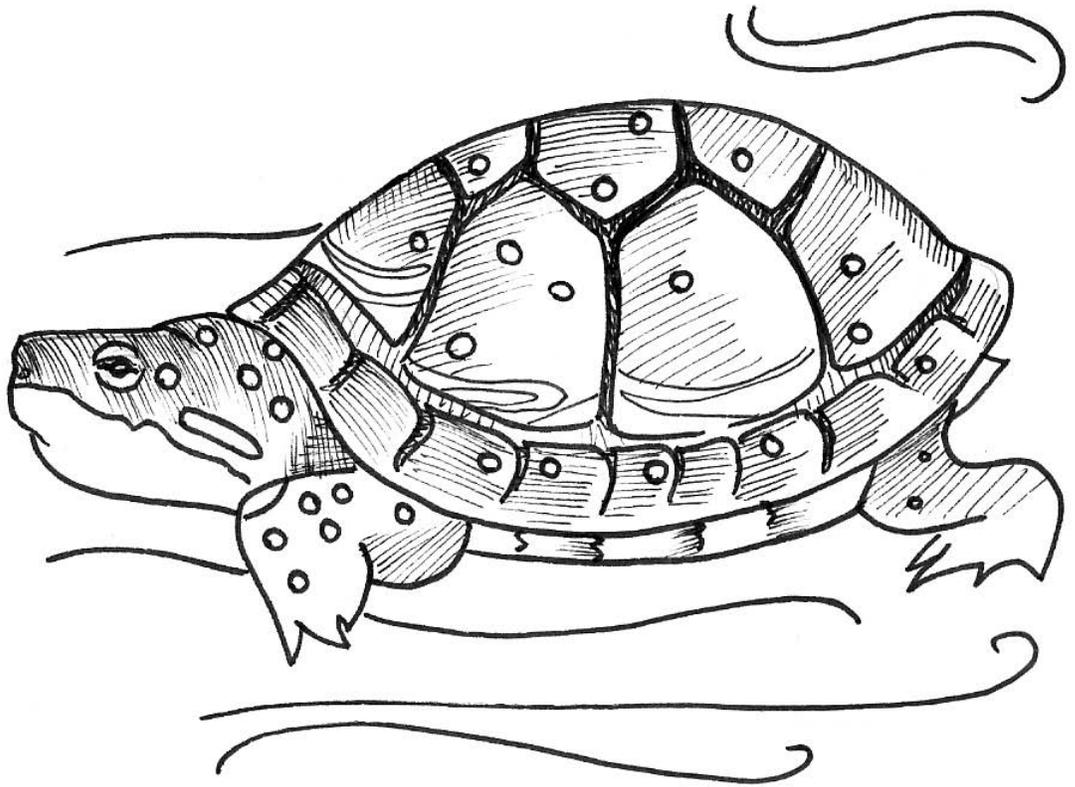
Map turtles congregate in clear, mud-bottomed sections of large rivers and bays and are often mutilated by powerboats. Five to 10 percent of several hundred marked turtles in a St. Lawrence River study bore propeller wounds. Many more probably died as a result of such wounds. Along with painted and snapping turtles, map turtles frequently drown in commercial fishing traps. Poor water quality renders them susceptible to shell rot, resulting in soft red lesions on the upper shell. Map turtles are the least studied turtle in the province, and the extent of the dangers they face remains unclear.

**DESCRIPTION** Olive brown to greenish shell with yellowish irregular concentric markings like a contour map (faint on females); dark green skin with wavy yellow lines on head, neck and legs; yellow lower shell

**SHELL LENGTH** 10-27 cm

**RANGE** Discontinuous populations along the Great Lakes and some larger rivers North to Pembroke and the French River

**STATUS** Species of special concern provincially and nationally



## SPOTTED TURTLE

*(Clemmys guttata)*

Poaching by turtle collectors, habitat loss and mortality on roads have combined to extirpate 40 percent of Ontario's known populations of the diminutive spotted turtle. Generally, it is the first turtle species to emerge in April, migrating to shallow pools in sphagnum swamps, grass marshes and fens to bask and breed. In early autumn, spotted turtles gather in mossy pockets beneath submerged tree roots or rock shelves to spend the winter. Lying low for so much of the year may contribute to their impressive longevity, estimated to be up to at least 60 years.

**DESCRIPTION** Black with yellow spots on shell, legs and head; lower shell mostly black or yellow with black blotches

**SHELL LENGTH** 8-12 cm

**RANGE** Thinly distributed around Georgian Bay, Southwestern and Eastern Ontario

**STATUS** Endangered provincially and nationally



## WOOD TURTLE

*(Glyptemys insculpta)*

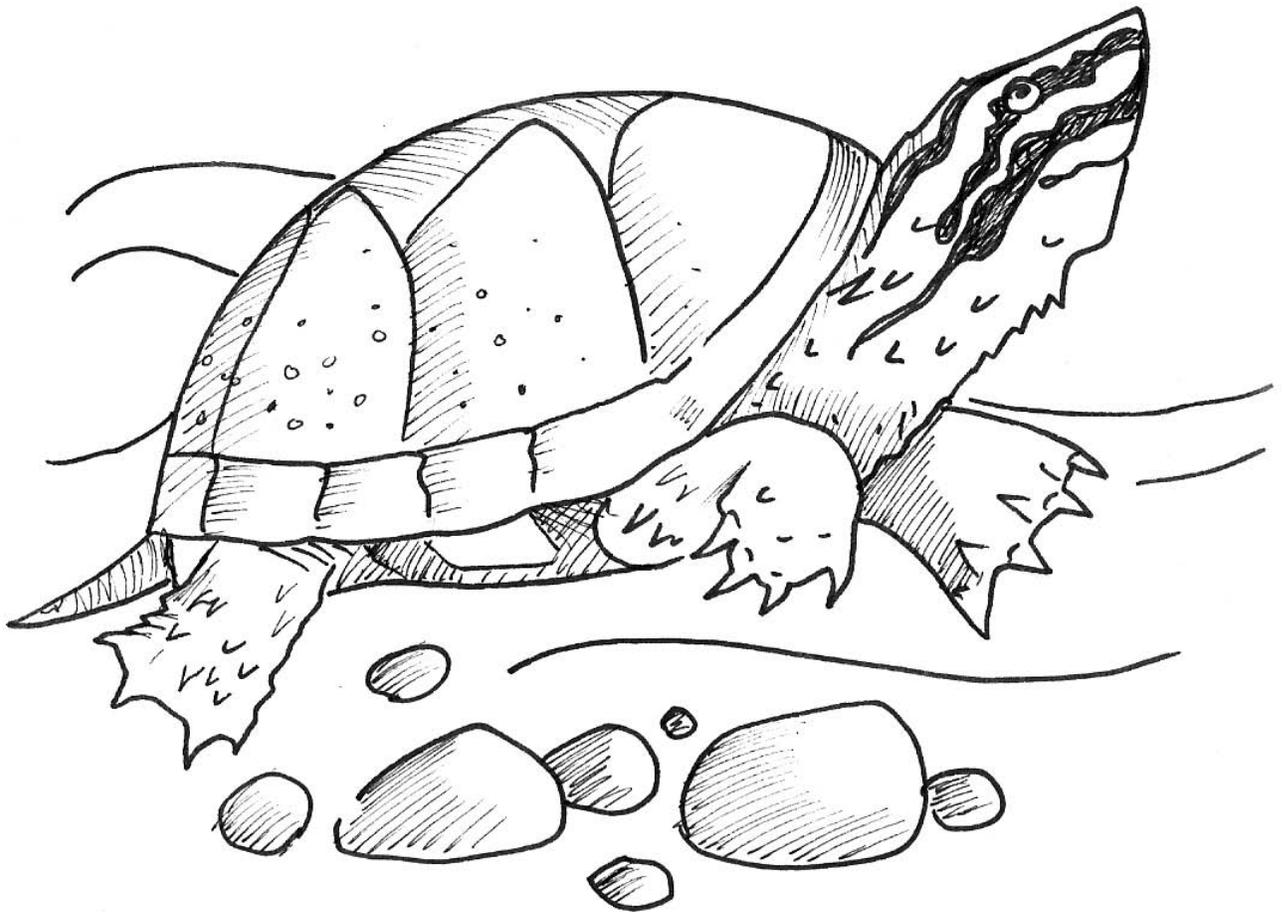
In addition to encountering the dangers all turtles do, the wood turtle, Ontario's most terrestrial turtle species, is also threatened by the illegal pet trade. In 1994, a wood turtle population of some 400 in Southwestern Ontario suddenly declined by at least half, almost certainly due to poaching. While wood turtles probably once lived throughout most of Southern and Central Ontario, it is estimated that only 1,000 to 1,600 adults are left, in widely separated, genetically isolated populations.

**DESCRIPTION** Ridged, bumpy brown shell; brown skin with a reddish or orange tinge on neck and legs; yellow lower shell with black patches

**SHELL LENGTH** 13-20 cm

**RANGE** Sparsely scattered between northern Huron County, Midland and the Niagara Peninsula; separate populations in Algonquin Provincial Park and from Sault Ste. Marie to Sudbury

**STATUS** Endangered provincially, species of special concern nationally



## STINKPOT TURTLE

*(Sternotherus odoratus)*

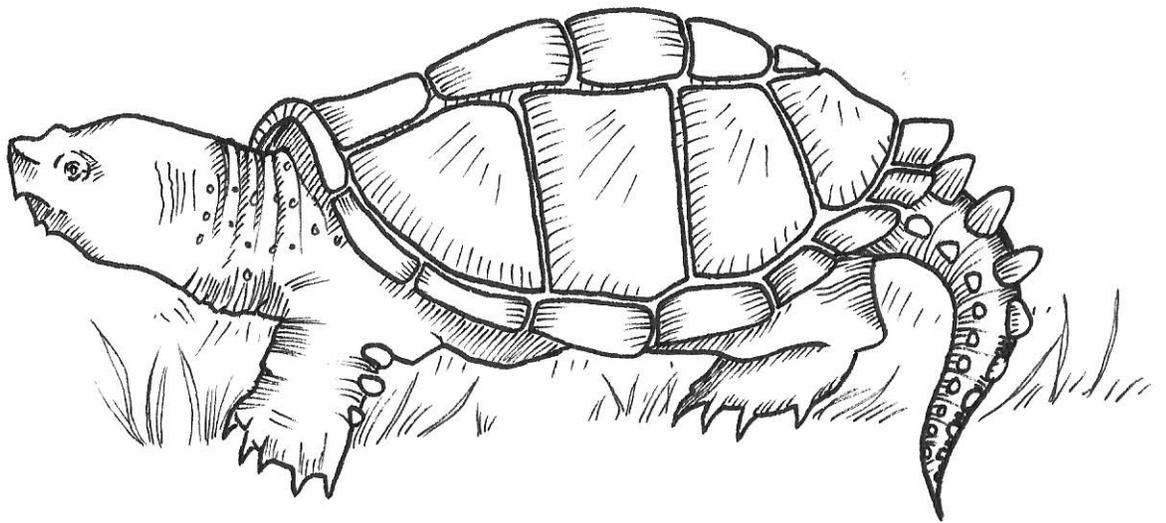
Crawling at the bottom of deep, thick weed beds in muddy bays, slow streams and marshes, stinkpots are seldom seen, coming to the shallows at dusk to catch crayfish, tadpoles, snails and aquatic insects. Also known as musk turtles, they are named for a smelly yellowish liquid they release from glands at the edge of their upper shell if threatened. Stinkpots are known to live up to 55 years but, due to the destruction of wetlands, these turtles have disappeared from most of southern Ontario.

**DESCRIPTION** Brown or grey shell with black flecks, often green with algae; dark skin, with two light lines on sides of head; black and yellow lower shell

**SHELL LENGTH** 8-13 cm

**RANGE** Parry Sound to Severn River; Pembroke to Prince Edward County; a few locations on Lake Erie and the Detroit River

**STATUS** Threatened provincially and nationally



# SNAPPING TURTLE

*(Chelydra serpentina)*

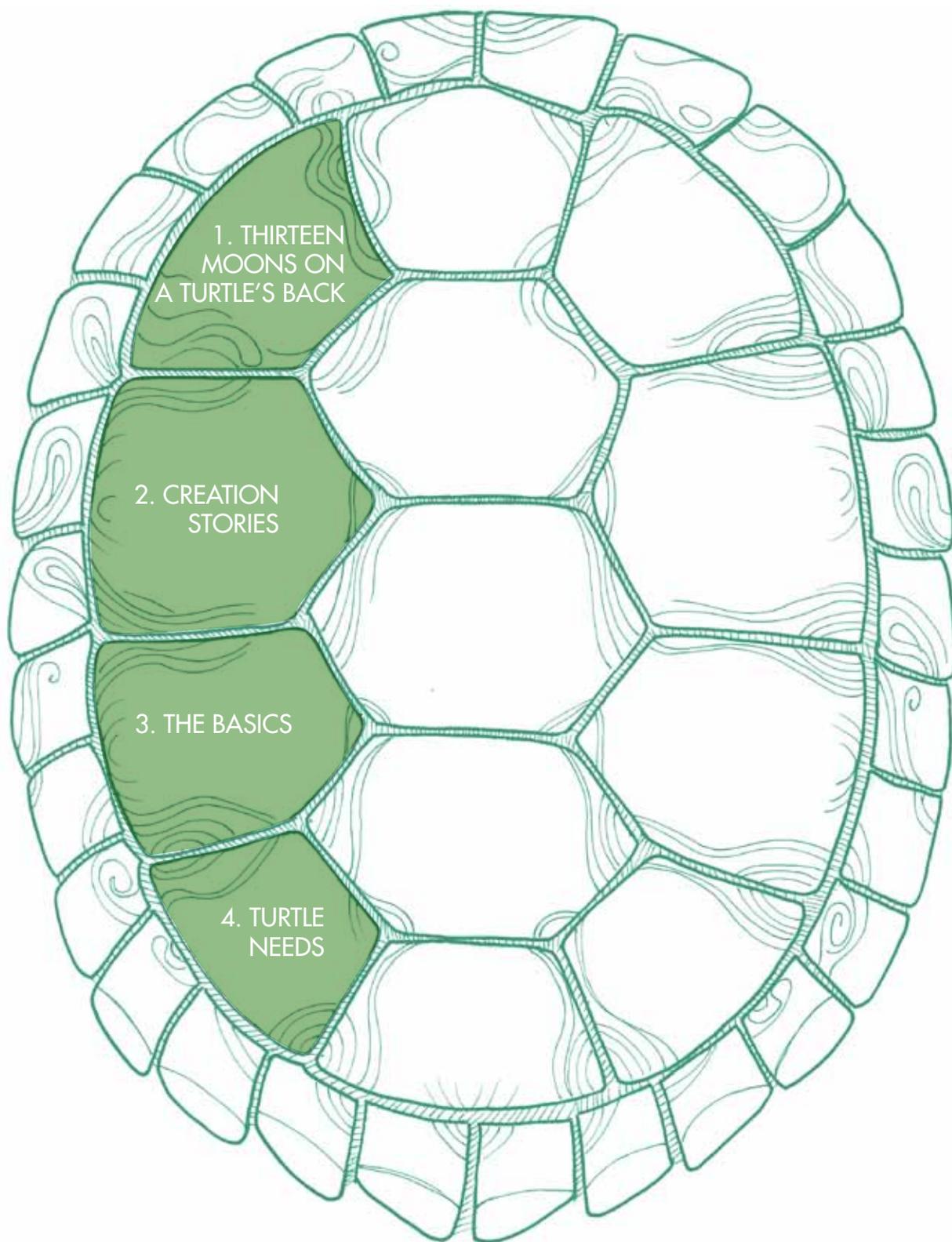
Snapping turtles are far more widespread than most other turtle species. Their numbers are falling, however, and researchers argue that this species should be designated as at risk. Egg failure and deformities are common in snapping turtle populations where high levels of PCBs, dioxins, furans and other contaminants are found in southern Ontario's water bodies. Even in Algonquin Provincial Park, a long-studied snapping turtle population has fallen by at least 50 percent.

**DESCRIPTION** Black, brown or olive shell; dark grey or brown skin; dull yellow or tan lower shell; long, jagged-ridged tail

**SHELL LENGTH** 20-50 cm

**RANGE** Southern Ontario North to about Temagami and Elliot Lake; scattered populations around Chapleau and Lake Superior West to Red Lake

**STATUS** Declining and now at risk



1. THIRTEEN  
MOONS ON  
A TURTLE'S BACK

2. CREATION  
STORIES

3. THE BASICS

4. TURTLE  
NEEDS

## THE FOURTH CHALLENGE

WALKING WITH MISKWAADESI

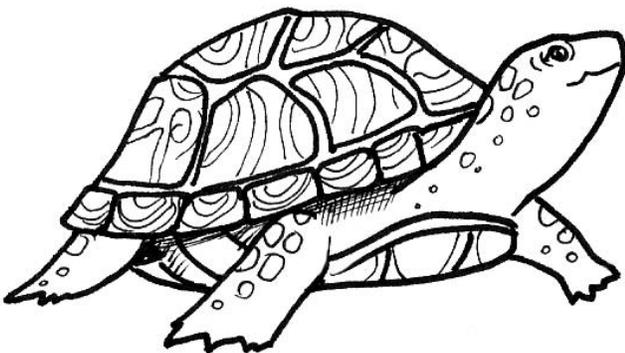
# THE FOURTH CHALLENGE

## TURTLE NEEDS

What can you learn about the turtle's requirements for habitat and can you find out what a healthy habitat might look like?  
What does a turtle need to thrive and survive?

*"My 4th challenge asks you to find out what turtles need to thrive and survive. What does a healthy habitat look like for a turtle? Do you think that the habitat in your community is a healthy one for me?"*

Miskwaadesi's 4th challenge.



# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY               | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                   |
|---------------------------------|--------------------------------|-----------------------------|
| Miskwaadesi Finds Habitat       | 4s12, 4s14, 4s19, 4p28         | Outdoor experience/<br>game |
| Where's My Twin?                | 4s10, 4s14                     | Card game                   |
| The Perfect Wetland Home for Me | 4s4, 4s8                       | Card game                   |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY    | ONTARIO CURRICULUM EXPECTATION | WORKSHEET |
|----------------------|--------------------------------|-----------|
| Turtle quiz          | 4s12, 4s15                     |           |
| Journal Reflection   | 4s11, 4e67                     |           |
| Habitat for a Turtle | 4s10, 4s15                     |           |

## ONE STEP MORE (individual student optional adventures in learning)

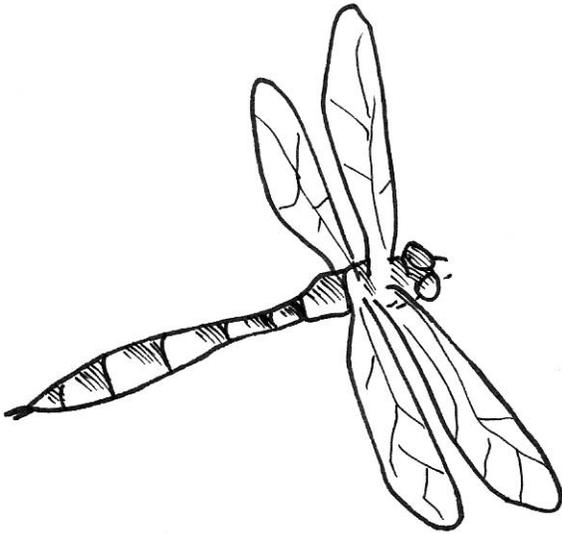
1. Research an Ontario Turtle

2. A New Game of Cards

### WORD WALL:

habitat, shelter, home, wetland, cattail, marsh, swamp, pond, river, lake, mud, water, rain, drink, eat, shore, pickerel weed, black willow, tamarack, pond lily

# LINKS TO OTHER CURRICULUM



## 4<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Reciprocity – pg 53

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

## TURTLE CURRICULUM LINKS

Activity 6 – Today's Picnic Specials Are...

Activity 7 – Turtle Appetites

Activity 11 – A Picture is Worth A Thousand Words

<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>

# RESOURCES



**<http://www.ducks.ca/resource/general/naturenotes/audio/marsha.wav>**

1.8 minute Marsh Sounds

**<http://www.hww.ca/hww2.asp?pid=0&id=233&cid=2>**

Hinterland Who's Who - description of wetlands and of many animals and plants that can be found there

**<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>**

Turtle Curriculum

# KOKOM ANNIE'S JOURNAL

## HABITAT

Last week I went down to the marsh to look and listen to the changes in the season. I sat on my favourite rock, put down some tobacco at the edge of the water, and closed my eyes while I focused on the sounds of the community. When I first sat down there weren't many sounds - I guess everyone saw me coming and they got very quiet. But, after I had settled down on that old mishomis the animals went back to their work and I began to hear the sounds of the marsh.

I can remember when I was a little girl I used to go and help my moshum (grandfather) catch minnows in the marsh down the road from our house. It was lots of fun and there were always lots of bugs and things to look at down at the water. There were so many birds singing and the frogs croaking - it was a place that was full of life! I think it was my moshum who talked to me about the marsh and the wonderful gifts it had for us. He talked about how much we needed it - mosquitoes and all!

Moshum said that all living things have four basic needs - food, water, shelter, and space. The food must be nutritious and healthy. The water must be drinkable and clean. The shelter must protect the living creature from the weather and from predators. He said that shelter also includes a place to be cared for and to be able to care for others and was more than a house - it was your home. Every plant and animal (and us too) needs enough space to be able to find food, water and shelter. Every living thing needs these four components in particular and special combinations. The combination of food, shelter, water, and space makes the niche that each living thing can thrive within.

We have had an understanding that in creation, each plant and animal on the earth has its very own special place, with specific needs for food, water, shelter, and space, and these needs cannot easily be changed without putting the animal or plant at risk. We also know that as humans, we also have needs for food, water, shelter, and space but we



also recognize that we depend upon every other member of creation for our needs because we are the youngest and the last to be created.

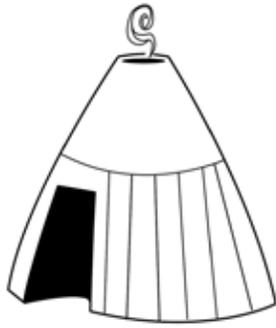
The sun was warm on my back and I was starting to nod off when all of a sudden I felt something was watching me. I opened one eye and there at my feet sat Miskwaadesi. Her shell was wet and sparkling in the afternoon sun. It was good to see her today!

*"Ahniin Nokomis - it's good to see you today. I was hoping that you would come by."* I told Miskwaadesi that I had been at a gathering in Mohawk territory and we opened our meeting with a beautiful prayer of thanksgiving - the kanian'kehaka. The Thanksgiving Address reminded me to be grateful for all of the sites and sounds of life in the wetland at my feet, because everything that lives in the wetland helps to provide me with what I need for my own health and wellbeing. Miskwaadesi nodded her ancient head slowly in agreement and then she spoke again, in her quiet voice.

*"It is your responsibility to be thankful for all of the great gifts of life that have been given to you. That reminds me of a very old teaching from long, long ago..."*

*"After the Great Mystery had thought everything into existence and placed all the elements, plants and animals on the earth (aki), and given them their responsibilities- when everything was ready, then and only then did the Great Mystery create you humans. My turtle ancestors have shared this story with me. They talked about how much the humans needed all of us and were dependent upon us for their needs. We, the older brothers and sisters of Creation had been given the responsibility to provide you humans with your food, to make sure that waters stayed clean and healthy, to give our body coverings as your shelter, and to share our environment to provide you with living space. You humans are the only members of creation who have been given free will - you can choose how you want to behave. All that the Great Mystery asked of you, the youngest of creation, was that you show gratitude and give thanks for the other members of creation who so readily shared themselves with you. Those first humans*

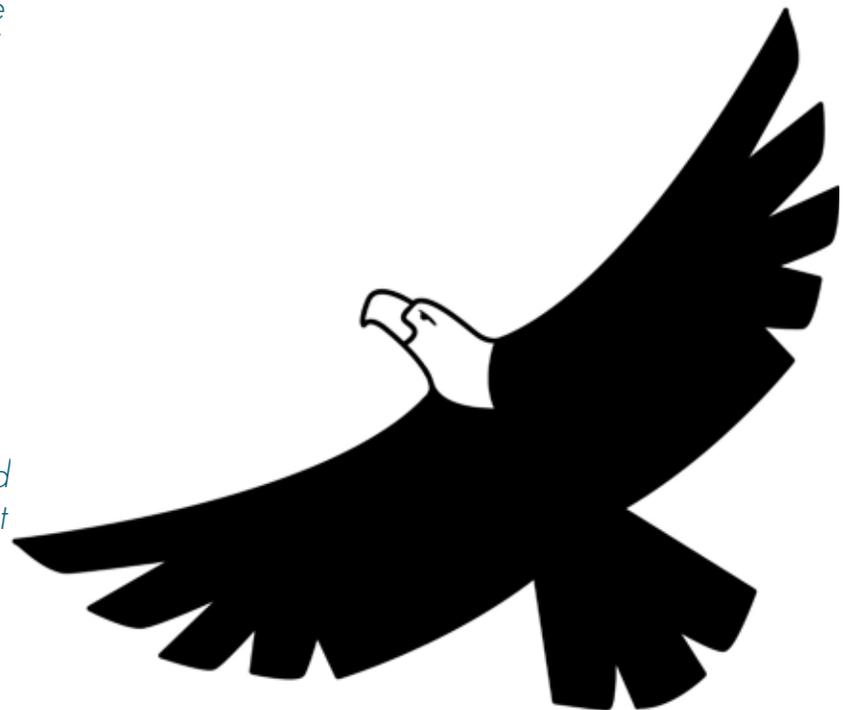




readily agreed and showed their gratitude every morning by offering their tobacco and prayers and thanksgiving to the Great Mystery. However, as time went by, the humans became forgetful and they were so busy enjoying the gifts of creation that they forgot to be grateful and thankful for the many gifts they had been blessed with. The Creator looked down upon all of creation and was very upset that the only members of creation who have free will and choice (humans) were not showing gratitude. The Creator decided to destroy the earth and everything on it. "

"The eagle understood the Creator's thoughts and spoke up in defense of the humans who were young and weak. The eagle asked that the humans be given another chance. The Great Mystery sent the eagle to fly over all of creation from east to west looking for one lodge where humans were showing thanks and gratitude. The Great Mystery promised to spare creation if the eagle could bring back good news. "

"At dawn the next day the great migizi set out on his journey across Turtle Island, flying from east to west, searching for signs of thanks. At the very last village, in a tiny lodge at the end of the trail, the eagle saw a thin plume of smoke rising up to the sky. The smoke was from the tobacco that an old nokomis and mishomis had placed on the earth - the elderly couple were saying a prayer of thanksgiving, speaking to all the different plants, animals, elements, and helpers that surrounded them. The eagle flew back to the sky-world to report to the Great Mystery that there was, on Turtle Island, one couple who remembered to be grateful. The Great Mystery was pleased, and promised to spare creation as long as there was evidence of thankfulness."



I remembered that teaching and thanked Miskwaadesi for bringing it back to my memory. The old people say that is why we need to begin our day with a prayer of thanks, acknowledging all of the other members of our great community that work together to make our life possible. When that migizi flies from the east to the west every morning as the sun is rising, it gathers up our prayers and takes them to the Creator.

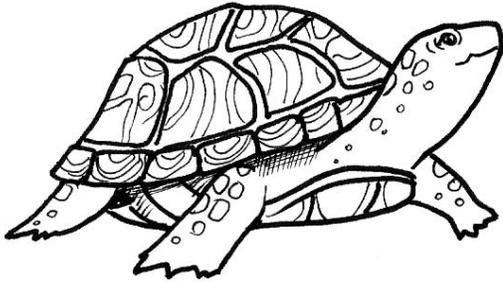
My Auntie Jan is from the Turtle clan. She knows a lot about turtles in the wild. She told me once that in the marsh or the wetland, the Turtle clan members have specific needs for food, water, shelter, and space. Some of their needs are similar yet each member of the turtle clan is unique and has a very special place and a special responsibility and role. Sometimes more than one turtle clan will live in a wet area - each one has a special place in the community and is very important to the health of the community. Some turtles in the wetland may eat only plants and seeds. Others may eat snails and bugs and little minnows. Every turtle has a special niche in the wetland and every turtle is important to the health and wellness of the environment.

I spoke about Auntie Jan to Miskwaadesi and the old turtle nodded in agreement.



*"Your Auntie is correct - each one of my clan has a special place in the marsh. Those of us who wear the coat of the Miskwaadesi only like to eat duckweed and other tiny water plants, little minnows, snails, and tadpoles, worms, and sometimes little insects that can be found along the shore. We only can live in slow moving aquatic places that have rocks and logs where we can bask in the sun to soak up its warm rays and energy. I did not grow up until I was 10 years old, and then I began to make a nest in the late spring. When it is time to lay eggs, I return to my nesting area which is usually near the bank or shoreline - and I can lay from 4 to 20 eggs. My hatchlings usually stay in the nest until spring, and then they climb out and always hurry back to the water because they need to find deep water to be safe from the birds and raccoons and skunks that would like to eat them.*

*One of my responsibilities is to make sure that the water in the marsh is clean and safe for drinking. I am also responsible for bringing the message that change of seasons is coming in the fall to the other animals and plants that live in the wetlands. I am one of the first turtles to go to sleep (hibernate) in the autumn. I think that's why my shell has those pretty fall leaf colours on it! I may be small and I don't usually grow larger than 15 cm even if I am 100 years old, but I still need plenty of space to live in and I need to have lots of basking logs and rocks because I need to be able to communicate between all of the other plants and animals in the wetland and the Creator. Did you know that if*



*my environment is healthy, I can live to be over 100 years? Lately many of my clan are not living that long. Changes in the marsh are making it difficult for us- the water table is lower than it used to be - you know, Nokomis, when you were a little girl, you could not sit on that mishomis where you are sitting now because it was under water! The marsh has been shrinking in size because the water table is getting lower. That means that every living thing in the marsh has less space in which to live. Where did all that water go? The water is warmer than it used to be too, and it is not as good to drink. I am trying hard to keep the waters clean but there used to be a lot more turtle brothers and sisters around here to help - now there is only me and a few cousins. We just can't keep up with all the work that we need to do."*

Miskwaadesi blinked, snapped at a damselfly that landed near the edge of the water and slowly turned away from the shore.

*"My 4th challenge asks you to find out what turtles need to thrive and survive. What does a healthy habitat look like for a turtle? Do you think that the habitat in your community is a healthy one for me?"*

Without another word, Miskwaadesi slipped into the water. I watched as she swam out of sight, leaving me to think about the teaching that she shared, and wondering what did happen to all that water - where did it go? What might happen when Miskwaadesi and her turtle cousins are gone - who will keep the water clean for us? I got up and walked back to the house - I had a lot to think about.

# TEACHER BACKGROUND



Upon completion of the 4th Challenge, students choose an appropriate symbol or picture to use to place on their turtle shell.

The 4th challenge will provide students with the opportunity to learn about the basic needs of the turtle - food, shelter, water, space and to compare these needs to our needs as humans. The 4th challenge contains an active game intended to be played outdoors if possible, as well as two card games where students can practice as they learn.

Teachers are encouraged to share Kokom Annie's journal with the class and to discuss the entry. The journal entry can be copied and provided as a literacy activity. Students may be invited to generate their own comprehension questions following reading of Kokom's journal.

## MISKWAADESI FINDS HABITAT

Outdoor activity (from Project Wild's Oh Deer)

Students will learn the four basic requirements of habitat - food, water, shelter, space by playing an active game. Students will also be introduced to some difficulties experienced by turtles in the wild as a result of human activity.

## WHERE'S MY TWIN? - Card Game No.1

Provide groups of students with turtle cards downloadable from pages 91-96 of this curriculum. Available online at <http://www.torontozoo.com/Adoptapond/tici.asp>

## THE PERFECT WETLAND HOME FOR ME - Card Game No.2

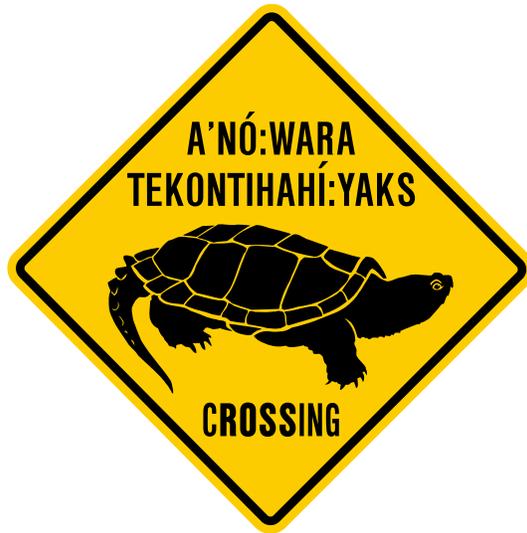
The object of the game is to collect a pair of turtle cards, plus one each of food, water, habitat, and shelter by drawing cards from the deck.

### *Suggested way of playing -*

Each time a card is drawn, a card must be discarded or played. When a player has a pair of turtle cards, they put them face up on their basking site and pick two cards from the deck. The player then tries to accumulate a water, food, space, and shelter card for their turtle pair. When they have gathered these cards, they can display them and place their last card on someone else's basking site to help complete their habitat home. The turtle helper cards can be used to replace any of the habitat cards provided the player can tell how the helper has made a positive difference to the turtle's world.

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. TURTLE NEEDS

#### Miskwaadesi Finds Habitat

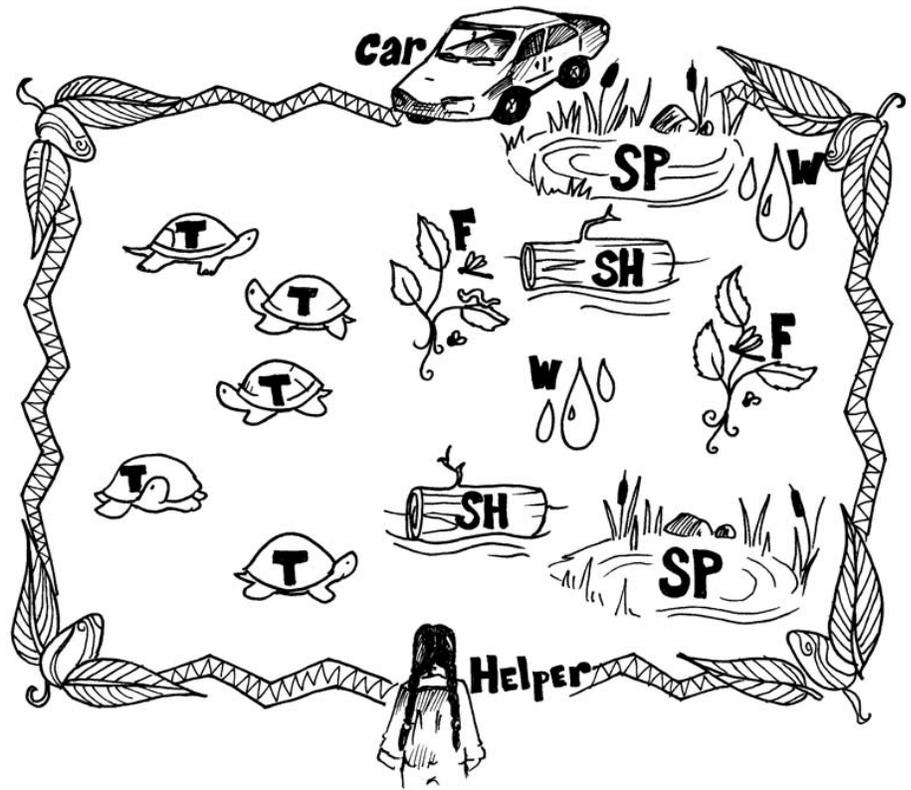
Materials - Outdoor play area

Discuss the needs of living things with the class - food, shelter, water, space. Draw up a simple chart on the white board, with columns titled food, shelter, water, and space. Using the following questions to stimulate discussion, fill in the columns with student responses. Think about turtles - what kinds of food might a turtle need? Where might a turtle find shelter (remember the turtle's shell is not its home, rather the shell is its primary protection from danger). Shelter may be found in the forest for some turtle species, in a pond or on a basking log for others. What kind of water does a turtle need? What kind of living space does a turtle require? (think about different space requirements at different times of the year - often turtles live far away from their nesting sites)

Discuss with the class some of the issues that turtles face in relation to each of their habitat needs and record these under the appropriate column as well.

|                    | FOOD | SHELTER | WATER | SPACE |
|--------------------|------|---------|-------|-------|
| SOURCES            |      |         |       |       |
| ISSUES FOR TURTLES |      |         |       |       |

Sketch an outline of the playing area on the board and explain the game to the class.  
(see image)



Go outside or to the gym to play the game. Divide class into five groups - one group will be turtles; one group will be food; one group water; one group shelter; one group space. All turtles go to one end of playing field or gym, their basking area and each turtle can decide what turtle clan they would like to be. All other players go to far end of field or gym. Students representing food will hold their hands over their stomachs; students representing water will hold their hands over their mouth; students representing shelter will hug themselves; and students representing space will put their hands out at their sides. Students turn their backs on the game area and wait for the teacher to begin the round.

The turtles will show the part of habitat they need and they will run to the other end of the playing field, touching a student who is showing the same symbol. The component of habitat who is touched now becomes a turtle. If the turtle cannot find a match, the turtle becomes part of habitat for the next round.

When the teacher/leader says "go" all students face the middle of the playing area. The habitat members all show their signs and the turtles show the component of habitat they need. Turtles run to habitat, find a match if they can, and return to their basking area.

The teacher/leader can record how many turtles begin the round and how many turtles are alive at the end of the round. The turtles return to their basking area.

Round 2 - This time, the members of habitat may choose to be a different part of habitat and they will use the new symbol. The teacher records how many turtles survive this round of the game.

Round 3 - the members of habitat and the turtles may choose to be different for this round. The teacher records how many turtles survive the round.



Round 4 - The teacher may choose to speak with the habitat players, and have them agree to represent only 3 of the components for a round to replicate the total loss of one element (ie wetland dries up - no water; the presence of pesticides in the wetland result in lack of food; a wetland is drained because the water table has dropped; a housing development means there is nowhere to hibernate in winter and therefore no space left).

Round 5 - The teacher/leader chooses two members of habitat to become vehicles. As the turtles go by looking for habitat components, the vehicles can 'drive' across the playing area, tagging any turtle that crosses their path. Teacher records results of the round.

Round 6 - the teachers chooses two members of habitat to become 'people' helping - one person helps by putting up turtle crossing signs (by standing with their arms outstretched and turned sideways) to alert the cars which must then stop and wait until the turtles have passed before continuing their journey) and the other person helps by walking with the turtles or by moving the habitat components closer to the turtles to simulate building/rehabilitating wetlands or providing clean water and/or food.

| ROUND | SCENARIO            | # OF TURTLES | RESULTS |
|-------|---------------------|--------------|---------|
| 1     |                     |              |         |
| 2     |                     |              |         |
| 3     |                     |              |         |
| 4     | Total loss of _____ |              |         |
| 5     | Vehicles (cars)     |              |         |
| 6     | People helping      |              |         |

After the game: Ask students to reflect upon some of the changes that have happened to our wetlands and to think about ways we can help to keep our existing wetlands healthy and to help rebuild them so that turtles will have a home. What did it feel like to not be able to find some of your habitat needs as a turtle?



## 2. "WHERE'S MY TWIN?" - Game No.2

Provide each student group with a deck of turtle cards. Begin by using only half the deck, but choose two of each species and of the elements as well, including food, habitat, shelter, water, and the two turtle helper cards for this game. The turtle helper cards are "wild cards" in this game and can be used to match up with any other cards. This is a game of matching pairs of similar cards.

- The dealer shuffles the cards, then places the cards face down in a 4 cards by 7 cards grid or in a circle on the wetland playing surface that the group has created.
- The player to the right of the dealer begins by turning over two cards. The player must say the name of the turtle on each card. If the cards match, the player removes the two cards and places them face up in front of his/her basking area. The player gets a second turn. When the player cannot find any more matches, the cards are turned face down again.
- The next player looks for a pair of turtle twins. Any card pairs that do not match are turned face down again.
- After a player has found a pair of turtles, the player should try to find good habitat for the turtle to live within - food, water, shelter, space.
- The game ends when all the cards have been drawn or accounted for, or when no more matches can be made.

The player with the best combination of habitat and turtle cards describes the habitat they have created for their turtle pairs. The other players in turn describe the habitat they were creating and discuss the elements of habitat that they needed to collect.

- As students become more informed about Ontario's turtle species and their habitat needs, provide an opportunity for groups to play the game using the entire deck of cards.



### 3. THE PERFECT WETLAND HOME FOR ME! - Game no. 2

Provide each group of students with a wetland playing mat and a deck of Turtle cards.

Dealer gives out 7 cards to each player.

Player one to the left of the dealer begins by organizing their cards in their hand. Player one now has a choice - they can draw a card from the deck, or pass one card to the right or left. If the card is passed, everyone else also passes a card to the right or left. If player one draws a card from the deck, she/he must discard from their hand and place the discard face-up beside the deck. If player one has a pair of matching turtle cards, he/she can put them down on their basking site. Player one now begins to organize their habitat cards. Player one waits for their next turn.

Player two takes their turn - choosing from the deck, choosing from the discard pile, or passing a card to the right or left. Player two must also discard if they have chosen a card so that they will always have seven cards in their hand.

All players must first show a pair of turtle cards before they can lay down their habitat and/or helper cards.

When all the players have developed a good habitat for their turtle species, they can share what they know about their particular turtle (adaptations, species features, etc.) and discuss different ways that they can help their turtle species to continue to live in Ontario.

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. QUIZ

Complete the turtle I.D. quiz. How did you do?

### 2. JOURNAL REFLECTION

Complete a reflection for the 4th challenge in your journal.

What did you learn by playing the Miskwaadesi finds habitat game?

Which card game did you like the best? Why?

Where do you think the water went from Kokom Annie's wetland?

How will the waters be kept clean if the turtles are not there?



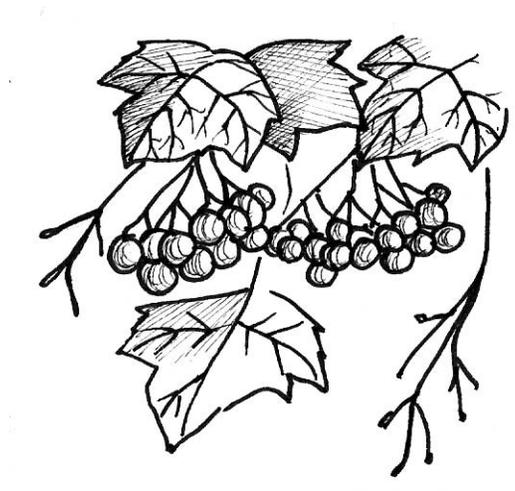
### 3. HABITAT FOR A TURTLE

Draw an outline of a turtle shell on your page. Leave enough space under the drawing to answer 2 questions. Divide the shell into quarters. Write one component of habitat in each quarter of the turtle's shell and colour the space to reflect what you have written.

Question 1: What did you learn about turtle habitat needs?

Question 2: What do you think is the most important component of habitat for Miskwaadesi and her clan?

4. Create a suitable symbol to add to the turtle shell on the cover of your journal to show that you have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 4th scute on the large turtle shell poster.



# ONE STEP MORE

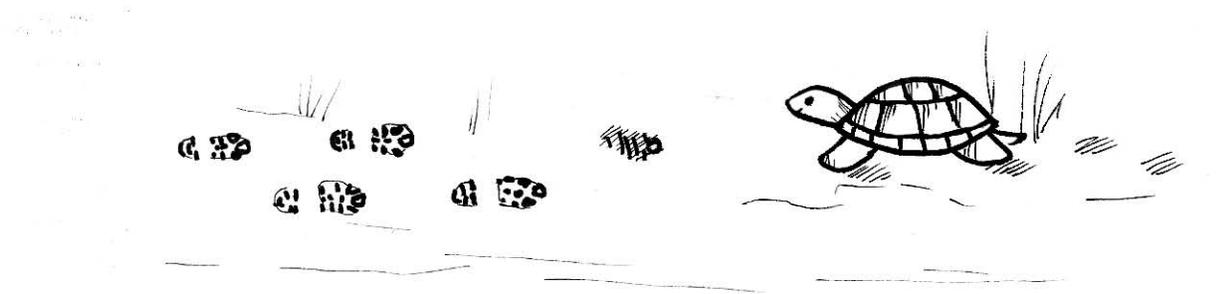
## DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

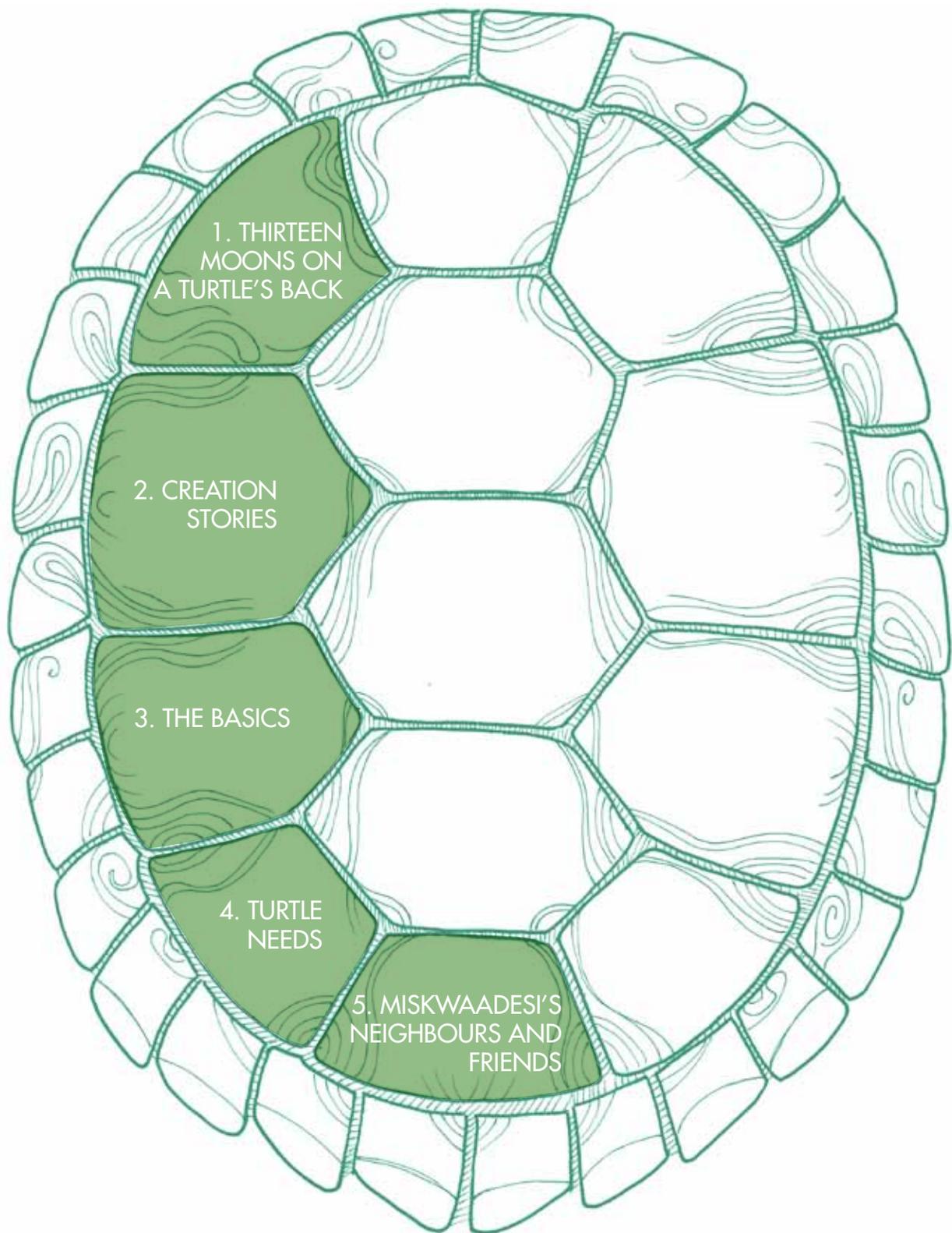
### 1. RESEARCH AN ONTARIO TURTLE

Are you interested in finding out more about one of Ontario's turtles? Do some research - look at the websites in the resources section and see if you can find out more. Report back to your class.

### 2. A NEW GAME OF CARDS

Use the cards to make up a new card game. Give the game a name. Write down the rules. Try your game with some friends.





1. THIRTEEN  
MOONS ON  
A TURTLE'S BACK

2. CREATION  
STORIES

3. THE BASICS

4. TURTLE  
NEEDS

5. MISKWAADESI'S  
NEIGHBOURS AND  
FRIENDS

**THE FIFTH CHALLENGE**

WALKING WITH MISKWAADESI

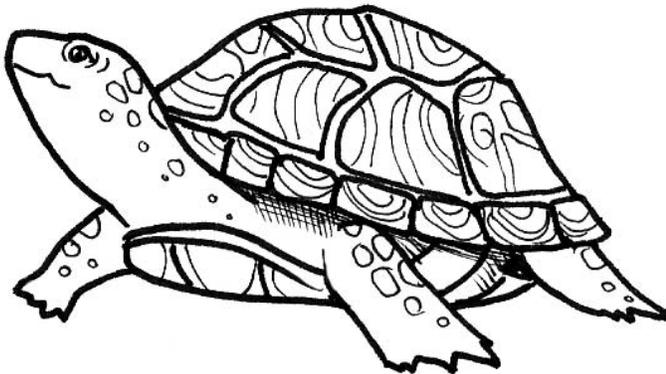
# THE FIFTH CHALLENGE

## MISKWAADESI'S NEIGHBOURS AND FRIENDS

- Who are Miskwaadesi's friends and neighbours in a wetland?
- How are the plants and animals in a wetland connected?
- How do our clan names relate to Miskwaadesi and life in a wetland?
- Can you construct a web of life to illustrate a wetland?
- What does a turtle need to thrive and survive?

*"My 5th challenge to you is to find out who are my friends and neighbours in the waters and watersheds? All the animals and plants are woven together in the web of life and I need all of them if I am to be healthy and well. How are all the plants and animals related?"*

Miskwaadesi's 5th challenge.



# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY           | ONTARIO CURRICULUM EXPECTATION | WORKSHEET |
|-----------------------------|--------------------------------|-----------|
| Who's Who in my Wetland     | 4s12, 4s15                     | Card Game |
| Welcome to my Neighbourhood | 4s14, 4s15                     | Card Game |
| We're all in this Together  | 4s20, 4s15, 4s10               | Card Game |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY       | ONTARIO CURRICULUM EXPECTATION | WORKSHEET               |
|-------------------------|--------------------------------|-------------------------|
| Wetland Web of Life     | 4s8, 4a43, 4a40                | Sculpting a web of life |
| Daily Life in a Wetland | 4s15, 4a43, 4a55, 4a43         | Living Diorama          |
| Journal Reflection      | 4s10                           | Writing                 |

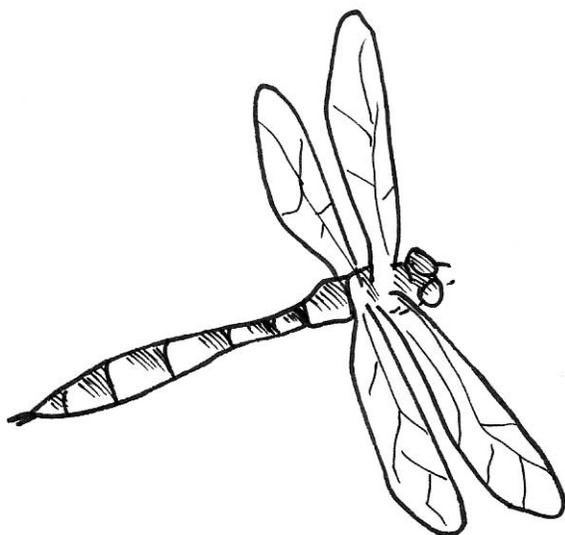
## ONE STEP MORE (individual student optional adventures in learning)

1. Sculpt a Critter
2. Wetland Poster

### WORD WALL:

Anishinaabe, moose, deer, caribou, elk, marten, beaver, muskrat, porcupine, raccoon, rabbit, mink, fox, bullhead, fish, snapping turtle, mud turtle, painted turtle, snake, rattlesnake, frog, otter, merman, catfish, whitefish, sucker, sturgeon, pike, crab, bear, lynx, wolf, crane, thunderbird, hawk, bald eagle, golden eagle, sparrow hawk, black hawk, pintail, wild goose, turkey, loon, black duck, gull, snipe, pelican, kingfisher, crow, raven, heron, grouse, Haudenosaunee, eel, snipe, beaver, heron, hawk, biodiversity

# LINKS TO OTHER CURRICULUM



## 5<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Relationship – Interdependent Relations – pg 46

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

## TURTLE CURRICULUM

Activity 12 – A Link in the Chain

<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>



Wetland Ecosystems 1 - Teacher and student lesson plans and marsh habitat cutouts - (downloadable) or order from Ducks Unlimited  
1-800-665-3825

**<http://www.ducks.ca/cgi-bin/www.cgi?tp=IS&pg=SPW048X&ab=1&kp=1102>**

**<http://www.ducks.ca/resource/general/naturenotes/index.html>**

Nature Notes on wetland creatures - ducks unlimited site - click on individual species

**<http://www.epa.state.il.us/kids/fun-stuff/water-cycle/>**

Excellent activity - water cycle - why a wetland is important; free and downloadable

**<http://www.hww.ca/hww2.asp?pid=0&id=233&cid=2>**

Hinterland Who's Who - description of wetlands and of many animals and plants that can be found there

**<http://www.ducks.ca/resource/general/naturenotes/audio/marsha.wav>**

1.8 Minute Marsh Sounds

**<http://www.ducks.ca/resource/general/naturenotes/index.html>**

Ducks Unlimited - Description and pictures of wetland residents

**[http://www.ducks.ca/resource/teachers/lesson\\_plans/element.html](http://www.ducks.ca/resource/teachers/lesson_plans/element.html)**

Teacher and student lesson plans about wetlands (downloadable)

**<http://www.lttacollection.ca>**

Lesson plans and ideas for making masks.

**<http://www.artlex.com/ed/Maskmaking.html>**

Maskmaking Ideas

# KOKOM ANNIE'S JOURNAL

## HABITAT



*"My 5th challenge to you is to find out who are my friends and neighbours in the waters and watersheds? All the animals and plants are woven together in the web of life and I need all of them if I am to be healthy and well. How are all the plants and animals related?"*

"Hmmm - who are Miskwaadesi's neighbours and friends in the wetland? There are so many and they all play a significant role in the community of life that supports Miskwaadesi. I remember what my Nokom and my aunties said about how things are connected..."

"My girl..." they would say while we sat together and worked on some sewing or beading - ..."We understand that every life form, no matter how small or large, has needs for nutrients (food), water, shelter, and space and these needs are met by other life forms. As well, each life form itself serves as a nutrient, source of water, shelter, or space for other living things. All things exist within a web of interdependence. If the web is changed in any way, all things will be affected in some way."

Through careful observation and by living within this web over many thousands of generations, our People have come to understand some of the complexities and delicate balances that are necessary for life to continue in balance.

It is all part of our traditional knowledge that has been passed down from one generation to the next.

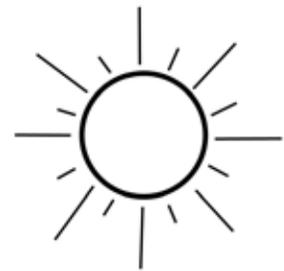




We understand that the sun provides the energy that all life forms need, either directly or indirectly.

We understand photosynthesis - the process by which the energy from the sun is turned into food for the plant, but that is not what we call it.

We understand that some animals and birds get their energy from the sun by eating plants (science today calls these animals herbivores), while other animals get their energy by eating animals (science today calls these animals carnivores) and still other animals eat both plants and animals to get their energy (science today calls these animals omnivores).



We understand that our clans all reflect animals that are dependent upon wetlands and that are interconnected.

We understand that our clans have special responsibilities based on their animal totem and that our communities function best when the clans work together for the health (betterment) of all.

We can identify various food chains and we understood how these chains work together to make a complex web of life.



These understandings are thousands of years old and to Our People, they are very important.

The Anishinaabe Nations are divided into clan groupings. Each clan has special characteristics and responsibilities to the community and the Nation. Today there are seven clans - crane, loon, fish, bear, hoof, marten, and bird.

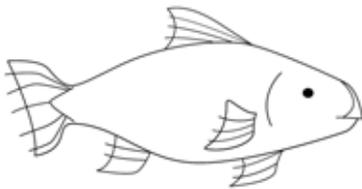
The crane clan (baswenaazhi group) are the communicators and leaders in matters that affect everyone. The group includes the crane, thunderbird, hawk, bald eagle, the golden eagle.



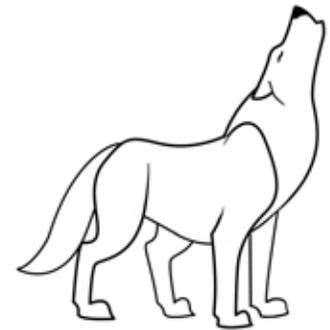
The loon clan members are the communicators and leaders within the community. Clan members also include the sparrowhawk (kestrel) and the black hawk.



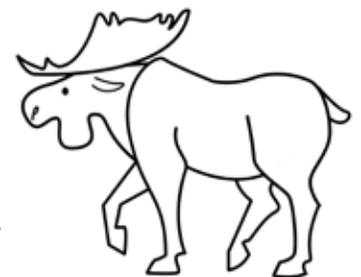
The fish clan (wawaazisii group) are the teachers and healers. In the old days the fish clan included the sturgeon, bullhead, snapping turtle, mud turtle, painted turtle, snake, black snake, rattle snake, frog, otter, merman, catfish, whitefish, sucker, pike and crab clans.



The bear clan (nooke group) are the defenders and the healers. The members include bear, lynx and wolf clans.



The hoof clan (moozwaanowe group) are the hunters, scouts and gatherers of food and include the moose, deer, caribou in the north, elk, stag, beaver, muskrat, porcupine, raccoon, rabbit.

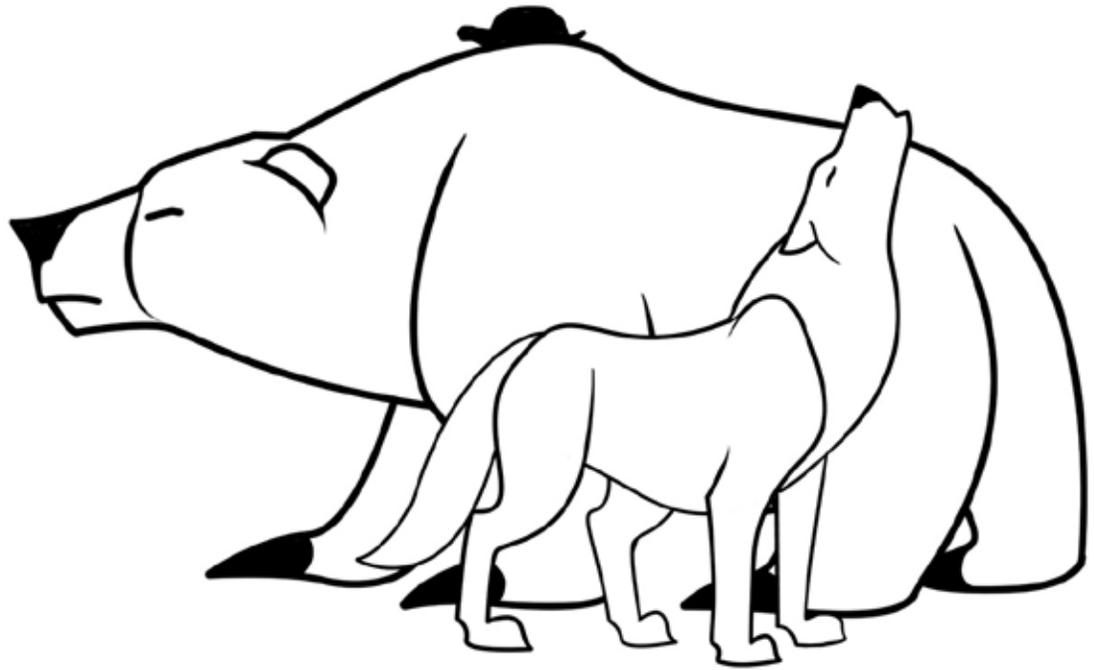


The marten clan are the protectors (warriors) and the providers. The clans include the mink, and fox.



The bird clan (aanaawenh group) are the communicators within the council fire of the community. The clans include the wild goose, pintail duck, turkey, black duck, gull, snipe, heron, pelican, kingfisher, crow, raven and grouse.





My friend Jan from Tyendinega explained to me that the Haudenosaunee People also are divided into clan groupings. Each nation has a clan to represent the earth; one for the water; and one for the air. Each clan sits together in the longhouse for ceremony and in the larger communities, each clan has their own longhouse.

The Mohawk Nation has three clans - bear, turtle, and wolf.

The Oneida Nation has three clans - wolf, bear, and turtle.

The Tuscarora Nation has seven clans - wolf, bear, turtle, snipe, deer, beaver, eel

The Onondaga Nation has eight clans - wolf, bear, turtle, snipe, deer, beaver, hawk, eel.

The Cayuga Nation has five clans - wolf bear, turtle, snipe and heron.

The Seneca Nation has eight clans - wolf, deer, turtle, snipe, deer, beaver, heron, hawk.

Our clans are important, and our clan animals all depend upon wetlands for their life. If we can help Miskwaadesi and her clan cousins we will also be helping all of the clan animals that depend upon the wetland for food, water, shelter, and space.

# TEACHER BACKGROUND

Students play a game of 20 questions using the wetland cards, improving and practicing their good listening and questioning skills.

Students play an active game, with cards taped to their backs. By careful questioning they determine which animal or plant they are in a wetland habitat/ecosystem and they then join together to form simple habitat components

Students play an outdoor game, gathering up names of members of a wetland food chain as they develop an understanding of the various plants and animals that are dependent upon each other in a wetland habitat.

Students review the clans of the Anishinaabe and Haudenosaunee nations and come to understand that the clan animals are all connected to wetlands.

Students review what they have learned about wetland habitats by engaging in an activity in which they tie together the plant, animal and elements of the wetland in a web of life. Students make a mask to represent the animal or plant that they are representing in the living diorama. Teacher and students prepare a dialogue to accompany the living diorama and present it to another class.

Students complete a reflection in their journal to demonstrate their learning (questions may include - how things in the wetland fit together - how important is each member? What happens when something disappears from the chain?)

## MATERIALS

### FOR PRACTICING THE LEARNING

1 set of game cards showing the animals and plants that live in Miskwaadesi's wetland

Ball of string or wool

Student worksheets - clan members for Anishinaabe and Haudenosaunee

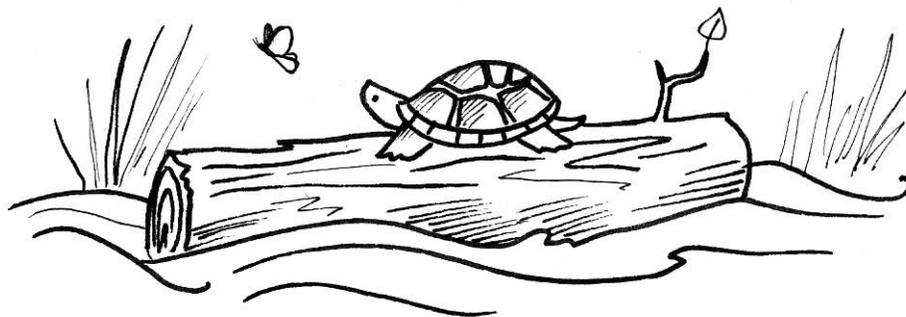
### FOR DEMONSTRATING THE LEARNING

Willow or alder branches for bending into hoops

Sinew; beading needles

Beads

Mask Making materials- card stock; coloured paper; glue; feathers; fake fur scraps; etc. a stick or ribbon/string to attach the mask to the student; mural of a background for the wetland - cattails; water; rocks, etc.



Some websites teachers may wish to preview for ideas on mask making include:

<http://www.lttacollection.ca>

Mask-making - detailed lesson plan from Yukon includes short video clips as illustrations

<http://www.artlex.com/ed/Maskmaking.html>

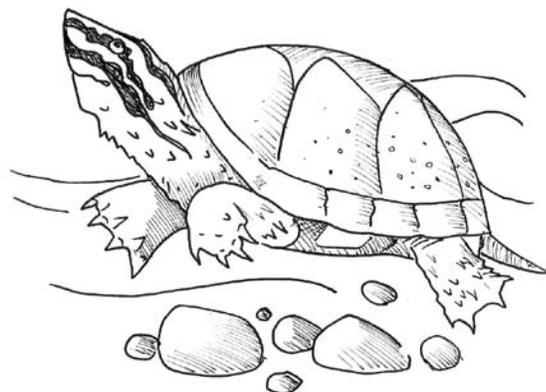
Mask-making using plaster bandage material

Teachers/leaders are encouraged to read and share Kokom's journal and to discuss the journal entry with the class. The students who know their clan may be encouraged to talk about what it means to be a member of their clan and what their responsibilities are within their community.

Make a copy of the Wetland Community Neighbours and Friends found later in the section. Make 2 copies of the descriptions of each neighbor and friend; cut one set out, and attach them to the back of the name card and keep the other set for teacher reference and for the Wetland Buddies (bingo-type) game. The 48 neighbours and friends cards make up a deck of cards to be used in the challenge activities. The deck of cards can be placed in the classroom for students to use at other times as they become familiar with the plants, animals, and elements that make up a healthy wetland ecosystem."

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. WHO'S WHO IN MY WETLAND?

Organize a game of 20 wetland questions with the students - students are invited to guess what animal or plant is represented on a mystery card by asking only yes/no questions. Divide class into 2 teams. Place a card from the Wetland Neighbours and Friends card pack face side down between the teams. Only Miskwaadesi's helper (teacher) knows the name of the plant or animal. The students must guess the identity of the mystery wetland resident. One team begins by asking a yes/no question about the animal/plant. If the answer is 'yes' the next person on the team can ask another question. The game continues until a 'no' answer is received. Then the other team begins to question Miskwaadesi's helper (the teacher).

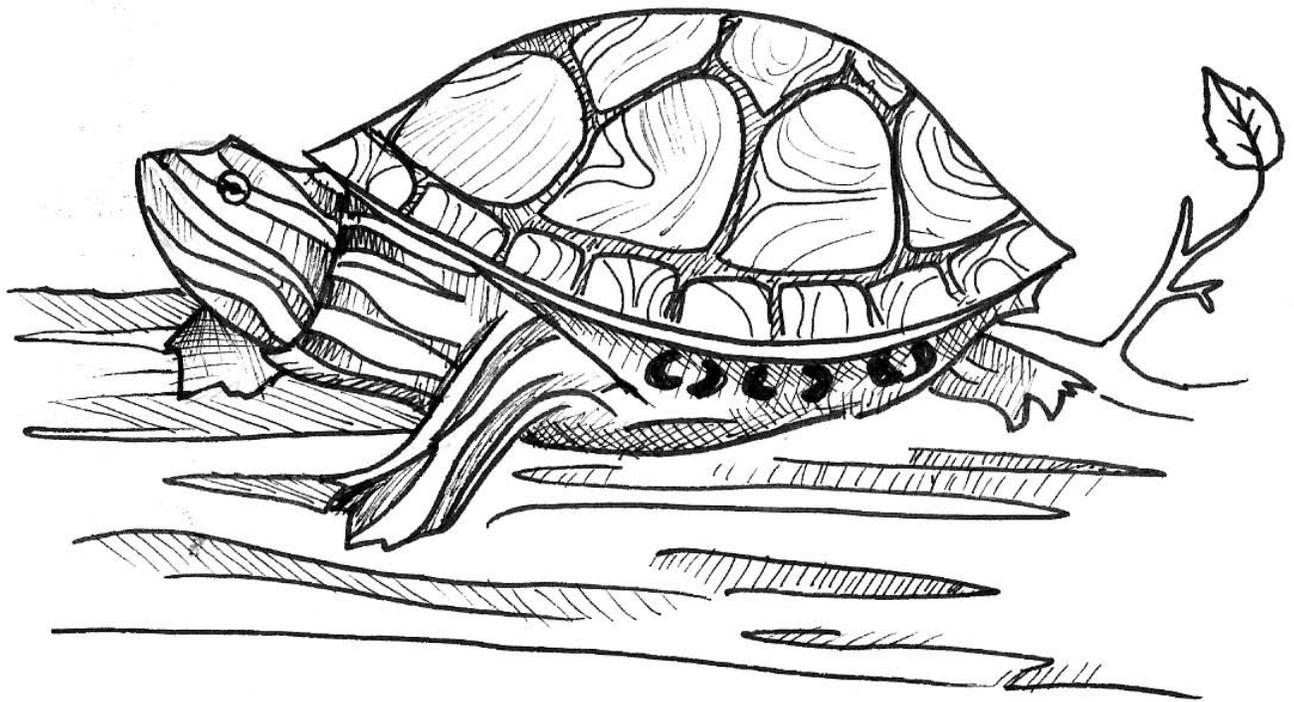
Students are reminded to listen carefully to the questions that are asked so that they do not repeat a question.

If the team guesses and they are incorrect, the other team is given a point. If the team guesses incorrectly three times, Miskwaadesi's helper turns the card over for everyone to see and to discuss the mystery guest. The other team automatically wins the round.

Miskwaadesi's helper draws another card from the pile and the second round begins.

Once students have had an opportunity to see how the game is played, divide the class in to groups of 4-6, with a 'helper' to manage the card pile. The small groups can then play the game.

Use the Wetland Neighbours and Friends card game to create a bingo-like game for the class. Provide each student with a square piece of paper divided into 25 squares - 5x5. The middle square is called 'wetland buddies' and is 'free'. Students choose 24 names from the 48 neighbours and friends cards to randomly place on their card. When the student cards have been prepared, the teacher uses the Wetland Neighbours and Friends game cards themselves to call a bingo game. Students mark their cards with small counters as the plants and animal names are called. Those with a bingo must describe each of the neighbours and friends that are part of their 'bingo' line. Teachers can collect the cards and store them to use another time.



## 2. 'WELCOME TO MY NEIGHBOURHOOD'

This game encourages students to develop their listening and questioning skills.

Use the Wetland Neighbours and Friends card deck with the descriptions on the back.

Tape a card to each student's back without telling them what animal or plant they are representing. Students 'mingle' near an imaginary pond or wetland in the classroom, and they try to identify themselves based upon the questions they ask other students about their character card. If a student 'guesses' who he or she is, and they are incorrect, they must go to Miskwaadesi's helper (teacher) and successfully ask two questions before returning to the game. As students guess their identity, they proceed to walk into the imaginary wetland or pond area and they then try to collect at least three other students who they depend upon or who depend upon them for survival in the wetland, creating food webs and chains. Each web or chain must be able to explain their membership to the class at the completion of the activity. The teacher can record the webs and chains that are made.



### 3. WE'RE ALL IN THIS TOGETHER or DIVERSITY IS WHERE IT'S AT!

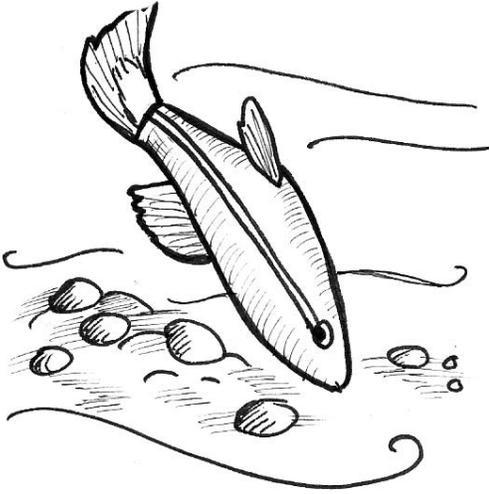
When students have had several opportunities to learn about the members of the wetland community, by playing the games and working with the wetland cards, bring the class together and sit them in a circle. Place the wetland posters in the middle of the circle. Pre-select cards from the Wetland Neighbours and Friends deck so that each student in the class will receive a card (make sure that the sun, wind, water and earth cards are among those chosen). Deal a card to each student in the circle. Students place their cards in front of themselves, face up so that they can be seen by everyone.

Each student in turn introduces themselves according to the card they have been given. They will talk about something that depends upon (needs) or something that is similar to them and something that they depend upon in the wetland. They may describe a wetland friend or foe and explain their relationship to him or her.



When all students have been introduced, the leader or teacher takes a ball of string or yarn and passes it to a student. The student calls out their name and then calls out the name of another wetland inhabitant and briefly explains their relationship. The ball of string is passed to the person who has been identified. This person looks around the circle and identifies a plant or animal that it is related to in the wetland community and the ball of string is passed to the new member. Eventually all students are connected with the ball of string.

The leader or teacher then has the opportunity to discuss how interdependent everything and everyone is- how we all depend upon everything else for our health and wellbeing. The teacher/leader produces a list of questions, such as those that follow for students to reflect upon... the questions could be written on the board for student reflection or the students and teacher together could generate a list of "What would happen if..." Questions for the class to answer. Some possible questions might include the following:



"What would happen if the minnows were all caught in minnow traps - who would suffer? (The student with the minnow card would be asked to gently tug on their string. Students who receive a tug could put up their hand to identify who is being affected.)

"What would happen if the wetland is drained to create a new housing development?" (The student holding the water piece of the string could tug on their string and students affected could raise their hand to indicate they have been affected.)

"What would happen if purple loosestrife filled the marsh and the cattails and bulrushes disappeared?"

(The students holding the cattail and the bulrush ends of the string tug gently on the string. Students affected raise their hands to indicate they have been affected).

For each "what would happen if..." question, the teacher/leader asks the class if the affected members of the community could continue to live in the wetland or if they would have to go away. If the member must leave the community, the student can drop their hold on the string, moves backwards one step from the circle and stands up. If the student leaves the community for part of the year, the student slides back one step from the circle and sits up on their heels.

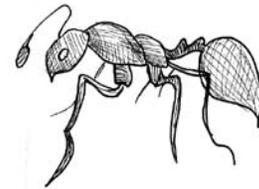
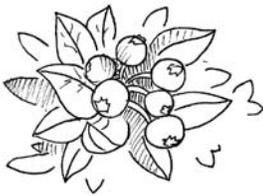
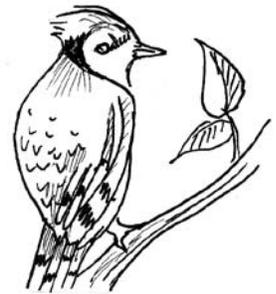
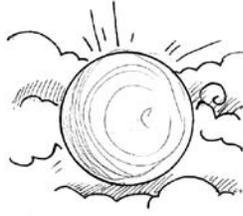
When a question is asked about an element- water, air, energy (sun), earth - all those plants and animals affected move backwards or leave the community.

Students are given a poster-sized sheet of paper upon which to draw a wetland as a background - plants, water, earth, trees. Students are invited to draw each of the Anishinaabe and Haudenosaunee clan animals within or around the wetland to show how everything depends on wetlands and water for survival.

Students illustrate each clan for their Nation using the worksheet provided.

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. A WETLAND WEB OF LIFE

#### MATERIALS

Branches of willow or tag alder long enough to make into a small hoop; sinew to attach willow ends together and to weave the web; variety of seed beads

Use chart paper - list various members of a wetland community. As a class, choose a seed bead colour for each individual member.

You may choose from the list the colours that you will use to create a wetland community web within the willow circle.

Start with a piece of willow or alder. Attach the ends of the willow to form a circle to be used in making a wetland community web (similar to a dream catcher). Weave the sinew through the circle to form a web, attaching the seed beads you have chosen.

Attach a piece of sinew about 15 cm long at the top of the hoop so that it can be displayed.

Now, record the colours of seed beads that you chose in your journal and beside each colour name the animal or plant that the bead represents. This will help you to describe your wetland community.

## 2. DAILY LIFE IN A WETLAND - A LIVING DIORAMA (DRAMA PRESENTATION)

As a class or in a large group, construct a background mural of a wetland showing trees, water, rocks, floating logs, water plants. This will serve as the backdrop for the dramatic presentation

Choose a wetland community member to represent Take some time to research the community member that you chose - what does it look like; how does it sound; how does it move; what does it 'do', etc.

Now it's time to make yourself a mask that will look like your community member - be creative! The teacher/leader or a group of students prepare and deliver a dialogue of who's who in the wetland or use the sample dialogue that is provided for you.

Take your place throughout the wetland- sit, stand, or lay quietly as each community member is mentioned, until the teacher/leader calls out your role. Now it's your turn - create a sound or appropriate movement to express identity within the wetland. The dialogue might start out as.

Dawn in the wetland - each species can be called upon to wake up and to sing their song of thanks. Plant species wave their branches or leaves. See the suggested dialogue "One Morning in Our Wetland" or create your own)





### 3. JOURNAL REFLECTION

Respond to the following reflection in your journal

Why is a wetland habitat so important for our clan animals?

How many members leave before the community is no longer a community?

How can we help to re-build a diverse community of living things in a wetland?

In the living wetland diorama, I was a \_\_\_\_\_. This is how I interpreted my role...

Create a suitable symbol to attach to the cover of your journal or duotang to show that you have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 5th scute on the turtle shell poster.

## ONE STEP MORE

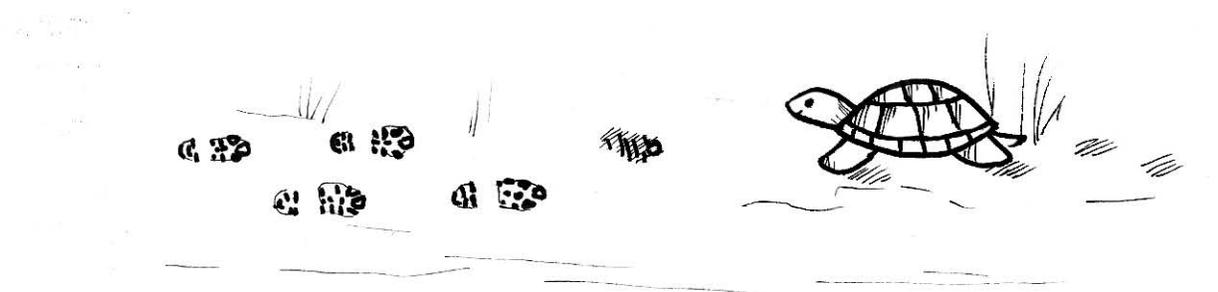
### DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

#### 1. SCULPT A CRITTER

Choose 1 card from the Wetland Neighbours and Friends cards. Prepare a paper sculpture of the creature on the card - your sculpture will become part of a class diorama, a bulletin board display or a table display of a healthy and diverse wetland community.

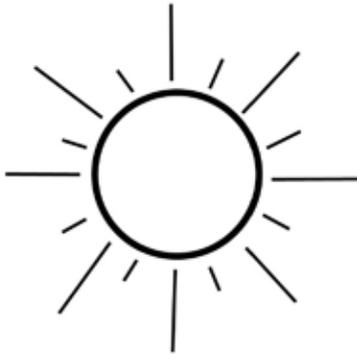
#### 2. WETLAND POSTER

Create a wetland poster and try to include as many plants and animals as you can to show how biodiversity in a wetland is important and healthy. Think of a good title for your work. When you have completed the poster, bring it to the band office or to your municipal office. Ask the receptionist to put the poster where people will see it and think about it.



# ONE MORNING IN OUR WETLAND

## A LIVING DIORAMA



The sky in the east was beginning to lighten as beedabahn, the morning star guided the sun into the sky.

The world of the marsh was about to awake as each member of Creation joined together to greet the new day and to give thanks and gratefulness.

As the sun's early morning rays peaked over the horizon they touched the bark of a birch tree that grew along the shore of the marsh. The birch tree's bark glowed in the early morning light as the tree's cells stretched and warmed to the energy from the sun. The tree gently started to sway as a tiny breeze began to dance across the water surface of the marsh.



The water rippled as the breeze caressed it. The ripples seemed to wake up some of the water creatures who lived within the wetland.

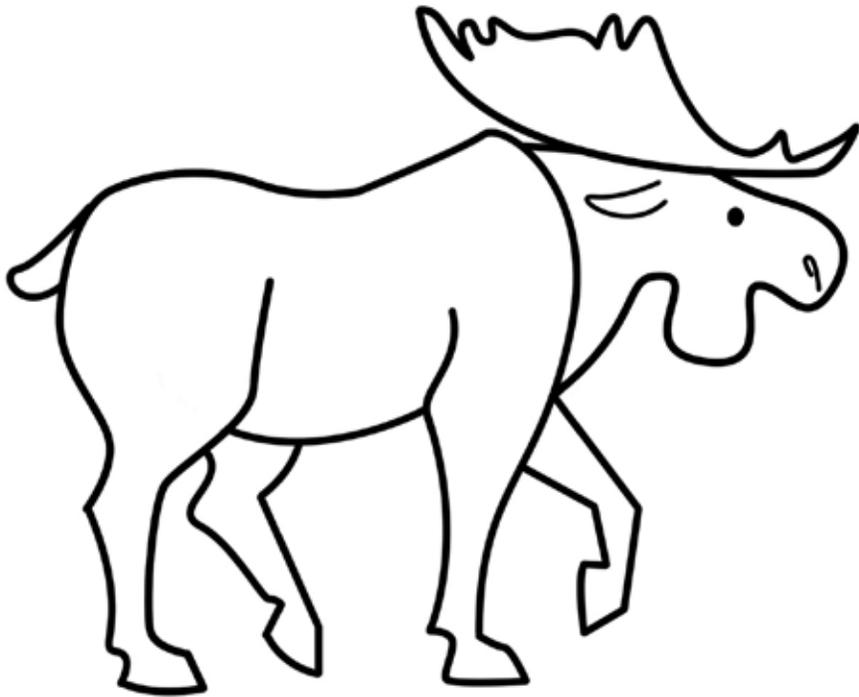
A dragonfly nymph scurried along the bottom of the pond, looking for some shelter from the light. A school of minnows scooted along the sunken log searching for bits of breakfast. The little black toad tadpoles wriggled in the shallows near the edge of the pond. A leopard frog peeked out from under a lily pad. It quietly hopped up onto the lily pad, and began to sing a morning song.

From the cattail plants the male red-winged blackbirds opened their eyes and began to stir. They perched on the stems of the cattails and began to sing their welcoming song of thanksgiving.



A chickadee called a good morning to all of Creation from the upper branches of the birch tree as it searched for seeds in the peeled bark.

The raccoon had been out hunting all night long and it was getting tired. As the early morning sun touched the fur on its back, the raccoon turned to face the sun, blinked its eyes, and walked into the denser trees around the wetland, looking for a hollow tree to sleep within.



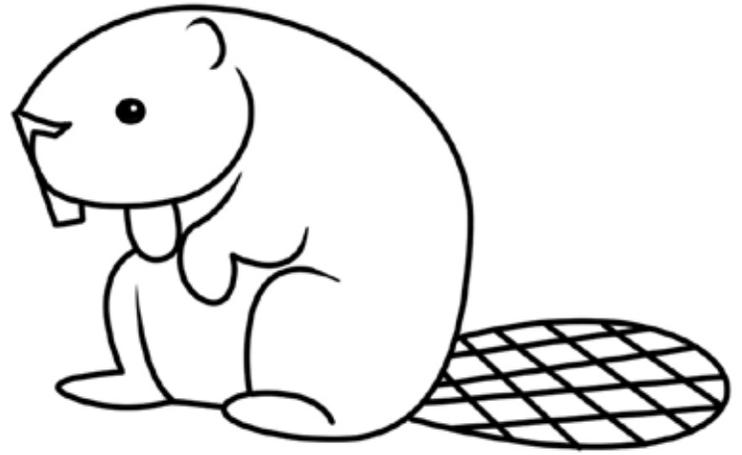
A large moose carefully walked down from the forest to the edge of the wetland, looking for a morning drink. As the sun's rays touched its head, the moose called out a greeting to the sun and to all other creatures in the neighbourhood. Then the moose put its nose deep into the clean cool water of the pond and began to quench its thirst.

The noisy bluejays awoke and flew over the water and the trees, calling out to everything in their loud voices as they showed their gratitude for another day. They landed near the moose and watched as it stood in the shallow edge of the pond.

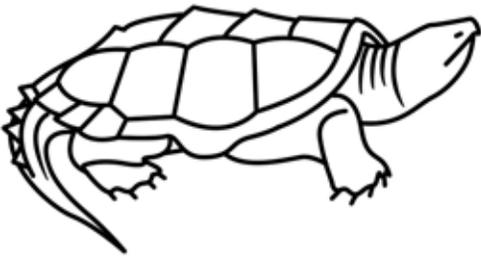
The sound of the moose having a drink raised the curiosity of the little mink that lived under the tree roots near the edge of the pond. The mink slipped out of its den and began to journey around its territory, sniffing and watching for signs of breakfast. It looked up at the morning light and gave a quiet cry of thanks.



Deeper in the pond the beaver family had just finished their work on a poplar tree and as the early morning sun shone its rays onto the pond surface, the beavers swam back to their lodge to sleep, eat and clean their fur. The young kits mewed a hello to the sun before they disappeared under the water, smacking their tails to all.



As the rays of the rising sun reached the old tree trunk that had fallen into the pond, an old snapping turtle climbed up onto the trunk to bask in the sun. Old turtle turned its head towards the rising sun and seemed to smile in gratitude for the return of the warmth the sun provided so the turtle would be able to move around quickly enough to catch its morning food.

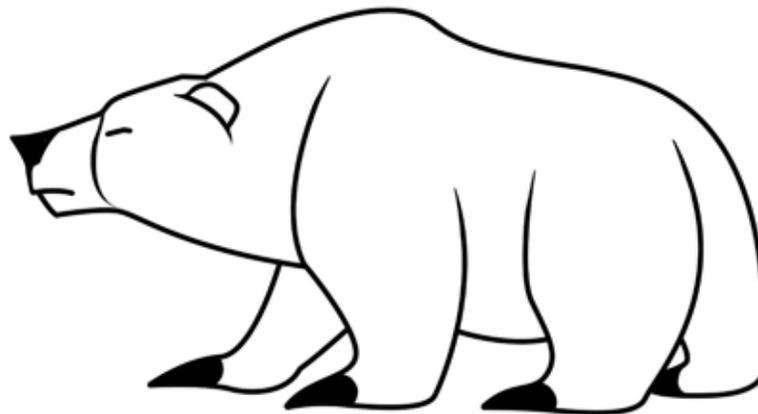


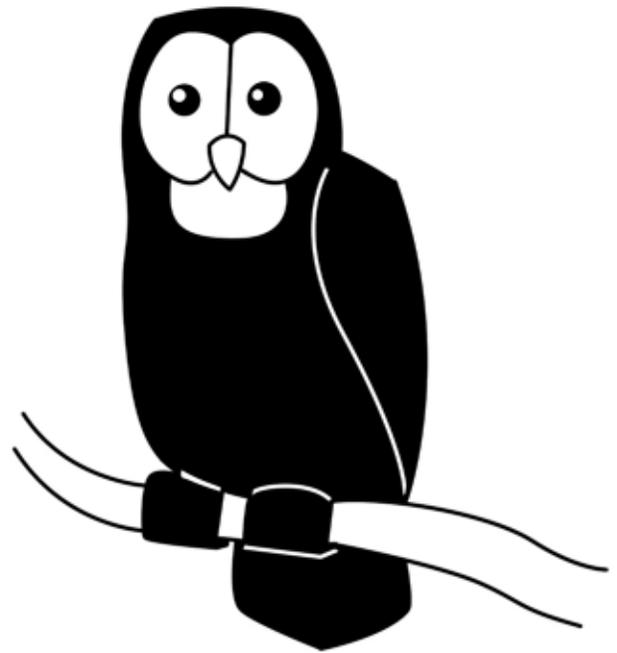
In the thicket by the edge of the pond, the little warblers and wrens stirred from their nests. Each one raised its voice in a chorus of song as it flew up into the morning sky, dancing in the tiny breeze.



From the top of the dead elm tree the heron stretched its long neck and legs. It soared out over the pond squawking a hello to everything in the wetland and then landed in the shallows, looking for some minnows for its breakfast.

Mukwa, the black bear ambled down from the forest to drink at the pond, growling and grunting a morning greeting before turning over the large stones and rocks searching for ants and grubs.

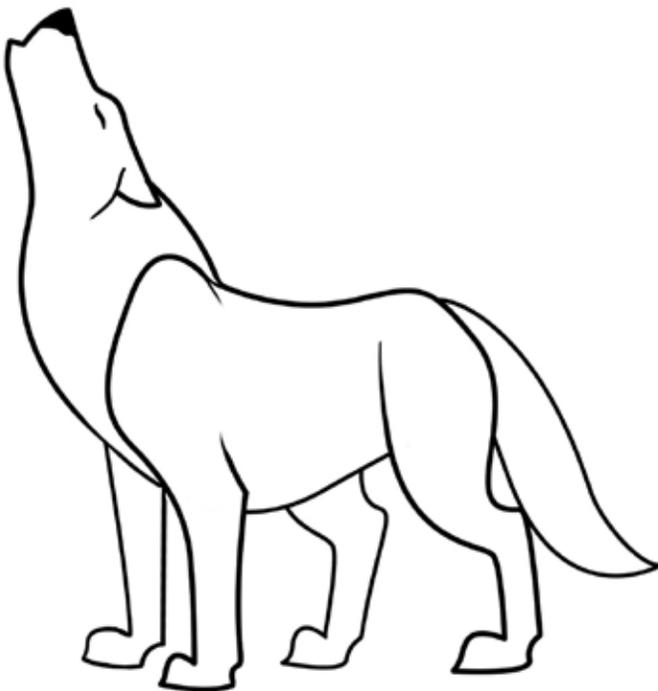


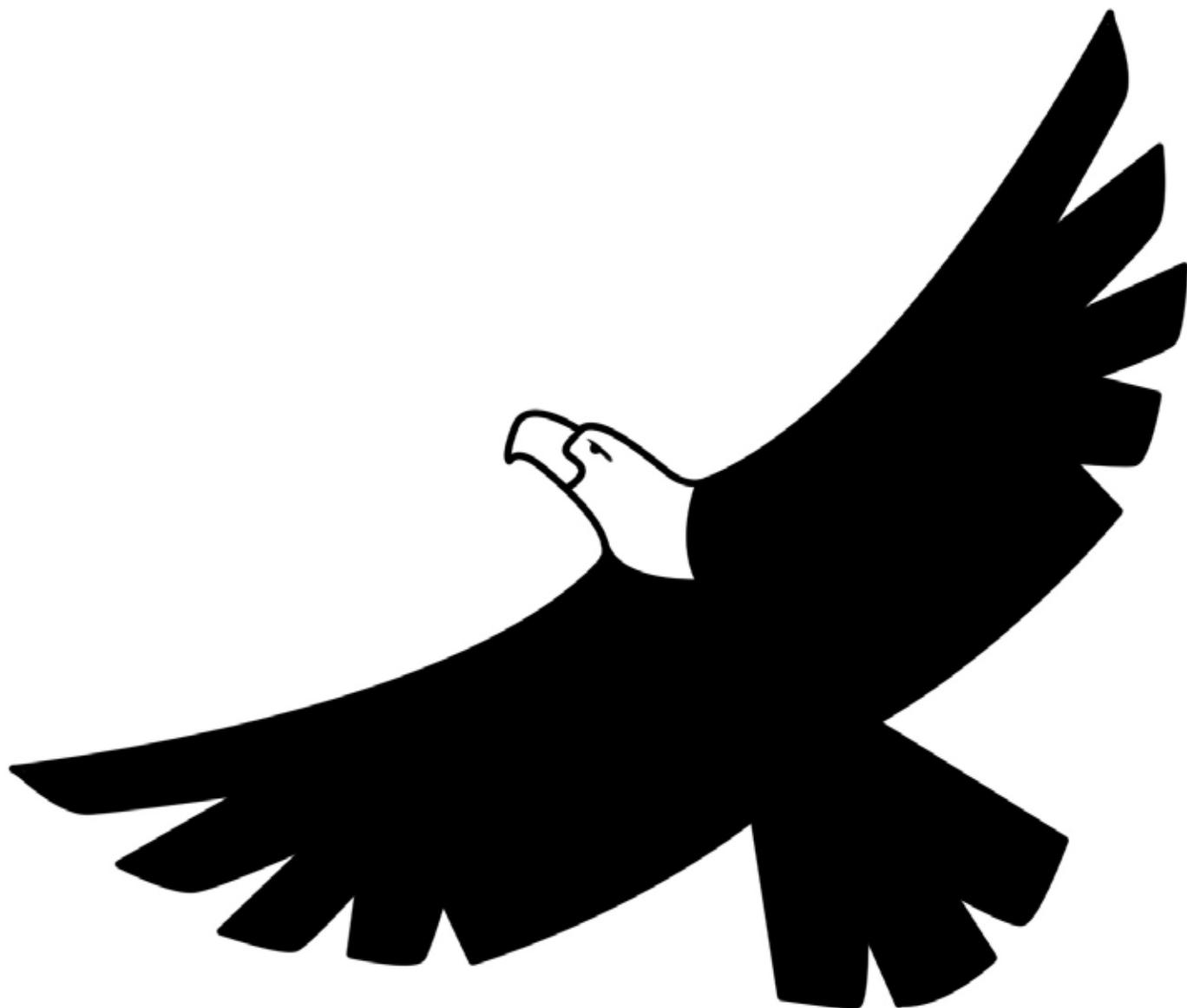


At the far edge of the pond the ghostly shape of a barred owl could be seen as it climbed close to the trunk of the cedar tree. With a who-who-who-who the owl cuddled up to the trunk of the tree along a wide branch, preparing for a long sleep while the sun walked across the sky.

From behind the cedar tree, a grey and brown shape appeared as if by magic as the wolf padded on silent feet. It sat down under the tree and peered down at the pond. Then it raised its voice in a single howl in honour of the new day, and it was gone, disappearing into the shadows behind the cedars.

The little red squirrel ran here and there through the branches of the shrubs and trees along the edge of the wetland, chattering to one and all as it searched for seeds and nuts.





The front door opened on the little house that sat just up in the woods above the pond and the wetland. From the house came the woman and the man and their two children. They carried tobacco with them and their smudge bowl. When they arrived at the edge of the water, their voices and thoughts joined with those of the plants and animals as everything and everyone spoke the words of greeting and gratefulness for a new day and a new beginning.

The sun seemed to shine a little brighter. High up in the sky, an eagle soared - watching, listening, and remembering. The eagle circled higher and higher, called out once, and disappeared into the bright blue sky as it took its message to the Creator - another beautiful day on Turtle Island had begun.

# Student Worksheet

5A - ANISHINAABE



Illustrate each clan in your Nation. Create a diorama or a wetland environment for the clan animals. Can you fit them all into your picture?

- Originally 21 clans

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## MY NATION'S CLANS : ANISHINAABE

### MOOZWAANOWE GROUP - Hunters, Scouts, Gatherers of food

Moose, deer, caribou (north), elk, stag, beaver, marten, muskrat, porcupine, raccoon, rabbit, mink, and fox.

### WAWAAZISII GROUP - Teaching and Healing

Sturgeon, bullhead, snapping turtle, mud turtle, painted turtle, snake, black snake, rattle snake, frog, otter, merman, catfish, whitefish, sucker, pike, and crab.

### NOOKE GROUP - Defense and Healing

Bear, lynx, and wolf.

### BASWENAAZHI GROUP - Communication and Leadership

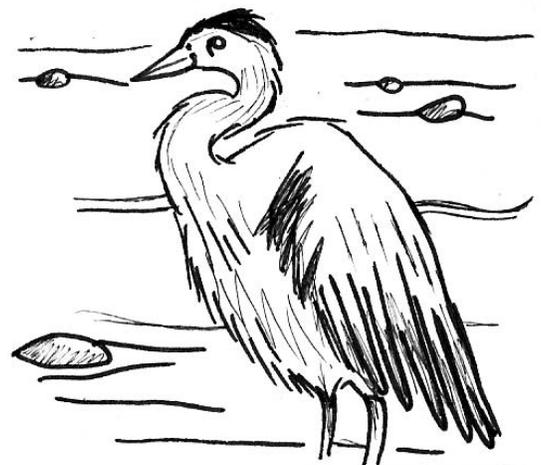
Crane, loon, thunderbird, hawk, bald eagle, golden eagle, sparrowhawk, and black hawk.

### AAN'AAWENH GROUP - Communication within council fire; Cosmetic issues

Loon, wild goose, pintail, turkey, black duck, gull, snipe, heron, pelican, kingfisher, crow, raven, and grouse.

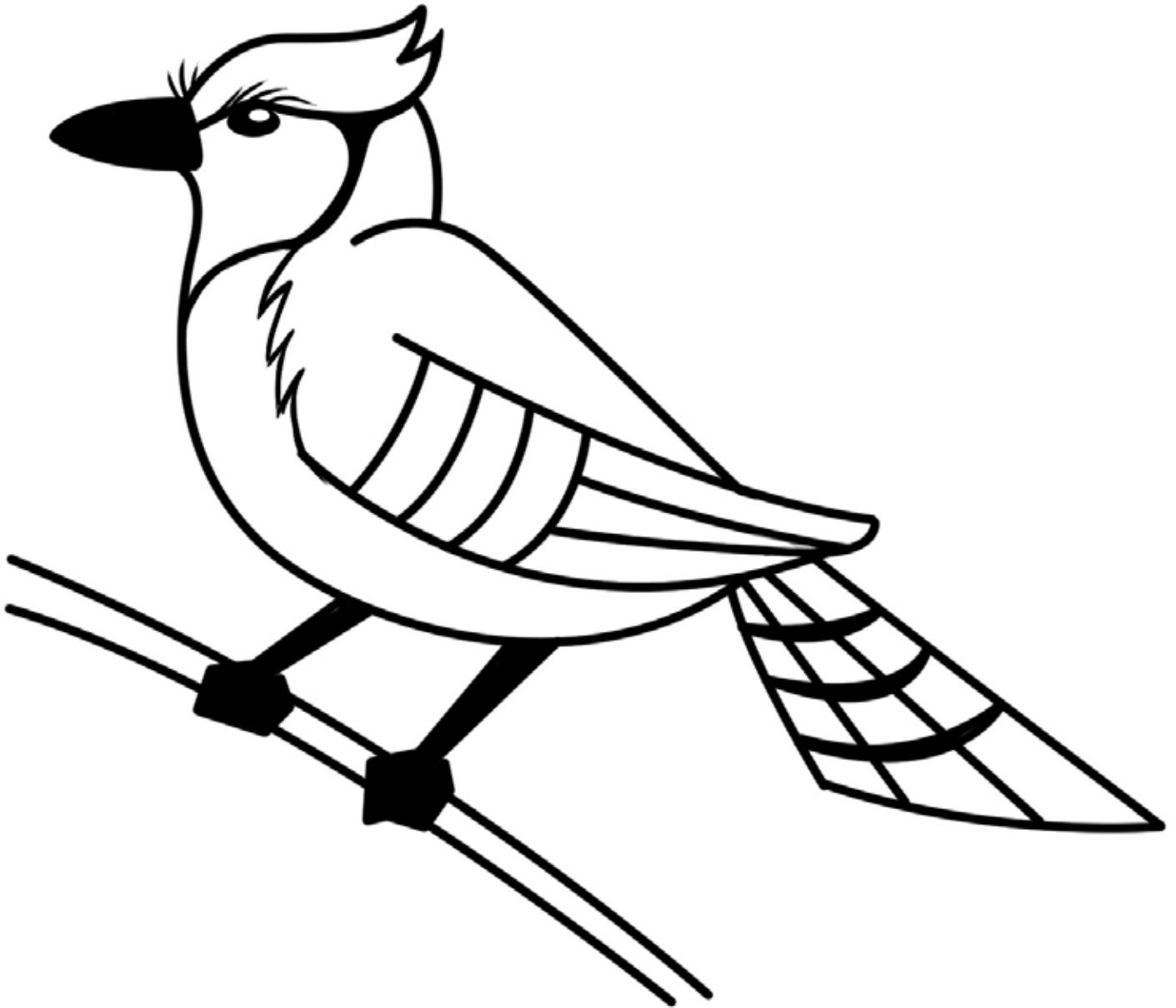
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Today 7 major clan groupings  
Crane, Loon, Fish, Bear, Hoof, Marten, and Bird



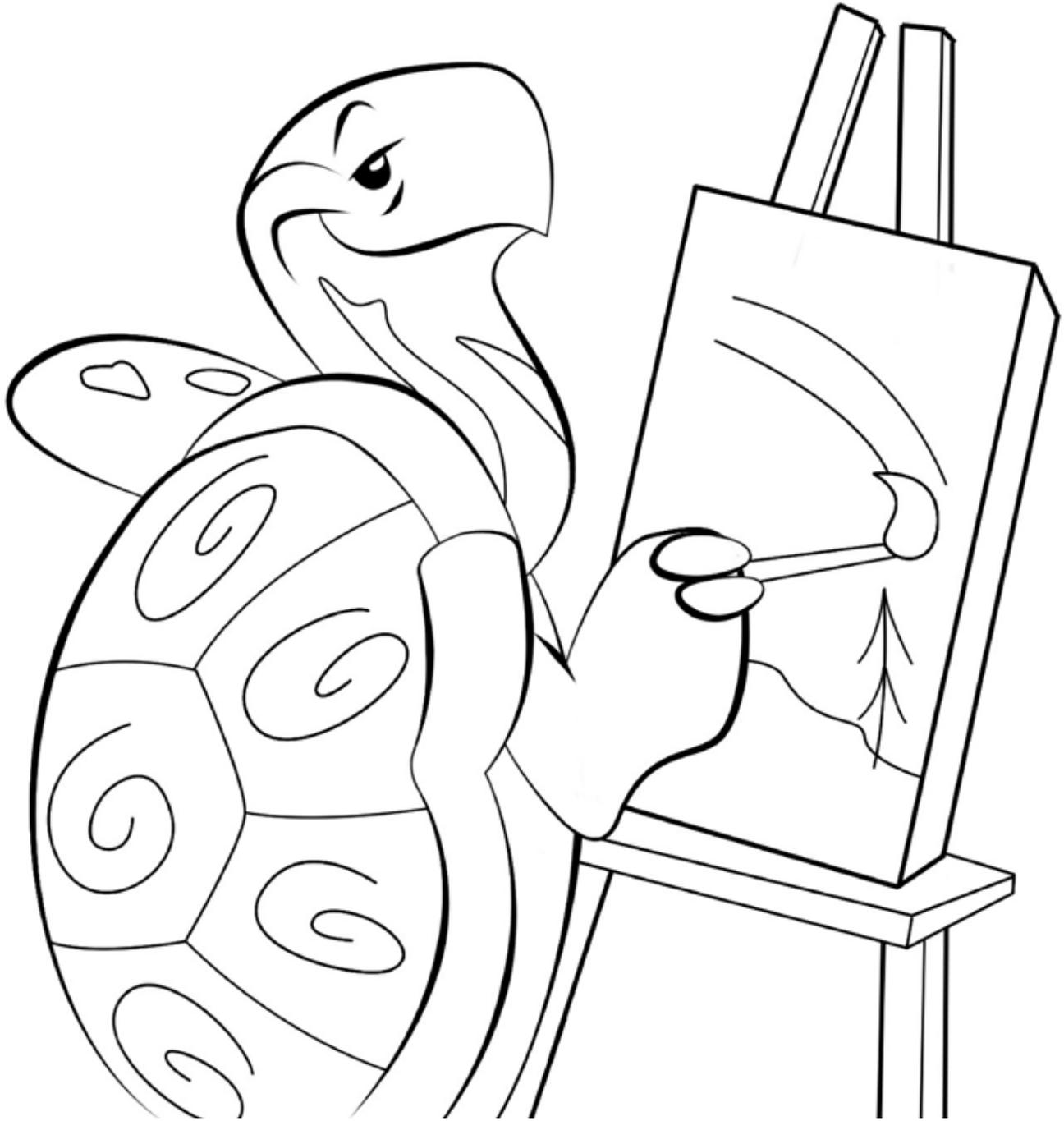
# Student Worksheet

COLOURING PAGE



# Student Worksheet

COLOURING PAGE



# Student Worksheet

5B - HAUDENOSAUNEE

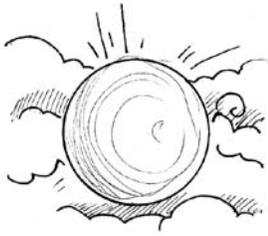


Illustrate each clan in your nation.



# WETLAND NEIGHBOURS AND FRIENDS CARDS

## BACK OF CARDS



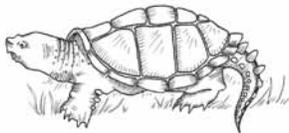
### SUN

Source of energy and light;  
Connected to all living things



### BLACK CAPPED CHICKADEE

Small seed-eater; nests in shrubs  
near water; eggs eaten by  
raccoon, blue-jay



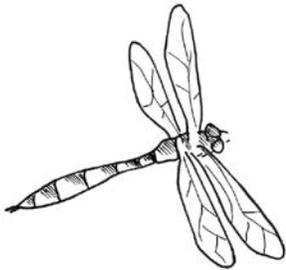
### SNAPPING TURTLE

Communicates with all  
animals and plants in  
wetland; eats minnows;  
crayfish; dragonflies; carrion



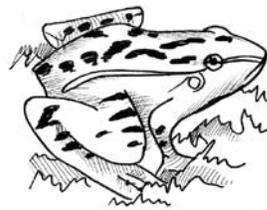
### WHITE BIRCH TREE

Grows along shore;  
roots hold soil;  
medicine tree; bark used  
for mukuks, canoes,  
wigwam, sacred tree



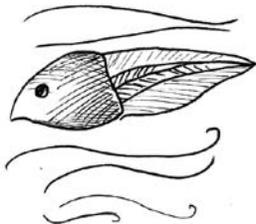
### DRAGONFLY NYMPH

Large insect found on  
bottom of pond;  
likes clean water; eats many  
other bugs in the pond



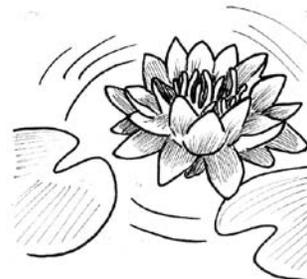
### LEOPARD FROG

Spotted yellow and green;  
eats mosquitos, blackflies;  
eaten by fox, raccoon, otter



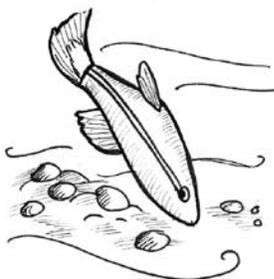
### TOAD TADPOLE

Black; grow quickly as  
water warms up;  
eat algae;  
eaten by fish, turtles



### WATER LILY

Fragrant flower;  
eaten by moose;  
medicine plant (root);  
nectar for bee



### MINNOW

Likes clean water;  
eats water plants;  
eaten by turtle,  
raccoon, otter

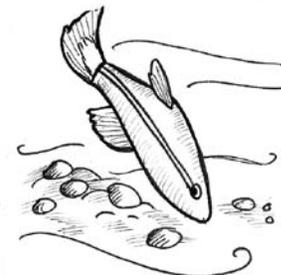
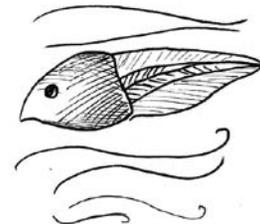
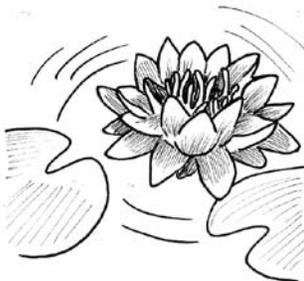
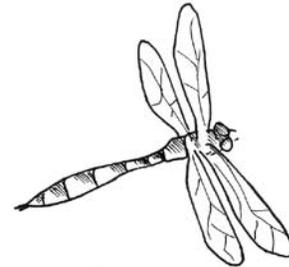
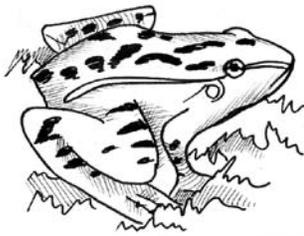
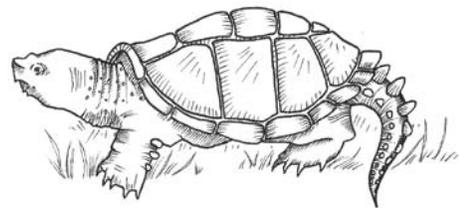
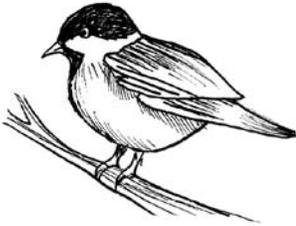


### CATTAIL

Grows along  
edge of water;  
food for birds and beetles;  
home for blackbird  
and marsh wren

# WETLAND NEIGHBOURS AND FRIENDS CARDS

FRONT OF CARDS



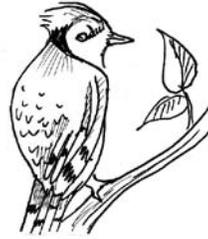
# WETLAND NEIGHBOURS AND FRIENDS CARDS

## BACK OF CARDS



### RED-WINGED BLACKBIRD

First bird of the spring;  
eats flying insects and seeds;  
lives in cattail marsh;  
home for many animals



### BLUE-JAY

Alerts all animals to  
presence of danger;  
eats seeds,  
bugs and baby birds;  
eaten by fox; raccoon;



### RACCOON

Nocturnal hunter;  
eats clams; crayfish;  
bird eggs;  
needs clean water  
to wash food



### MINK

Small and quick;  
eats frogs; snails; minnows;  
berries; eaten by wolf; otter



### MOOSE (MOOZ)

Largest mammal in wetland;  
eats water plants and lily roots;  
eaten by man and wolf



### BEAVER (AMIK)

Builds ponds and dams  
flowing water; eats poplar,  
birch; eaten by wolf;  
teaches us to be good parent



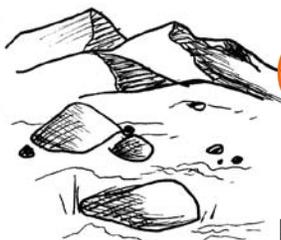
### WATER

Must be clean and  
flowing slowly;  
source of life for all  
animals and plants



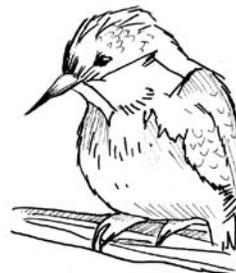
### BALSAM POPLAR

Grows along waterways;  
medicine (buds and bark);  
eaten by beaver;  
shades water



### MISHOMIS (ROCKS) AND SOIL

Surround wetland;  
nourish plants; home for  
small bugs;  
basking site for turtle, frog

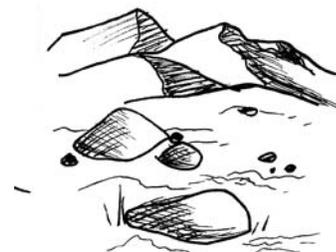
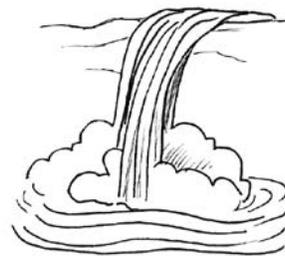
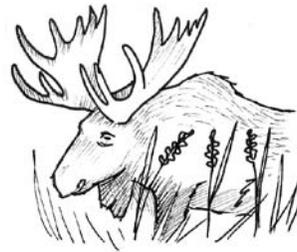
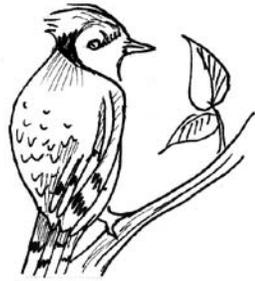


### MARSH WREN

Small bird; Nests in  
cattails; eats flying insects  
and beetles;  
migrates in fall;  
alerts animals to danger

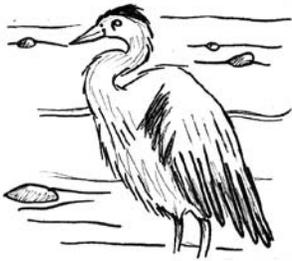
# WETLAND NEIGHBOURS AND FRIENDS CARDS

FRONT OF CARDS



# WETLAND NEIGHBOURS AND FRIENDS CARDS

## BACK OF CARDS



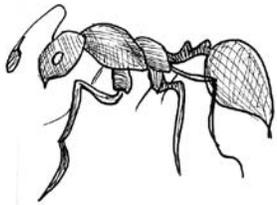
### GREAT BLUE HERON

Tallest bird in wetland;  
nests in dead trees;  
eats frogs, minnows;  
good hunter



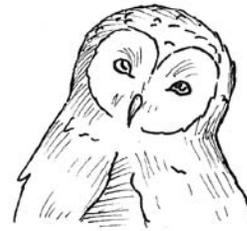
### BLACK BEAR (MUKWA)

Knows all medicine plants  
in wetland; eats ants,  
grubs, berries; carrion;



### BLACK ANT

Lives in soil around wetland;  
eats fruits, plants; stores food  
for winter; hard worker;  
teaches cooperation



### BARRED OWL

Lives in pines near  
wetland; hunts at night;  
eats mice, voles, rabbits;  
young birds



### WIND (NODIN)

Brings fresh air to wetland  
plants and animals;  
helps move water;  
carries seeds and insects in air



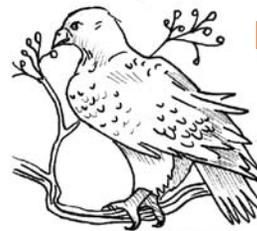
### GRAY WOLF (MAENGAN)

Large hunter that eats  
small 4-leggeds  
and frogs, clams, snakes;  
needs clean water;



### RED SQUIRREL

Chatty and quick; eats seeds,  
mushrooms, plants;  
stores food for winter;  
eaten by owl, fox, wolf



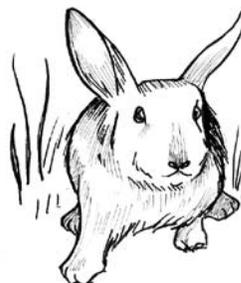
### BALD EAGLE (MIGIZI)

Messenger to all plants  
and animals; eats dead fish  
and cleans shore;  
lives in dead trees



### SPICE BUSH

Shrub grows around wetland;  
berries eaten by mice;  
moose; squirrels; birds;  
medicine plant

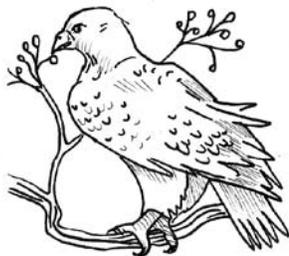
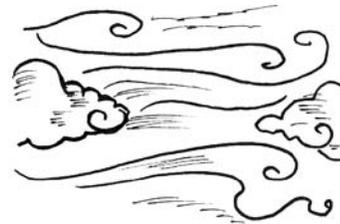
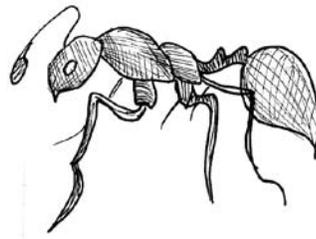
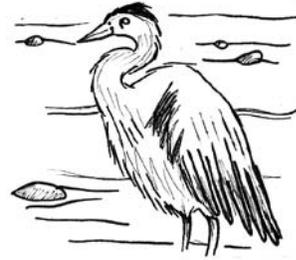


### COTTONTAIL RABBIT (WAPOOS)

In meadows around  
wetlands; eats spice bush;  
blueberry; plants;  
eaten by fox;  
wolf; hawk; alert to danger

# WETLAND NEIGHBOURS AND FRIENDS CARDS

FRONT OF CARDS



# WETLAND NEIGHBOURS AND FRIENDS CARDS

## BACK OF CARDS



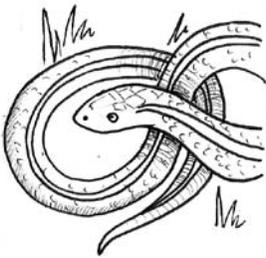
### SWEET FLAG (WHEE-KAY)

Grows along shoreline;  
medicine (rat root);  
eaten by moose, muskrat;  
needs clean water to grow



### RED MAPLE (ININAATIG)

First tree to wake up in spring;  
seeds eaten by squirrel;  
mice; birds; gives sap for  
maple syrup and medicine;



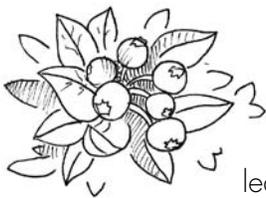
### GARTER SNAKE

In meadows around  
wetlands; eats mice; frogs;  
beetles; eaten by fox;  
wolf; mink



### BUNCHBERRY

Grows around the wetland;  
Small white flower and  
red berry; eaten by  
birds, mice; medicine (root)



### BLUEBERRY

Bushes grow around  
wetlands; berries eaten by  
4-leggeds and flyers;  
leaves and twigs are medicine



### POND SNAIL

In water; eats algae and  
dead plants; eaten by  
raccoon; mink; otter; fish;  
Cleans the water



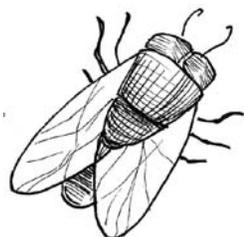
### OTTER

Eats crayfish; snails; minnows;  
tadpoles; teaches us to  
play and be joyful



### FINGERNAIL CLAM

Filters and cleans water  
in wetlands; eaten by  
raccoon; mink; turtle



### BLACKFLY

Lays eggs in moving water;  
pollinates blueberries  
and other flowering plants;  
eaten by birds; frogs; turtles

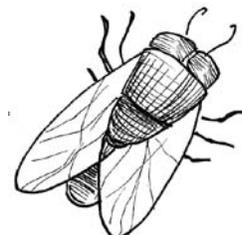
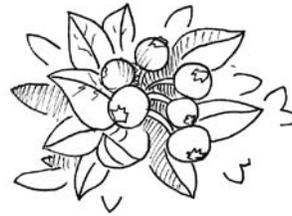
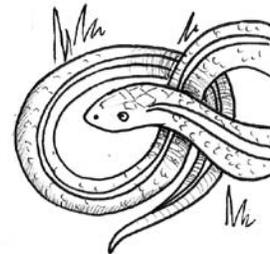


### MOSQUITO LARVA

Live in calm water;  
food for fish; frogs;  
dragonfly nymphs;  
ducks; eat algae;

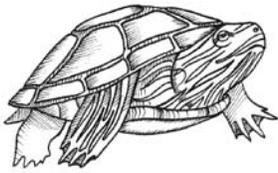
# WETLAND NEIGHBOURS AND FRIENDS CARDS

FRONT OF CARDS



# WETLAND NEIGHBOURS AND FRIENDS CARDS

## BACK OF CARDS



### PAINTED TURTLE

Eats bugs; tadpoles; mosquito larvae; basks on logs and rocks; needs clean water to live; lays eggs in gravel, sand



### BUMBLEBEE

Lives underground in meadow near wetland; pollinates flowers; makes honey; eaten by birds



### WOOD DUCK

Nests in hollow trees in wetland; eats water bugs; plants; tadpoles; ducklings eaten by pike, mink, fox



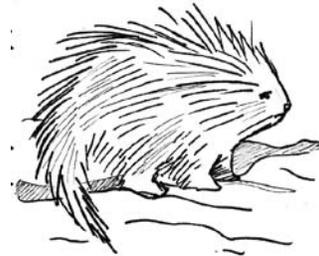
### YELLOW-SPOTTED SALAMANDER

Lives under logs and rocks near edge of wetland; eats worms; small insects; eaten by mink; fox; otter; rarely seen



### CRAYFISH

Lives in water around rocks; eats minnows, mosquito larvae; bugs; eaten by birds, raccoons; mink; otter



### PORCUPINE

Lives in forest near wetlands; eats bark; eaten by fisher; teaches us patience and kindness



### BLACK ASH

Prefers wet places; grows slow; seeds eaten by squirrels; birds; used for baskets; branches for nesting

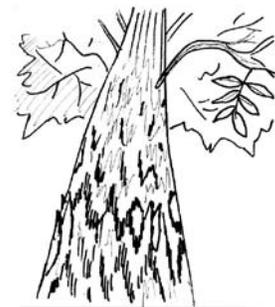
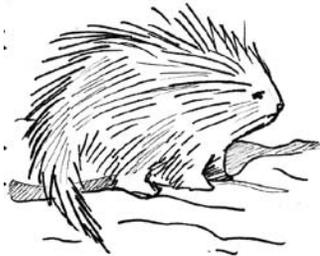
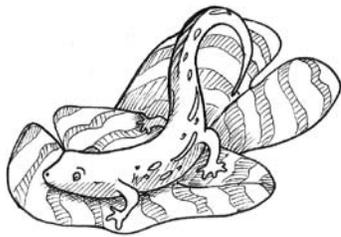
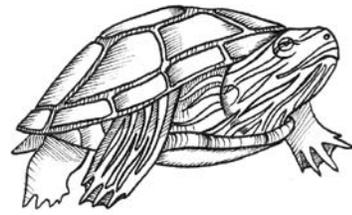


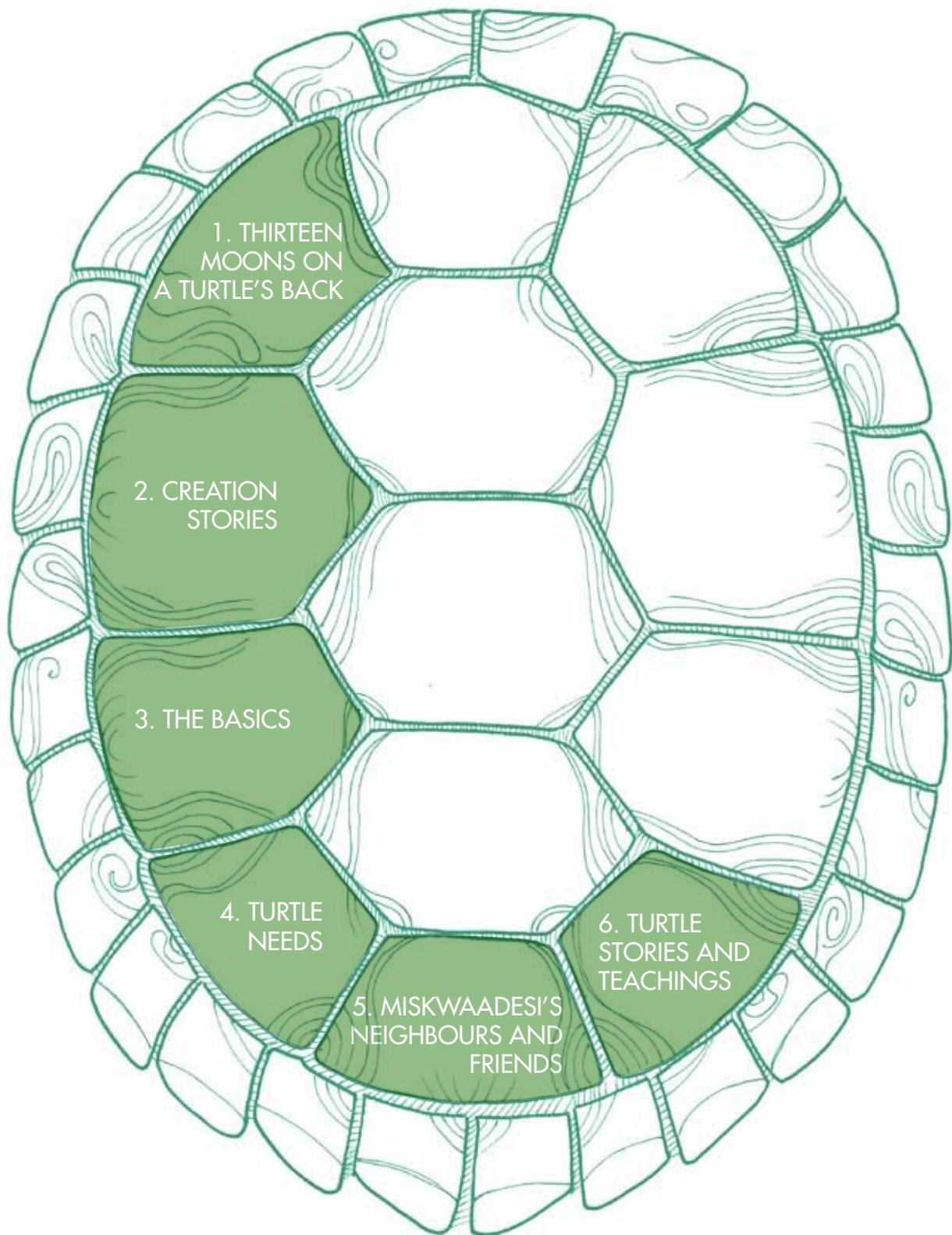
### RED FOX

Makes den and raises young near wetland; eats rabbits; mice; crayfish; clams; frogs; needs clean water

# WETLAND NEIGHBOURS AND FRIENDS CARDS

FRONT OF CARDS





# THE SIXTH CHALLENGE

WALKING WITH MISKWAADESI

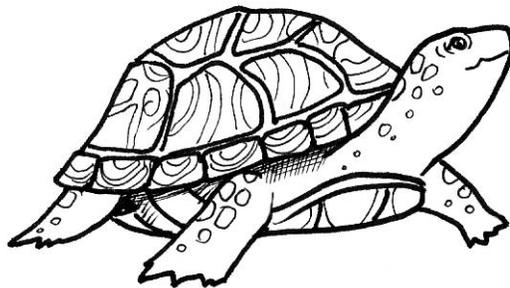
# THE SIXTH CHALLENGE

## TURTLE STORIES AND TEACHINGS

What teachings and stories do you know about Miskwaadesi and her turtle clan?  
How will you share some of the teachings that you have heard?  
Can you make a talking stick to help you remember the story?

*"My 6th challenge," said the old turtle, "asks that you find out some of the teachings and stories about my turtle clan. Every Nation has stories and teachings that include turtles. Which ones do you know? Can you retell one of the stories?"*

Miskwaadesi's 6th challenge.



# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY                 | ONTARIO CURRICULUM EXPECTATION | WORKSHEET            |
|-----------------------------------|--------------------------------|----------------------|
| Turtle and Bear Race              | 4a43, 4a50, 4a61               | Dramatize a Teaching |
| Turtle and Bear - the Great Chase | 4p28, 4p27                     | Outdoor Activity     |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

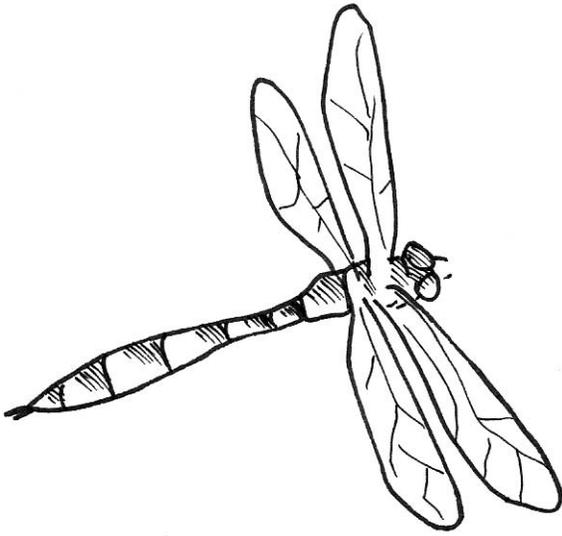
| TITLE OF ACTIVITY         | ONTARIO CURRICULUM EXPECTATION | WORKSHEET            |
|---------------------------|--------------------------------|----------------------|
| The Storytelling Festival | 4a50, 4e19, 4e15, 4a44         | Literacy/Visual Arts |
| Journal Reflection        | 4e50                           |                      |

## ONE STEP MORE (individual student optional adventures in learning)

1. Write your own story.

**WORD WALL:** Storyteller, legend, teaching

# LINKS TO OTHER CURRICULUM



## 6<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Relationship – pg 46

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)



Nanabush: How the Turtle Got its Shell. Joseph McLellan. Pemmican Publications. 1994 ISBN: 0921827407

Keepers of the Earth. Caduto, Michael and Joseph Bruchac. Fulcrum Inc Colorado. 1989 ISBN 1-55591-027-0

Note: see How Turtle Flew South for the Winter

See The Earth on Turtle's Back

**<http://www.cqsbc.ca/svs/434/fnstars.htm>**

The Iroquois story of the dance of the seven sisters

# KOKOM ANNIE'S JOURNAL

## TURTLE STORIES AND TEACHINGS



Nodin and Seegwun had come from the city to visit with Kokom and their Aunties over the winter holidays. There was a lot of snow in the bush and the snowbanks were getting high. Nodin was looking forward to getting out the old snowshoes and spending some time on Uncle's trapline. The swamps and marshes were frozen and it was time to set traps on the muskrat push-ups.

Nodin had been outside after supper looking in the shed for all the equipment he was going to need in the morning when Uncle Buddy came by on the sled. Everything was ready for his big adventure. It would be fun to be able to travel over the marsh and the swamp without getting wet feet!

Now it was time for bed but Nodin was having a hard time falling asleep - he was so excited about tomorrow morning! He turned over and over on the mattress, pulling the covers off his cousin.

"Hey - gimme back my blanket go to sleep Nodin."  
The kids were 'camping' in the back room of Kokom Annie's house on the air mattresses that were spread over the floor. "Kokom - Nodin won't settle down. I can't go to sleep. He keeps taking my blanket."

Kokom came into the room. "What's happening in here?" she asked.

"Kokom Annie, I can't sleep. Will you tell us a story to help us fall asleep? Tell us something about the animals and the plants."

Kokom had her old journal with her. She settled down in the big rocking chair and opened the journal to the page where she had drawn the turtle's shell. She looked at the drawing for a few minutes and then started to speak in her quiet, calm voice.

"You know that this is the time of stories and teachings," she began.

"Our People say that we should wait until the snow is on the ground, and the plants and animals are sleeping before we tell stories about them."

"Yes, Kokom Annie, -can you tell me a story about the animals that live in the marsh? I am looking forward to going out with Uncle Buddy tomorrow. It will be the first time I have been out on the marsh in the winter time," asked Nodin.

Kokom nodded and was quiet for a few moments while she gathered her thoughts.

"I can remember the stories that my grandfather used to tell us in the winter time when we were small. He and my nokomis lived in a two-room log house - we used to sleep in one room and the other room was our kitchen. The wood stove in the kitchen kept us nice and warm in the winter time. There was a line of mittens and socks drying behind the stove. I remember a big table and benches to sit at and a cupboard for our food and dishes. In the day time we rolled up the mattresses and sat on them like a couch. We had good times back then... went to bed when it got dark... used a coal oil lamp for light in the house... carried our water from the well down the road... there was always a pot of cedar tea on the stove and fresh bannock on the cupboard. At night when we were all tucked into our blankets, Moshom would tell us stories about Nanabush and the animals and plants.

"One time when the earth was new, Nanabush was out walking along the banks of a small stream. He had been naming all of Creation and he was hungry! His stomach was rumbling and grumbling and he was looking for food. He had just finished eating a handful of ripe heartberries and as he walked he sang a song of thanksgiving to the heartberry for giving its life to feed him. But still his stomach rumbled and grumbled - Nanabush needed more than a sweet snack! The rumbling and grumbling sounds got louder and louder. The sounds woke a small green turtle who was hiding inside a hollow log. The timid turtle peaked her head out from inside the log, trembling in fear that it was otter returning to catch turtle for lunch - you see at that time, turtle did not wear a hard shell as it does today, and she had no way of protecting herself from danger.

Someone was coming along the path, making the loudest grumbling and rumbling sounds - just like thunder! Quickly the timid turtle pulled her head back into the shade of the hollow log before she was seen. Her little heart beat like a drum - she was so shy and used to hiding away because the other animals were always making fun of her. At that time so long ago, Miskwaadesi the little turtle who had no shell had a very hard time getting from here to there. She had four legs, a beautiful tail, a long neck and pretty face but her body looked as though something was missing. She did not like to come out during the day time because the hot summer sun

burned the skin on her back. She had to hunt for food in the early morning and just before nightfall - it was very hard for Miskwaadesi. When she was out looking for food she had to be alert and always listening for the sounds of a predator.

Nanabush passed very close by the old hollow log but he didn't notice the little turtle who watched him.

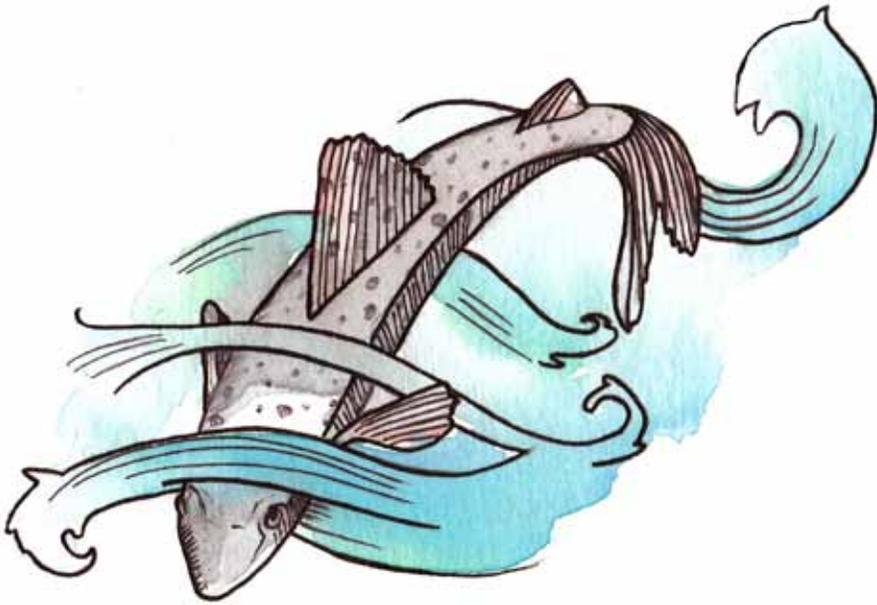
Along the shore Nanabush found an overturned bark canoe - how handsome and inviting it looked. Nanabush had an idea! He would catch some fish and have a feast! He got into the canoe and paddled up the stream. He had his spear ready, but he could not see any fish swimming around the front of the canoe - where were the fish? He paddled around and around the stream looking for a fish for his supper.

The rumbling and grumbling just got louder and louder. The sun was shining down on his back as he brought the canoe back to the shore - he was about to give up...

Little Miskwaadesi crept out of the hollow log. "Nanabush, Nanabush" called the soft voice of the turtle. "If you want to catch fish, go downstream to the bend in the stream where the big tree hangs over the water. Look under the tree roots and you will find lots of fish." "ah-ho" said Nanabush. Chi-miigwetch little turtle. I will try."

Nanabush turned the canoe downstream and soon he had paddled right down to the bend in the stream. There stood a great old black willow tree - its branches tickled the surface of the water, making little ripples as the water flowed past. Nanabush pulled the canoe into the shadows of the tree and soon saw a fine rainbow trout resting in the shade of the tree roots. Nanabush aimed his spear and sent it through the water - before you could blink, he was holding the spear with a fat trout on the end of it. Nanabush put the trout in the bottom of the canoe and tried again - in a few moments, he had enough fish to make a feast.

Nanabush took the canoe back to the stream bank and made a fire. Soon the air around him was filled with the wonderful smells of fish cooking... mmmmm.



Nanabush looked around to find the little Miskwaadesi that had given him some help to catch his supper. He found the little turtle, still hiding in the hollow log.

“Come on out and share some fish with me” called Nanabush. Miskwaadesi could smell the fish - it smelled soooo good. Miskwaadesi looked to the right and to the left - no one else was around. Carefully and cautiously Miskwaadesi took a step out of her hiding place. She scurried over to the fire to nibble on some fish. It tasted so good!

Nanabush looked down at the little green turtle with the stripes and the colours of the sunset. “Little turtle, why were you hiding in the log?”

Miskwaadesi blushed as she told Nanabush how embarrassed she was to have no way to protect herself and how the other animals teased her, poking her with sticks and scratching her with their claws when they played games.

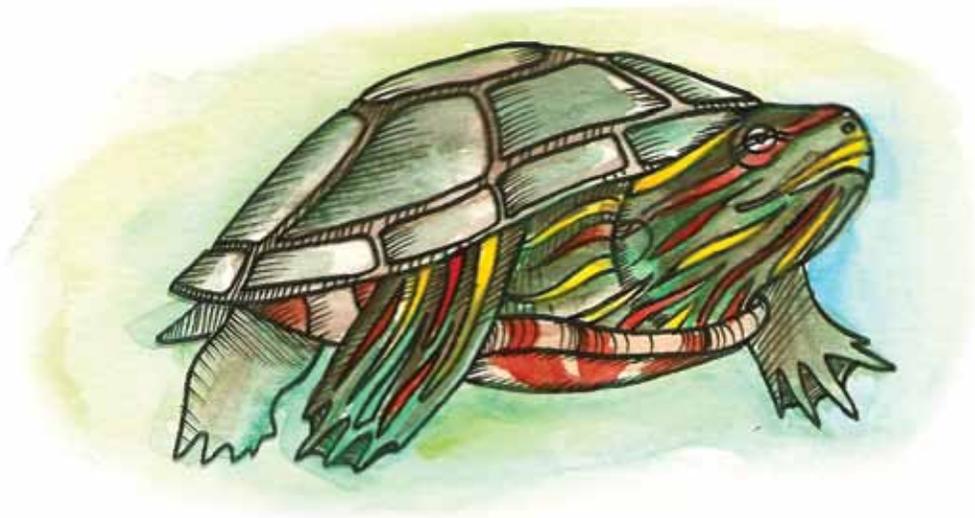
Nanabush sat by the fire for a few moments deep in thought. Nanabush was grateful to the turtle for her help and he wanted to honour her.

“I have an idea!” said Nanabush. He picked up a round gray rock from the edge of the stream and he set the rock on Miskwaadesi’s back. It seemed to fit quite nicely. Nanabush took a stick and carefully carved out the rock so that it would fit over top and under the little turtle like a coat. Nanabush showed Miskwaadesi how to put her legs through the holes on the sides of the rock. He helped her stick her tail out of the back and her long beautiful neck and head out of the front... she could no longer scurry and run about - the rock was quite heavy and she had to learn to crawl and to move slowly. Miskwaadesi had tears falling from her eyes - they were tears of joy and gratitude as she tried out her new ‘shell’.



Nanabush took out his paint brush and his paints. "Come here little turtle. You have such beautiful stripes and the colours of the sunset on your body. I will paint some colours on your back if you sit still."

Miskwaadesi trembled with joy. She dragged her rock over to Nanabush's side and sat patiently while he tickled her back and belly with the paintbrushes. Nanabush took a sharp stick and carefully scratched out 13 sections on the back of the rock. He then took the stick and marked 28 plates along the edges of the rock. Nanabush carefully marked the edges of the new shell with colours. He painted the new shell with greens and browns and there were yellow, red, and orange stripes. When he was done Miskwaadesi dragged her new shell down to the stream to look at her new covering. How beautiful she looked. The shell was hard as the rock had been and now she would not have to hide away in fear. She would walk with great dignity from now on, thanks to Nanabush!



"Chi-miigwetch Nanabush!"

"Chi-miigwetch to you little Miskwaadesi for your kindness has been repaid today! You will walk from this day onward with a new covering on your back- it will be your shell. You will carry the calendar on your back for everyone to see- 13 scutes and 28 plates. You have earned this for showing me such kindness this day."

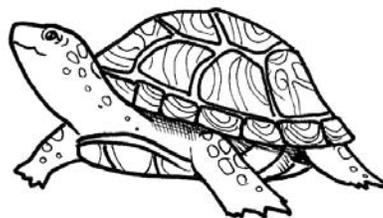
And Nanabush went on his way, his stomach not rumbling and grumbling, thanks to the kindness of a little turtle.

And Miskwaadesi went on her way, wearing a new covering with dignity and with a heart filled with gratitude."

Kokom Annie looked over at the sleeping bags. The children were asleep, dreaming of the old days when the earth was new...

She remembered Miskwaadesi's words that described the next challenge.

*"My 6th challenge," said the old turtle, " asks that you find out some of the teachings and stories about my turtle clan. Every Nation has stories and teachings that include turtles. Which ones do you know? Can you retell one of the stories?"*



# TEACHER BACKGROUND

Our teachings and stories are sacred to our people. They have been handed down orally through the centuries to help our young ones learn about our traditions and to bring our teachings to them in a good way. Our stories were told only during the winter moons when the Earth was asleep.

Many First Nations stories share these characteristics:

- they often include 4 events because the number 4 is very important to our people
- they reflect life and/or nature and our relationship to it
- based upon facts and truths
- begin in the past to explain an event
- teach a lesson about how we should behave
- involve changes of our inner spirit
- often involve a trickster-type of character who is part human and part spirit and who can turn himself into other shapes or forms. The trickster often makes mistakes as part of the lesson that is taught.

Teacher/leaders will need to gather up a variety of teachings, legends, and stories that students can use in demonstrating the learning. Look in the reading room for books that students can use. Make a list of the teachings and stories and help students to identify the origin of the teachings.

Discuss with the class the material from the teacher background. Make a list of the characteristics of First Nations teachings and ask students to look for the characteristics as they research a story or teaching to share with the class.

Prepare a variety of visual arts materials for students to use in illustrating part of the "Turtle Races with Bear" story.

Gather up materials for student groups to use to make their talking sticks - thin pieces of wood, sticks, paint stir sticks, rocks, any natural material that students might use to create their 'stick', paints, feathers, coloured yarn, glue, etc.

Invite a primary class to come to a storytelling festival.

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. TURTLE AND BEAR RACE

Materials needed:

art supplies - paint and paper; markers; modeling clay; variety of pieces of fabric and socks to make sock puppets.

Read Kokom's journal to the class and discuss the journal entry for this time of the year. Ask students if they have knowledge of stories and teachings about animals from the wetlands and the water. Share what students already know. Create a list of different animals and the teachings that have been shared.

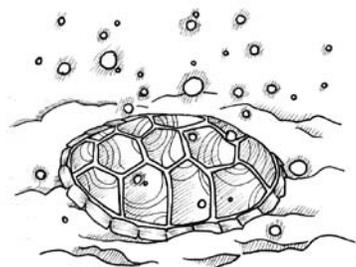
Tell the story of "Turtle races with bear" or provide the class with time at the computer to read the story on-line.

Students may be encouraged to use kid-pix or another illustrating program to illustrate their favourite part of the story.

Students might also work in partner groups to create a powerpoint presentation of one or more of the winter teachings.

Students may also recreate part of the teaching using a variety of media i.e. paint and paper; markers and paper; modeling clay to create a diorama; sock puppets to use in a student-made puppet show. Students could work in small groups to create the script for a puppet show.

Students could also make puppets for each of the main characters in the teaching and using their script, prepare and present a puppet show about the teaching.



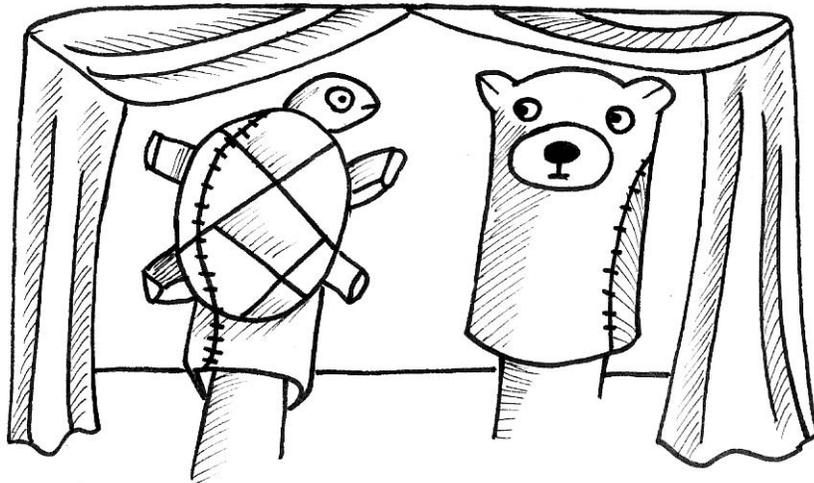
### 2. TURTLE AND BEAR - THE GREAT CHASE (OUTDOOR ACTIVITY)

This game is a game of tag. Take the class outdoors. Prepare an old fashioned fox and goose type of play area by stamping the outline of a large turtle shell, with the 13 scutes, in the snow of the playground. If the game is being played when there is no snow, use pylons or some other markers to create the pathways that students will run along and place hoops where the pathways intersect as safezones. The outline needs to be large enough for the class to be able to run around on the pathways.

Students become either bears or turtles. The Bears will chase the turtles around - all players must stay on the pathways that have been created. If a bear catches a turtle, the turtle is 'frozen' and must wait until another turtle comes to touch it to release it. The intersections of the pathways are 'safe' zones, but only one turtle can be resting in each safe zone at any time.

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



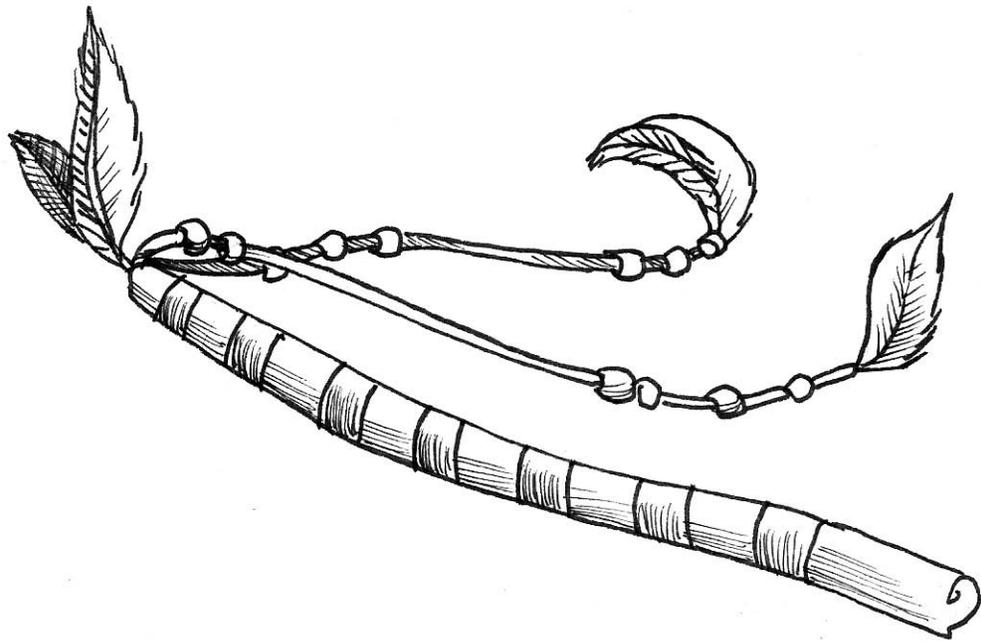
### 1. THE STORYTELLING FESTIVAL

Share with the class a variety of teachings and stories that include turtles and other wetland animals and plants that the teacher/leader has gathered. Work in a pair-share or small group environment to choose a teaching to present to a primary class.

With your partner or group, practice telling the story or teaching until you are very familiar with it. You will present the story in a storytelling circle. Remember to practice using good voice techniques and pacing in the telling of the story.

With your partner or group decide how you will illustrate your story - with a story board; with puppets; shadow puppet/pictures on a sheet; pictures; dioramas; plasticene-type figures; a power point presentation; kid-pix or other illustration software, etc.

As well, you and your partner or group need to create a talking stick that will help you remember the important parts of the story.



TALKING STICKS - in traditional times, the storyteller often had a talking stick or some other mnemonic to help them remember the story. Talking sticks also are used in circles - only one person may speak at a time, and everyone else listens carefully. The speaker holds the talking stick and passes it along when they are finished.

Find a stick or small piece of wood or create a stick from art materials. Decide which parts of your story you want to remember and then choose a symbol that will help your mind to remember that character or part of the story. Carve/draw/paint/decorate your talking stick. Practice your teaching using the talking stick.

When the class has prepared their stories and teachings to share, invite a primary class to come to a story-telling festival. Make an invitation for your festival. Organize the program. Prepare a treat (juice and fruit) for your guests.

In turn, each group presents their story/teaching to the audience. If you have access to a video camera you may want to record your story to share with other schools and groups. Take a picture of the talking sticks and display them for other classes to see.

## 2. JOURNAL REFLECTION

Respond to these questions

Which teaching/story did you enjoy the most? Why? What teaching or lesson do you think the storyteller was giving you? Illustrate your favourite story or legend in your journal.



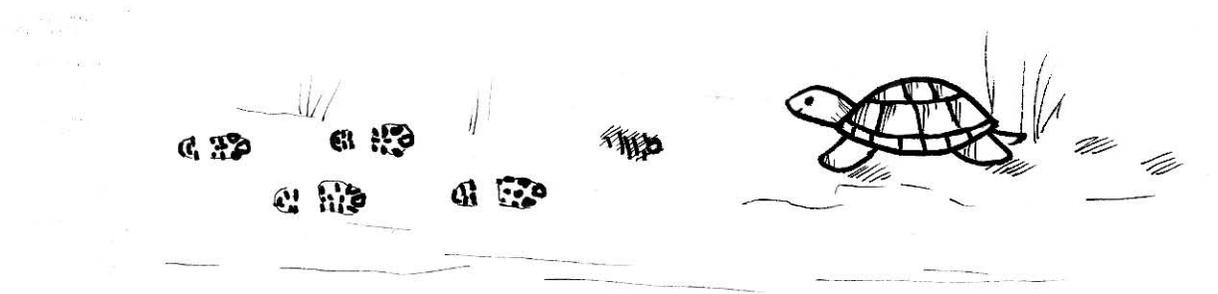
Create a suitable symbol to attach to the cover of your journal or duo-tang to show that you have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 6th scute on the turtle shell poster.

# ONE STEP MORE

DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

## 1. WRITE YOUR OWN STORY

Now that you have read and researched several stories and teachings, it is time to write your own. Think about the seven grandfather teachings and try to bring one or more of the values (wisdom, love, respect, bravery, honesty, humility, truth) to your story. What lesson do you want to teach and how will you share your story? Make a talking stick to help you remember the story. Share it with the class.





## MISKWAADESI RACES WITH MAKWA

### TURTLE RACES WITH BEAR

Long ago when the earth was new, Makwa (Bear) did not sleep all through the winter time. He looked for food all winter long, but food was hard to find. Makwa was always hungry. He grumbled as he went walking through the forest. Makwa's stomach was rumbling all the time, and so he was not in a good mood.

One early winter morning, when the ice had just frozen on the ponds, Makwa went down to the pond to look for some roots or frosted berries that were left over from summer.

The bushes were covered in frost. The ground was hard. He could not find anything to eat. Instead, Makwa saw old Miskwaadesi (painted turtle) peaking her head out from a hole in the ice of the pond.

"What are you staring at, old slow-one? Go back under the water, scaly-neck?" Makwa was very rude to Miskwaadesi.

Now, Miskwaadesi had very good hearing, but she only nodded at bear and did not speak. Bear's hunger made him grouchier. He kept on calling Miskwaadesi names.

"Ah ho slow one. You are the slowest of all the animals. You are so slow Miskwaadesi that by the time you realize it is winter, the winter will be over. Your back is hard as a rock, and not beautiful and shiny as mine. Go back down to the bottom of the pond and lay in the mud, you slow, ugly shell of an animal."

"I may be slow, but I can beat you in a race!" called Miskwaadesi from the pond.

"Ah ho slow one. A race you say? To race you have to run. You have a hard time walking. You do not know how to race. You are no match for me!" laughed Makwa.

"Stop teasing me Makwa. I am tired of your mean words. Let's have a race. This will show who is the fastest, me, Miskwaadesi or you, Makwa."

Well, Makwa and Miskwaadesi decided that they would race once around the pond. Makwa would run along the shore. Miskwaadesi would swim along the edge under the ice. Miskwaadesi would make holes in the ice at several places and she would swim under the water and stick her head out of each hole. The race would begin just before the sun reached the highest place in the sky. Makwa went to warm up his muscles for the race. Miskwaadesi went to make the holes in the ice.

The other animals of the forest gathered to watch the race.

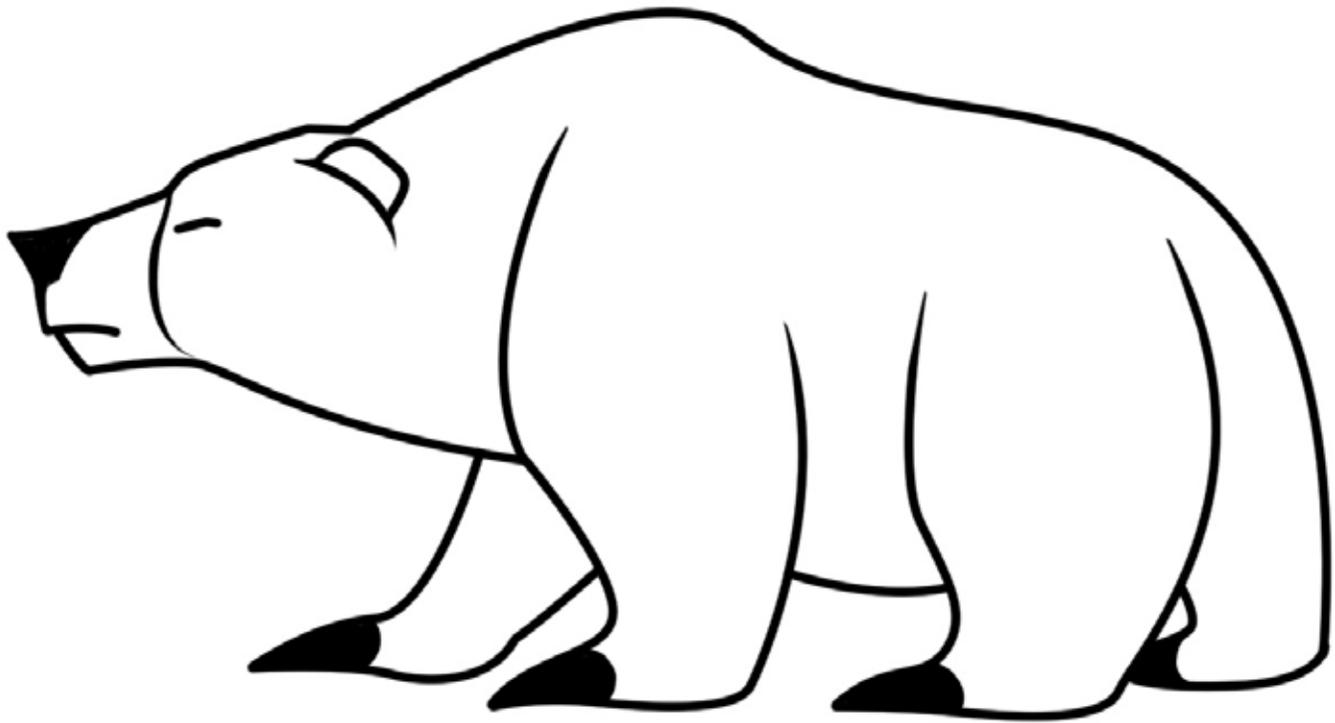
Mooz (Moose) Maiingan (Wolf), Waagosh (Fox), and Manidoo-waabooz (Rabbit) came to cheer for Makwa. Gijigijigaaneshinh (Chickadee), Diindiisi (Blue Jay), Waawaashkeshi (Deer), and Gaag (Porcupine) cheered for Miskwaadesi.

Just before the sun reached the high place in the sky the race was ready to begin. Makwa stretched his strong long legs. Miskwaadesi stretched her long thick neck. Makwa roared and snorted to clear his lungs. Miskwaadesi sang a little song of courage. Makwa started at the hollow log along the edge of the pond. Miskwaadesi's head peeked up through the first hole in the ice beside the log. When the animals called "Izhaa! (Go)" the race was on.

Makwa ran as fast as he could. He came to the first corner of the pond, laughing to himself. "That old slow one will never be able to keep up to me" he thought. Just then he heard a voice singing from the pond.

"Here I am Makwa. Hurry up if you want to catch me!" The voice belonged to Miskwaadesi who was calling from a hole in the ice just ahead of Bear. How could this be?

Makwa ran faster. His heart beat like a drum inside his chest. His breath made clouds of frost in the air. Soon Makwa came to the half-way mark in the race. He was sure Miskwaadesi must be far behind. But when Makwa turned to look at the ice on the pond, he saw that Miskwaadesi was even further ahead, her head poking through the ice around the corner. Makwa could not believe his eyes! He must be seeing things!



"Hurry up Makwa. You need to run faster!" sang Miskwaadesi from the pond. Makwa could not believe his ears!

Makwa ran harder and faster than he had ever run before. He was going as fast as he could. Makwa ran around the last little bay of the pond. Soon the finish line would be in sight. Makwa was getting tired. His heart was beating so fast! His breath was making big clouds of frost in the early winter air. Where was Miskwaadesi? She must be far behind. There was so much frost that Bear could hardly see... Then he heard the singing voice of Miskwaadesi calling to him from far up ahead. Miskwaadesi was almost at the finish line! Makwa took a deep breath and ran on; big clouds of frost and steam were all around him.

Makwa's feet were so sore from running on the hard ground. His legs were tired and shaky. He began to slow down. Just as Makwa was four steps away from the finish line, the animals started to cheer. Miskwaadesi's head peaked out from the hole in the ice at the finish line.

"What took you so long, Mawka?" called Miskwaadesi and she sang a song of thanks.

Miskwaadesi had won the great race! Gijigijigaaneshinh, Diindiisi, Gaag, and Waawaashkeshi were dancing for joy. Even Mooz, Maiingan, Waagosh, and Manidoo-waabooz were smiling and happy to see that Makwa had been beaten in a race. Makwa was always bragging and often grumpy and bad tempered. It was fun to see Makwa lose to Miskwaadesi.



Makwa could not believe it- imagine, Miskwaadesi, the slowest animal in the forest, had beaten the big and strong Makwa in a race!

Makwa was so tired from the race that he crawled away from the pond and crept into his den where he went to sleep. He slept through the winter and did not wake until Spring returned to the forest. All of Makwa's cousins have been doing that ever since. You will not see Makwa's tracks in the snow in the middle of winter.

The other animals left the pond. Miskwaadesi tapped on the ice with her front claws. A dozen green-striped turtle heads popped up - one from each hole along the edge of the pond. It was Old Miskwaadesi's family, all of whom looked just like her!

"Chi-miigwetch my relatives," Miskwaadesi called out. "Today we have shown Makwa that it does not pay to call other people names. We have taught him a good lesson. The animals of the forest now know that Miskwaadesi, Miikinak (snapping turtle) and all of their cousins are not the slowest of all living things. Turtles are fast when it comes to thinking and using our brains!" There are many ways to win a race!

Retold by Wahgeh-giizhigo-migizi-kwe

# LIFE FACTS ABOUT TURTLES

<http://www.torontozoo.com/adoptapond/turtles.asp>

## RESPONSIBILITIES

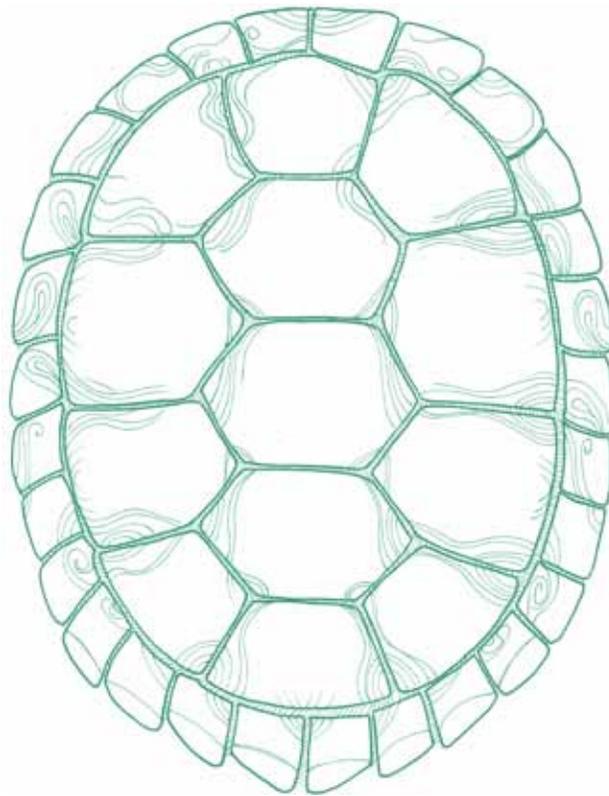
- Keeper of the waters
- Clean up shoreline and water
- Able to speak to all wetland creatures and plants
- Long life
- Good memory
- Thinker, peaceful

## FOOD

- Frogs
- Small Fish
- Water and Flying Insects
- Crayfish
- Pond Plants
- Snails
- Tadpoles
- Worms

## APPEARANCE

- Reptile, scaly skin, shell covers body
- 13 large scutes on shell
- 28 small scutes (plates) around edge of shell
- Ectotherm - body heated by the environment
- Found in late spring/summer



## HABITAT

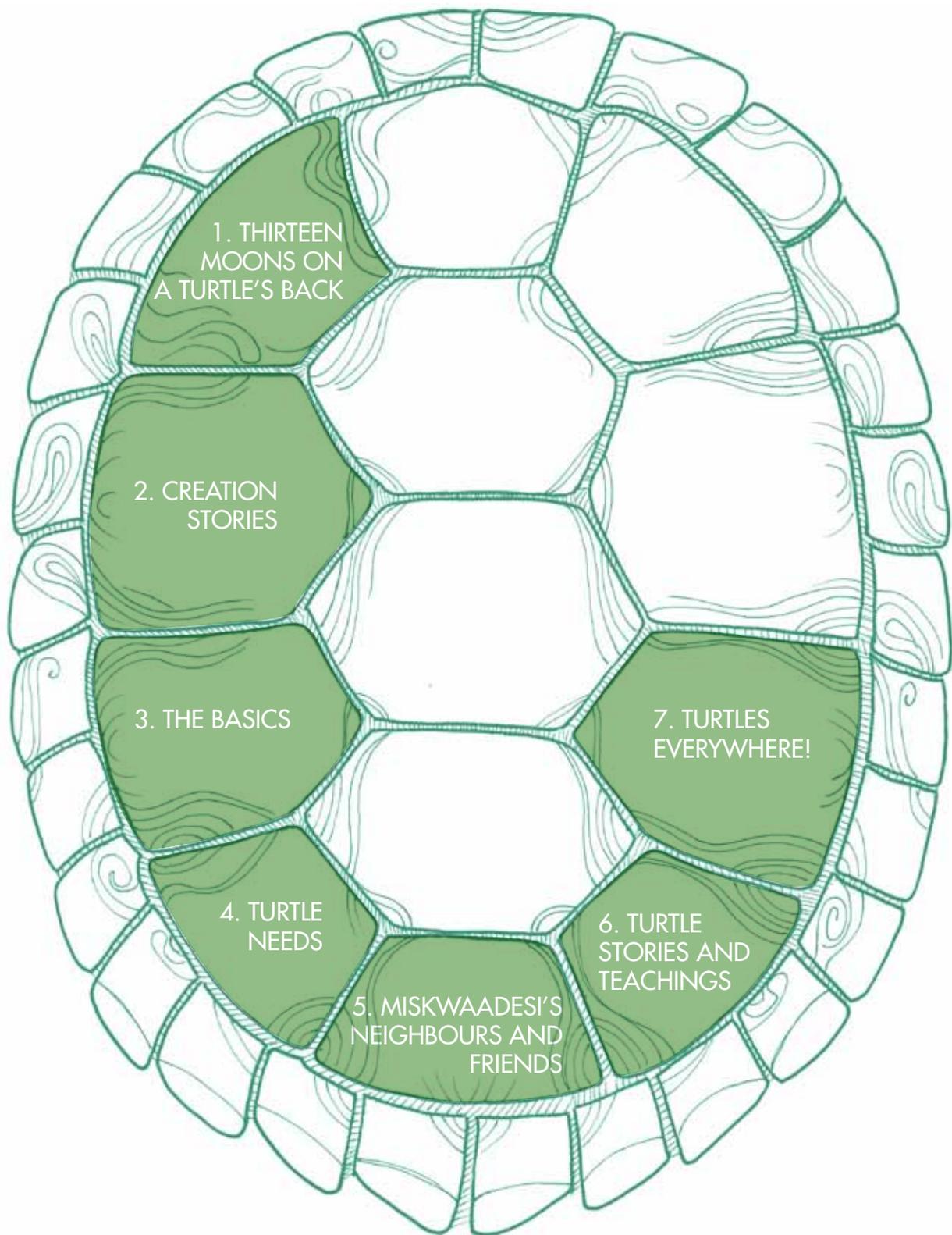
- Hibernates early fall and winter
- Basks in sun on logs, rocks
- Aquatic environment - ponds, rivers, lakes, wetlands
- Must have clean water

## FAMILY LIFE

- Lays eggs on land in spring
- Digs nest in gravel and sand
- Some babies hatch in fall, depending on summer temperature
- Babies resemble adults

## CLANS (SPECIES)

- Blandings Turtle
- Common Musk Turtle
- Northern Map Turtle
- Painted Turtle
- Snapping Turtle
- Spotted Turtle
- Spiny Soft-shelled Turtle
- Wood Turtle



1. THIRTEEN  
MOONS ON  
A TURTLE'S BACK

2. CREATION  
STORIES

3. THE BASICS

4. TURTLE  
NEEDS

5. MISKWAADESI'S  
NEIGHBOURS AND  
FRIENDS

6. TURTLE  
STORIES AND  
TEACHINGS

7. TURTLES  
EVERYWHERE!

## THE SEVENTH CHALLENGE

WALKING WITH MISKWAADESI

# THE SEVENTH CHALLENGE

## TURTLES EVERYWHERE!

Where can you find more information about turtles? Take a walk on the computer, complete a webquest or two, and find out more about our turtle clan family globally.

Make a special card for a turtle.

Play a game (or two) and learn about the BIG turtles of the world!

Have you tried the turtle game from the turtle curriculum or played the new board game?

*"The 7th challenge will be a difficult one. You will need to find a helper. I want you to find out about my clan relatives who live far far away. They swim where the waters are salty and they nest where there are warm winters and summers. First Nations and Aboriginal peoples throughout the world have close relationships with turtles, tortoises and terrapins - we are all the same big family. Look for stories and teachings and share what you find with your children and grandchildren. My sea turtle clan cousins are in great danger and they are asking for help!"*

Miskwaadesi's 7th challenge.



# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY        | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                                  |
|--------------------------|--------------------------------|--|
| Sea Turtle Powerpoint    | 4e43, 4e41, 4s5                | View Powerpoint Presentation and Summarize |
| Sea Turtles of the World | 4e53, 4e52, 4s19               | Research                                   |
| Webquesting for Turtles  | 4s8, 4s14                      | Webquest on Internet                       |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY                  | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                   |
|------------------------------------|--------------------------------|-----------------------------|
| Netting Headaches                  | 4s4, 4s5                       | Game                        |
| Sea Turtle Quiz and More           | 4s14                           | Quiz                        |
| Journal Reflection and I Care Card | 4s11, 4e56                     | Writing and Creating a Card |

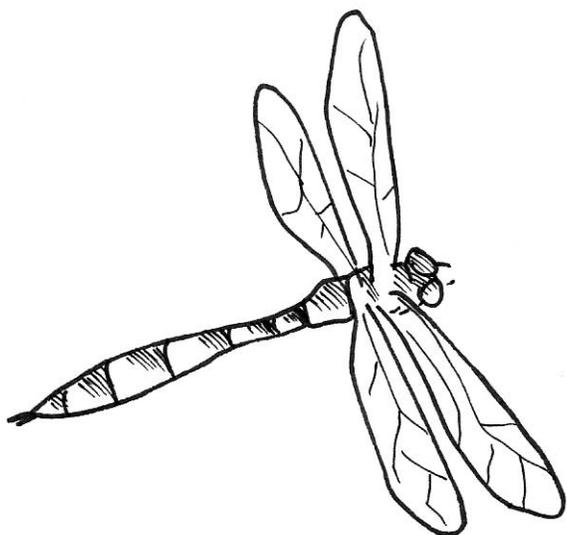
## ONE STEP MORE (individual student optional adventures in learning)

1. Webquesting with Ontario's turtles

### WORD WALL:

Marine, global, loggerhead, flatback, hawksbill, olive ridley, kemp's riddley, leatherback, Atlantic, Caribbean, hatchling, magnetic, ancient, trawl, shrimp, predator

# LINKS TO OTHER CURRICULUM



## 7<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Reciprocity – pg 53

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

## TURTLE CURRICULUM LINKS

At Risk Interactive, Educational Turtle Video Game

<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>



**<http://www.hww.ca/hww2.asp?id=33>**

Hinterland Who's Who - Leatherback Turtle fact sheet

**<http://www.torontozoo.com/adoptapond/tici.asp>**

Turtle Island Conservation

**<http://www.torontozoo.com/adoptapond/turtles.asp>**

Adopt-A-Pond underneath this link

**<http://www.cccturtle.org/>**

**<http://www.yoto98.noaa.gov/books/seaturtles/seatur1.htm>**

Colouring book

**<http://www.bonairerturtles.org>**

**<http://www.seaworld.org/animal-info/info-books/sea-turtle/index.htm>**

**<http://www.turtle.ky>**

**<http://www.catalinaconservancy.org>**

**<http://www.itec-edu.org/conservation.html>**

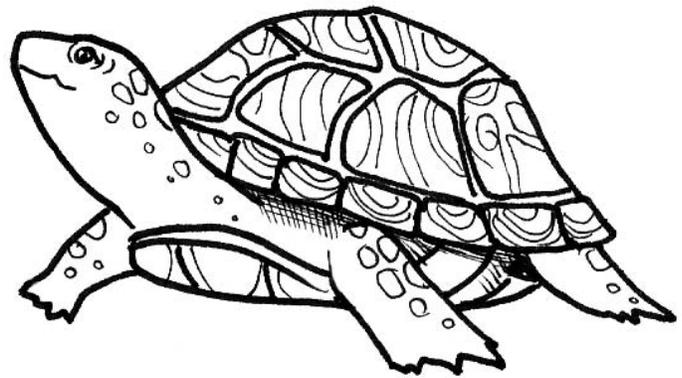
**<http://www.nps.gov/pais>**

**<http://www.nova.edu/ocean/seaturtles/index.htm>**

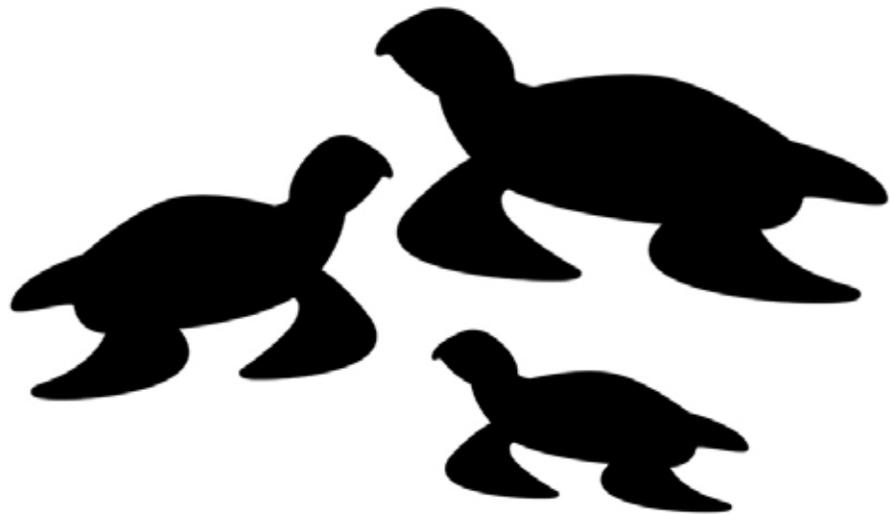
**[http://www.bhigr.com/pages/info/info\\_rept.htm](http://www.bhigr.com/pages/info/info_rept.htm)**

# KOKOM ANNIE'S JOURNAL

## TURTLE STORIES AND TEACHINGS



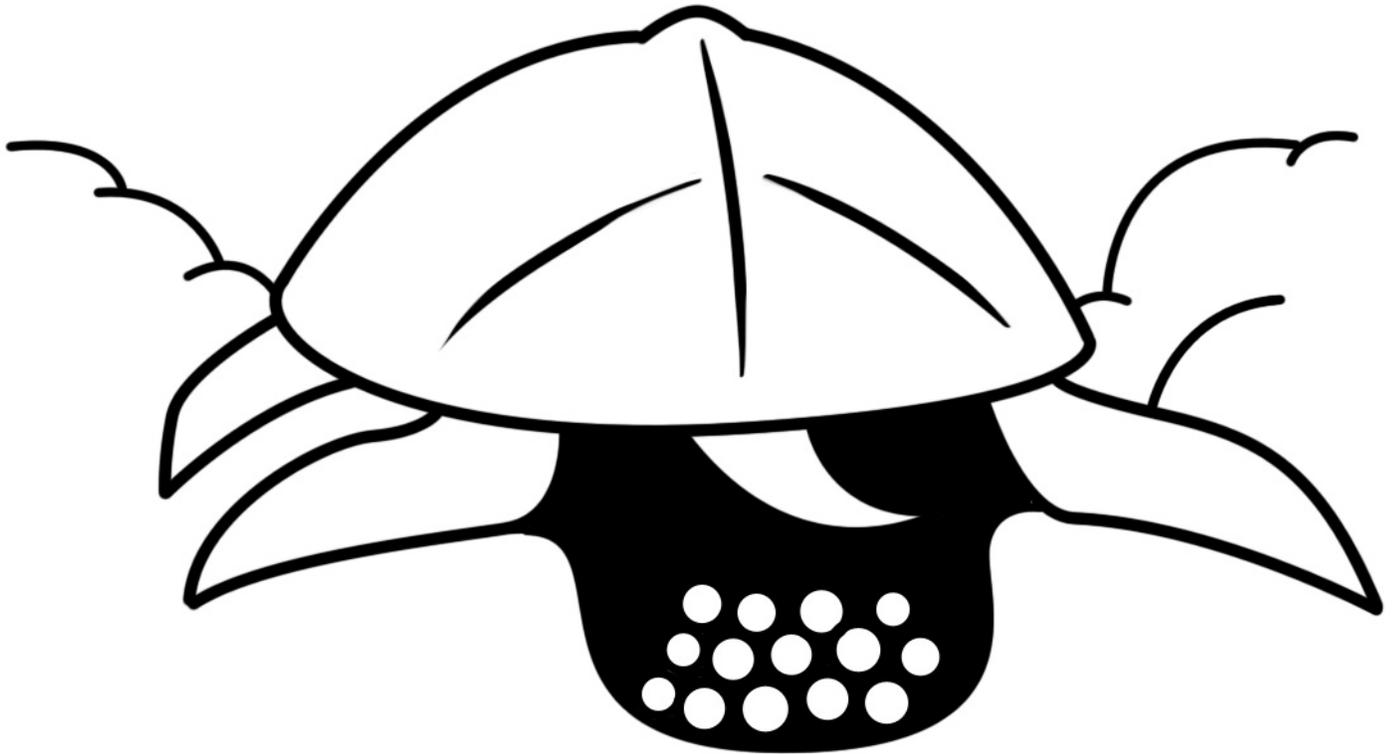
*"Kokom Annie - the 7th challenge will be a difficult one. You will need to find a helper. I want you to find out about my clan relatives who live far far away. They swim where the waters are salty and they nest where there are warm winters and summers. First Nations and Aboriginal peoples throughout the world have close relationships with turtles, tortoises and terrapins - we are all the same big family. Look for stories and teachings and share what you find with your children and grandchildren. My sea turtle clan cousins are in great danger and they are asking for help!"*



I woke up with a start - I was sitting in my favourite rocking chair and I had been watching APTN and I must have nodded off. I was dreaming about Miskwaadesi and she talked about the 7th challenge.

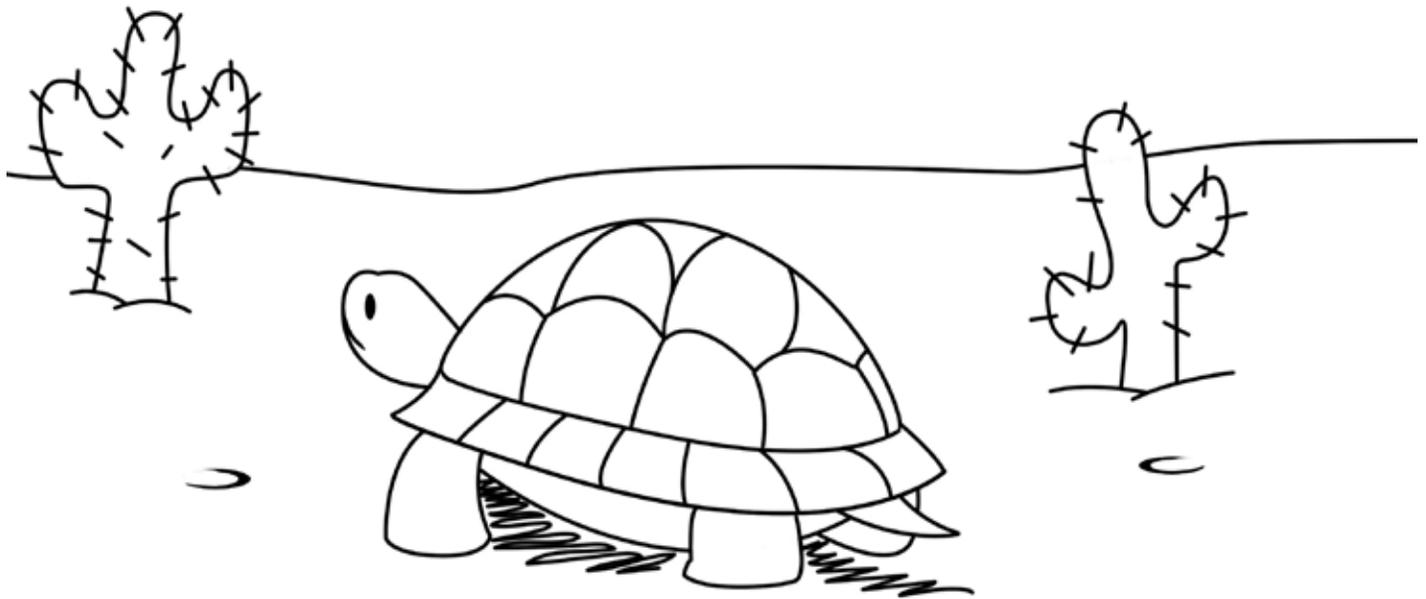


The television was still on - there was a special show on APTN that talked about turtles. They were showing pictures of baby sea turtles hatching from the sand on tropical islands and from the shore of Australia - that reminded me of our brothers and sisters, the Aborigines, and their connection to the turtle. It seems that indigenous people have many teachings about turtles. The sea turtle story is a journey of many kilometers and many years from when the baby turtle hatches from its shell until it comes back to lay eggs on the very same beach - but they always find their way back home. It reminded me of



some of our young people who have to leave our community to find a job or to go to school, or to find their own path. They need to remember that sea turtle and its life journey - and to find their way home!

I can understand how strong that sea turtle's call to come home is. Once when I was younger I had to move to the city to go to school - it was so hard for me to be away from home. I used to sit outside at night and look up at the stars, thinking about home and the family and friends that were there. I was so lonely for home... that little sea turtle must feel that way too - imagine - walking into the sea as a tiny baby turtle and spending the next twenty years swimming through the oceans, far, far from home. How happy that turtle must be when it returns to that beach where its life began so that it can lay its eggs and begin the cycle of life over again. I read somewhere that many of those beaches are being turned into parking lots and hotels and resorts. How confusing it must be for a turtle to come home and to find out that home is not there.



That made me think about what a teacher once told me when I was little - we were learning about animals and the teacher said that the turtle is the only animal that has its 'home' on its back. I thought a lot about that... it seems to me that the turtle may have its house on its back... but a home is more than just a shelter - it is food, a special space to live in, clean water, and shelter too, as well. Our sea turtle neighbours are under great stress with the loss of habitat and the pollution of the ocean waters. Plastic bags and plastic rings floating in the waters cause many turtles to die when they mistakenly eat the plastic thinking it is a jelly fish.

The program on the tv also talked about the tortoise clans who live in deserts. They are much larger than our local turtles and they have different needs and habitat requirements. I was fascinated to learn so much about these turtle cousins from far away. I never realized that there are turtles and tortoises in most ecosystems where it is warm enough for eggs to hatch.

It makes me sad sometimes to think about the terrible difficulties our turtle clans must overcome to survive in today's world.

I went over to the school to ask for some help in the computer lab to find out more about this challenge so that I could share with my grandchildren. The technician was working on the internet when I got there and she helped me search for information on the sea turtles and the tortoises. With her help I found this great site and I spent some time reading and thinking about the sea turtles and comparing them to our fresh water turtle clan members.

The address is: [http://marinediscovery.arizona.edu/lessonsF00/brittle\\_stars/2.html](http://marinediscovery.arizona.edu/lessonsF00/brittle_stars/2.html)

The site has a beautiful powerpoint presentation that I was able to watch that showed me the eight different sea turtle species - they are also all species at risk! The powerpoint presentation address is:

[http://marinediscovery.arizona.edu/lessonsF00/brittle\\_stars/sea\\_turtle\\_present5.ppt](http://marinediscovery.arizona.edu/lessonsF00/brittle_stars/sea_turtle_present5.ppt)

The technician also helped me to find some more really interesting web sites - they are called WEBQUESTS... webquests challenge us to find answers to questions by following links to different sites. I spent the afternoon looking at several webquests and I learned so much more about sea turtles.

I wrote down the web sites to send to the kids in the city - I hope they have time to go and look at these fun webquests too!

<http://warrensburg.k12.mo.us/webquest/endangered/index.htm> This webquest was about the leatherback turtle and I really had fun with it!

<http://questgarden.com/21/23/1/060408083706/>  
Taught me a lot about the Olive Ridley sea turtle - it is the smallest of them!

<http://questgarden.com/63/68/5/080408183850/t-index.htm>

This webquest taught me a lot about why the turtles are endangered.

I didn't have time to look at any more of the webquests but I am going to go back to the computer lab one day next week to look at some more!

I didn't know that turtles have been around for 225 million years and I didn't realize that so many turtles worldwide are in danger from loss of habitat. Miskwaadesi and her turtle relatives have so much knowledge to share - we must try very hard to change our behaviours so that the turtles will be able to survive and to thrive.

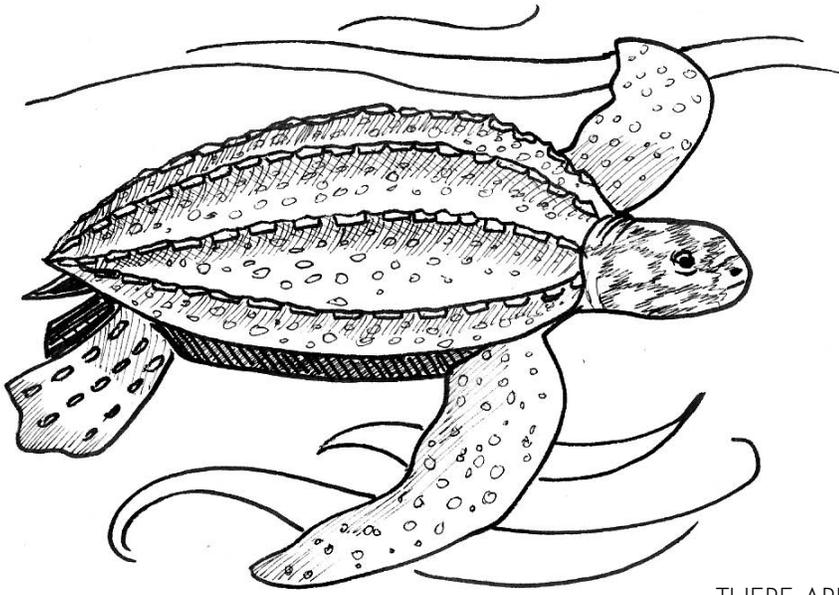
# TEACHER BACKGROUND

What is a webquest? A WebQuest is defined, by Bernie Dodge at San Diego State University, as “an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the Internet.” Webquests provide the students with a safe search device to learn more about a topic as they respond to a series of questions that are answered by visiting a variety of websites. Teachers who are not familiar with webquests may wish to follow the short tutorial that explains the philosophy and process - see this website for the tutorial: <http://www.teachersfirst.com/summer/webquest/quest-a.shtml>

Webquests are a great way to introduce students to research on the internet in a safe way and to provide students with an opportunity to conduct an inquiry. There are several good websites that have been developed for student use.

Each webquest begins with a question; a series of tasks that students must discover, often with worksheets; and an activity to demonstrate learning. There is usually a parallel teacher page for each webquest to help teachers monitor student work.

Sea turtles are an important part of cultural history for people all over the world. Ancient myths and legends present the turtle as a symbol of strength, stability and wisdom. A Chinese myth tells the story of the creation of the earth occurring on the shell of an immense turtle. Many other cultures, such as the Greeks and Egyptians, considered the turtle to be sacred. In Bangkok, Thailand, for example, turtles are a sign of immortality. Even today, people give special significance to turtles. They are beautiful, graceful animals, very important to both the environment and to societies both as food and for trade.



THERE ARE EIGHT DIFFERENT SPECIES OF SEA TURTLES ALIVE TODAY:

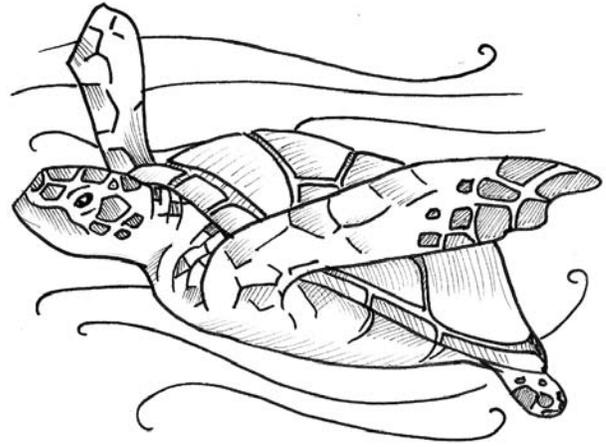
#### THE LEATHERBACK (*Dermochelys coriacea*)

is exploited for eggs. It is the largest sea turtle- growing up to 7ft long and weighing at least 1,200 lbs. Instead of a hard shell, it has thin, tough, rubbery skin. Five distinct ridges are formed by small bones buried in their skin. Its carapace is black with white spots while the plastron is whitish to black. This turtle lives in the open ocean, it can dive the deepest and travel the furthest of any other sea turtle. It is found in the oceans off the coasts of Atlantic and Pacific Canada. Its body shape is very streamline; it has powerful front flippers to aid in strong swimming. It is rarely seen except on nesting beaches. Jellyfish are the main component of their diet.

#### THE LOGGERHEAD (*Caretta caretta*)

has an anti-tropical distribution. It is found in Northern and Southern Indian Ocean, Australia, Japan and the Southeastern US, also found in the Atlantic Ocean off eastern Canada. The loggerhead can be identified by its large head as well as by a reddish brown carapace (upper shell) and dull brown or yellow plastron (lower shell). The loggerhead can grow between 32-41 inches and can weigh up to 350 lbs. This turtle doesn't suffer from poaching or capture for meat, but rather from accidental capture. It has powerful jaws for eating shellfish living on the bottom of the ocean.





### THE GREEN TURTLE (*Chelonia mydas*)

is a circumglobal species and is the most common of the eight sea turtles. The green turtle can be recognized by a single pair of scales in front of the eyes rather than 2 pairs of scales, which most sea turtles have. They are one of the largest species of sea turtles: their shells can be up to 3 ft long, and they can weigh up to 300 lbs.

They are called green sea turtles for the color of the fat under their shell, not for the actual color of the shell, which can range from a greenish shade, to brown, black, or even gray.

The green turtle feeds on seagrasses and seaweed. Its important nesting and feeding grounds are in the tropics. It has long been harvested for meat and eggs in Costa Rica, Caribbean, Indonesia, and Panama. Its cartilage is used in Asian countries for turtle soup.

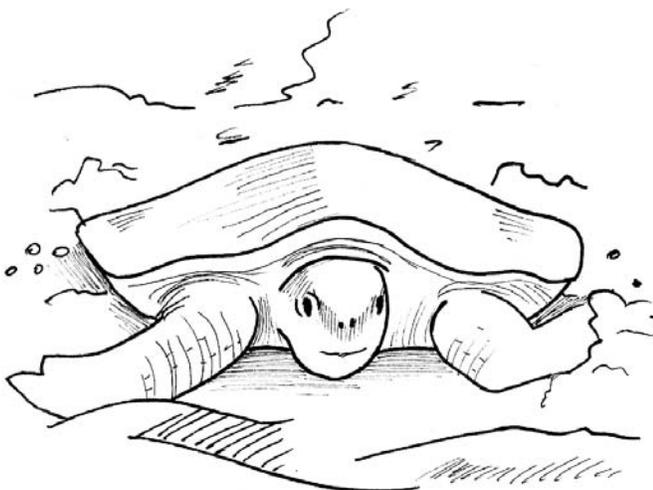


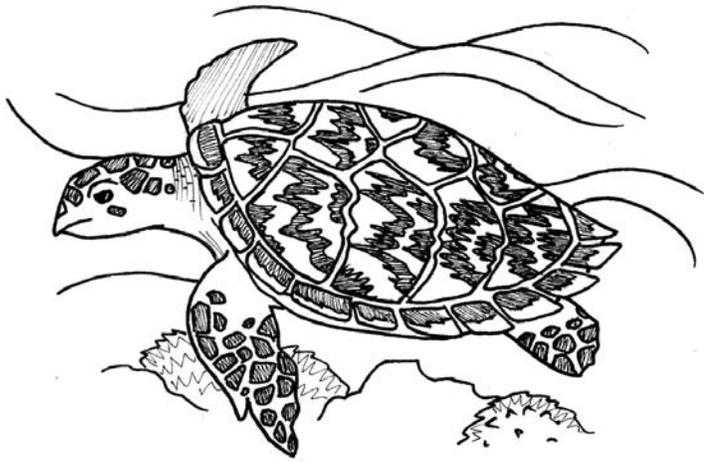
### THE BLACK TURTLE (*Chelonia agassizii*)

which is named for the black or gray color of its shell, is confined to the Eastern Pacific Ocean. It is protected in the Galapagos and nominally in Mexico. They are still subject to illegal harvest, and are on a decline.

### THE FLATBACK TURTLE (*Natator depressus*)

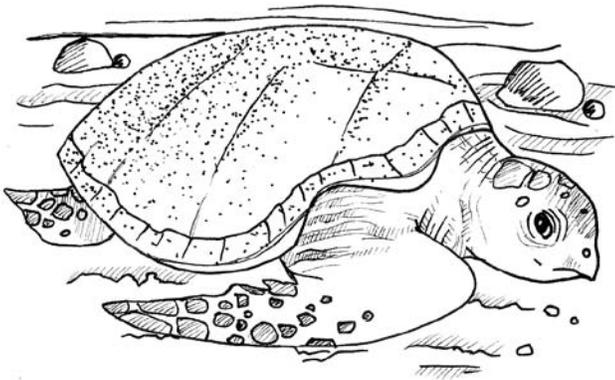
live only in the waters of Australia where it is protected by law, with the exception of aboriginal harvest. It is named for its flat shell, and can grow up to 39 inches long and 198 lbs.





### THE HAWKSBILL (*Eretmochelys imbricata*)

is subject to intense intentional trade. Its beautifully patterned shell is a source of tortoiseshell used to make jewelry and combs. Its narrow head and beak make it look like a hawk, owing to its name. This is one of the smaller sea turtle species. It only grows 30-36 inches and weighs 100-150 lbs. It is common on tropical reefs in the Caribbean islands and Australia. It is smaller than the green sea turtle and its shell is reddish brown with yellow streaks. It feeds on encrusting animals such as sponges, sea squirts barnacles, and seaweed.

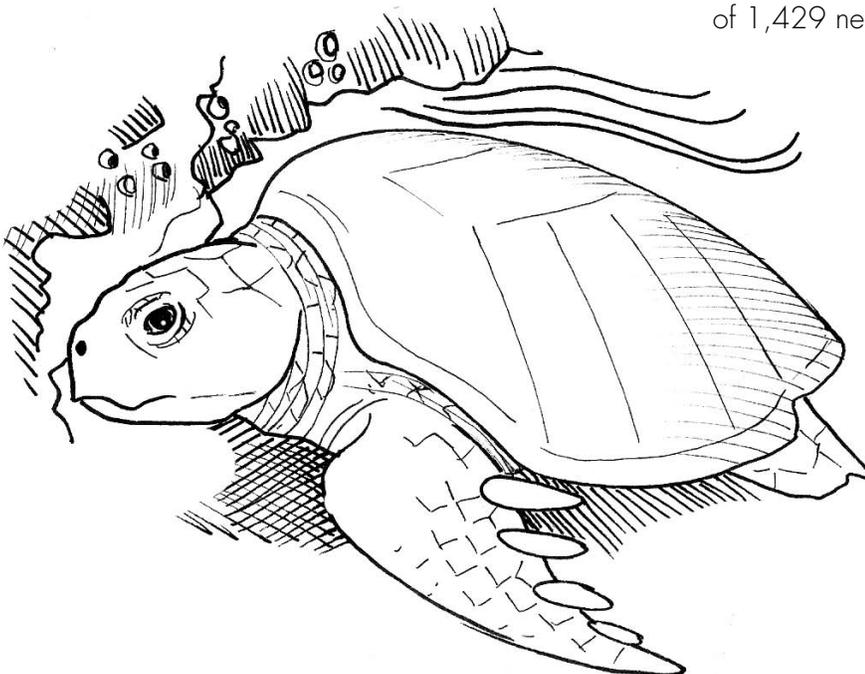


### THE OLIVE RIDLEY (*Lepidochelys olivacea*)

nects mainly in the Pacific Ocean, around Costa Rica, Mexico and Nicaragua, as well as the Northern India Ocean. It is the most abundant species of sea turtle, as well as one of the smallest, weighing less than 100 lbs. It is olive green in color, giving it its name.

### THE KEMP'S RIDLEY (*Lepidochelys kemp*)

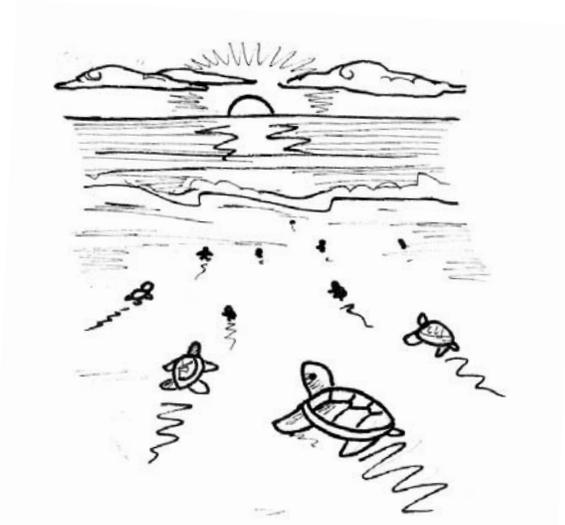
is the rarest species of sea turtle as well as most endangered. Kemp's Ridley is the smallest sea turtle, only growing to be 24-28 inches and weighing 77-100 lbs. Its carapace is olive green, and its plastron is yellowish. This turtle only nests on one beach in the world, in Rancho Nuevo, Mexico. In 1942, in only one day, 42,000 Kemp's Ridelys could be seen nesting on this beach. In 1995, there were only a total of 1,429 nests.



## REPRODUCTION IN SEA TURTLES:

**Mating:** During the mating season, all species of marine turtles migrate from feeding areas to mating areas. After mating, the males then return to foraging areas while the females proceed to nesting beaches. Some turtles migrate more than 2600 km, but most travel less than 1000 km. Female turtles do not usually reproduce every year, except for Kemp's Ridley. Males may breed every year. Mating can occur anywhere in the water but usually occurs at the surface. Mating is not gentle. The male bites the female's flippers and neck. Her shell gets clawed from the male's large claws on the hind and front flippers that hold him in place. The male may also get attacked from other males during this process. Males will bite other male's tails and flippers. Turtles can stay together while mating for about 10 hours.

**Nesting:** Most females lay several clutches of eggs, which reduces the likelihood of all eggs being lost. This can be done at 2-week intervals. When nesting, turtles generally escape the heat by creating their nests at night, except for the L. kempii and N. depressus. Eggs hatch after 6 to 13 weeks of incubation depending on the temperature. They generally hatch in the early evening. They can tell whether it is evening or daytime based on the temperature of the sand. They dig toward cooler sand; if they start digging and the sand gets progressively warmer they wait until the sand cools. If they hatched during the day they would have to face excessive heat and predation.



**Navigation:** After hatching, sea turtles primarily use vision to find the sea, orienting themselves toward the brightest light, presumably the moon. They move away from elevated silhouettes, such as sand dunes and vegetation. Turtles also rely on wave cues to swim offshore, moving toward approaching waves. They sense the wave motion under water by monitoring the sequence of accelerations they experience in the water column. Loggerhead and leatherback hatchlings use internal magnetic compass orientation. Turtles emerge from their nests without an established directional preference. They acquire a directional inclination while crawling on the beach toward a light source. This sets their magnetic compass. They do not have a polarity-based system but an inclination system, which means they follow the intensity of the earth's magnetic field and not the poles.

**Conservation:** Sea turtles worldwide are being protected under the endangered species list and by federal agencies. Efforts are being made to develop local help and to educate locals on the importance of these marine reptiles, not only for the future generations, but also for the health of the environment. Unfortunately, sea turtles are still being killed in drift nets, disoriented by street lights, taken as eggs for alcoholic beverages, and are killed as adults for souvenirs, food and shell products. Worldwide, help is needed from both young and old to save these remarkable ancient, endangered animals. Currently, there are several different attempts being made to help protect these species and increase their populations. Shrimp trawling is a large problem for sea turtles, many get caught in the nets and drown. TED's (Turtle Exclusion Devices) have been developed to reduce sea turtles getting caught in these nets. TED's are trap doors in the nets that allow the sea turtles, but not the shrimp to escape. Shrimp farms are also being started. Instead of harvesting the shrimp, which can cause the accidental capture of the turtles as well as other marine animals, shrimp are being raised in farms. Turtle hatcheries have also helped reduce the decline of sea turtles by removing the eggs from nests where they may be eaten by predators or removed by poachers. The eggs are taken to the hatchery where they are incubated and later released. In Atlantic Canada scientists work with the fishermen to conserve leatherback and loggerhead sea turtles.

The Native American people of Hawaii have a special relationship with the sea turtles that make their home on the Hawaiian Islands. Students will find a story about a memorial that was installed to honour Kauila, a sea turtle in 1995 by going to the turtle website at:

<http://www.turtles.org/monu.htm>

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. SEA TURTLE POWERPOINT

Download the powerpoint presentation that introduces the sea turtle clans and discusses their life.

**[http://marinediscovery.arizona.edu/lessonsF00/brittle\\_stars/sea\\_turtle\\_present5.ppt](http://marinediscovery.arizona.edu/lessonsF00/brittle_stars/sea_turtle_present5.ppt)**

Discuss the powerpoint as it is viewed. Create a class note to summarize the powerpoint.

### 2. SEA TURTLES OF THE WORLD

Copy the descriptions of the 8 sea turtles onto poster board for student reference.



Divide the class into 8 groups and assign one sea turtle to each group. Decide as a class what information will be needed for the presentations - ie size, colour, special features, food, nesting and home sites, endangered status, etc. Student groups research their turtle and introduce the turtle to the class.

Use a globe or map of the earth to identify places where the sea turtles are found. Focus on Canada's sea turtles: the leatherback and loggerhead **<http://www.seaturtle.ca>**

Discuss the reasons why the sea turtles are endangered.

Have students view the Sea Turtle Restoration Project website for more information - **<http://www.seaturtles.org>**

The site also provides good links to other organizations that are working to help sea turtles.

### 3. WEBQUESTING FOR TURTLES

Preview the webquesting sites. Choose the one(s) that seem most interesting to your class and assign pairs and small groups to work together to solve the webquest(s). You may focus on Canada's two species of sea turtles: the leatherback (Atlantic & Pacific) and the loggerhead (Atlantic) <http://www.seaturtle.ca>. Students respond to the webquest, answering questions and documenting their learning in their journal.

Student groups present their learning to the class.



<http://warrensburg.k12.mo.us/webquest/endangered/index.htm>

Leatherback Turtle

<http://questgarden.com/63/22/5/080327155804/>

Sea Turtles

<http://questgarden.com/65/88/6/080513102830/t-index.htm>

Leatherback turtle - Costa Rica

<http://questgarden.com/63/68/5/080408183850/t-index.htm>

Going, Going, Almost Gone - Intro to Sea Turtles

<http://questgarden.com/55/37/9/070926064213/t-index.htm>

Swimming with the Sea Turtles - intro (gr 3 level)

<http://questgarden.com/43/72/0/061130034236/t-index.htm>

Sea Turtles

<http://questgarden.com/28/94/9/060627161448/t-index.htm>

Field Trip to See the Leatherbacks - Creating a Brochure

<http://questgarden.com/23/80/6/060509191423/>

Sea Turtle Quest

<http://questgarden.com/21/23/1/060408083706/>

Olive Ridley Sea Turtle Quest

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. NETTING HEADACHES

For each group of students the following items are needed:  
 2 small paper cups and 1 plastic spoon per turtle group  
 large bag of coloured candies (smarties or skittles-type)  
 two-three boxes of pop rocks  
 student journals  
 teacher-prepared blank charts - see below - for student use

Divide the class into their turtle research groups. Give each group a spoon (trawling nets), and an empty cup (boat). The coloured candies will represent different ocean species that often are caught accidentally in the traps. The pop rocks will represent the shrimp (note: these candies are smaller and more difficult to catch and represent what happens as the trawl nets try to trap the small shrimp). With the class, assign a separate candy colour for each captured organism - halibut, tuna, dolphin, insects, leatherback turtle, olive ridley turtle, green turtle, loggerhead, etc. Record the colours and the species on a chart, in student journals, and/or on the white board.

Provide each group with about half a cup of candies and pop rocks mixed together. Group members each take a spoonful of candies from their cup, and place the candies into the empty 'boat', recording the number of each colour of organism they catch on their personal chart in their journal.

| COLOUR/SPECIES     | FISHER 1 | FISHER 2 | FISHER 3 | TOTAL | CLASS TOTAL |
|--------------------|----------|----------|----------|-------|-------------|
| Purple/Leatherback |          |          |          |       |             |
| Green/Loggerhead   |          |          |          |       |             |
| Red/Dolphin        |          |          |          |       |             |
| Blue/Tuna          |          |          |          |       |             |
| Yellow/Halibut     |          |          |          |       |             |
| Orange/Loggerhead  |          |          |          |       |             |
| Poprocks/Shrimp    |          |          |          |       |             |
| Bycatch            |          |          |          |       |             |

When each group member has had a chance to go fishing, the group compiles the results and adds their numbers to the class chart or white board. Subtract the total number of shrimp caught from the overall total in order to see the amount of bycatch that results in shrimp harvesting.

The class and the teacher discuss their findings and the overall costs of trawling and net fishing to the marine environment. Discuss why this is decreasing sea turtle populations, and what is being done or can be done to prevent this (TED nets, etc.).

Provide students with the information about the conservation efforts that exist today to help protect these species (various conservation groups, turtle farms, etc.). Students reflect in their journals on ways that bycatch can be reduced. <http://www.seaturtle.ca>

## 2. SEA-TURTLE QUIZ AND MORE

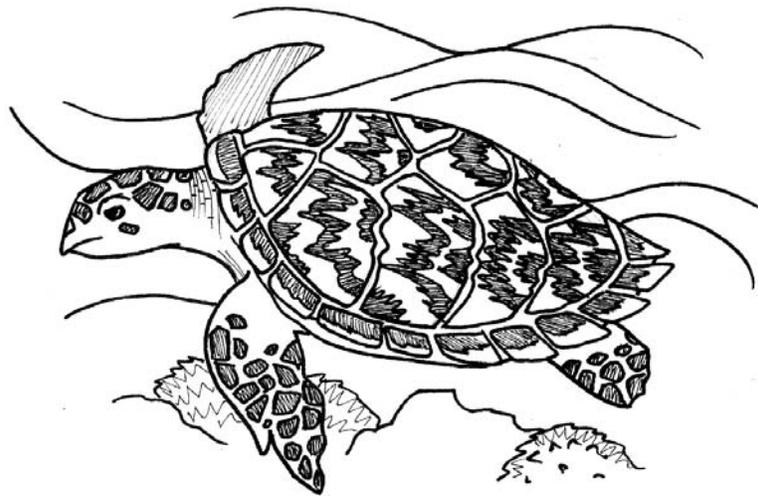
Students take the sea turtle interactive quiz that is found on this website:

<http://www.cccturtle.org/coolstuff.php?page=FlashSeaTurtleQuiz>

Teachers may like to download the pdf file on a point coordinate math activity on sea turtles at: <http://www.cccturtle.org/pdf/SeaTurtleDesignCoordinates.pdf>

Students can create their own sea turtle from a paper plate- see this website for instructions:

[http://www.myfwc.com/docs/WildlifeHabitats/Seaturtle\\_PaperPlateActivity.pdf](http://www.myfwc.com/docs/WildlifeHabitats/Seaturtle_PaperPlateActivity.pdf)



## 3. JOURNAL REFLECTION

Students create a suitable symbol to attach to the cover of their duo-tang to show that they have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 7th scute on the turtle shell poster.

Students individually design an "I Care" card about one of the sea turtles they have studied. The card should indicate why the student cares about this species and may suggest a way that students can become involved in helping endangered sea turtles.

# ONE STEP MORE

DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

## WEBQUESTING WITH ONTARIO'S TURTLES

Work with a small group to create a webquest about fresh-water turtles.  
You will find assistance with developing your webquest at this website:



**<http://webquest.sdsu.edu/LessonTemplate.html>**

The templates provide a variety of styles and ideas for putting your webquest together

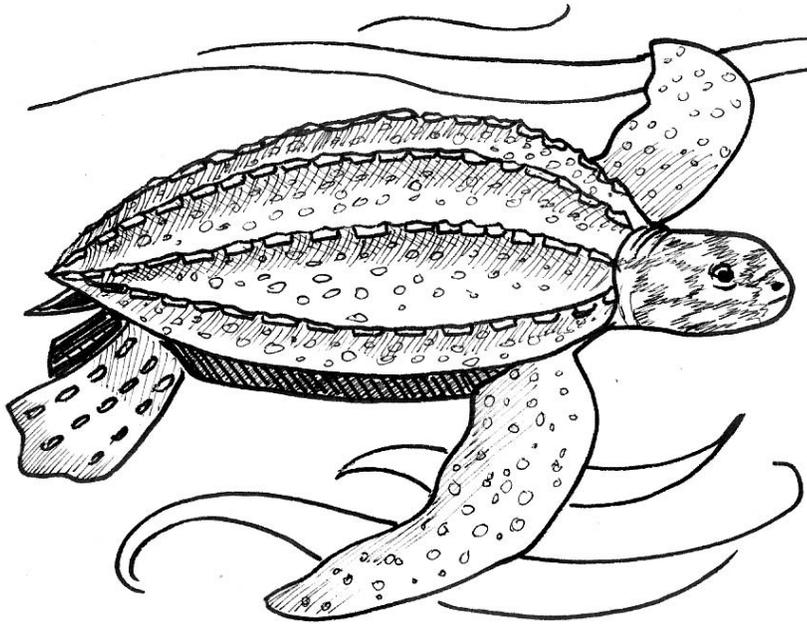
**<http://projects.edtech.sandi.net/staffdev/tpss99/anatomy.htm>**

This site describes each page of a webquest.



# Student Worksheet

7A - RESEARCH 1/3



## 1. THE LEATHERBACK

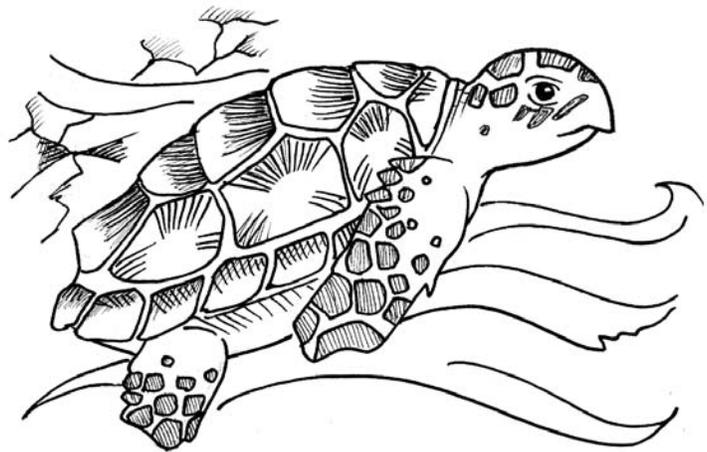
*(Dermochelys coriacea)*

is exploited for eggs. Its Atlantic colonies seem to be secure from disruption, but other sites have declined. It is the largest sea turtle- growing up to 7ft long and weighing at least 1,200 lbs. Instead of a hard shell, it has thin, tough, rubbery skin. Five distinct ridges are formed by small bones buried in their skin. Its carapace is black with white spots while the plastron is whitish to black. This turtle lives in the open ocean, it can dive the deepest and travel the furthest of any other sea turtle. Its body shape is very streamline; it has powerful front flippers to aid in strong swimming. It is rarely seen except on nesting beaches. Jellyfish are the main component of their diet.

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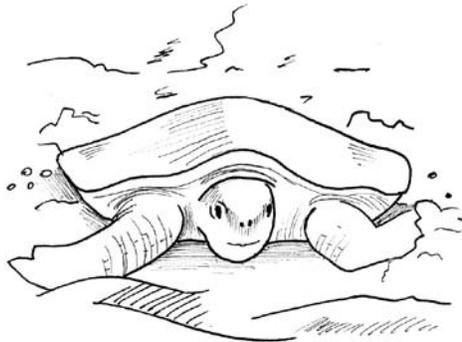
*(Caretta caretta)*

has an anti-tropical distribution. It is found in Northern and Southern Indian Ocean, Australia, Japan and the Southeastern US. The loggerhead can be identified by its large head as well as by a reddish brown carapace (upper shell) and dull brown or yellow plastron (lower shell). The loggerhead can grow between 32-41 inches and can weigh up to 350 lbs. This turtle doesn't suffer from poaching or capture for meat, but rather from accidental capture. It has powerful jaws for eating shellfish living on the bottom of the ocean.



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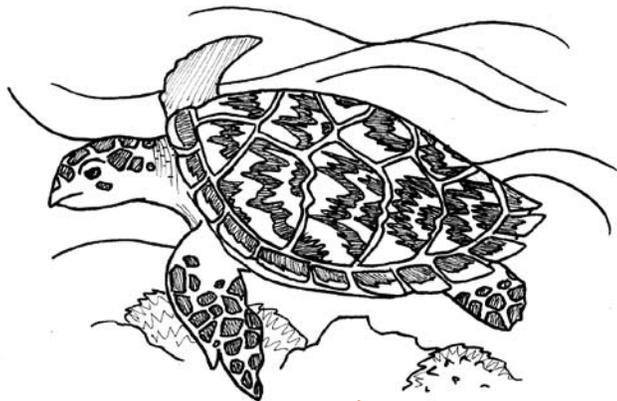
7A - RESEARCH (CONTINUED 2/3)



### 3. THE FLATBACK TURTLE

*(Natator depressus)*

live only in the waters of Australia where it is protected by law, with the exception of aboriginal harvest. It is named for its flat shell, and can grow up to 39 inches long and 198 lbs.



### 5. THE HAWKSBILL

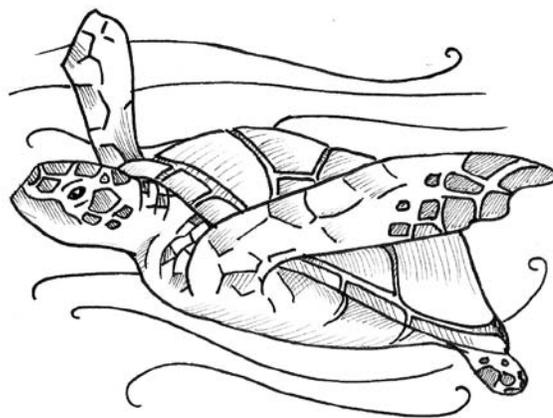
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# Student Worksheet

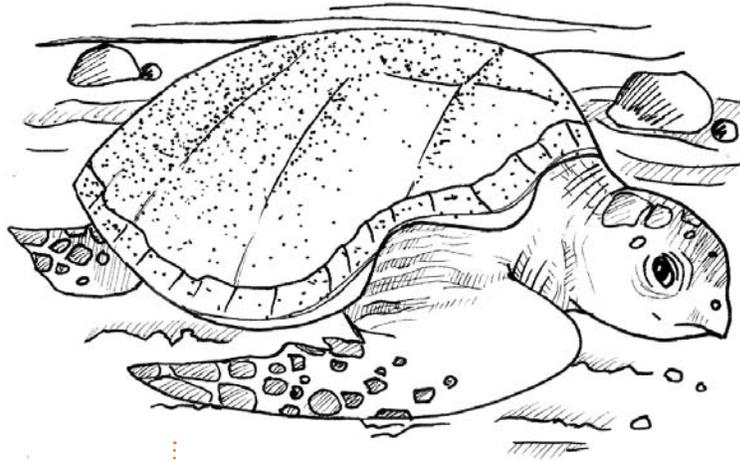
7A - RESEARCH (CONTINUED 3/3)



## 6. THE OLIVE RIDLEY

*(Lepidochelys olivacea)*

nesting mainly in the Pacific Ocean, around Costa Rica, Mexico and Nicaragua, as well as the Northern India Ocean. It is the most abundant species of sea turtle, as well as one of the smallest, weighing less than 100 lbs. It is olive green in color, giving it its name.



## 7. THE KEMP'S RIDLEY

*(Lepidochelys kempii)*

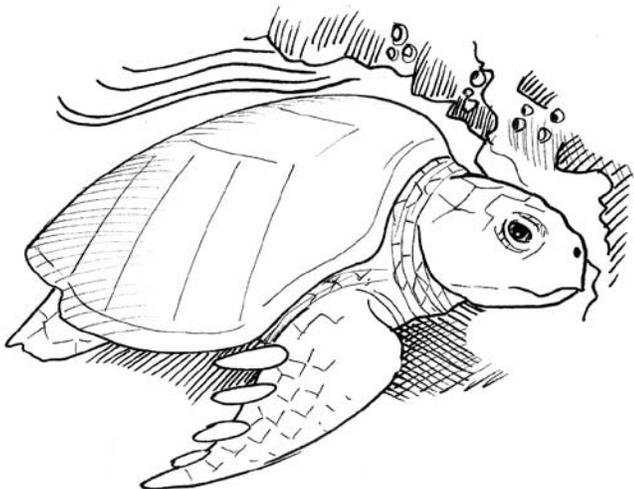
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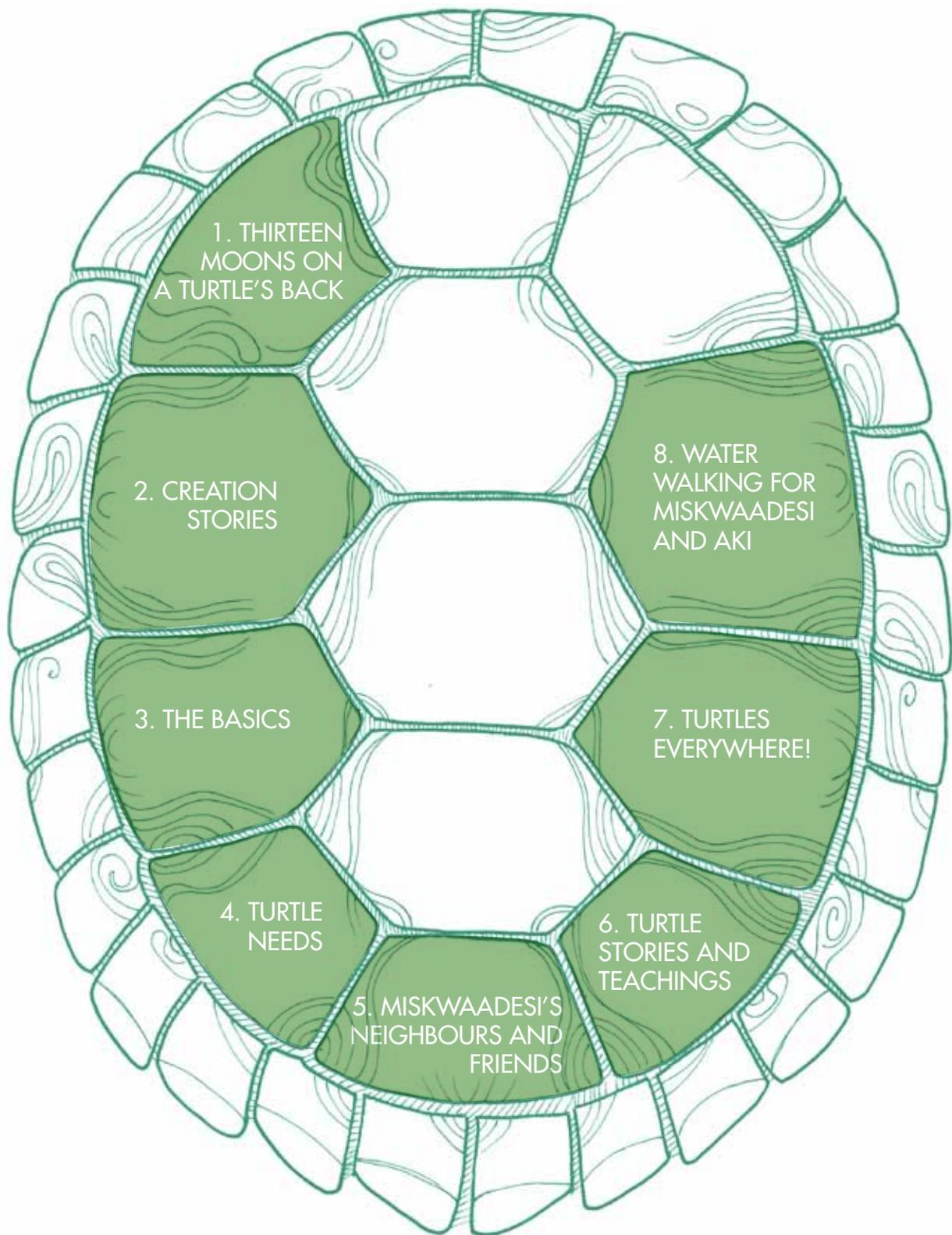


## 8. THE BLACK TURTLE

*(Chelonia agassazii)*

which is named for the black or gray color of its shell, is confined to the Eastern Pacific Ocean. It is protected in the Galapagos and nominally in Mexico. They are still subject to illegal harvest, and are on a decline.





1. THIRTEEN  
MOONS ON  
A TURTLE'S BACK

2. CREATION  
STORIES

3. THE BASICS

4. TURTLE  
NEEDS

5. MISKWAADESI'S  
NEIGHBOURS AND  
FRIENDS

6. TURTLE  
STORIES AND  
TEACHINGS

8. WATER  
WALKING FOR  
MISKWAADESI  
AND AKI

7. TURTLES  
EVERYWHERE!

## THE EIGHTH CHALLENGE

WALKING WITH MISKWAADESI

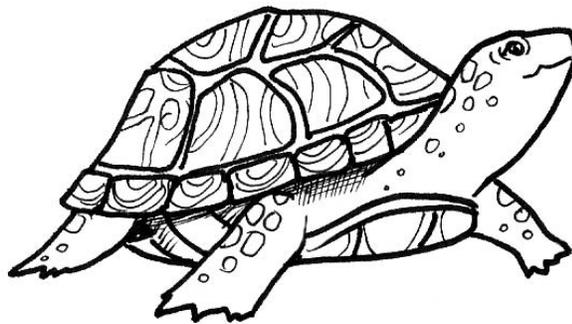
# THE EIGHTH CHALLENGE

## WATER WALKING FOR MISKWAADESI AND AKI

How clean is the water in your backyard?  
Is the water safe for Miskwaadesi - and you?  
Do you know how to talk to the water?  
Find out from Josephine Mandamin and the Water Walkers.  
Have you thanked the water for its gift to you?  
Carry a bucket of water around your watershed.

*"My 8th challenge - walk for the water; walk for the turtle; walk for yourself and your future."*

Miskwaadesi's 8th challenge.



# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY                   | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                    |
|-------------------------------------|--------------------------------|------------------------------|
| I Didn't Know That                  | 4s12, 4s14                     | Computer - Quiz              |
| From Paddle to the Sea to Josephine | 4e7, 4e81, 4s14, 4z40, 4z39    | Literacy/Video               |
| Planning a Water walk               | 4e52, 4p27, 4p28               | Chart and Journal Reflection |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY             | ONTARIO CURRICULUM EXPECTATION | WORKSHEET      |
|-------------------------------|--------------------------------|----------------|
| Water Walking for Miskwaadesi | 4p31, 4p27, 4p28               | Action project |
| Journal Reflection            | 4e56                           |                |

## ONE STEP MORE (individual student optional adventures in learning)

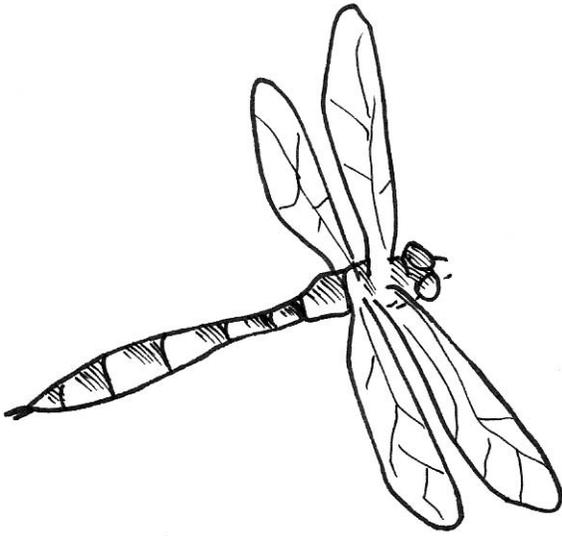
1. Helping our Great Lakes

2. Water Wheels

### WORD WALL:

watershed, Superior, Huron, Michigan, Erie, Ontario, St. Lawrence, healthy, bucket, drop, miino giizhigad,

# LINKS TO OTHER CURRICULUM



## 8<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Relationship – The Waters – pg 78

[http://www.torontozoo.com/pdfs/stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/stewardship_Guide.pdf)



**<http://motherearthwaterwalk.com>**

Waterwalkers website

Waterwalker Address -

Biidaajiwun Inc. Community Health Outreach Worker

c/o Josephine Mandamin

134 Frederica Street West

Thunder Bay, Ontario

P7E 3V7

(807) 474-3542

(517) 980 2640

**<http://www.epa.state.il.us/kids/fun-stuff/quiz/water-quiz.html>**

water quiz for students

**<http://www.epa.state.il.us/kids/earthship-logs/log-3.html>**

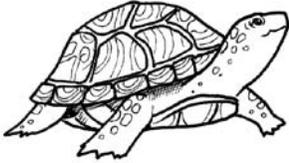
Water Water everywhere reading activity

**<http://www.epa.state.il.us/kids/fun-stuff/water-cycle/>**

make a water cycle wheel

# KOKOM ANNIE'S JOURNAL

## JOSEPHINE TAKES A WALK

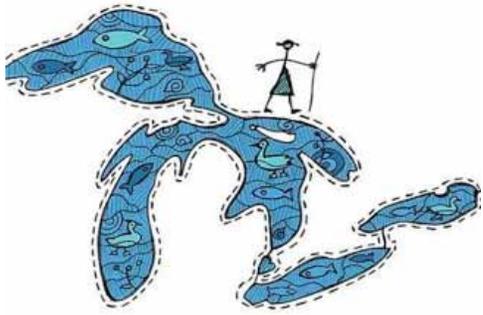


*"Kokom Annie - the spirit of the water has spoken to me. It is telling me to let you know that our Elder Josephine is coming. Josephine is coming. Go and meet her - she has a message for you. Josephine has thought about the seven generations that came before us. She is thinking about the seven generations not yet here. Josephine is honouring the water and the spirit of the water. Josephine and the water walkers will be here soon. Listen to what they have to share. Take their message home to your community. If you walk for the water, you will be walking for me, Miskwaadesi as well. You will be walking for all of the different forms of life that live in our waters. Listen to Josephine's message and then you will understand my 8th challenge - walk for the water; walk for the turtle; walk for yourself and your future."*

Miskwaadesi's words stayed in my heart and in my head. I spoke with Lily about what she had said and we called in to the Friendship Centre to find out if they knew who Josephine is. They said that Josephine Mandamin and the Water Walkers were coming soon. Josephine would stop at the Friendship Centre and talk to anyone who would listen about her walk around the Great Lakes to bring attention to the health of the water and to tell the water that we still care about it. Lily and I went to bed early so that we would not be late - we were looking forward to meeting this wonderful grandmother from Thunder Bay.



The day after Josephine's visit - I was so honoured yesterday to meet Josephine Mandamin, our Nokomis who has walked around all of the Great Lakes to remind us how important our fresh water is to our people. Josephine is an Anishinawbe Elder who began her very special journey in 2003. Yesterday she came to talk to the women on the reserve and to share her message about how important water is in our lives and in our communities. Josephine takes her responsibilities as an Anishinawbe-kwe very seriously. She reminded all of us of the responsibilities that women have as water keepers.



Josephine shared with me her understanding that “Water is precious and sacred. It is one of the basic elements needed for all life to exist. All people need to be concerned about the water in our backyards and how much of it we are using and wasting.”

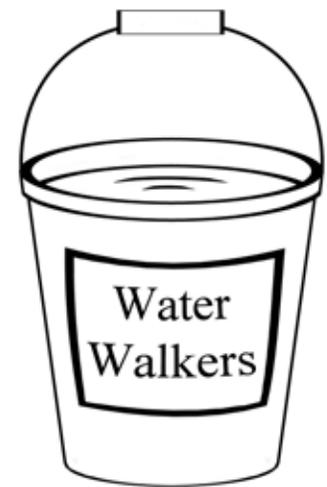
Some of the things that she spoke of yesterday were that:

There are six quadrillion gallons of water in our Great Lakes. Only the polar ice caps and Lake Bakal have more fresh water than the Great Lakes. 40 million people live within the beautiful watershed of the Great Lakes and they must share the one percent of the water in the lakes that is renewed every year through rain and snowfall with each other and with the plants and animals that also rely on the water. Miskwaadesi is one of those animals that must have clean water.

Josephine was worried because she noticed that the people who live in this most beautiful watershed are the most wasteful of water in the whole world. The people have had so much clean and fresh water available to them that they have taken it for granted and they have wasted huge amounts of water. The groundwater in the Great Lakes watershed has become sick with the pollution of industry and communities who do not understand that somebody lives downstream and the people who live upstream have a responsibility to make sure that the water they send downstream is clean and healthy.

Water is essential to survival and health; everything is related to water.

First Nations peoples in Ontario have been made aware of the issue of water pollution in the Great Lakes. Since the beginning of time, the First Nations peoples living along the shores and within the watershed of the Great Lakes have carried within their hearts a love for the water; within their minds the understanding of the need to keep the water clean and healthy because it is the water that cleanses and heals body, mind, and spirit, and everything depends on the water for continued life; and within their spirit the connection given to us by Creation between water and all life forms.





The Elders spoke of the need to keep the water clean and pure for the sake of the seventh generation yet to be born.

Our ceremonies include water for its healing and nourishing power.



The First Nation peoples of North America believe that the water is sacred and that water is the life-blood of Aki, our Mother the Earth.



Together, we need to come together with all peoples within our watershed and to share our awareness of the condition of the Earth's fresh water supply.



The everyday wasting of water and polluting of fresh water is going to jeopardize the future of our waters and our future generations.



If this disregard for the water supply continues, we can expect that the water will be depleted and unfit for us to use.



Josephine believes that we must each take responsibility for raising awareness within our communities of the need to conserve this beautiful life source.



Josephine's words were still in my mind and heart when I went to bed. It seemed that I had barely closed my eyes when I was dreaming of sitting by the marsh in the early morning, listening to the first red winged blackbirds singing their spring song of joy. Miskwaadesi peeked out from under some floating duckweed. Her soft faint voice mingled with the early sounds of spring.



"Miskwaadesi - ahniin - it is so good to see you. Miina-giizhigad (it's a nice day!) I met the most wonderful anishiniaabe-kwe who had a dream about walking and talking to the water. Nokomis Josephine and the water walkers have been walking around the Great Lakes



watershed carrying a bucket of water to remind everyone of how important the water is. I told her about you and the challenges. Josephine reminded me that turtles spend so much time in and around water and they must have clean healthy water, just as we do. Josephine thought that maybe if we got the women and children together right here at Wasauksing, we could walk around the wetlands and the waters on the reserve, carrying a bucket of water, to let everyone know that we are concerned about our water. Josephine thought that we might pick up any litter or garbage that we find so that

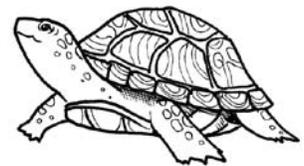
when the turtles wake up from their winter sleep they will find a cleaner and healthier place to live. She reminded us that we have a responsibility to care for the water, just as the turtles have a responsibility to care for the wetland and the water.

What do you think, Miskwaadesi? Could this be one of the challenges?"

The old turtle blinked in the April sun.

*"Kokom, that would be a good challenge. Josephine had a very powerful dream. She worked so hard to carry that bucket of water and she has reminded many people of their responsibilities. I like her idea- so... the 8th challenge is to water walk with me around the watershed right here at Wasauksing. See the water as I see it - experience the wetland from my perspective. When you walk, look for signs of change. Listen for the sounds of joy. Clean up what you find that needs cleaning. Honour the water spirit and speak to it."*

*"Thank the water for its gift to you. Clean water for drinking, washing, cooking, bathing is becoming scarce. My clan cousins cannot live in a wetland if the water is not clean. Water is so important to me and to all of my clan members. The amount of water (quantity) and the health of the water (quality) are both tied together and are equally important to my health and survival. I challenge you to take a walk around your own watershed - learn about your water. Follow in the footsteps of Josephine Mandamin and the waterwalkers, for her footsteps are my footsteps as well!"*



# TEACHER BACKGROUND



## WATERWALK - MOTHER EARTH WALK

*"Thank the water for its gift to you. Clean water for drinking, washing, cooking, bathing is becoming scarce. My clan cousins cannot live in a wetland if the water is not clean. Water is so important to me and to all of my clan members. The amount of water (quantity) and the health of the water (quality) are both tied together and are equally important to my health and survival. I challenge you to take a walk around your own watershed - learn about your water. Follow in the footsteps of Josephine Mandamin and the waterwalkers, for their footsteps are my footsteps as well!"*

In the 8th challenge, Miskwaadesi calls upon us to walk around our watershed to honour the water and to bring attention to the need for clean water. Many of our communities are located on waterways. We depended upon the water in old times to take us from place to place in our canoes. We depended upon the water to heal our illnesses and to keep us healthy. We depended upon the animals that live in the water for food. We depended upon the water to nourish the plants that we use as medicines for healing. The Elders taught us that it was the responsibility of the women to look after the water. We knew that the water was given a gift in Creation - the water has the ability to clean or heal itself, but it takes time. Water that falls upon the face of Mother Earth is supposed to sink into the soil gradually and as it makes its journey underground to the aquifers, it cleans itself of the impurities that it may have picked up in its journey as a cloud and as it fell as rain or snow. However, to become truly clean again, the water needs time. Some of the Elders say that it takes about 100 years for the water to clean itself - but - today, there is too much pollution and too many toxins being poured into the waterways and into the air, and the water cannot keep up. The water is becoming tired and discouraged and unable to complete its responsibilities. The water needs our help, but more importantly, we need water's help because water is a necessity of life for all plant and animal members of creation. Just as we depended upon the water in times past, we depend upon it today, and we need to focus on the seven generations to come because they will depend upon the water as well.



Scientists tell us that the human body is over 80% water. We are told that to remain healthy we need to drink up to 2 litres of water a day. Our daily needs for clean water are great. Too much clean healthy water is being wasted, especially here on Turtle Island where over 20% of the world's fresh water can be found in the Great Lakes watershed. In the old times, the people had an understanding of the importance of keeping the waters clean.

In 2003, Josephine Mandamin an Anishnaabekwe grandmother had a dream about water. She dreamed that if she walked around Lake Superior carrying a bucket of mide-wabo (sacred water) and talked to the water spirit to let it know that we care for it, the water would respond and begin to start healing itself again. Josephine and her water walker friends and family began a journey that would take them around each of the Great Lakes, one year at a time, finishing in the spring of 2009 with a walk up the St Lawrence River to the Atlantic Ocean. As Josephine completed her water journey, she challenged all women on Turtle Island to pick up a bucket of water in their own community and walk with it around their own watershed, praying for the water and letting it know that we still care. We are challenged to thank the water for its gifts to us and to ask it to continue to follow its original instructions and responsibilities. In doing this we also recognize the importance of water to the survival of Miskwaadesi and the animals and plants that live in and around the water.

The Native Womens Association in Ontario has set aside a special day for everyone to do something special for the water - Aboriginal Water Day is held between March and April every year.

Students come to understand that Miskwaadesi needs clean fresh water to live in, and so do we. The 8th Challenge encourages us to honour the water in our community and to make it healthy so that Miskwaadesi can find a good place to live and so that we will have clean potable water for the next seven generations.

The following websites provide teachers and students with background information of the waterwalks and also introduces Josephine's journal entries for the water walks. Teachers are encouraged to preview these sites and to copy the articles for student use in literacy class.



**<http://www.motherearthwaterwalk.com>**

Josephine Mandamin's journal for each of her water walks - Click on each of the lakes to read the journal entries.

**[http://section15.ca/features/news/2007/04/22/last\\_lake/](http://section15.ca/features/news/2007/04/22/last_lake/)**

Article about Josephine and the waterwalkers

**[http://campaigns.hellocoolworld.com/index.cfm?campaign\\_id=12&campaign\\_page\\_id=75](http://campaigns.hellocoolworld.com/index.cfm?campaign_id=12&campaign_page_id=75)**

Article about Josephine

**<http://www.milwaukeerenaissance.com/KtRusch/2008MotherEarthWaterWalk>**

Article written about the waterwalk in 2008

**<http://www.youtube.com/watch?v=Gn5eEWWec30>**

5 minute interview and video of Josephine from Indian Country News regarding her reasons for walking for the water

**<http://www.youtube.com/watch?v=wPega7E8Lhg&feature=related>**

10 minute video of interview with Josephine regarding her walk

**[http://www.wawataynews.ca/archive/all/2009/11/26/Waterlife-film-screened\\_18611](http://www.wawataynews.ca/archive/all/2009/11/26/Waterlife-film-screened_18611)**

Melvina Flamand discusses accompanying Josephine on the waterwalks and introduces the film Waterlife that has been made to honour the walk

**<http://www.ourwaterlife.com/>**

Trailer for the film waterlife - can be viewed on this site

**Waterlife - available as a DVD (also has Paddle to the Sea on the DVD from National Film of Canada**

National Film Board Canada - see the website for more info. <http://nfb.ca>

**<http://waterlife.nfb.ca/>**

National Film Board of Canada's WATERLIFE website for youth

**[http://www.nfb.ca/film/paddle\\_to\\_the\\_sea#](http://www.nfb.ca/film/paddle_to_the_sea#)**

Paddle to the Sea available to teachers through an agreement with the National Film Board – as of April 2010. The movie is about 30 minutes long and is downloadable from the NFB website or viewable at this website.



Help the students to organize a waterwalk within your community. Record what you see and hear as you walk. Think about Miskwaadesi and her clan cousins who cannot live in a wetland if the water is not clean. The amount of water (quantity) and the health of the water (quality) are both tied together and are important for the survival and good health of everyone and everything that lives within the watershed community.

Follow in the footsteps of Josephine Mandamin and the waterwalkers! When the waterwalk has been completed, send a message to Josephine and tell her what your class has done... our Elder will be happy!

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. I DIDN'T KNOW THAT! - THE GREAT WATER QUIZ

<http://www.epa.state.il.us/kids/fun-stuff/quiz/water-quiz.html>

Provide students with enough time to take the online water quiz (10 questions) - this will give them a perspective of the amount of water that is available in the Great Lakes and will introduce them to some of the issues that need to be solved.

### 2. FROM PADDLE TO THE SEA TO JOSEPHINE MANDAMIN

Show the dvd of Paddle to the Sea; download or view the movie (30 minutes) from the National FilmBoard ([http://www.nfb.ca/film/paddle\\_to\\_the\\_sea#](http://www.nfb.ca/film/paddle_to_the_sea#)) ; or read the story to the students. Discuss the story and how old it is. Ask the students to think about how things have/have not changed in the water of the Great Lakes since Paddle to the Sea was published in the 1940's. Talk about the need for a new version of Paddle to the Sea, to bring our attention back to the water and its health. Use the youtube selections that interview Josephine and share them with the students. Preview "Waterlife", the documentary about the Great Lakes that includes Josephine's walk and share those sections with the class that you feel are important for the students to help them understand the need for individual action to help the water to heal.

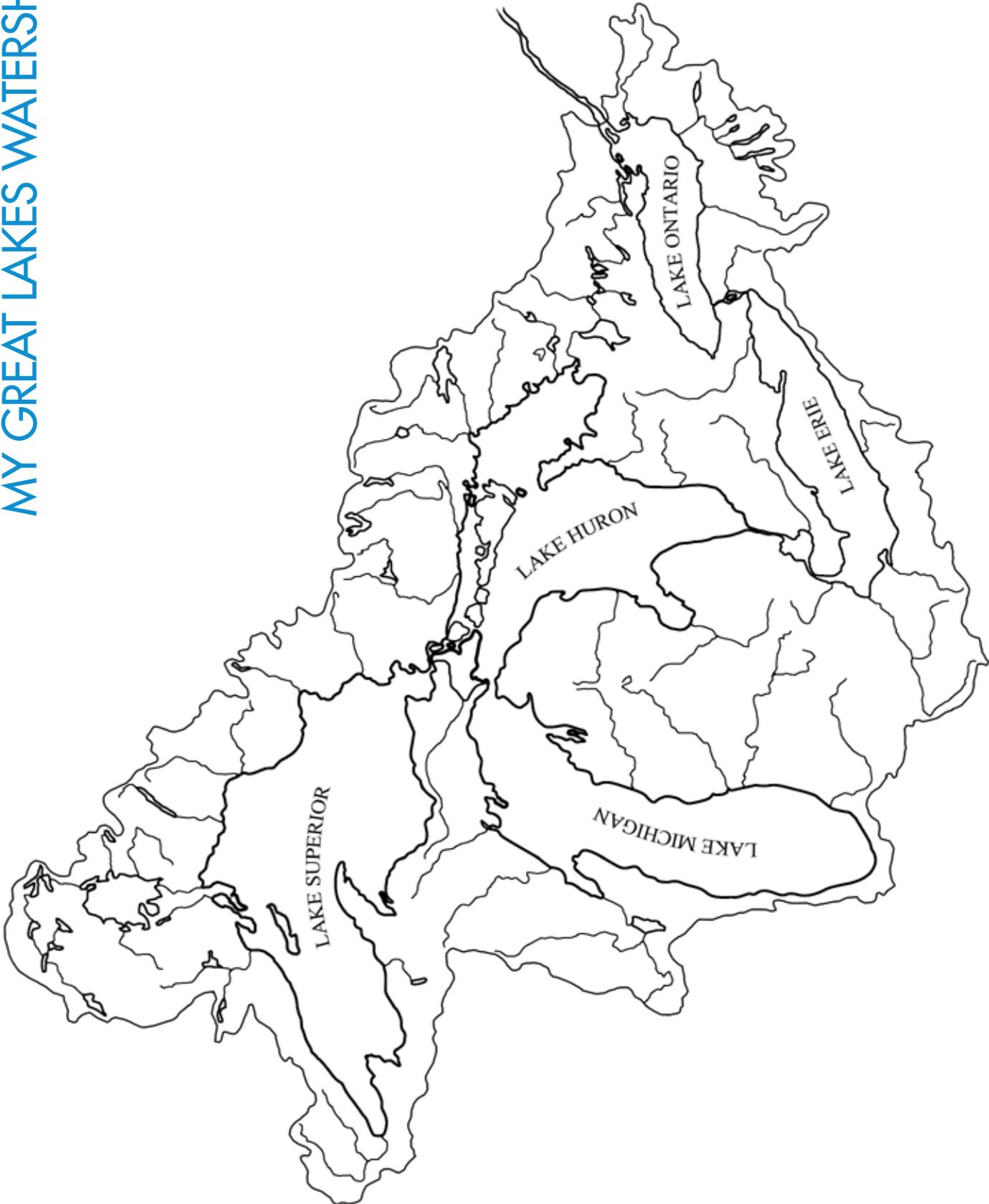


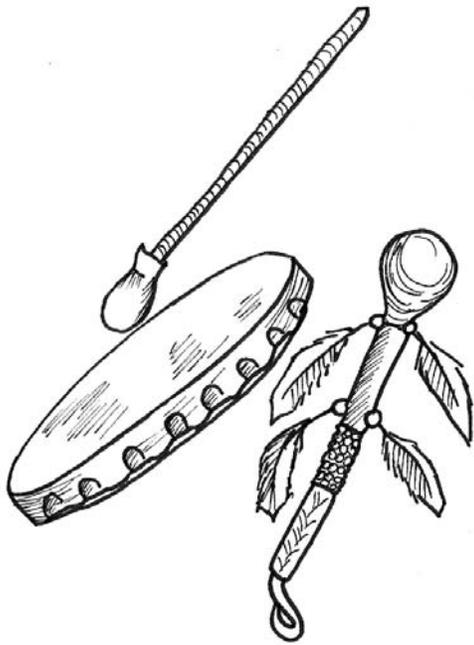
# Student Worksheet

COLOURING PAGE



# MY GREAT LAKES WATERSHED





Divide the class into small groups. Assign each group a task of reading one of the articles from the teacher background material that speaks about Josephine's water walk and the journal that Josephine kept on her journeys around the lakes (Superior, Huron, Michigan, Erie, Ontario) and along the St. Lawrence.

As the groups read through their articles and journal entries, provide them with an outline map of their Great Lakes and ask them to trace Josephine's footsteps on the map by marking the stops that she made along the way. From the student maps, create one large mural or poster-size map of the Great Lakes, add your school location, and use the map to generate interest for your own community waterwalk.

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### 3. PLANNING A WATER WALK

Decide where and when you will walk for the water and for Miskwaadesi.

Make posters to advertise the walk and invite the community to come and participate.

Ask the Native language teacher to help the students compose a song or a prayer to the water. Practice the words so that the students can use their song and/or prayer while they are on their waterwalk.

Plan a feast for the water in your community. Gather together at the end of your journey and celebrate the water.

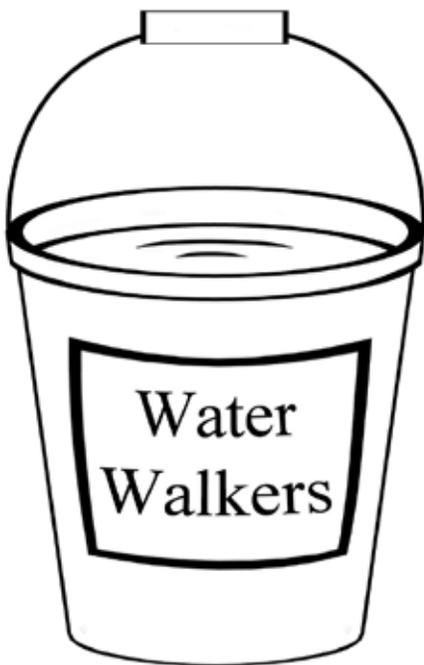
Go to the band office and ask for a copy of the wetland, lake, river, creek, or other water body that you will walk along, or draw the route. Use the map you have made to help promote your community waterwalk and also to record interesting things that you notice on the walk.

Provide students with enough time to record their thoughts and ideas about the waterwalk. How important is water to them? How will walking around the watershed help miskwaadesi and her clan? What can we learn by walking along the water? What sounds do we think we will hear? What do we think we will see? What colours might we find along our walk? What do think we will smell? These questions can be answered in the student journals and reviewed after the walk has taken place.

Invite the chief and council or community members to walk with the students as they honour the water. Students should be encouraged to make banners, flags, signs and posters to carry on their waterwalk.

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. WATERWALKING FOR MISKWAADESI

Organize a waterwalk within your community. Record what you see and hear as you walk.

If there are many waterbodies in your community, pick a different one every year to walk around.

Think about Miskwaadesi and her clan cousins who cannot live in a wetland if the water is not clean. The amount of water (quantity) and the health of the water (quality) are both tied together and are important for the survival and good health of everyone and everything that lives within the watershed community.

If there are Elders joining you, make sure you accompany them and help them along the way. Ask them to tell about what they remember about the water from when they were little. Where did they swim? What was the fishing like? Do they remember any stories that they hear when they were small? Listen carefully to their words and record what they say if they are comfortable with that.

Take a camera with you and take pictures of your watershed. Record the good things as well as those that need to be fixed.

Carry a long stick and garbage bag and pick up any litter that you find as you walk. Make your shoreline clean again - Miskwaadesi will be smiling!

Sing your water song as you walk. Stop and talk to the water and think about it!

Bring some tobacco to place by the water as you begin your walk.

Follow in the footsteps of Josephine Mandamin and the waterwalkers! When the waterwalk has been completed, send a message to Josephine and tell her what your class has done... our Elder will be happy. You can reach Josephine at [www.motherearthwaterwalk.com](http://www.motherearthwaterwalk.com).



## 2. JOURNAL REFLECTION

What did the waterwalk mean to you?

How did you participate in the walk- did you help to carry the water bucket?

What thoughts did you have about the water as you walked along?

Create a suitable symbol to attach to the cover of their duo-tang to show that they have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 8th scute on the turtle shell poster.

# ONE STEP MORE

## DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

### 1. HELPING OUR GREAT LAKES

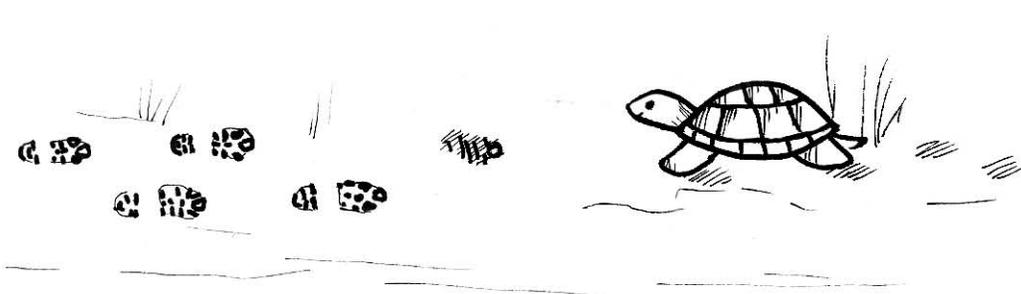
The Great Lakes watershed needs your help. Look at the following website and pick an action to complete. Become one of the growing number of people who live around the lakes who are taking responsibility for cleaning up the water.

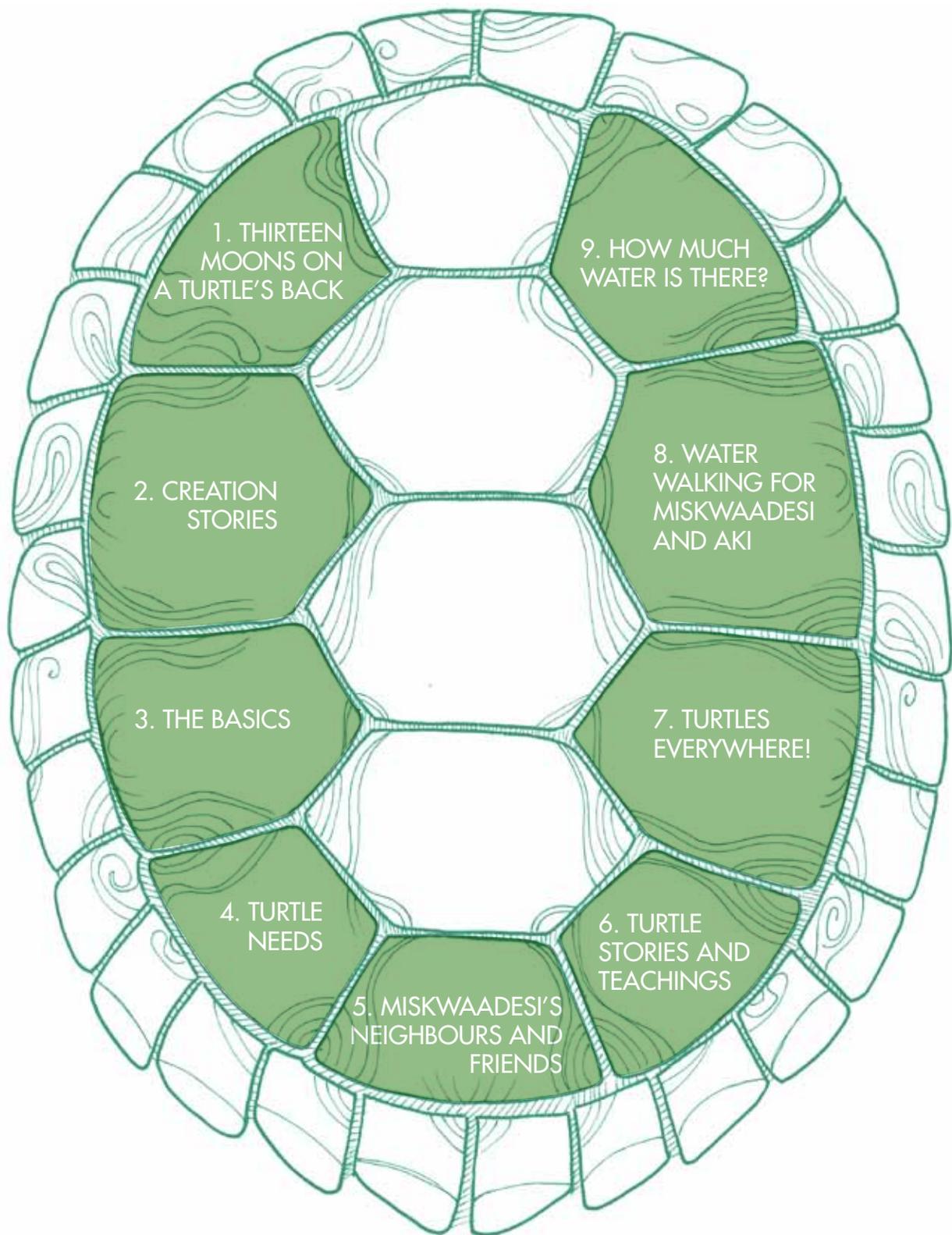
[http://www.kairoscanada.org/fileadmin/fe/files/PDF/EcoJustice/Water/WaterMoreValuableThanGold\\_GreatLakesStory.pdf](http://www.kairoscanada.org/fileadmin/fe/files/PDF/EcoJustice/Water/WaterMoreValuableThanGold_GreatLakesStory.pdf)

### 2. WATER WHEELS

Make a water wheel for some younger students and explain it to them.

<http://www.epa.state.il.us/kids/fun-stuff/water-cycle/>





1. THIRTEEN  
MOONS ON  
A TURTLE'S BACK

9. HOW MUCH  
WATER IS THERE?

2. CREATION  
STORIES

8. WATER  
WALKING FOR  
MISKWAADESI  
AND AKI

3. THE BASICS

7. TURTLES  
EVERYWHERE!

4. TURTLE  
NEEDS

6. TURTLE  
STORIES AND  
TEACHINGS

5. MISKWAADESI'S  
NEIGHBOURS AND  
FRIENDS

**THE NINTH CHALLENGE**

WALKING WITH MISKWAADESI

# THE NINTH CHALLENGE

## HOW MUCH WATER IS THERE?

How much water is there, and how much are you using every day?  
Can you make changes to the amount of water you use so that there will be more clean water for everyone and everything to share?



*“It’s all about the water that humans use for themselves. Find out how much water you use in a week” came the soft voice from the turtle on the log. “What do you use water for?”*

*“Think of what you can do to make sure that there will be good water for the seventh generation to come.... Remember your ancestors have lived in the watersheds of Turtle Island for thousands of years and they were very careful to keep the water clean. It takes 350 years for one drop of water to go from the top of Lake Superior to the St Lawrence River and that is longer than the Newcomers have been here on Turtle Island. Think of the changes that drop of water has seen on its journey to the sea.”*

*“The women took their responsibility to be the keepers of the water very seriously. Their ceremonies, prayers, and actions taught the young ones how important the water was.”*

*“Today on Turtle Island, too much water is wasted and made dirty and polluted. The water cannot clean itself quickly enough- humans are using too much. In other lands, people conserve the clean water and they get by using only a little bit. Every drop of water that you can save is a drop of life for all the plants and animals that have need for water in their life. Can you do that as well?”*

Miskwaadesi’s 9th challenge.

# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY        | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                                  |
|--------------------------|--------------------------------|--|
| My Watermark             | 4e30, 4e53                     | Personal survey                            |
| Turtle Island Watersheds | 4z47, 4z42, 4s12, 4s19         | Mapping exercise                           |
| Water in the World       | 4s21, 4m88, 4m89               | Math - Interpreting Data - Cereal Activity |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

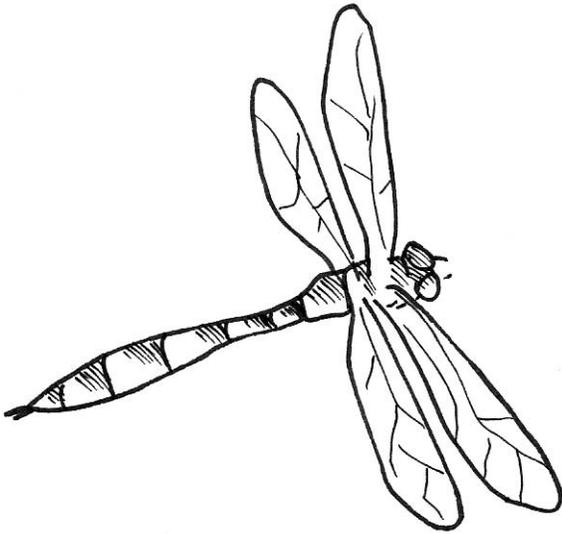
| TITLE OF ACTIVITY  | ONTARIO CURRICULUM EXPECTATION | WORKSHEET  |
|--------------------|--------------------------------|------------|
| Journal Reflection | 4e52                           | Writing    |
| Water Quiz         | 4e53                           | Quiz       |
| Commitment String  | 4a43, 4a44                     | Visual Art |

## ONE STEP MORE (individual student optional adventures in learning)

1. Water Cycle Game
2. Childrens' World Water Forum - get involved!

**WORD WALL:** universe, audit, watershed, hazard, commitment,

# LINKS TO OTHER CURRICULUM



## 9<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Relationship – The Waters – pg 78

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)



**[http://www.ec.gc.ca/water/en/info/pubs/primer/e\\_contnt.htm](http://www.ec.gc.ca/water/en/info/pubs/primer/e_contnt.htm)**

ENVIRONMENT CANADA - publications and activities website

**<http://www.ec.gc.ca/grandlacs-greatlakes/default.asp?lang=En&n=B4E65F6F1>**

Fast facts on water in Canada

**[http://www.wateryear2003.org/en/ev.php-URL\\_ID=1456&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://www.wateryear2003.org/en/ev.php-URL_ID=1456&URL_DO=DO_TOPIC&URL_SECTION=201.html)**

International Year(s) of water - 2003-2015

**<http://www.un.org/waterforlifedecade/factsheet.html>**

Water fact sheets

**<http://atlas.nrcan.gc.ca/>**

Atlas of Canada

# KOKOM ANNIE'S JOURNAL

## HOW BIG IS THE RIPPLE?



I was out walking along the road by the marsh yesterday afternoon. The spring sun was warm but the bugs weren't biting yet so it was a good day for a walk. I was happy to find Miskwaadesi sitting on a log by the edge of the marsh. It was the first time I had seen her since she had gone to sleep for the winter in the mud at the bottom of the marsh. Miskwaadesi seemed to be enjoying this beautiful spring day - I was so very glad to see her again. I had been thinking a lot about her and her clan cousins since the women of the community met together and planned their waterwalk. I was certain that Miskwaadesi would approve of our posters and our walk around the marsh.

"Ahniin Miskwaadesi - it is so good to see you today!"

*"Ho-wah- ahniin nokomis. I am just waking up from my winter sleep. It's a nice afternoon to sit by the water and soak up some sun."* The old turtle's whispered voice seemed to be a bit stronger than it had been the last time she spoke with me.



I nodded my head and sat down beside her.

I told her what we have been doing to learn about our turtle clans.

I spoke about Josephine Mandamin and the waterwalkers and I talked about how the women in the community got together to organize a water walk for our youth. All the children took a turn carrying the bucket of water and singing good songs to the water.

Miskwaadesi blinked her eyes and I noticed a few tears forming at the corners of her eyes, and she seemed to nod her head in approval.



*"Water is so important to our clans" she said. "I spend almost all of my day and night in the water. Everything I need for life is connected with the water..."*

*I sleep in the water for 6 moons of the year. I am surrounded by water when I'm swimming; when I am looking for dinner; and even when I am preparing my nest for my eggs there is usually water just below the surface of the earth waiting to bathe my eggs.*

*I need fresh and clean water every day for my very life.*

*I could feel the vibrations of a drum down at the bottom of the water where I was resting, and I could hear voices singing, but then I thought I must have been dreaming.*

*My 9th challenge is about water and the amount that everyone and everything needs and uses."*

Miskwaadesi looked out over the marsh - the water looked so inviting on this beautiful spring afternoon. The little water bugs were swimming around and a few minnows dashed between water plants. Some tiny tadpoles wiggled in the shallow water.



Kokum thought about how much Miskwaadesi depended on the water - the water is as important as the air for her existence. Water is so much a part of her life and she has a great role to play in the health of the water. The two are so interconnected. She is also responsible for sharing the communication between different plants and animals and the elements like the water, the sun, the air, and the earth. She is like a super-translator!

Miskwaadesi gave me an idea of what the next challenge would be when she asked me if I knew how much water I used every day.

I know that my body is about 75 percent water and that to stay healthy I have to drink between 7 and 9 glasses of good water every day. Then there's the water I use to cook my meals and wash my dishes and of course water for my morning shower; brushing my teeth; flushing the toilet... hmmm... I started to realize that I am very dependent on clean water as well.

I thought about how much water my nokomis would have used when she lived back in the bush with no hydro and no running water in her little house... I remember spending a lot of time with her when I was small. We used to carry water from the creek to use in the house.



She taught me to fill my bucket by scooping downstream so the water didn't get disturbed. She always seemed to have a little bit of tobacco with her when she went down to the water and she would put the tobacco just at the edge of the water. She said that the tobacco was to say 'miigwetch' to the water and to honour it. She said we need to be taking care of that water because it is so important to us. We didn't waste any water in those times - I remember her giving me a little cup of water for my toothbrush, and I drank the water when I was finished brushing. I remember she had an outhouse that was back of the house, away from the water, and when it was wash time, we used a basin to scrub our hands and face, and a round tub for a bath in the winter time. She was really respectful with the water and reminded me to look after the creek and to be grateful for the good cold water that came to us. My nokomis understood that water is alive and that it has spirit. I think that my Nokomis was a good keeper of the water! She had a very small water footprint on the earth.



My water footprint is bigger than hers was. Even so, I have to be careful with the water that I use because I get my water from a well and I do not want to use all the water from my well. My well water is so tasty and cold and clean - it tastes so much better than city water and I really appreciate having this clean natural water to drink. I know it keeps me healthy!

Miskwaadesi reminded me to put down my tobacco every day and to say a prayer of thanks to the water, and to tell the water that I care for it. Then Miskwaadesi talked about the challenge.

*"The 9th challenge is all about the water that humans use for themselves. Find out how much water you use in a week" came the soft voice from the turtle on the log. "What do you use water for?"*



*"Think of what you can do to make sure that there will be good water for the seventh generation to come... Remember your ancestors have lived in the watersheds of Turtle Island for thousands of years and they were very careful to keep the water clean."*

*"The women took their responsibility to be the keepers of the water very seriously. Their ceremonies, prayers, and actions taught the young ones how important the water was."*

*"Today on Turtle Island, too much water is wasted and made dirty and polluted. The water cannot clean itself quickly enough- humans are using too much. In other lands, people conserve the clean water and they get by using only a little bit. Every drop of water that you can save is a drop of life for all the plants and animals that have need for water in their life. Can you do that as well?"*

Miskwaadesi turned her head away and suddenly plopped into the water of the wetland. The minnows and tadpoles scurried for cover as the ripples spread out around her shell. She swam away and the ripples reminded me that everything we do makes a ripple on the earth that affects everything and everyone in creation. The ripple starts out small, but spreads out, touching everywhere.

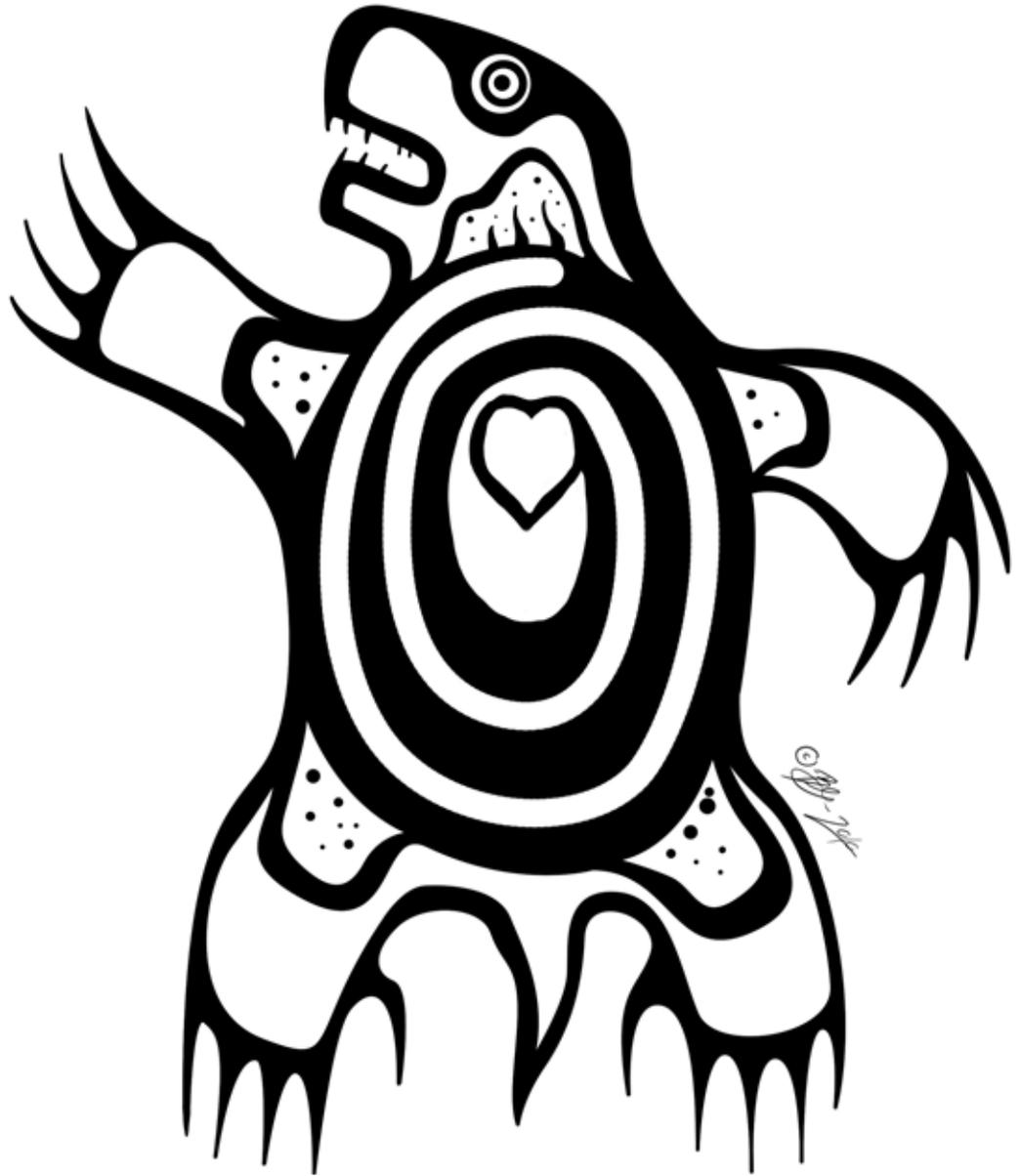
I wondered how I could make my water-use ripple smaller and gentler... I would have to survey my own life to see how much water I was using.

I drew up this chart in my journal to help me with my survey...

| Activity             | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Total |
|----------------------|--------|--------|---------|-----------|----------|--------|----------|-------|
| Dishes               |        |        |         |           |          |        |          | L     |
| Bath<br>or<br>Shower |        |        |         |           |          |        |          | L     |
| Flushing<br>Toilet   |        |        |         |           |          |        |          | L     |

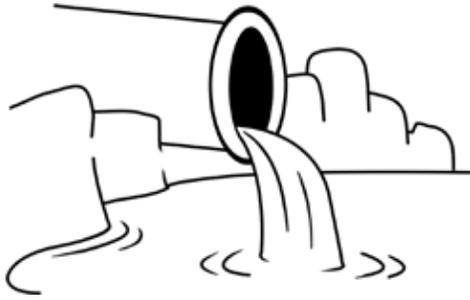
WEEKLY TOTAL \_\_\_\_\_ L

## TEACHER BACKGROUND



What can we do to help our turtle clans continue to find healthy watery homes and communities? One thing we can do is to reduce the amount of fresh water we are using.

If we get our water from a well, we have a better understanding of being a good conserver of fresh water because if we waste water we may find our well has gone dry. Globally, the 'well' is going dry because too much fresh, clean water is being wasted and/or polluted so quickly that the earth cannot clean it and help it to recycle itself. The water in a well comes from a source under ground - the veins of the earth contain our clean water. Well water was once on the surface of the earth, but the earth has had a chance to cleanse the water as the drops percolated down through the different layers of soil and rock.



If we live in a large community, we usually get our water from the water treatment plant. The water treatment plant takes water from a source like a lake or river and pumps it in to a large tank. The water insects and algae get caught in the water, so the treatment plant forces the water through screens and filters and then puts chemicals into the water that kill all the little creatures. Until recently, water treatment plants used chlorine to 'purify' the water. We now know that chlorine is not a good chemical to use because it is harsh and it can combine with other chemicals to make hazardous compounds. New water treatment plants use ozone or peroxide to make the water safe for drinking.

When we are finished with the water in our home, it goes into a sewer pipe or into a septic tank. The sewer pipe takes the water to the waste treatment plant and from there it is put back into the lake or river. But, the water that goes back into the river or lake has changed - now it has chemicals in it (like chlorine, cleaning products, soap, etc) and these chemicals make the water less safe for drinking, cooking, cleaning, and swimming in. The water that goes into a septic tank sits in the tank and is slowly released into a weeping tile bed. From there the water droplets return to the earth for further cleaning. People who have a septic tank need to have it cleaned out every year or so to remove the solids that have collected and the people should be very careful not to put harsh chemicals down the drain because those chemicals will seep out into their yard.

By conserving fresh water, we limit the amount of water entering the water treatment plant, reduce the amount of chlorine going into the watershed, and we are better able to share the fresh water within the watershed with all the other members of creation.

In the 9th challenge, the students are invited to conduct a personal water audit and compare their results with their friends. Students discuss ways that they can conserve the fresh water in our lives.

Teachers are encouraged to contact their local conservation authority (local wetland representative or source water person) to find out about water needs and water use in your watershed.

Students demonstrate their learning by participating in activities that help them learn about the characteristics of water and by making a commitment string to remind them of their responsibility to look after the water in our life.

### 1. CONTACT THE NEAREST CONSERVATION AUTHORITY.

See the website for contact numbers at: <http://www.ontarioconservationareas.ca>

Ask to speak with the source water protection technician or someone who is working with wetlands and water. Ask if they will send information for the class about the watershed you live in and/or ask them to come and speak to the class about water conservation. Some of the conservation authorities have programs that are just right for this age group of students.

### 2. THE COUNCIL OF CANADIANS

has made a commitment to look after the water. Use their website at: <http://www.canadians.org/water/index.html> to find out what they are doing. Share the information with your class. The Council of Canadians continues to support several campaigns for fresh water and to protect the water. In 2009-2010, they worked hard to help the First Nations of the Georgian Bay area (including the territories of the Ojibway; Chippewa; Metis; Wendat and Mohawk Nations) and the settler communities who live in and around Tiny Township (Simcoe County) to protect one of the cleanest and healthiest water aquifers in the world from becoming covered with a dump (dump site 41).

Teachers are encouraged to share this wonderful story of how a group of neighbours became friends and developed a sense of community and family as they worked together to save their watershed. You can read about how the community was able to successfully protect this pristine water source in the June 2009 edition of The Native Drum newspaper -

<http://www.firstnationsdrum.com/2009/june/index.html>

### 3. THE UNION OF ONTARIO INDIANS

has set up the Anishinabek Womens' Water Commission in March, 2007. One of the commissioners, April Jones has said "During my lifetime, I have seen the extreme changes that have occurred regarding the sustainability of one of our most precious resources, Mide-waboo...I continue to learn and to help in any way that I can regarding the protection of the water, because it is evident that the very future of our children and all of creation is dependent upon it." Find out what the Womens' Water Commission is working on at this time.

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



Teachers are encouraged to download the 12 water activities from the following website and to choose those that they feel would help their students to practice the learning! The water activities are science based at the grade 3-5 level, and are intended to introduce students to the concepts of watershed; ground water; fresh water; wells; aquifers; etc)

<http://www.epa.gov/safewater/kids/wsb/pdfs/354.pdf>

Teachers are encouraged to explore several of the Extension activities and websites for games and interactive learning opportunities. One extension involves learning about hazardous symbols and could lead students to developing water-friendly cleaning products for home use.

### 1. MY WATER MARK

Material

1 copy of Our Water Story and Water survey sheet per student

Pencil/pen

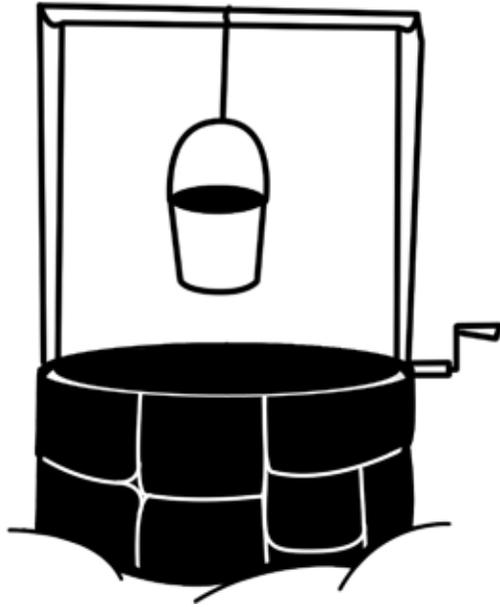
5 minutes per day for a week to complete survey chart

Read Our Water Story (see student worksheet 9a) with the class and discuss the importance of looking after our drinking water. Students may wish to illustrate Our Water Story on a blank sheet of paper.

Students conduct a personal WATER SURVEY. (see student worksheet 9b). Individual students keep track of their own personal water use for one week. Check off what they use each time they use it.

Record daily information and tally up the totals at the end of the week.

Bring the survey sheets to class. Prepare a class survey from the individual results.



Discuss as a class - Who in the class has the smallest water footprint or watermark? Why?  
Who has the largest water footprint or watermark? Why?  
What can we do to decrease the amount of water we are using for some of the categories?  
What items use the most water in your house?  
Where could you reduce the amount of water you use without compromising your health?  
If students live in a larger community, they may have a water meter. If so, write down the meter reading on Monday morning and again on Sunday night.

\_\_\_\_\_ Monday

\_\_\_\_\_ Sunday

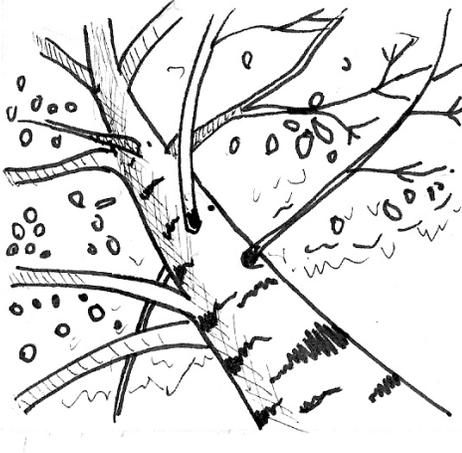
The difference is the amount of water that was used in their home this week. Which day of the week was the most water used? Why?

Which day of the week was the least amount of water used? Why?

In other countries, the amount of fresh water available is much less than it is in North America. People must adjust their lifestyle to the amount of fresh water that is available.

# Student Worksheet

9A - OUR WATER STORY 1/4

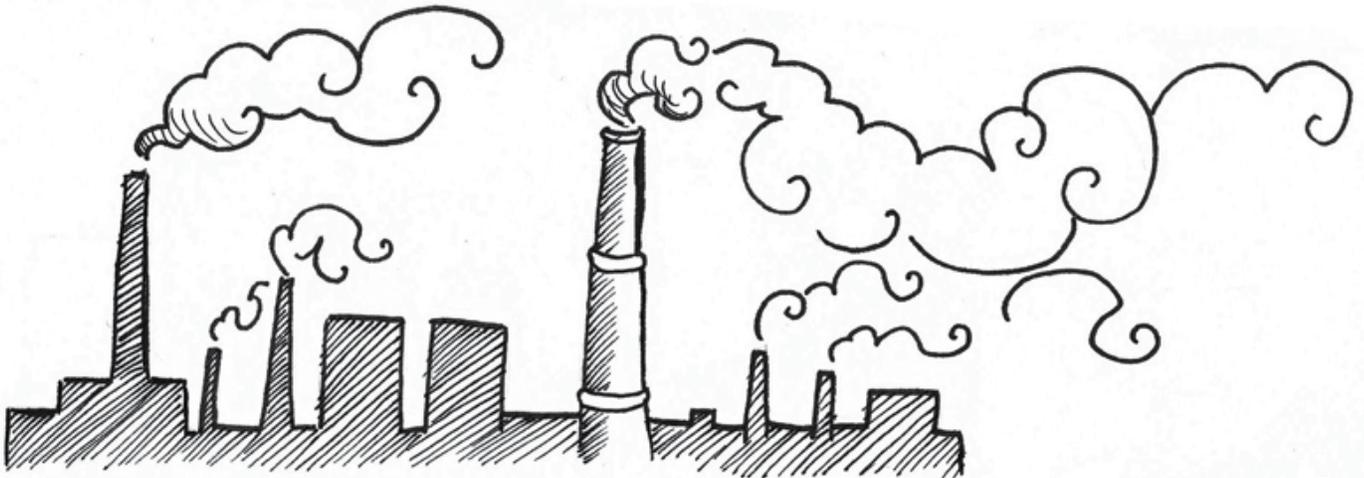
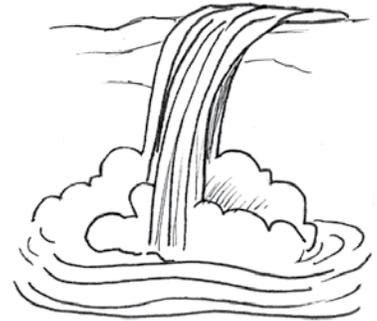


## OUR WATER STORY

When The Great Mystery created the universe, Turtle Island was given a certain amount of water, earth, and air. The Great Mystery thought about earth and the mishomis' (ancient rocks), clay, and soil came together to form the earth.

The Great Mystery thought about the air and placed a certain amount of air, moved around by the four winds, to surround the earth like a blanket. The Great Mystery thought about water and drop by drop,

a certain amount of water found its home upon and within the earth. Some of the water droplets became frozen into the glaciers and ice caps of the north. Some of the water droplets flowed into the creeks, streams, rivers, lakes, bays, and oceans. Some of the water droplets found homes in the swamps, fens, bogs, marshes and wetlands. Some of the water droplets found homes under the earth where they became part of the aquifers that are the life-blood of mother earth. Some of the water droplets found homes within the skins and coverings of the plants, trees, and animals that lived on Turtle Island.



# Student Worksheet

## 9A - OUR WATER STORY (CONTINUED 2/4)



The Great Mystery instructed Mother Earth in how to clean the water. The Earth was given the responsibility to take impurities from the water as it passed through the soil and rock, and to permit the water droplets to continue on in their cycle, clean and healthy, ready to renew and sustain all living things.



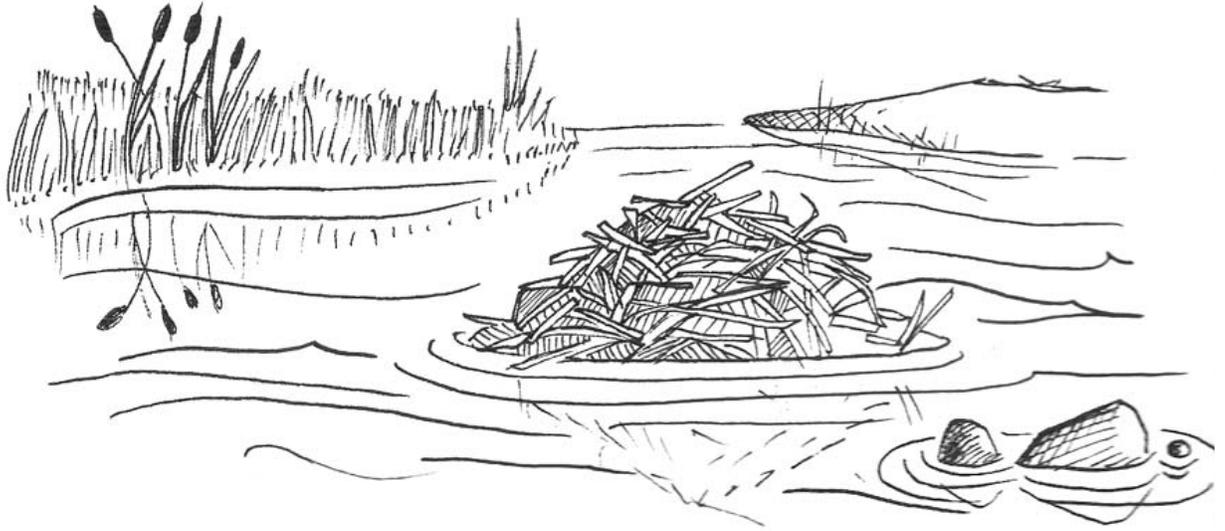
The Great Mystery gave the water the ability to change its shape, from water droplets to water vapour; to rain and snowflakes; to ice; and back to water droplets again. The Great Mystery instructed the water how it was to provide moisture and refreshment for all living things. The Great Mystery instructed the water on how it was to work with the mishomsum to make soil for growing plants to anchor their roots in by changing rocks into soil through erosion. The Great Mystery instructed water on how it was to move into the sky (as vapour) to form clouds; to flow from the sky onto the Earth (as rain, snow and hail) and into the Earth.

As the water moved through this cycle, it nourished all living things and cleansed them, carrying impurities away. In this way, the Earth would clean the water of its impurities by absorbing them into the soil and gravel. The clean water would flow through Earth's aquifers (veins) and become available as pure and clean water for all living things. As the water droplets evaporated into water vapour to become clouds, they became part of the sky world again.



# Student Worksheet

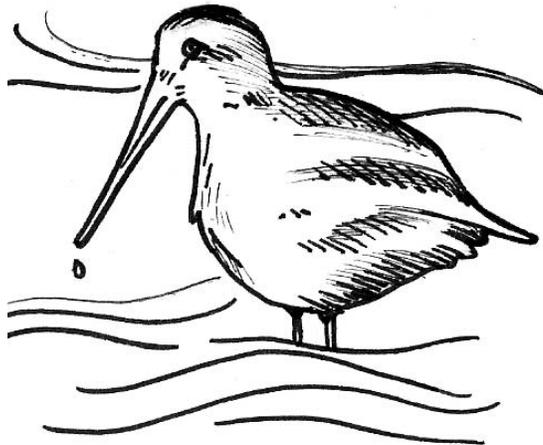
9A - OUR WATER STORY (CONTINUED 3/4)



Water is unique because it lives in the air; on the surface of the Earth; inside the Earth; and inside all living things.

There is only so much water available for all life on Earth to share. Most of the water is frozen into the polar ice caps and in the glaciers and icebergs. Of all the water on the Earth, only a tiny amount is available for us to drink, wash, cook, bathe, and use every day.

As the youngest of Creation, humans have a responsibility to care for the water that is available - it needs to be clean and pure so that all living things can have access to it for their daily needs.



On Turtle Island, many people misuse the water or waste the water that is available to them. When we compare the amount of water that North Americans use every day with the amount that is used in other countries and in other cultures we see that we need to conserve our fresh water and to make more of an effort to keep it in a healthy state.

# Student Worksheet

## 9A - OUR WATER STORY (CONTINUED 3/4)



One way we can find out how much water we are using is by conducting a water audit or survey of our own personal life. We can measure how much water we use everyday. We can look at the amount of water being used in our schools, our communities, and in our land.

We can think about ways to keep our water healthy and to send it back into the Earth in such a way that the Earth will be able to cope with cleaning the water.

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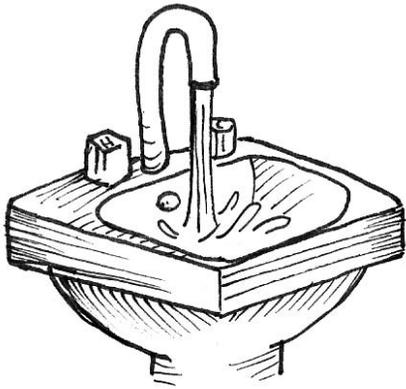


### KEEP TRACK OF YOUR OWN PERSONAL WATER USE FOR ONE WEEK.

1. Check off what you use each time you use it.
2. Add up the totals when the week is over.
3. What items use the most water in your house?
4. Where could you reduce the amount of water you use without compromising your health? If you have a water meter, write down the meter reading on Monday morning and again on Sunday night.      ..... MONDAY ..... SUNDAY

# Student Worksheet

## 9B - MY OWN PERSONAL WATER AUDIT



| ACTIVITY                | CND. AVG         | MON | TUES | WED | THURS | FRI | SAT | SUN | TOTAL |
|-------------------------|------------------|-----|------|-----|-------|-----|-----|-----|-------|
| Bath                    | 60L              |     |      |     |       |     |     |     | L     |
| Shower                  | 100L/<br>10 min  |     |      |     |       |     |     |     | L     |
| Toilet                  | 6-20 L           |     |      |     |       |     |     |     | L     |
| Wash<br>Face &<br>Hands | 8L w/<br>Tap on  |     |      |     |       |     |     |     | L     |
| Brush<br>Teeth          | 10L w/<br>Tap on |     |      |     |       |     |     |     | L     |
| Drink                   | .3 L             |     |      |     |       |     |     |     | L     |
| Cook                    | 10L              |     |      |     |       |     |     |     | L     |
| Dishes<br>(Hand)        | 35L              |     |      |     |       |     |     |     | L     |
| Dishes<br>(Washer)      | 40L              |     |      |     |       |     |     |     | L     |
| Wash<br>Clothes         | 225L             |     |      |     |       |     |     |     | L     |
| Wash<br>Car             | 16L/min          |     |      |     |       |     |     |     | L     |
| Water<br>Lawn<br>(min)  | 16L/min          |     |      |     |       |     |     |     | L     |
| <b>TOTAL</b>            |                  |     |      |     |       |     |     |     | L     |



## 2. TURTLE ISLAND WATERSHEDS

BACKGROUND: - see background from Activity 1

A geography book says that a river's watershed, or drainage basin, is the area of land that supplies the river with water. The watershed is separated from its neighbouring watershed by higher lands called divides or heights of land. Creeks and streams have small watersheds that combine together to make a larger watershed area. In traditional times, each family had the responsibility for a small watershed - that was their hunting, gathering, and often fishing territory. Great care was taken to ensure that the watershed would be a healthy place for all life forms for the coming seven generations. Our People had a good understanding of 'watershed' - we knew that it was more than the land and the water- it included ALL life forms within the natural boundary or height of land. We knew that within the watershed all living things were tied together by the water and the land and the air.

### MATERIALS

map of Canada with its river systems  
atlas

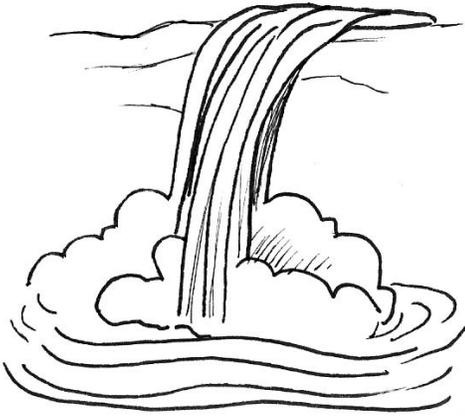
Discuss the meaning of 'watershed' with the class. Today, Aboriginal People in Canada live within many of the most fragile watersheds in the country (see the map at

<http://atlas.nrcan.gc.ca/sitefrançais/english/maps/environment/hydrology/watershed2>)

The class can find their community on this map by clicking on the map to zero in on their location. The following map shows where large groups of First Nations were living in 1630 within the Great Lakes watershed... can the students find their community?

<http://atlas.nrcan.gc.ca/sitefrançais/english/maps/historical/aboriginalpeoples/circa1630>

Provide the students with a map of the Great Lakes watershed from page 230. This watershed that drains into the St. Lawrence River and then into the ocean drains a significant part of Turtle Island ( about 1 344 000 square kilometers!) and is very important to most of the people who live in North America. The Great Lakes watershed is one of the ten largest watersheds in the world!



Identify (label) each lake and identify (label) the local community on the map. Ask students to label and identify other places of interest that they are familiar with on their own map. Assist students to create a legend for their map. Remind students that before highways and roads were built on Turtle Island, we used the creeks, streams, ponds, rivers, lakes, and bays as our way of getting from one place to another. Our great great grandparents had a very good relationship with the waters that they lived by.

Provide students with time to work in the computer lab - see the Map of Canada website to explore the Great Lakes watershed -

<http://atlas.nrcan.gc.ca/site/francais/english/maps/environment/hydrology/drainagebasins>



Students complete a reflection in their journal. Suggested ideas for the reflection include:

Describe the watershed that you live in - what are the boundaries?  
Why is it important to learn about the different plants and animals that are part of your watershed?

What is your favourite place in our watershed? Describe it. Draw it.

Literacy Connection:

1. It takes about 350 years for a drop of water to flow from the top of Lake Superior to the Atlantic Ocean. Write a story about the drop of water and its adventures. Remember that when the water drop entered Lake Superior, Turtle Island was a very different place- the numbers of First Nations People who lived within the watershed was many times what they are today... non-native explorers and settlers had not yet arrived in Lake Superior. Everyone still lived a traditional life.

2. Reflect on the story of Paddle to the Sea (the journey of a tiny carved canoe from Lake Nipigon at the top of the Lake Superior watershed to the Atlantic Ocean from the 8th Challenge. Discuss some of the many changes that had come to the Great Lakes watershed at the time that Paddle made his journey (1940's). Ask the students if the changes have continued since then and list some of their answers.

# ECOREGIONS, WETLANDS AND DRAINAGE BASINS

## MAJOR WETLANDS



There are numerous wetlands in northern Ontario and elsewhere that are too small to show individually at this scale.

## NOTE:

Ecoregions are areas that exhibit broad ecological unity, based on such characteristics as climate, landforms, soils, vegetation, hydrology and wildlife.

## CANADIAN ECOREGIONS

- 1 Lake St. Joseph Plains
- 2 Nipigon Plains
- 3 Thunder Bay Plains
- 4 Superior Highlands
- 5 Matagami
- 6 Chapleau Plains
- 7 Nipissing
- 8 Hurontario
- 9 Erie
- 10 Saint Laurent

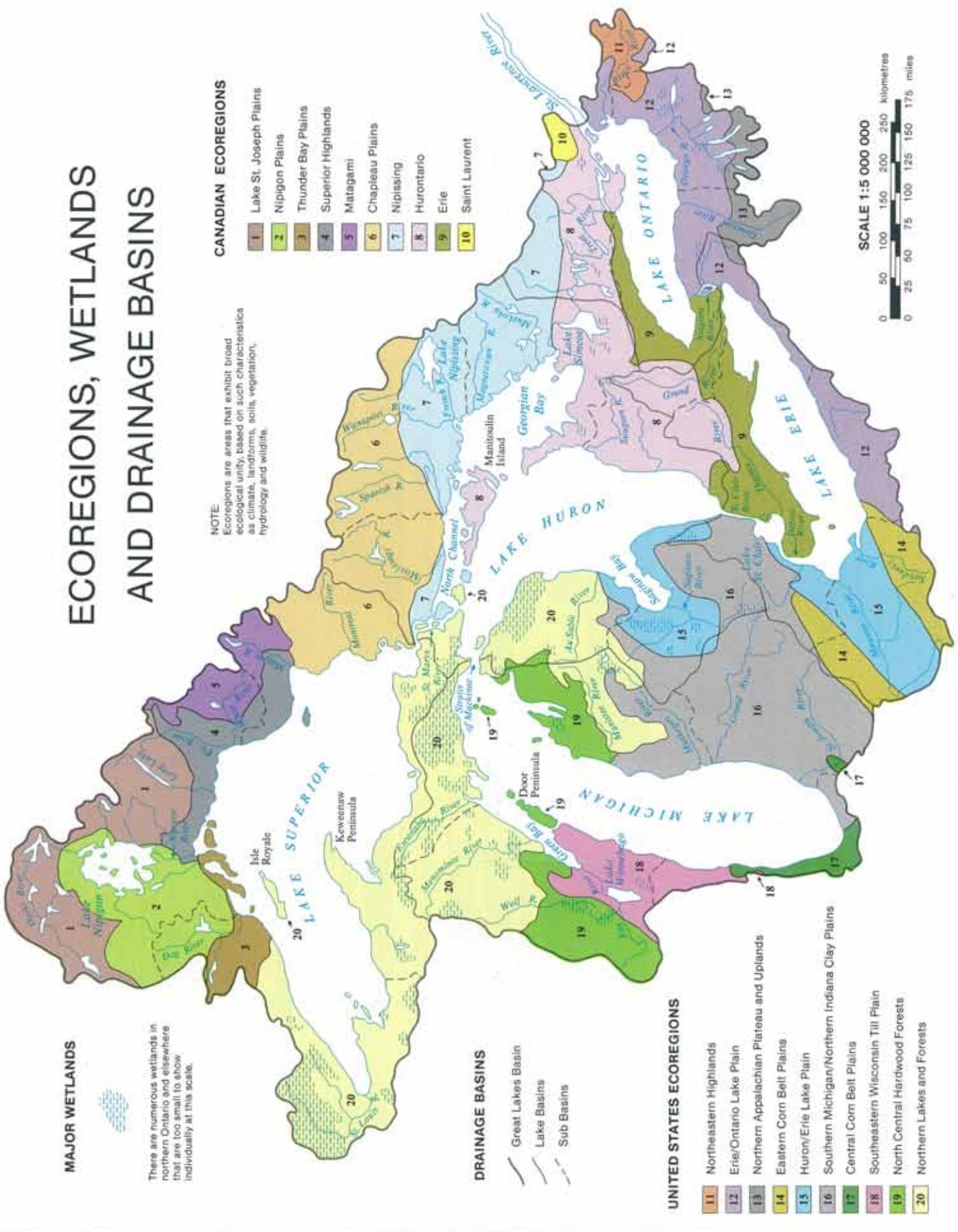
## DRAINAGE BASINS

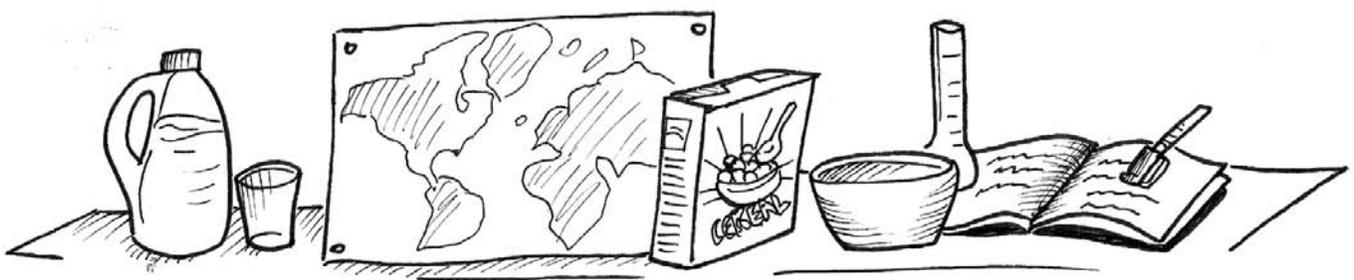
- Great Lakes Basin
- Lake Basins
- - - Sub Basins

## UNITED STATES ECOREGIONS

- 11 Northeastern Highlands
- 12 Erie/Ontario Lake Plain
- 13 Northern Appalachian Plateau and Uplands
- 14 Eastern Corn Belt Plains
- 15 Huron/Erie Lake Plain
- 16 Southern Michigan/Northern Indiana Clay Plains
- 17 Central Corn Belt Plains
- 18 Southeastern Wisconsin Till Plain
- 19 North Central Hardwood Forests
- 20 Northern Lakes and Forests

SCALE 1:5 000 000





### 3. WATER IN THE WORLD

The United Nations has declared the time from 2003-2015 the “Water for Life Decade” to raise awareness of our global responsibilities and ties to water. Each year there is a special focus on water and watersheds. Fresh water is becoming very difficult to find and pollution from industry and chemical contamination is making it hard for Mother Earth to purify the water. Even the water itself is experiencing increasing problems in completing its cycle the way it was instructed - acid rain and global warming are threatening Water’s ability to become clean through the water cycle. Other Nations of the Earth use much less water than we do in Turtle Island.

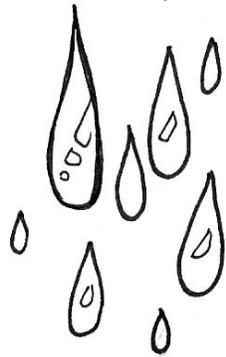
#### MATERIALS

freshwater resources in each continent - Table 1

journal

wall map of the world

one small box of breakfast cereal (oaties-type); 5 bowls; small cup or container per student or 4000 ml of juice or water; 5 graduated cylinders; small cups (one cup per student)



The United Nations provides information on water use and availability in other lands. In some countries the veins of Mother Earth have been depleted and are starting to dry up. This means that there is less water available in the watersheds for all living things to use. The loss of water affects the weather and the climate. It is difficult to live in a land without healthy water. This activity will show students how fresh water must be shared in different continents of the world.

Use a world map to review the location of the continents.

Share the information from Table 1 (see below). Discuss the differing amounts of water that are available and ask students if they think that there will be enough for everyone on each continent to share.

Divide the classroom into 5 areas - Turtle Island (North America); South America; Europe; Asia; Africa; Australia and the South Pacific. Label each continental area. Use the second table to divide the class into 5 groups - 3 students go to Turtle Island; 2 students to South America; 4 students to Europe; 15 students to Asia; 4 students to Africa and 1 student to Australia. (If there are more students, add another to Asia and Africa and then Europe). From the second table, Provide each continent with the appropriate food or liquid amounts. Students at each continent must share equally the amount of food or liquid that has been provided to them. Give students time to count out the food items or measure the liquids and then ask them to look around the room to see how the freshwater is distributed. Have each group reflect on the unequal distribution of water in the world. What kinds of changes would the students have to make in their lives if they had to live with less water? How might their lives be different? How would they treat fresh water if there was not very much to share? Record their thoughts on chart paper.

**TABLE 1**  
**AMOUNT OF FRESHWATER RESOURCES IN THE WORLD**

| CONTINENT                                    | FRESHWATER RESOURCES | POPULATION<br>( % of all the people in the world) |
|--|----------------------|---|
| TURTLE ISLAND<br>(North and Central America) | 15%                  | 8%  |
| SOUTH AMERICA                                | 26%                  | 6%  |
| EUROPE                                       | 8%                   | 13%   |
| AFRICA                                       | 11%                  | 13%   |
| ASIA   | 36%                  | 60%   |
| AUSTRALIA AND<br>THE SOUTH PACIFIC           | 5%                   | Less than 1%                                      |

**TABLE 2**  
**AMOUNT OF FRESHWATER RESOURCES IN THE WORLD - ACTIVITY**

| Continent - amount of cereal<br>pieces                  | Continent- amount of liquid                                 | Population / Student numbers |
|---|---|------------------------------|
| Turtle Island - 150 pcs                                 | 300 ml of liquid  | 3                            |
| S. America - 260 pcs                                    | 520 ml of liquid  | 2                            |
| Europe - 80 pcs   | 160 ml of liquid  | 4                            |
| Africa - 110 pcs (mark $\frac{1}{2}$ *)                 | 210 ml of liquid - mark $\frac{1}{2}$ with<br>food colour * | 4                            |
| Asia - 360 pcs - (mark $\frac{2}{3}$ rds *)             | 720 ml of liquid - mark $\frac{2}{3}$ with<br>food colour * | 15                           |
| Australia/ 50 pcs<br>S. Pacific - mark $\frac{1}{2}$ *) | 100 ml of liquid - mark $\frac{1}{2}$ with<br>food colour * | 1                            |

Use a different colour of oatie or colour the appropriate amount - this will reflect the amount of water that is not drinkable due to pollution on this continent.

Students reflect upon their learning - What are our responsibilities to the freshwater resources of the world when we live on Turtle Island and represent only 8 % of the population of the world? What is the significance of the population of Asia having access to only 36 % of the world's freshwater, but much of the water that is available is not drinkable? What kinds of adaptations to the lack of drinkable freshwater would you have to make if you lived in Asia?

## HOW BIG IS YOUR WATERMARK?



# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. JOURNAL REFLECTION

Think about the following questions and answer them in your journal.



Imagine what the Earth and the Water will be like when they have become healthy and clean again. Describe what you might see and illustrate your thoughts.

What can you do right now to help the Water and the Earth to become healthy and clean again? What will you do in the next ten years to help the Water and the Earth? What will you do in your life journey to help the Water and the Earth?

Students create a suitable symbol to attach to the cover of their duo-tang to show that they have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 9th scute on the turtle shell poster.

### 2. COMMITMENT STRING

Make a commitment string of beads (like a wampum belt) as a personal life commitment to look after the water.

#### MATERIALS

a variety of coloured and different sized beads (include several shades of blues and greens)  
a needle and a length of sinew (about 30 cm) for each student

Wampum belts are our way of making commitments and promises. Wampum beads are made from special shells.

When you have decided what actions you can take to help heal the water, you are ready to make a wampum commitment string. Your commitment string should include individual actions that will influence your family actions; your community's actions; and your nation's actions.

Work with some friends and record the ideas on a chart paper or the board. Remember - your individual/personal action commitments will have a positive effect on family actions; community actions; and nation actions.



1. From the list that has been made, assign various colours to represent individual/personal commitments to action.

2. Use a needle threaded with a length of sinew and a round piece of leather. Begin your commitment string by tying a knot at the end of their string, leaving about 3 cm of sinew hanging down that you will fray to represent your ancestors. Thread the round disk of leather to represent the earth. Now choose several beads that you will thread onto your string to represent the individual/personal commitment you are making to help the Earth to become healthy again. Then add a piece of leather cut into a water drop shape. Above the water drop you can add beads to represent that personal/individual commitment you are making to the water to help the water to become healthy again. Next, add a piece of leather cut into a circle with an X drawn across it - this divides the circle into four to remind you of the importance of living a balanced life - physical, spiritual, mind, emotional. Last, choose a special bead that will represent yourself, to thread onto the top of the string. Tie a knot into the top of the string to hold everything together.

3. When you are finished, share your commitment string with the class. The strings can be gathered together and tied to hang in the classroom for the remainder of the challenges and then displayed at the celebration (challenge 13). You will want to take your own string home to remind yourself of their promise you have made.

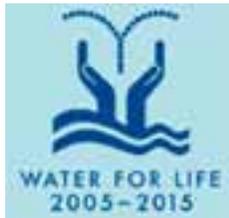
# ONE STEP MORE

DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

## 1. WATER CYCLE GAME

Have some fun! Try this interactive website for great games and activities about water and watersheds: [http://www.epa.gov/safewater/kids/flash/flash\\_watercycle.html](http://www.epa.gov/safewater/kids/flash/flash_watercycle.html)

Thirstin's water cycle game



## 2. CHILDRENS WORLD WATER FORUM

Get involved!

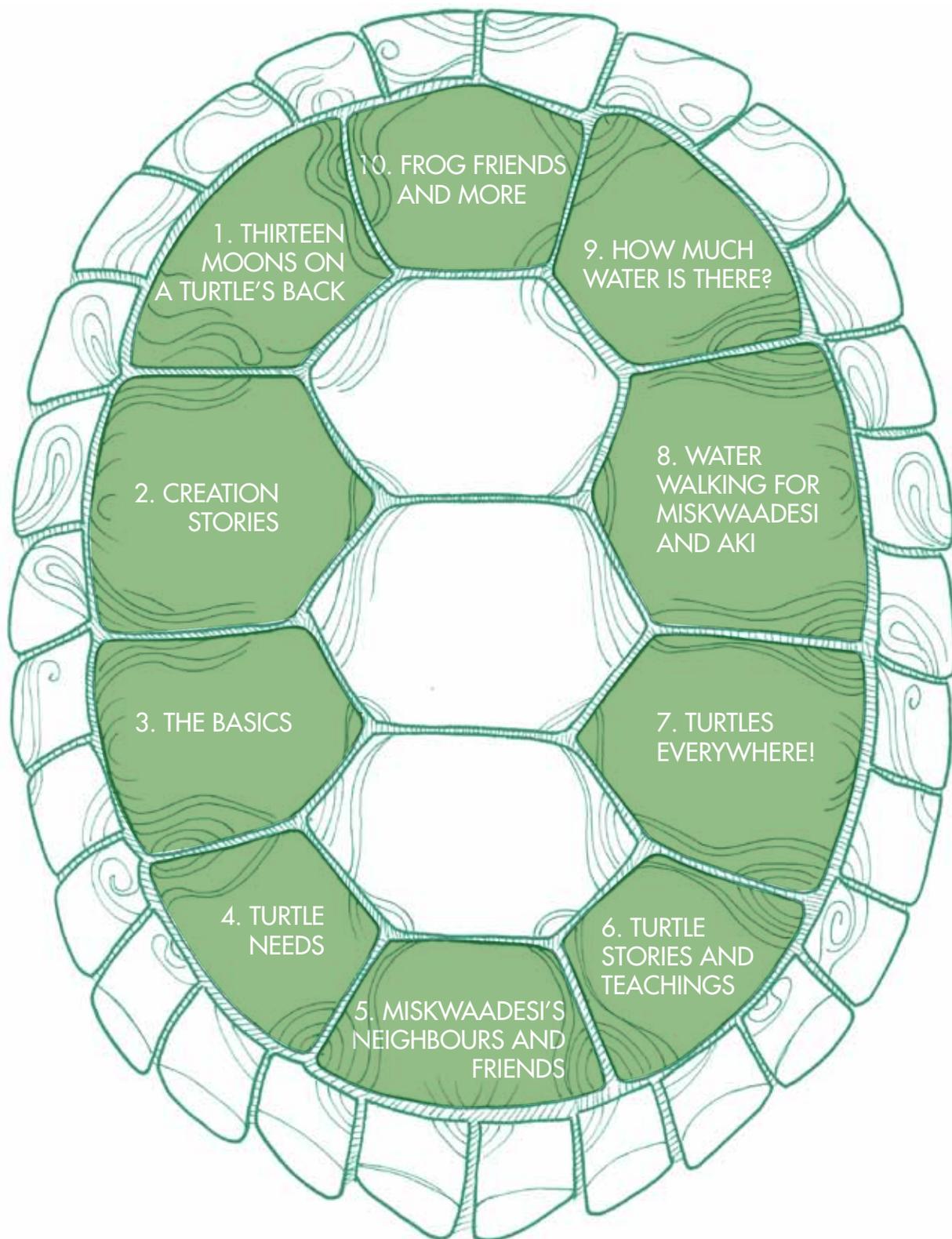
Go to the United Nations kids' website at <http://www.un.org/waterforlifedecade/kids.html> to find out what you can do to participate in the water-for-life-decade. Play the Water Alert interactive game to learn more.

Introduce the students to the 2nd Childrens' World Water Forum to show how children can become involved in helping solve the issues of global water needs. To view the world water forum website go to: [http://www.unicef.org/voy/explore/wes/explore\\_2706.html](http://www.unicef.org/voy/explore/wes/explore_2706.html)

Use the pages on this site as a literacy activity - bookmark the site and permit students to read and reflect upon the life stories and the "Childrens World Water Forum Call To Action" (see below). Go over the Call to Action requests from the Children and ask the students to think about how each action would affect them. Can the students think of any other Actions that would reflect their own community's water needs? Encourage them to add to the list.

Students may choose one of the actions and make a postcard to illustrate it - these action postcards could be displayed within the school around the Call to Action. What would the students say and do if they are chosen to be part of the 3rd Childrens World Water Forum?





1. THIRTEEN  
MOONS ON  
A TURTLE'S BACK

10. FROG FRIENDS  
AND MORE

9. HOW MUCH  
WATER IS THERE?

2. CREATION  
STORIES

8. WATER  
WALKING FOR  
MISKWAADESI  
AND AKI

3. THE BASICS

7. TURTLES  
EVERYWHERE!

4. TURTLE  
NEEDS

6. TURTLE  
STORIES AND  
TEACHINGS

5. MISKWAADESI'S  
NEIGHBOURS AND  
FRIENDS

# THE TENTH CHALLENGE

WALKING WITH MISKWAADESI

# THE TENTH CHALLENGE

## FROG FRIENDS AND MORE

Who lives in your neighbourhood wetland?

How healthy are our wet places- could Miskwaadesi live there?

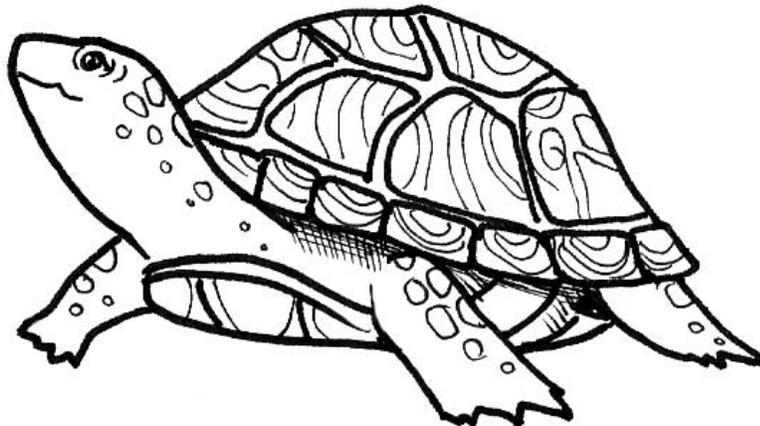
What role does the frog play in keeping a wetland healthy?

Go out and listen for frogs and record when you hear them welcome the new season with their songs.

Complete the pond study and give your wetland its very own health report card.

*"...my 10th challenge is to come down to the water. It is spring and the first birds are coming back. The frogs are beginning to sing their thanksgiving song of joy. Come down to the water. Listen to the frogs - what are they saying? Record the frog clans that live in your waterways. Look at the little creatures who live in and around the water. Come down to the water and become close to the spirit of the water and the land."*

Miskwaadesi's 10th challenge.



# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY   | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                        |
|---------------------|--------------------------------|----------------------------------|
| Getting Ready to Go | 4s4, 4s10, 4s6                 | Planning and gathering equipment |
| A Visit to the Pond | 4s21, 4s15, 4s6                | Field trip                       |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY   | ONTARIO CURRICULUM EXPECTATION | WORKSHEET                       |
|---------------------|--------------------------------|---------------------------------|
| Frog Watch          | 4s6, 4s19                      | Field trip and survey worksheet |
| Wetland Report Card | 4s4, 4s14                      | Chart/table                     |
| Journal Reflection  | 4s5, 4s15                      |                                 |

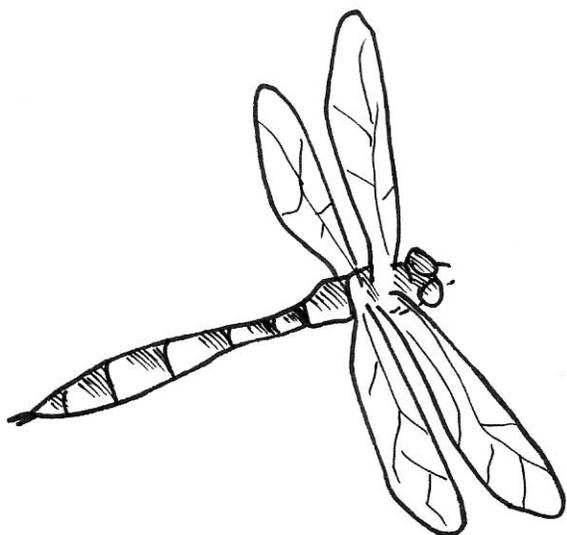
## ONE STEP MORE (individual student optional adventures in learning)

1. Monitor frog calls for two week

### WORD WALL:

amphibian, invertebrate, crayfish, damselfly, sowbug, planarian, Mayfly, caddisfly, waterpenny, stonefly, dobsonfly, crayfish, clam, crane fly, beetle, leech, midge, worm, pouch snail, blackfly, larva

# LINKS TO OTHER CURRICULUM



## 10<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Relationship – The Waters – pg 78

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

ADOPT-A-POND CURRICULUM LINK Frogcall CD

<http://www.torontozoo.com/adoptapond/frogs.asp>

Frogwatch Ontario and frog calls

[http://www.torontozoo.com/adoptapond/  
Aboutamphibians.asp?am=5](http://www.torontozoo.com/adoptapond/Aboutamphibians.asp?am=5)

For individual species call sounds



**<http://www.turtleislandconservation.com>**

Frog calls in Anishinaabe and Haudenosaunee

**<http://torontozoo.com/adoptapond/FrogwatchOntario.asp>**

**<http://www.naturewatch.ca/english/frogwatch/on/intro.html>**

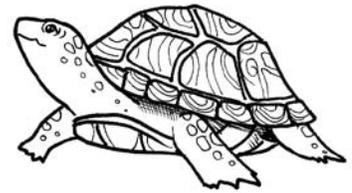
Frogwatch website

**<http://www.naturewatch.ca/cgi-bin/quiz/step1.asp?language=english>**

Amphibian and Reptile online quiz - check this out!!

# KOKOM ANNIE'S JOURNAL

## COME DOWN TO THE WATER



*"Kokom Annie - my 10th challenge is to come down to the water. It is spring and the first birds are coming back. The frogs are beginning to sing their thanksgiving song of joy. Come down to the water. Listen to the frogs - what are they saying? Record the frog clans that live in your waterways. Look at the little creatures who live in and around the water. Come down to the water and become close to the spirit of the water and the land."*

Kokom Annie went to find her rubber boots in the back closet. There they were standing waiting in the corner. A home-made net and a white basin from the buck store were sitting by the door. Auntie Lily and Waubun were coming down the path. It was a bright spring afternoon in Wasauksing and it was time to count the frogs.

"Ahniin Lily, Ahniin Waubun. What a beautiful day! Look at the little poster that I got at the band office from the environment department - it shows all the frogs that we might see and it's laminated too so it won't get wet. I listened to the frog call tape last night - did you know that the children at the school are going to listen to it this week in their Ojibway language class- the tape is in Ojibway!"

"Ah-ho Kokom. Good to know. I was asked to take some of the grade 4's out for a short walk down to the edge of the water every afternoon next week to listen for frogs. The students are going to listen to the tape and practice filling in the papers. They are really happy to be included in the Frogwatch program. Hey, I like that basin you found - it's white so we will be able to see all those little swimmers that we catch in our net."



"I brought my bug book and some bush tea in case we get thirsty," said Lily. "I am anxious to see if I can find some more medicine plants near the shore because I have used up all of my flu and cold medicine that we picked last year. Let's get going! We have to practice so that we will be good at this before the grade 4's come down to the water with us next week."

Kokom Annie, Lily and Waubun walked down the path to the road and turned towards the water. Kokom had brought tobacco and she spoke about the importance of putting tobacco on the water to thank and honour the water. Together they set their nets and basins and notebooks on the big mishomis rock that waited for them at the edge of the marsh. Soon they were busy scooping marsh water into the basin to look for signs of life in the water. The sun shone down on the group as they worked away. There was lots of laughter and chatting as the work was being done. Waubun took some pictures to send to Nodin and Seegwun in the city.

As they scooped they counted the tiny insect babies that they saw. Soon they had their report card finished. They had found lots of insects from the B category and a few from A and C. When they looked at their chart they decided that the big wetland would get a "B". That was pretty good news. It meant that the wetland was fairly healthy and maybe this spring it would need a litter cleanup followed by some water testing in the summer. From the far side of the marsh came the 'peep, peep' of the



spring peepers calling and singing a song of joy and thanksgiving for the return of the spring. The marsh was waking up! Miskwaadesi would soon wake and swim up from the mud and the plant roots at the bottom of the marsh. Another season of life had come back to the watershed.

"Next week when we come back, I will ask Waubun to bring his i-pod and that little digital recorder so that we can record some of the sounds of spring in our wetland" thought Kokom as she gently returned the insect babies to the water and rinsed out the basin. "I will have to listen to those frog tapes a few more times so that I am ready when we go walking next week. This is going to be fun, listening for frogs while we are out walking for our health. That's what I really like about the return of spring- the weather is nice in the evenings for walking."

Kokom sat on the mishomis rock for a few moments listening and watching the signs of spring and thinking of Miskwaadesi.

# TEACHER BACKGROUND

Teachers are encouraged to explore the Adopt-a-Pond's Wetland Curriculum for background information on amphibians see:

<http://www.torontozoo.com/adoptapond/wetland-Curr/d1-amphib-background.asp>

Obtain an English frog call CD from the Toronto Zoo's Adopt-a-Pond programme by sending an email request to: [aap@torontozoo.com](mailto:aap@torontozoo.com) or Ojibway or Mohawk language frog call CD from the Turtle Island Conservation programme by sending an email request to [turtleisland@torontozoo.ca](mailto:turtleisland@torontozoo.ca).

There are several teachings and stories about frogs and toads in the traditions of the First Nations see: <http://www.firstpeople.us/american-indian/results.html?cx=partner-pub-6193843553852498%3Ac5cvsj-6w5k&cof=FORID%3A10&ie=ISO-8859-1&q=frog&sa=Search#1083> for several pages of frog stories from all over Turtle Island.

This particular website is an excellent one for student research. Download several of the teachings and stories and use them as literacy activities in the classroom.

The website <http://www.nativeonline.com/legends.html> also contains some frog teachings to share with students.

Frogs, toads and salamanders are three species that share habitat with Miskwaadesi. Miskwaadesi speaks on behalf of the frogs and toads in the watershed, awakening us to the difficulties experienced by the amphibians in our waterways today. Because they live both on land and in water, amphibians are unique to the water world. They must have clean fresh water to thrive and survive, much like the turtles. Scientists have expressed concern with the decline worldwide in amphibian populations and this decline seems to be parallel to the decline in turtle species and numbers. Since both groups of animals depend so much on the water, it is thought that water issues have caused the decline in both species.

The 10th challenge asks us to investigate the water world by conducting a shoreline study and by participating in the FrogWatch program that monitors frog populations. Students are provided with amphibian call sounds that they can learn before the field trip into the watershed.

Teachers are asked to develop within their students a respect for the tiny insects and plants that make their homes in the water world. Students should be cautioned to stay out of the water, particularly at this time of the year when many of the insects and small animals have just emerged from their winter resting time and there are many tiny eggs and insect larvae in the mud/clay at the bottom of the water. Students need to understand the importance of scooping very carefully with their dip nets to minimize damage to the life in the water and they are asked to show respect to the small macroinvertebrates that they see in the basins and buckets.

Teachers are also asked to return the insects and small animals and plants back into their home with care and consideration when students have finished looking at them.

Teachers are encouraged to give students a few moments to sit quietly on their own by the edge of the water to think about the healing power of water (see student reflection for the water teaching).

Teachers may use the following website for background information on a simple way of determining the health of the water by observing the little creatures that spend so much of their life in the water - <http://www.dep.state.fl.us/water/bioassess/bugind.htm>  
Click on the 3 bug identification cards to view outline pix of the group one taxa (A+ on the Report Card); group two taxa (B on the Report Card) and group three taxa (C on the Report Card). Download each page, print, and laminate for student use on the field trip.

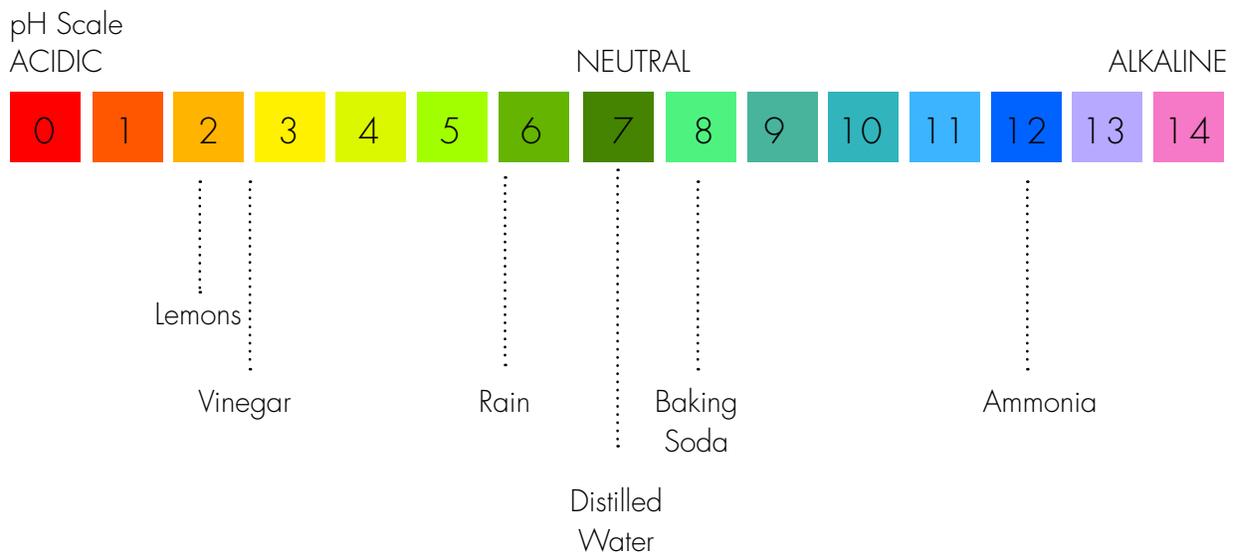
Teachers may also visit this website to view levels of taxa that indicate healthy waterways.  
<http://www.state.ky.us/nrepc/water/biindpg.htm>.

### MY WATERSHED REPORT CARD - HOW HEALTHY IS IT?

| A+         | B                              | C              |
|------------|--------------------------------|----------------|
| Mayfly     | Crayfish                       |                |
| Caddisfly  | Clam                           | Leech          |
| Waterpenny | Crane fly                      | Midge larva    |
| Planarian  | Sowbug                         | Aquatic Worm   |
| Dobsonfly  | Whirligig Beetle               | Pouch Snail    |
| Stonefly   | Damselfly and Dragonfly larvae | Blackfly larva |



# MATERIALS FOR FIELD TRIP



pH water test strips (available with swimming pool supplies) - one per group. pH will tell you how acidic or basic the water is. Some animal and plant species are very sensitive to a high acidic pH; others are very sensitive to a high alkaline pH.

benthic cards - powerpoint presentation - benthic life in a wetland (macroinvertebrates) compiled by Lynette Dawson, Environmental Water Quality/technician.

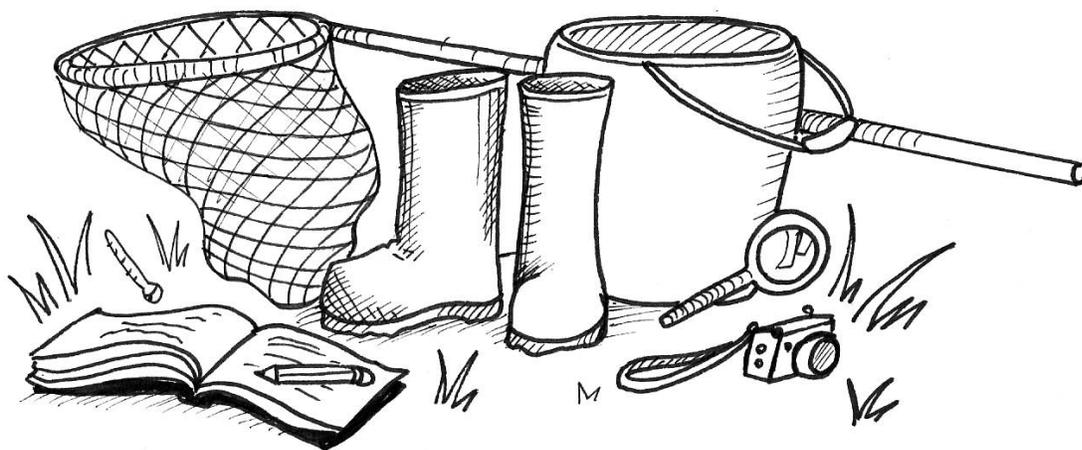
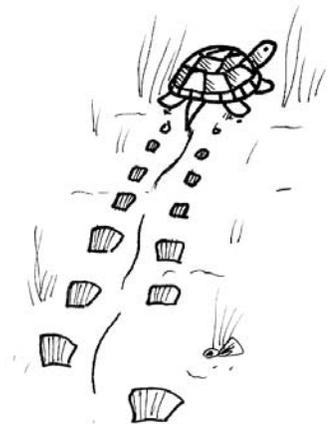
nets - pond nets or simple nets made from coat hangers formed into a circle with old panty hose (nylon stockings) pulled over top of the hanger to form a net - one per group

white basin (available at dollar-type stores) - one per group

laminated copy of macroinvertebrates for student identification

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. GETTING READY TO GO

Plan a field trip to the wetland/water area.

Make sure all trip forms have been completed.

Students will need rubber boots or suitable footwear.

Take one thermometer to take the water and air temperature.

Prepare for groups of 3-4 students.

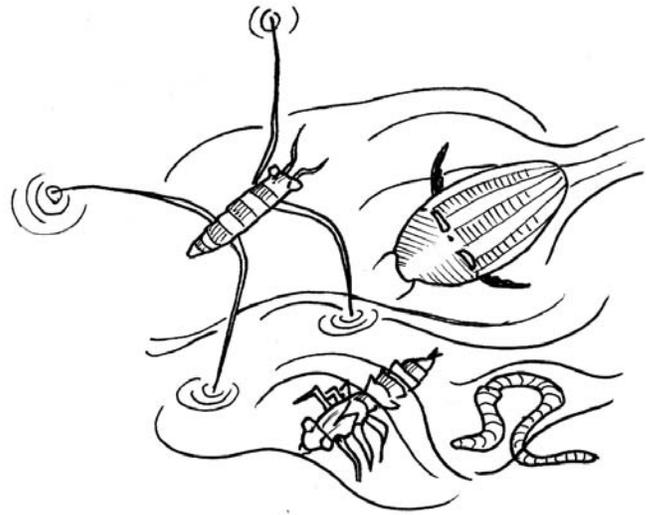
Each group will need 1 white basin, a net, laminated 'critter' card or pond identification book; small magnifying glass; student journals and pencils; camera (optional). Record frog calls in a small notebook or journal.

To make your own nets see <http://www.torontozoo.com/adoptapond/wetland-Curr/g1-field.asp> "Wetland Curriculum Resources Unit 7: Get Wet"

To test pH of the water (a good indicator of what species can/cannot live in the water) get a simple pH test kit from a pool supply store or hardware store.

Before the trip, ask students to predict what they might find at the waterway - evidence of animal life (visual sightings; sounds; evidence of nibbles and chews on plants, etc; evidence of human interaction with the waterway (positive and negative).

When students arrive at the study area, give them a few moments to look around for those evidences of life in the water world. What kind of work might need to be done to improve the water for the plants and animals, such as cleaning up trash and litter.



## 2. A VISIT TO THE POND

When the class arrives at the water's edge, students should use their senses to observe the wetland area. Look, listen, smell, feel, but try not to talk in a loud voice because human voices carry over the water and can frighten the animals that live around and in the water. Students should cup their hands behind their ears ("make animal ears") and quietly turn their faces to scan the wetland area. The sounds will be magnified significantly. Students can record what they hear and see.

Many animals and insects will notice that there are humans about and the animals will become quiet. If students sit down lower than the level of cattails or grasses/shrubs growing around the water, the animals will begin to move about again and students will have an opportunity to hear and possibly see more species.

Sit quietly and listen for the frogs to call. If any frogs are seen, record them for the Frogwatch tally.

Ask students to look around and to think of ways in which the animals and plants in this wet community depend upon one another, and remind students to look for evidence of biodiversity within the water community.

When students have had a chance to look and listen, share the equipment that will be needed for the water survey.

Each group of students needs to set up their basin in a safe and secure area near the water. Half fill the basin with water from the wetland. Each student should take a turn dipping their net into the water (try to scoop along the bottom where many of the insect babies live).

Carefully empty the contents of the net into the basin. Use the mini field guides to identify the insects that are seen.

Do not keep the insects out of the water environment for very long. Some insects can crawl out of the water/basin. Return all water and living critters to the water in a good way when everyone in the group has had an opportunity to view the life in the water.

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. FROG WATCH

Read some of the frog and toad teachings and legends to begin to develop an understanding of how important these little amphibian brothers and sisters have been to our First Nations. Look at this website for some of the teachings:

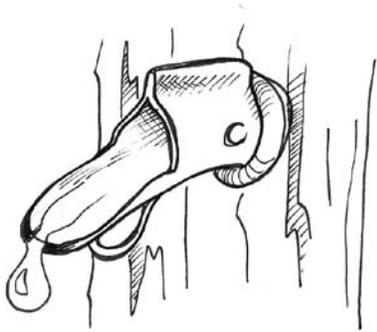
<http://www.firstpeople.us/FP-Html-Legends/> At this site, type “frog” in the search engine and you will see many teachings and stories about frogs from all around Turtle Island. Read some. Share them with a friend. Which one did you like the best?

Read the article on “Frog” (see worksheet 10b) to find out about the First Nations peoples of the Northwest Coast and their relationship with frogs.

Now, it's time to take part in FROG WATCH - this is your opportunity to become involved in an active project that is looking and listening for signs and sounds of frogs and toads. Have you listened to the tape or to the frog calls on the internet? Do you have your journal or a small notebook handy? Are you dressed for the cooler weather of the early spring? As the weather becomes warm enough for the spring peepers to begin to sing, you will also hear several bird species that are returning to your part of Turtle Island. You can keep track of the bird songs that you hear as well.



One of the very first birds of spring to return to the waterways is the beautiful red winged blackbird. The male blackbirds arrive when there is still ice on the ponds and waterways, and some of the old people say that it is the blackbirds' calling that wakes up those little spring peepers and encourages them to start climbing out of their mud beds to join the new season.



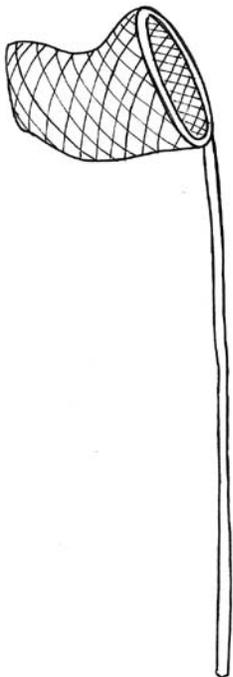
Another one of our teachings says that when the spring peepers start to call it is time to take the spiles out of the maple trees because sap season is coming to an end. Scientists will tell us that this teaching is very accurate - when the temperature has warmed up enough in the waterways and wetlands that the first frog singers come out, the sap in the maple trees is beginning to get cloudy and the sweetness is fading from the sap.

Another teaching says that the tiny little spring peeper was given the great responsibility to wake up his frog and toad relations with his beautiful voice. Just as the maple tree is the leader of the trees, and indicates when the seasons are changing, so is the little humble spring peeper, welcoming the spring and waking up the water world. Some people say that the song of the spring peeper guides the early insect-eating birds (snipe or woodcock and nighthawks) back to the meadows and edges of the waterways.

Record the sounds that you hear. Record the time that you hear them and take the temperature of the air and the water and record that as well.

## 2. MY WETLAND REPORT CARD

Use worksheet 10a to help with this.



Gather up some of the small insects that live in the water. Scoop them into the white basin that you are using. Use your i.d. sheets to identify which insect larvae and adults you have found. From your sample you will be able to determine if your waterway is and A, B, or C depending on the species that you have found. To get an A on the Wetland Report Card, the water has to have lots of oxygen in it. To get a B, the water needs to have a good supply of oxygen. If your waterway only gets a C that means that there is not very much oxygen in the water for the little ones to breathe. Water that is oxygen-deprived cannot support much life and is not considered very healthy. Sometimes a lack of oxygen means that the water is not flowing (stagnant) or that there is some kind of pollutant in the water that is using up the available oxygen.

How does your water measure up?



### 3. JOURNAL REFLECTION

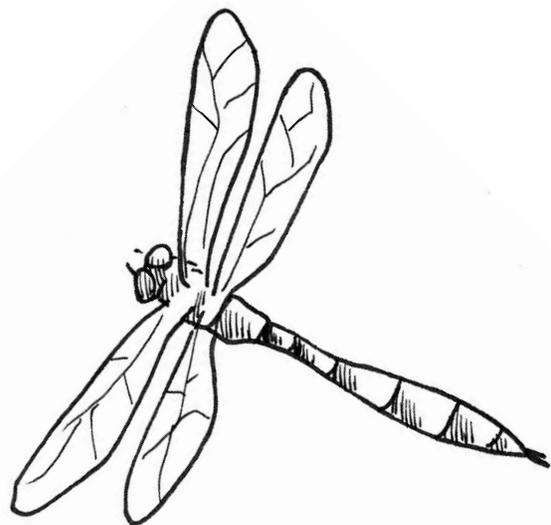
What did you enjoy the most about your trip to the water today?

What do you think the frogs, toads, and birds are saying when they sing?

Were you surprised with the report card mark that your waterway received? If it is healthy, how can you keep it that way, and if it is not, how can you make it a healthier place for everything to live?

Find a quiet place to sit by the edge of the water - somewhere that you can focus on the water and its healing powers. There is a teaching that encourages us to go down to running or moving water when things are troubling or bothering you. The teaching says that the sound of the water flowing is good for you. Talk to the water. Tell it what is bothering or troubling you. Put down your tobacco as you do this, and the water will take away those troubles and the water will sooth and comfort you. When you leave the water, you will have a new outlook or perspective and you will be at peace. What thoughts do you have after you have had an opportunity to sit by the water?

Create a suitable symbol to attach to the cover of your duo-tang to show that you have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 10th scute on the turtle shell poster.



# ONE STEP MORE

DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

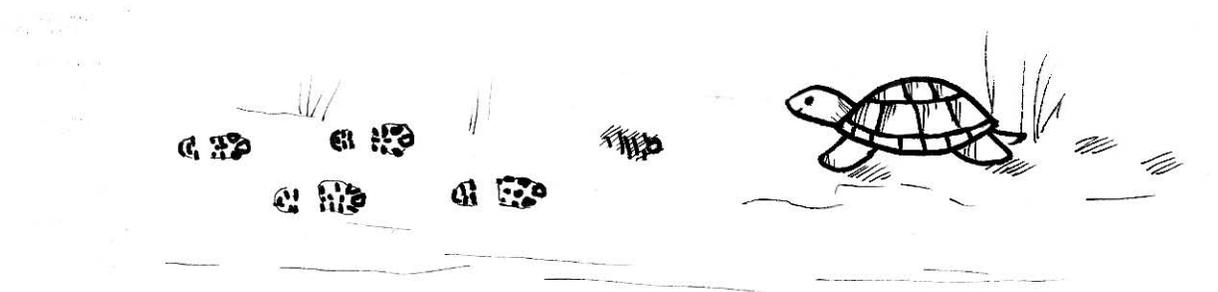


## 1. MONITOR FROG CALLS FOR TWO WEEKS

Get your frog call CD and Amphibians of Ontario Identifier guides in English, Ojibway or Mohawk from Adopt-A-Pond [aap@torontozoo.com](mailto:aap@torontozoo.com) or Turtle Island Conservation at [turtleisland@torontozoo.ca](mailto:turtleisland@torontozoo.ca).

Going out for a walk you will begin to notice patterns - such as, the frogs start to call in the late afternoon to early evening and continue until dawn or until the temperature gets too cold. There is a definite order in the way the frogs wake up in the spring and start to call. Keep careful track of which days each frog can be heard. Keep the information for next year and compare the data. What do you notice? Give a copy of this year's data to the next class and challenge them to add to your information.

<http://www.torontozoo.com/adoptapond/wetland-Curr/d1-amphib-background.asp>



# Student Worksheet

## 10A - WETLAND REPORT CARD



WORK WITH YOUR GROUP. Scoop your net into the water. Carefully place everything from the net into the basin. What did you find? Record the numbers of each insect in your basin on your report card. When you are finished, carefully return all of the critters to the water. Make sure that any mud or sand from the bottom also goes back into the water! Compare your report card with the other groups.

### A+

LOTS OF OXYGEN  
AND CLEAN WATER

### B

NOT AS MUCH  
OXYGEN

### C

VERY LITTLE OXYGEN  
WATER MAYBE POLLUTED

Mayfly

Crayfish

Caddisfly

Clam

Leech

Waterpenny

Crane-fly

Midge larva

Planarian

Sowbug

Aquatic Worm

Dobsonfly

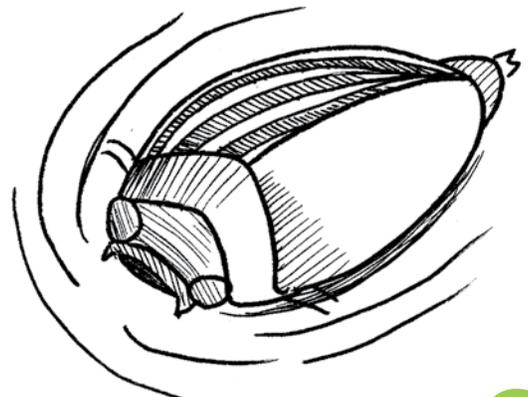
Whirligig Beetle

Pouch Snail

Stonefly

Damselfly and  
Dragonfly larvae

Blackfly larva



# Student Worksheet

## 10A - WETLAND REPORT CARD - IDENTIFICATION



**A+**

**B**

**C**

Mayfly nymph



Crayfish



Caddisfly larva



Clams



Leeches



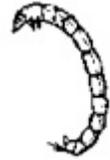
Water penny larva



Crane fly larva



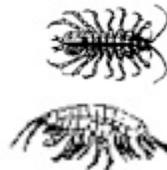
Midge larvae



Snail



Sowbug and Scuds



Aquatic Worm



Dobsonfly larva



Beetle larvae



Pouch Snail



Stonefly nymph



Damselfly larvae



Blackfly larva



Riffle Beetle



Dragonfly larvae



# Student Worksheet

10B - FROG 1/3



## FROG

"Frog is a creature of great importance in Northwest Coast art and culture. As a creature that lives in two worlds, water and land, Frog is revered for his adaptability, knowledge and power to traverse worlds and inhabit both natural and supernatural realms. Frogs are primary spirit helpers of shamans. A great communicator, frog often represents the common ground or voice of the people. Frog's songs are believed to contain diving power and magic. When show in art as touching or sharing his tongue with another creature, Frog represents an exchange of knowledge and power. Frog designs are commonly used as decorative elements, so that frog faces, for example, peek out from another creature's ears, mouth, or hands. In symbolic terms the emergence of frog from these orifices may represent an eruption of magic and unseen interior and other worlds.

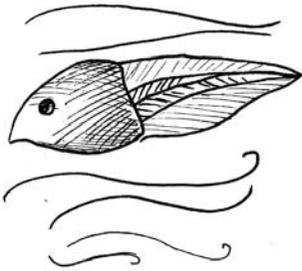
# Student Worksheet

10B - FROG (CONTINUED 2/3)

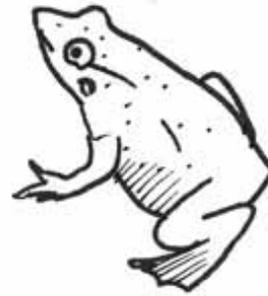


Frog is often associated with copper and great wealth. Legendary Haida princes are said to have attended feasts wearing necklace chains made of living frogs. The Haida carved Frog on house poles to prevent them from falling over.

They also included them in many other carvings, from feast bowls to totem poles. Frogs on Haida Gwaii B.C.'s Queen Charlotte Islands, are actually northern toads. One Haida name for Frog (toad) is "crab of the woods".



Many legends are attached to this whimsical little animal. The Tlingit of Alaska tell of it's distribution in a story about a chief's daughter who made fun of Frog. She was then lured into his lake by Frog in human form, who then married her. Her angry parents drained the lake and scattered Frogs in every direction. Some B.C. First nations told that Frog announces the end of the winter dance season. It is said that when the last snowflakes of winter touch the ground they turn into Frogs. Then the Native people know that there is only six weeks until the Salmon begin returning to the rivers and summer begins.

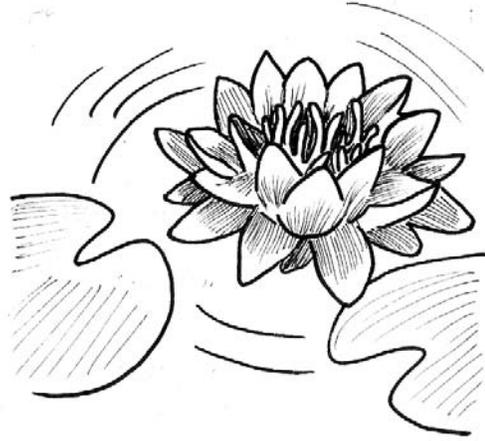


# Student Worksheet

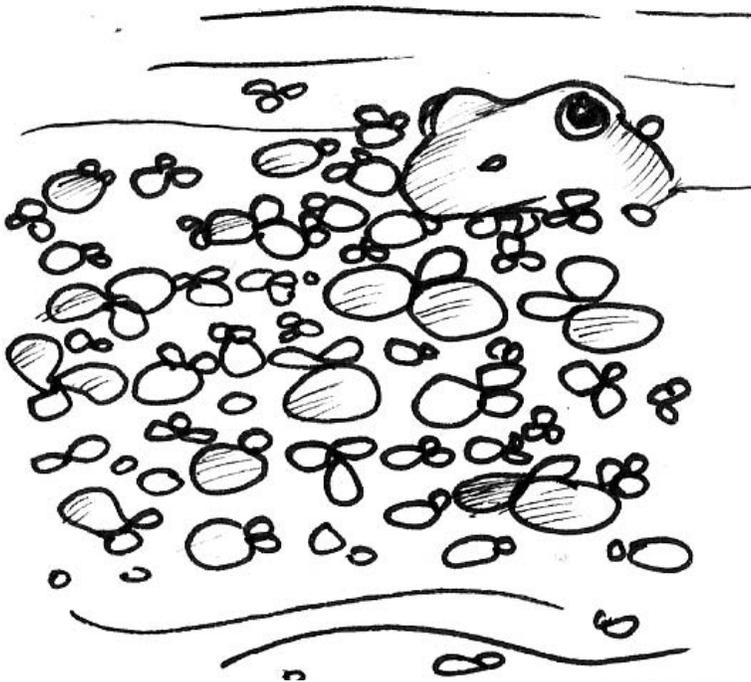
## 10B - FROG (CONTINUED 3/3)



One story about Frog tells he was volcano woman's only child. One day frog saw evil men hunting only for pleasure rather than necessity. When the men noticed Frog they killed him. Volcano woman erupted in her sorrow and fury, crying great tears of lava. She destroyed the earth, but in time it would be born again even stronger and more fertile.



Yet another Frog legend says a village was starving because no one could catch any fish or game, so a warrior went out to try to find some food. No one had been successful for a long time. The warrior met a bird who instructed him to follow, so he could help him. The bird brought him to a frog, who let the warrior wear his skin. With the Frog skin, the warrior was able to get enough food for the whole village but, as time passed, the warrior was fully transformed into a Frog, and he went to sea. There he could live and catch fish and other seafood. Until his days were no longer, he provided these foods to his village."



---

Source: Hill's Native Art

# Student Worksheet

10C - FROG CALLS IN MY WETLAND



1. What frogs did you hear calling?

.....  
.....

2. Where were they calling from?

.....  
.....

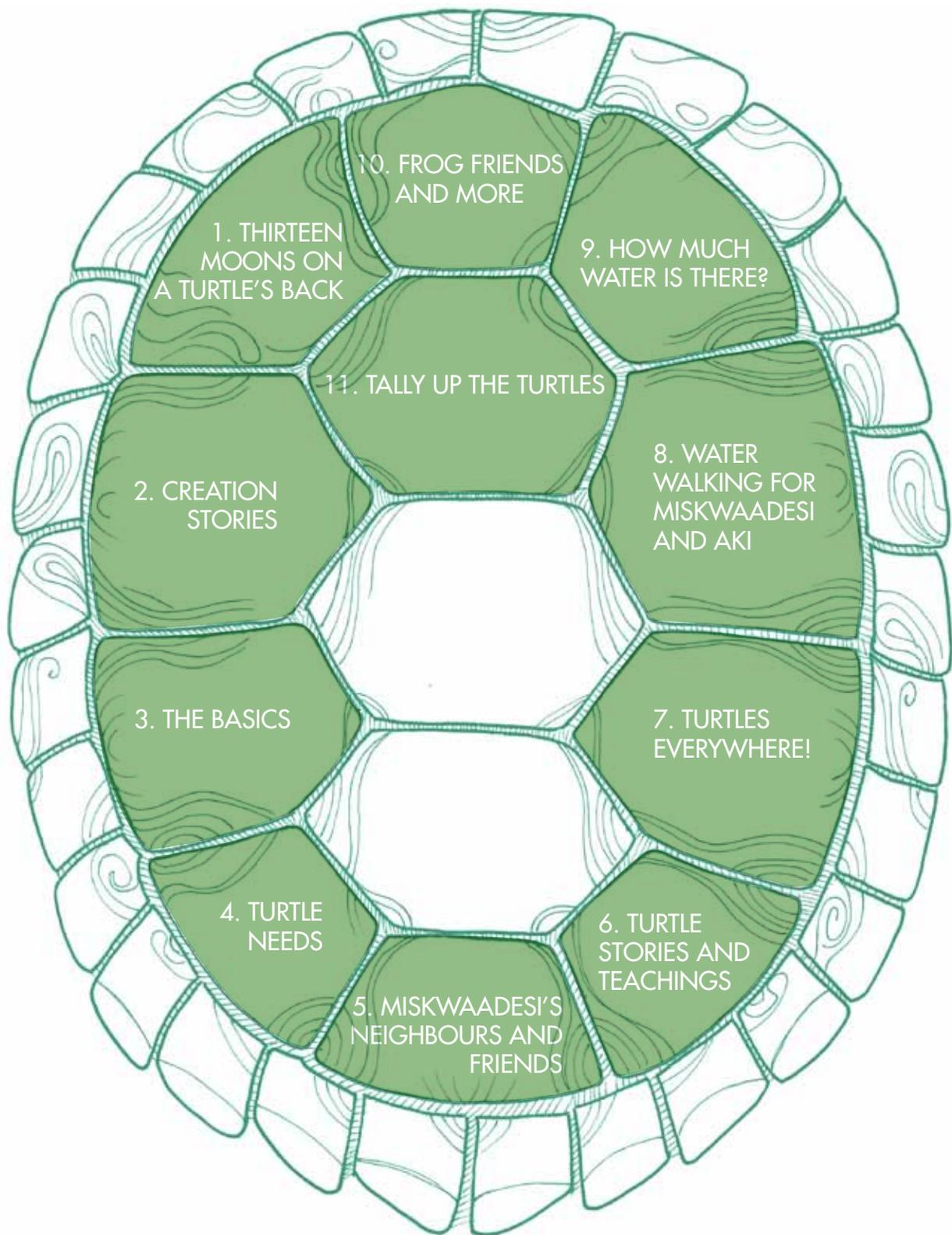
3. What did they sound like?

.....  
.....

4. Write down your reflections here...

.....  
.....  
.....  
.....





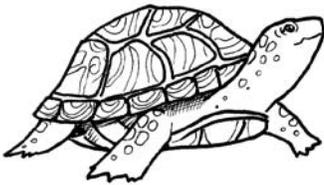
# THE ELEVENTH CHALLENGE

WALKING WITH MISKWAADESI

# THE ELEVENTH CHALLENGE

## TALLY UP THE TURTLES

How many turtles live in your wetland?  
Where can you see turtles in your neighbourhood?  
Take the Turtle Tally and get active!



*"Come down to the water, Kokom. Bring your young ones with you.*

*Show them how they can help the turtle clan cousins.*

*Find the nesting sites and try to protect them from the skunks and raccoons who have a big appetite for tasty turtle eggs.*

*Count the different turtle species that they see in the community.*

*If they find a turtle that has been hurt by a car, try to fix its shell and put it back into its home habitat so that it can continue its journey.*

*The turtle people need the help of the humans at this time especially because we are moving around a lot during the Berry Moon.*

*Come down to the water Kokom Annie and visit with me and my relatives. This is my 11th challenge - count all of the turtle species in your waters."*

Miskwaadesi's 11th challenge.

# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY                  | ONTARIO CURRICULUM EXPECTATION | WORKSHEET         |
|------------------------------------|--------------------------------|-------------------|
| Getting Ready for the Turtle Tally | 4e52, 4s5, 4s6                 | Planning exercise |
| Turtle Tally                       | 4s6, 4s8, 4s15, 4s12           | Field trip        |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

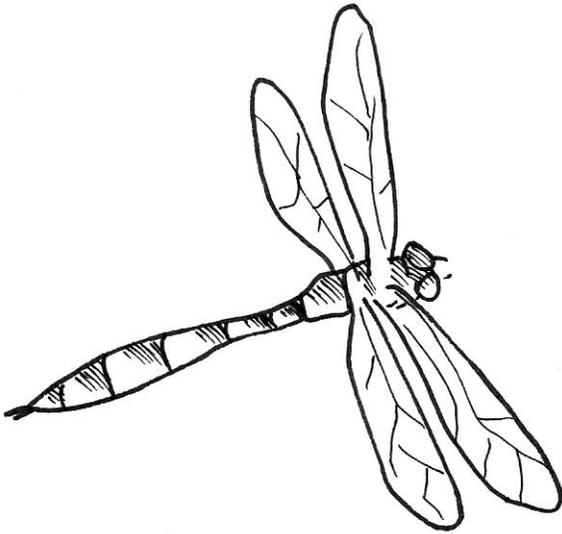
| TITLE OF ACTIVITY  | ONTARIO CURRICULUM EXPECTATION | WORKSHEET        |
|--------------------|--------------------------------|------------------|
| Turtle Wampum      | 4a43, 4a44                     | Stringing wampum |
| Journal Reflection | 4a53                           | Writing          |

## ONE STEP MORE (individual student optional adventures in learning)

1. Protecting the nests/turtle crossings

**WORD WALL:** tally, mortality, conservation,

# LINKS TO OTHER CURRICULUM



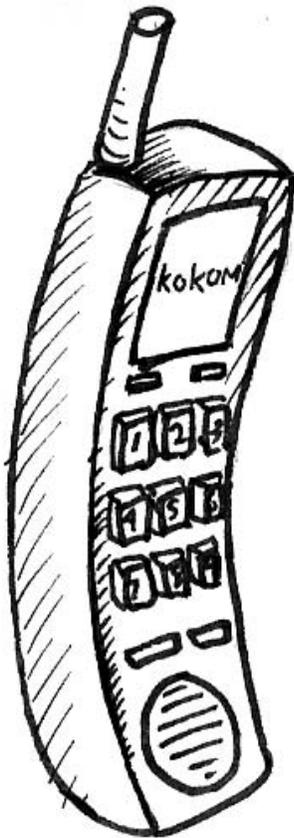
## 11<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Reciprocity – Indigenous Ways of Knowing – pg 53

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

# KOKOM ANNIE'S JOURNAL

## TURTLE TALLY



Seegwun was on the phone from the city and her voice sounded so excited. "Kokom Annie - guess what Nodin and I found when we were looking at the Toronto Zoo's Adopt-a-Pond website at school yesterday? They need communities to go out and watch for turtles. It's called the Turtle Tally. The website said that we need to go walking and looking in June when the turtles are out and about during egg-laying time. Berry Moon starts next week, Kokom. Can we come up and take a walk with you out to the wetland? Maybe we will find some of Miskwaadesi's friends in the wetland. Uncle Bud is coming up to the reserve from the city and he said that he will drive us if you say that it's okay to stay with you."

Kokom Annie was happy to hear from her grandchildren. It was always a good time when they came home from the city to see her. She missed them especially during the long winter. Now spring was almost over and soon the kids would be coming up for the summer to stay at Kokom's little house.

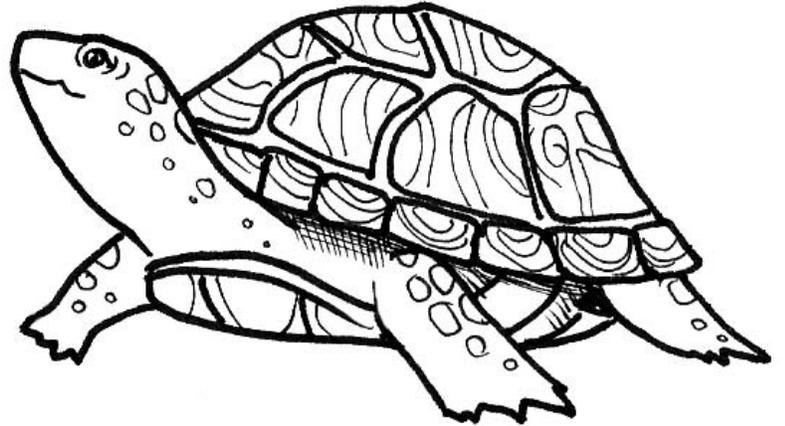
"Hey-hey! How kind of Uncle Bud. If your mom says it's okay with her, then come on. The women in the "Friends of the Turtle" walking group have been out and about every afternoon and on some evenings too, and we have been looking and listening for signs of spring while we walk for our health. You will be surprised with some of

the things that we have seen and heard as the marsh and the wetland woke up this spring - red-winged blackbirds, mallards, frogs singing- even a couple of geese down by the open area in the little bay. We would welcome some more eyes and ears. Tell me more," said Kokom Annie.

Seegwun had copied the turtle tally information and she read it to her Kokom. "We need to go and watch for signs of turtles - basking in the sun or walking on the road looking for places to lay eggs, or even signs of turtle nests. I can bring a pair of binoculars and a copy of the turtle tally. If you get the turtle poster we can carry it with us. Nodin says that he is bringing his new rubber boots just in case you need him to go looking in the marsh and the wetland. We copy down what we see and then send in the information to add to the Ontario Turtle Tally results."



Kokom Annie got things ready at home for her grandchildren's visit on the weekend. The sleeping bags and extra pillows were taken out of the closet and hung outside in the fresh air. She decided to bake a big pan of bannock and to fry up some fresh fish on Friday for their supper. She called Auntie Lily and Waubin and asked if they would like to come to help count the turtles. Everything would be ready for Saturday afternoon. Kokom went to bed early on Thursday so that she would have a good sleep.



*"This is my 11th challenge. Come down to the water, Kokom. Bring your young ones with you. Show them how they can help the turtle clan cousins. Find the nesting sites and try to protect them from the skunks and raccoons who have a big appetite for tasty turtle eggs.*

*Count the different turtle species that they see in the community.*

*If they find a turtle that has been hurt by a car, try to fix its shell and put it back into its home habitat so that it can continue its journey.*

*The turtle people need the help of the humans at this time especially because we are moving around a lot during the Berry Moon.*

*Come down to the water Kokom Annie and visit with me and my relatives. This is my 11th challenge- count all of the turtle species in your waters."*

Kokom was dreaming of Miskwaadesi. It was as if the old turtle had heard Seegwun's phone call. Kokom listened carefully to the soft voice of the old turtle so that she would remember what was said. Kokom pictured Miskwaadesi sitting on the edge of the wetland calling to Kokom and her grandchildren. When the turtle became silent, Kokom sat up in bed, opened her journal and quickly wrote down what she remembered of the turtle's challenge - she wanted to be able to tell everything to Nodin and Seegwun in the morning.

# TEACHER BACKGROUND

Teachers will plan and prepare to lead the class on a Turtle Tally in their community, recording evidence of turtles and nests in the water/wetland area that they have chosen. Students will participate in the turtle tally and then create their own wampum to represent their learning about turtles.

Wampum belts have been made for thousands of years as a means of making an agreement or treaty or promise - the wampum strings help the people to remember the promise. Stringing wampum is very spiritual and special to First Nations peoples. Students are invited to make a wampum string to commemorate their studies about turtles and to make their own personal commitment to Miskwaadesi and the animal and plant families that live in and around the waters. Two worksheets will help students plan and prepare their wampum belts.

Materials: turtle posters, binoculars, pencils and worksheets for the turtle tally; bead thread or fishing line; bead looms or Styrofoam meat trays; seed beads of various colours; student worksheets.

Teachers should visit the turtle tally page of the Toronto Zoo's Adopt a Pond website at: <http://www.torontozoo.com/adoptapond/TurtleTally.asp> for background information on how to conduct the turtle tally.

**Ontario Turtle Tally - Data Form**

Click on an image to enlarge.

|          |         |                 |          |                  |
|----------|---------|-----------------|----------|------------------|
|          |         |                 |          |                  |
| Hardings | Map     | Midland Painted | Snapping | Spiny Soft Shell |
|          |         |                 |          |                  |
| Spotted  | Striped | Western Painted | Wood     | Red Eared Slider |

**NOTE:** Please submit observations for only one species and one location at a time. You will be asked whether you would like to submit another observation once you have completed this form.

Observation Date:  Time:  Species:  Number of Individuals:   
(DD/MM/YYYY) Please choose one

**OBSERVATIONS / LOCATION DESCRIPTION:** (Please give an accurate account of your sighting - Species observed, numbers of individuals, and nearest named place or Postal Code.)

[Find latitude / longitude](#) [Convert GMT's to Long/Lat](#) (cut and paste into fields)  
Feel free to enter GPS co-ordinates as well

Latitude:  Longitude:

Habitat Type:  Turtle Behaviour:   
Please choose one

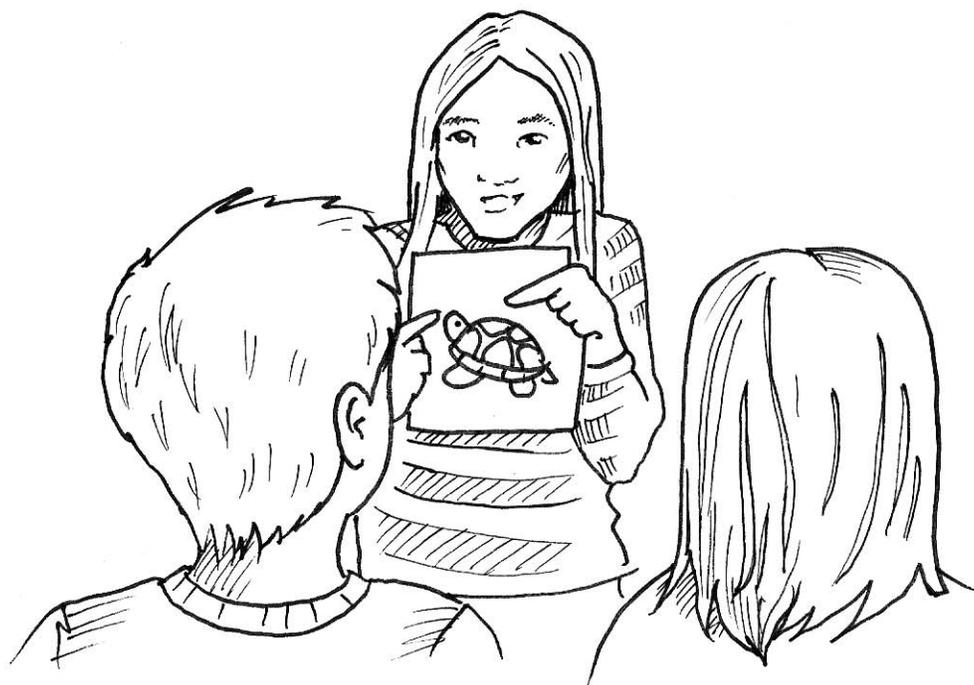
**PERSONAL INFORMATION**  
The personal information will not be used by anyone, for anything other than its intended purpose. The co-ordinator may wish to contact you if you submit a turtle sighting of particular scientific interest.

First Name:  Last Name:   
Address:   
City:  Prov/State:  P.C./Zip:   
Phone:  (###-###-####) Email:

The tally form.

# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. GETTING READY FOR THE TALLY

Choose a date and time when you will survey for turtles. Prepare for the field trip by filling out all of the required forms. Discuss the responsible way of interacting with plants and animals in the water/wetland (looking, listening, appreciating without touching or gathering). Plan on bringing a camera to record some of the great discoveries, and invite an Elder and other community members to come with you if possible.

Make a rough copy of the turtle tally information and fill it in as you go.

Divide the class into pairs and have students bring their journal with them so that at some time during the tally they can spend some personal quiet time by the water to reflect upon their learning and to record their understanding.

Review the different turtle species from the poster and the adopt-a-pond website with the class before Tally day arrives.

Predict what turtles you will find and think about where good nesting sites might be. Take some flagging tape or sticks to mark nest sites.

If you have turtle crossing signs, get them ready to bring with you on Tally day. Remind students to dress to be outdoors and to bring a drink with them.

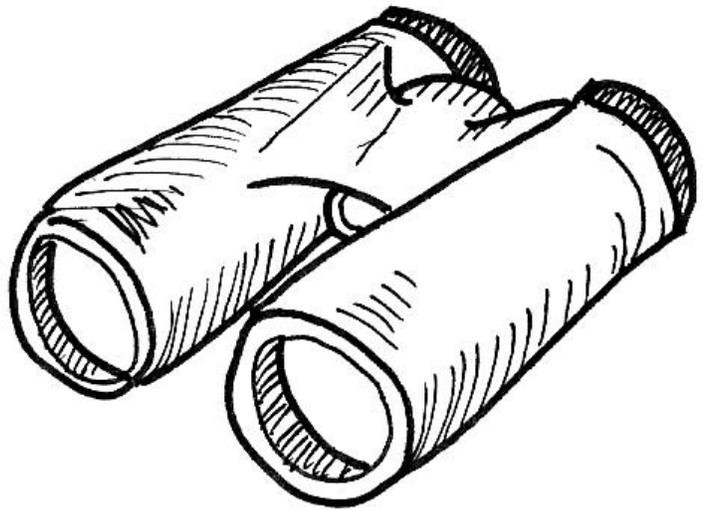
Provide each student with a copy of the worksheet (11a Tally Day).

## 2. THE TURTLE TALLY

Take the turtle poster(s); recording devices; and all other materials that are required to complete the Turtle Tally. Be especially careful to record any nest sites (look for broken egg shells in the gravel as evidence of predator visits during the night) that you may find - perhaps by marking them with a stick and flagging tape. Take pictures of nesting sites and any basking sites that you may see.

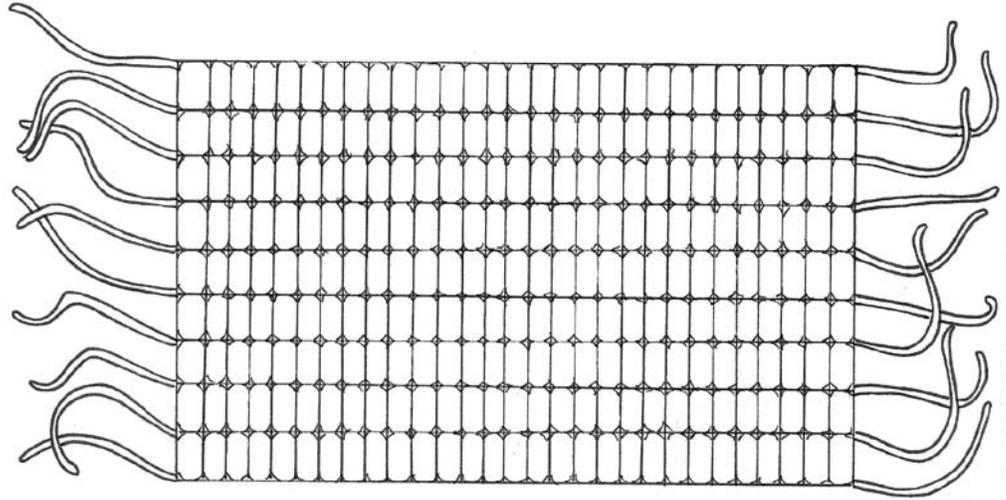
Fill out the turtle tally rough draft.

Enjoy the time by the water, looking, listening, smelling, feeling, thinking about the gifts of the water and the watershed.



# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. TURTLE WAMPUM

Use a bead loom or make your own wampum ([see the worksheet](#)). Work on the wampum grid to design your very own turtle wampum. Colour the wampum on the practice sheet. When you are satisfied, transfer your pattern to a bead loom and make your very own wampum! See student worksheet [11b](#) and [11c](#) for help.

### 2. JOURNAL REFLECTION

Complete these statements in your journal.



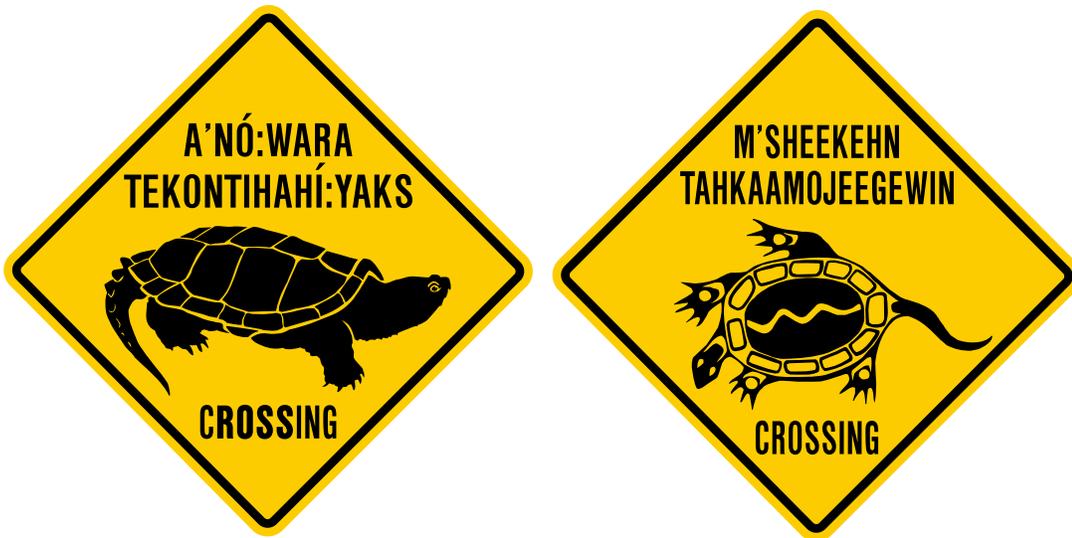
I was surprised to find...

I was able to identify.....

If I found a nest site I might be able to protect it by....

I think that the turtles in our waters are....

When you have completed the reflection, choose a symbol to add to the turtle shell on the cover of your journal to show that you have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 11th scute on the large turtle shell poster.



DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

## 1. PROTECTING THE NESTS/TURTLE CROSSING SIGNS

Did you find any evidence of turtle nesting sites?

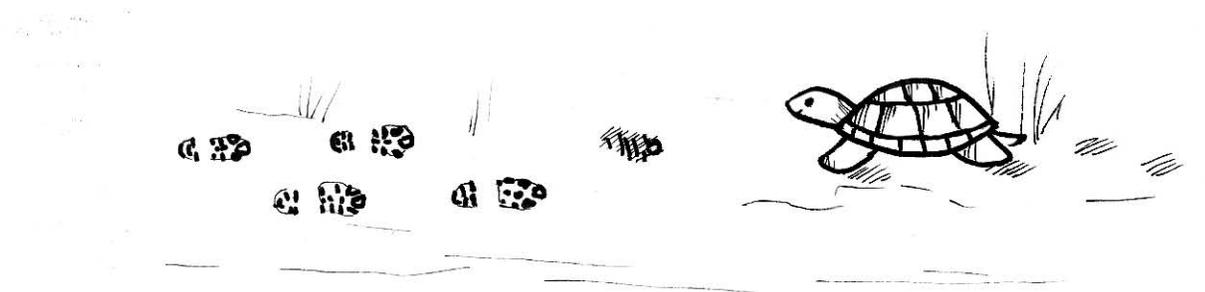
Were there broken or empty egg shells?

Did you find any animal tracks that might indicate who was snacking on turtle eggs?

How might you protect the nest site - mesh fencing laid on top of the gravel; piece of plywood set on top of nest site (remember you must go back and remove the cover before the baby turtles are scheduled to hatch!) Take pictures of your efforts. Go back through the summer and fall and watch for signs of baby turtles!

Can you put up a turtle crossing sign to alert others to the nesting area?

You can obtain turtle crossing signs at: [aap@torontozoo.ca](mailto:aap@torontozoo.ca).



# Student Worksheet

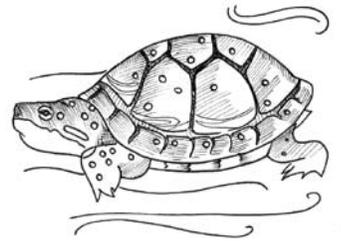
11A - TALLY DAY



DATE: ..... WEATHER: ..... MY PARTNER: .....

1. Evidence of turtle nests:

.....  
.....



2. Turtles seen:

.....  
.....

3. Possible locations for turtles to bask:

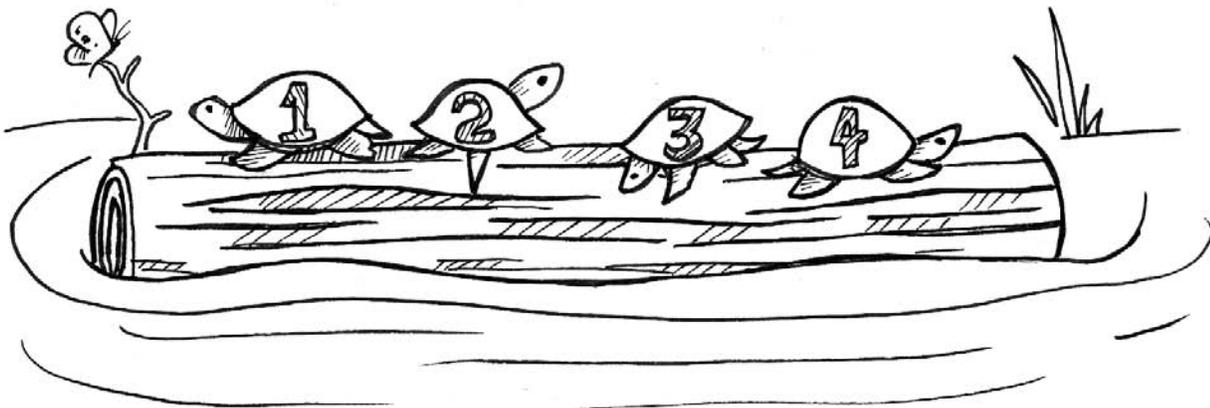
.....  
.....

4. My reflections on today:

.....  
.....

5. My thoughts about the water/wetland today - what I see, hear, smell, and feel.

.....  
.....

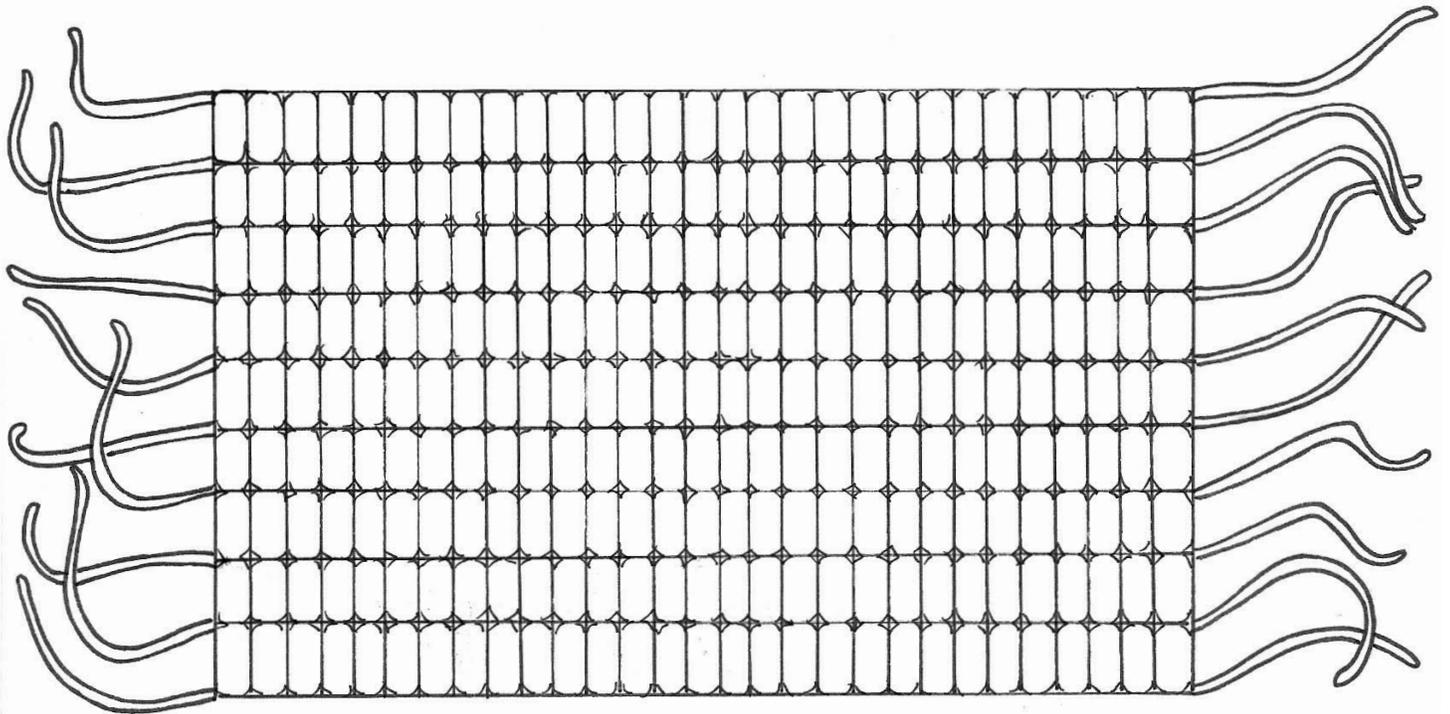


# Student Worksheet

11B - TURTLE WAMPUM 1/2



Use the wampum belt below to plan your wampum. Colour in the wampum as you would like it to look. When it is complete, make your own wampum belt using sinew or very heavy cotton thread and beads.



# Student Worksheet

## 11B - TURTLE WAMPUM (CONTINUED 2/2)



### TO MAKE A WAMPUM USE A BEAD LOOM, OR MAKE YOUR OWN LOOM

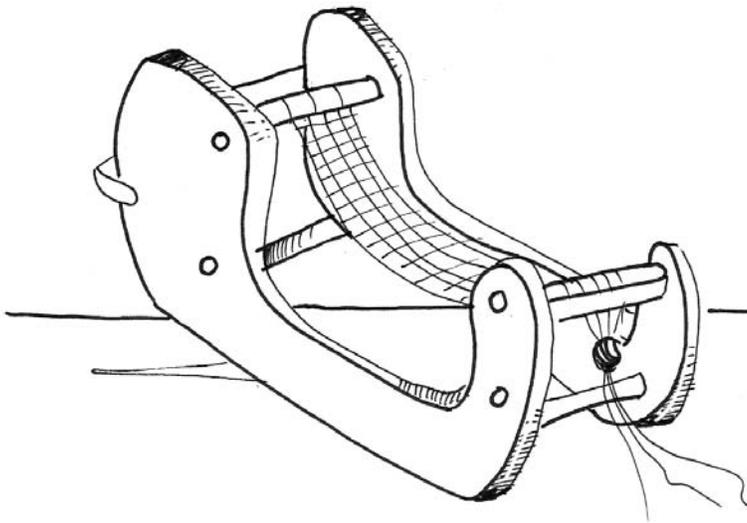
Take a piece of Styrofoam meat tray about 30cm long. Cut the meat tray lengthwise into two pieces and share one with a friend. Take a knife and carefully cut 10 slits into each end of the tray, making sure that the slits are close enough together that a seed bead will fit in between the slits. Use fish line or bead thread to thread your loom - start at one end and attach the thread to the back of the Styrofoam with a piece of tape. Wind the thread around the meat tray from one end to the other, making sure the thread goes into the slits that have been made.

Continue to wrap the thread around and around the meat tray until all 10 slits have been used. Now take the end of the thread around to the back of the tray and attach it with tape.

Thread the bead needle, attach the thread to one end of the loom's warp threads and pick up the beads that you need for the first row.

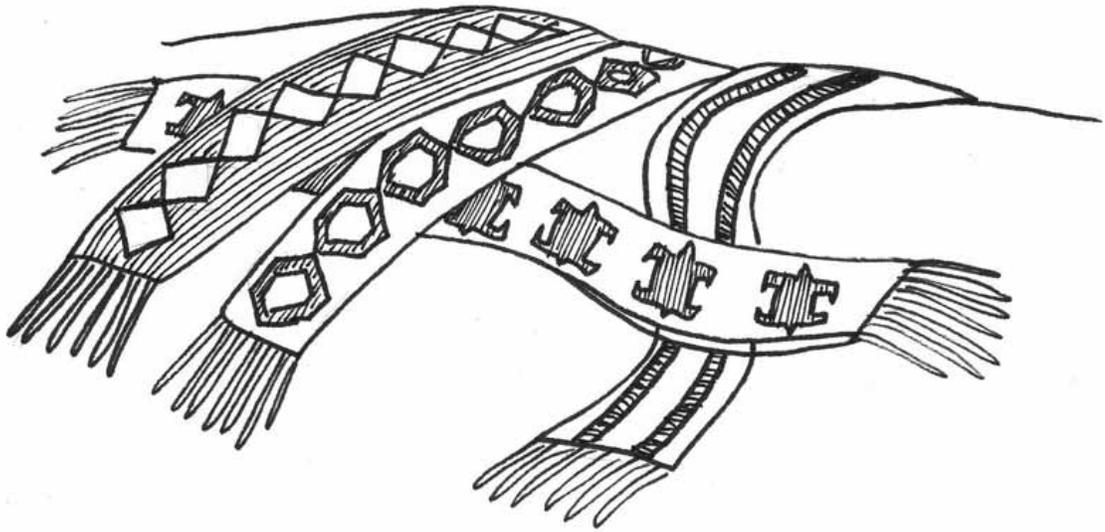
Attach the beads by sewing them in place (push the 9 beads up through the warp threads, hold them there with your finger while you sew them into place above the warp by taking the thread back through each bead. Continue with each row, following your pattern until it is complete.

Carefully cut the warp threads on the back of the tray and tie a firm knot in each end. End off the beading by knotting the thread and attaching it to one end of the warp threads. Use the paper pattern to help you with your design.



# Student Worksheet

## 11C - HOW TO USE A BEAD LOOM - INSTRUCTIONS 1/2



### INSTRUCTIONS

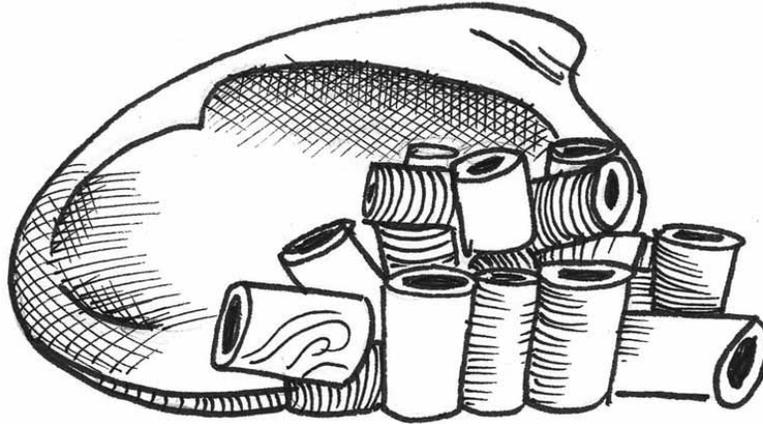
#### Things You'll Need:

- Bead loom and beading thread or fishing line
- Beading needle and assorted seed beads

- 1.** Position the bead loom so one of the short ends faces you. Tie one end of the beading thread to the hook or knob that is the anchor for the warp thread. This is the thread that you will be bead weaving around and will form the length of the finished product.
- 2.** Run the warp thread up over the bead loom cross bar and down to the other end of the loom. Loop the beading thread around the other side's knob or hook. Repeat this back and forth motion as many times as necessary for the finished Native American style bead loom project. Remember that you need a warp thread on both outside edges of the piece. The warp threads should be taut.
- 3.** Thread a long length of beading thread or mono-filament onto a long beading needle. Leaving a long tail, tie the thread to the first warp thread on the right hand side. This is the anchor for your entire bead loom project.

# Student Worksheet

## 11C - HOW TO USE A BEAD LOOM - INSTRUCTIONS (CONTINUED 2/2)

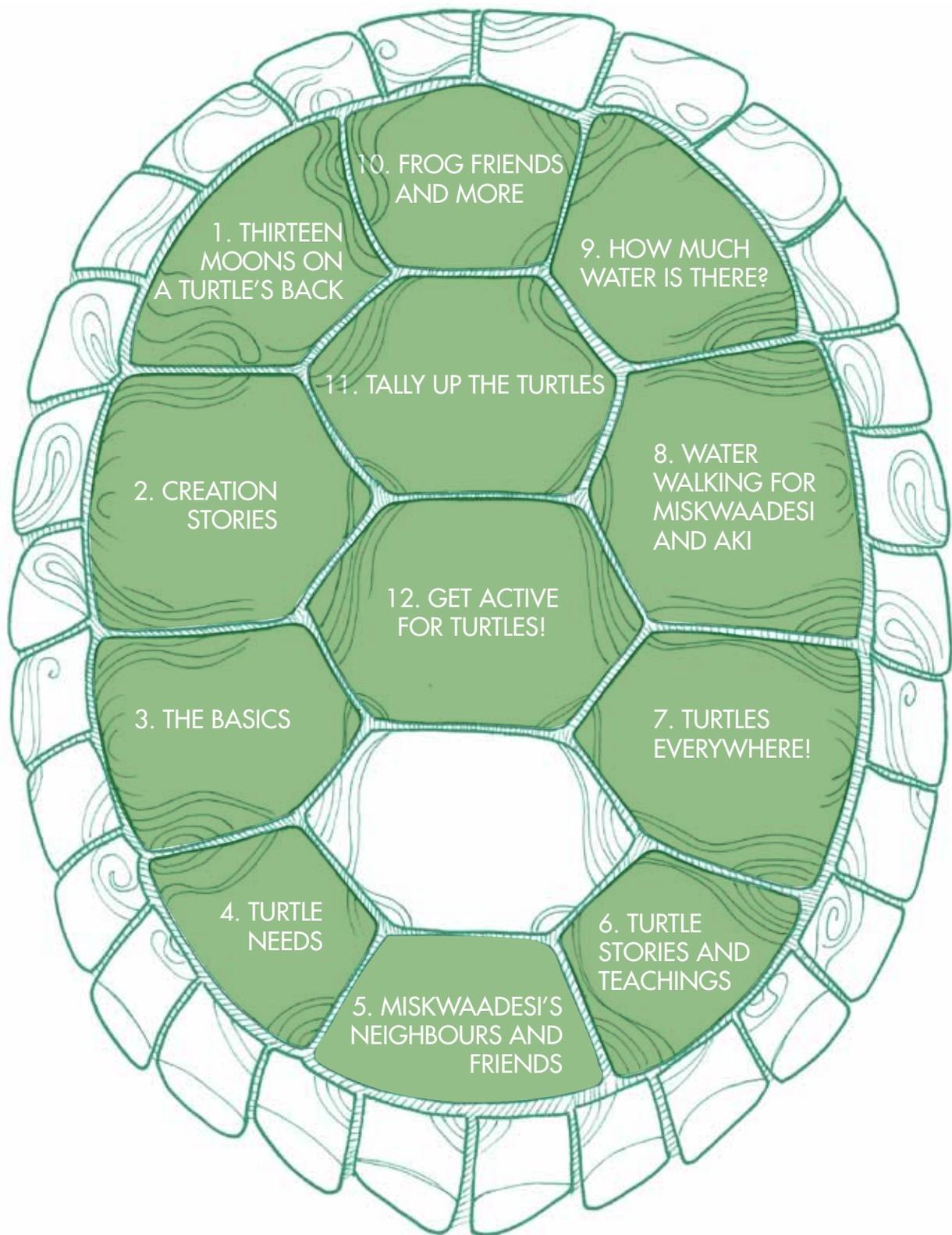


### INSTRUCTIONS (CONTINUED)

- 4.** Slide the beading needle through all the seed beads needed to complete the first row of the pattern. The pattern should already be laid out on graph paper or you can use a purchased pattern from a craft store. Each square in the pattern is a seed bead.
- 5.** Pass the beaded needle under the warp threads from right to left. Push the beads to the very end of the thread next to the knotted end on the Native American style bead loom. Then press the beads up between the warp threads: one bead in each space.
- 6.** Loop the threaded needle upward around the last warp thread on the left. Then pass it through all the seed beads in the row on the top side of the warp thread. This will hold all the beads in place and completes one row of bead loom work.
- 7.** Repeat the same process for every line of the pattern you want to make. When you are done with the Native American style bead loom project, weave the long ends of the beading thread into the beaded section to hide them. Clip the warp threads, tie them off or weave them in and use the bead loom finished project in your craft or jewelry.

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(from [http://www.ehow.com/how\\_2325249\\_use-native-american-bead-loom.html](http://www.ehow.com/how_2325249_use-native-american-bead-loom.html))



# THE TWELFTH CHALLENGE

WALKING WITH MISKWAADESI

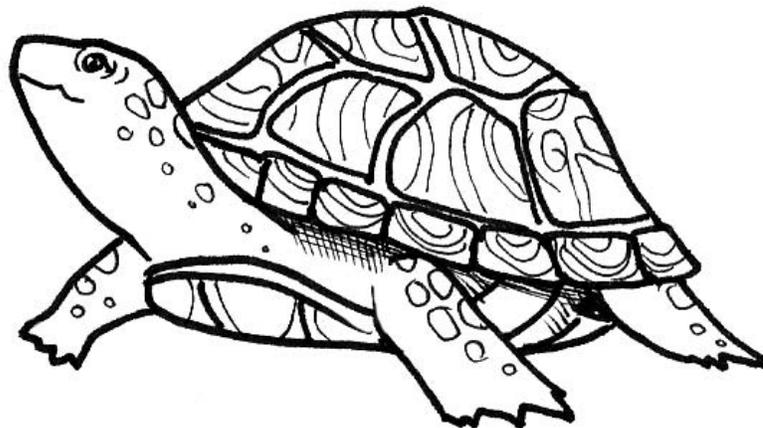
# THE TWELFTH CHALLENGE

## GET ACTIVE FOR TURTLES

What will you do to help my clan cousins and myself?  
Can you work with your class to create a project that will make things better?  
Will you create an action project to help turtles in your community's watersheds? Plan,  
organize, act, and report!

*"My 12th challenge is this - what will you do to help my turtle family? Can you work with your class to create a project that will make things better for the turtles of the seventh generation yet to come? What will you do with the information that I have shared with you? Create a project to help the turtles in your community watershed and you will improve the health and wellness for not just the turtles but for everyone and everything. Plan, organize, act, and report!"*

Miskwaadesi's 12th challenge.



# EXPECTATIONS

## PRACTICING THE LEARNING | FOLLOWING THE FOOTSTEPS

| TITLE OF ACTIVITY   | ONTARIO CURRICULUM EXPECTATION | WORKSHEET          |
|---------------------|--------------------------------|--------------------|
| Writing for Turtles | 4e48, 4e61, 4e69               | Writing Activities |
| Picture This!       | 4e54, 4e68, 4e69               | Picture book       |

## DEMONSTRATING THE LEARNING | MAKING OUR OWN FOOTSTEPS

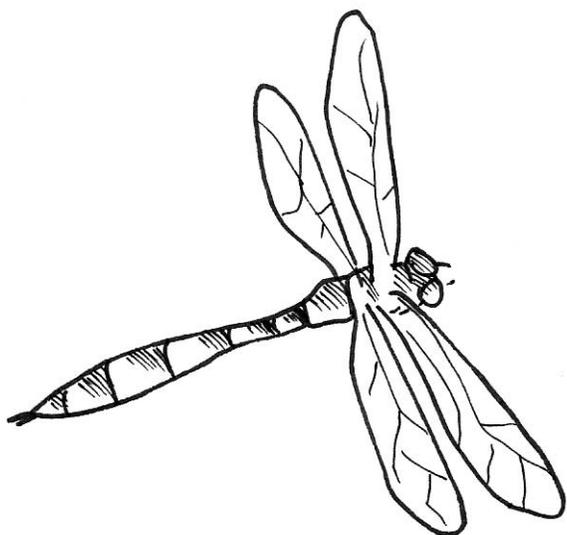
| TITLE OF ACTIVITY      | ONTARIO CURRICULUM EXPECTATION | WORKSHEET      |
|------------------------|--------------------------------|----------------|
| Get Active for Turtles | 4e12, 4e2, 4e44                | Action project |
| Journal Reflection     | 4e44, 4e48, 4e53, 4e72         |                |

## ONE STEP MORE (individual student optional adventures in learning)

1. Tell 2 More

**WORD WALL:** conservation, action

# LINKS TO OTHER CURRICULUM



## 12<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Relationship – Interdependent Relations pg 46

Ways of Knowing Guide – Responsibility – Community Mapping – pg 94

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

## TURTLE CURRICULUM LINKS

Activity 21 – Be a Conservationist!

Activity 22 – Wanted, Students to Help Save Ontario’s Turtles!

<http://www.torontozoo.com/adoptapond/turtleCurriculum.asp>

# KOKOM ANNIE'S JOURNAL

## A SENSE OF RESPONSIBILITY



*"What will you do with the knowledge that you have been given? With awareness comes a new sense of responsibility to act upon what you have learned. How will you help the turtle clans of Turtle Island? By helping the turtles to improve their health and wellness, you help yourselves as well. That is my 12th challenge to you."*

The soft voice of the old turtle came to me from the other side of the marsh. The voice sounded far away but I could make out every word in the crisp cool morning air.

In my dream I could just barely make out the outline of her shell. There was mist on the water today. The temperature had dropped overnight and in the early morning light, the mist swirled over the water. Miskwaadesi was not moving much this morning - it was too cold for her blood to be flowing quickly enough to warm her up. She sat motionless on the edge of a muskrat push-up waiting for the sun's rays to shine upon her shell and warm her up. It seemed as though she was thinking the words that I was hearing. I was about to call out to her when...

A loud sound startled me. I opened my eyes and was surprised to find myself not at the water but under the covers in my own bed... it was another dream. I took my journal and pencil and quickly wrote down the soft slow words of Miskwaadesi, thinking about what she meant as I wrote.

Hmm... time to get active, eh? Well, that meant I would need to call upon Nodin, Seegwun, Lily and Waubun for some ideas. What could we do? There were so many things that needed to be done right here at home - we need to take a good look at the marshes and wet areas and get the Elders to come with us to explain about the medicine plants and the special traditional places.



We need to map those places that are special to our community to protect them from development. We need to find out what the Elders say about turtles and their importance to our community. We need to clean up the waterways and the shoreline and put out garbage boxes and recycling bins. We need some turtle crossing signs and we need to protect those nest areas so that the baby turtles will survive. We need to take a look at how we are using our fresh water so that there will be enough of it for our future generations. We need to share what we have learned with the band council and with the environmental department. We need to find more help because there is so much to be done.

## TEACHER BACKGROUND

The 11 challenges that have been completed have provided students with an increased awareness of the issues that turtles are facing all over the world. In particular, students have learned a great deal about the eight turtle clan species in Ontario and they have a new understanding of the difficulties that turtle species face due to loss of wetland and pollution of their watersheds. With this new awareness comes a new level of responsibility - a responsibility to become actively involved in communicating the needs of the turtles; a responsibility to become active participants in a variety of efforts to improve the situation of the turtle and other inhabitants of our wetlands and watersheds.

The 12th challenge invites the class to discuss and plan an action project and to carry out the project. Actions are limited only to the imagination of the students and teachers themselves. Teachers are encouraged to have the class share the action project with the larger community.



# PRACTICING THE LEARNING

## FOLLOWING THE FOOTSTEPS



### 1. WRITING FOR TURTLES

Creative writing and poetry writing

Provide students with the opportunity to write a story about their learning or to use poetry to express their learning about turtles. Students use the writing process to write, edit and publish their efforts for a class book that will express the learning that has occurred.

Make a conservation message to share with other classes - the message could become a bumper sticker or a poster.

Publish a story, poem, paragraph that will be shared and displayed at the feast (Challenge 13).

### 2. PICTURE THIS!

Share a variety of picture books with the class. Brainstorm within small groups to create the story line for a picture book for a kindergarten student. When the story line has been chosen, students work within their small group to create a picture book that uses some of the turtle knowledge and teachings that have been shared. Completed books will be shared during Challenge 13 - feasting the turtle.

# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



### 1. GET ACTIVE FOR TURTLES

What will you do with the information that I have gathered in my challenges? Think about what you would like to do. Share your ideas with the class. Make a list of all the ideas. From the list, choose the one action project that the class can be successful with. Draw up a plan of action -

What will you do?

What equipment or materials will you need to complete the project?

Who will you call upon for help?

When will you begin and complete the project?

How will you let people know that you are working on this project?

Where will your project take place? What season(s) of the year?

How will you celebrate the completion of your hard work?

Here are some ideas to get you started:

Make a video that will both describe the wetlands in your community and will talk about the importance of wetlands to the turtle.

Turtle Tally News: when you have completed the turtle tally, make a news report of your findings and contact your local newspaper; prepare a press release for your local radio station; let the community know what you have found.

Organize a community cleanup of your wetland - if there are many wet spaces on your reserve, plan a cleanup of one area each year. Make sure you have lots of posters and announcements.

Organize a fund raiser for the turtle. Use some of the funds to plan a marsh or wetland restoration project and use some to get some turtle books for your community library.

Summarize what you have learned and write a report to present to Chief and Council. Let them see how important the wetlands in your watershed are to you and ask them to make sure to protect the waterways and wetlands from development.

Get some turtle Crossing Signs and put them up wherever you find evidence of turtles in your community. Monitor nesting sites and protect them so that the eggs will hatch.

Begin to map your wetlands. Identify the special trees (like the black ash); places where medicines grow; turtle viewing places; and any other spaces that are important to your community. Use your map to talk with the Elders - find out their stories and memories.



Take a camera and start taking photos of your wetland areas throughout the year. Begin to notice the beauty of the gifts of creation.

When you have organized your ideas and completed the planning, it is time to ACT! Get that project started, get lots of help and when it is complete, celebrate your success. Fill in the organizer ([worksheet 11a](#)) to help you get organized.

# Student Worksheet

12A - TIME TO ACT

A large graphic organizer consisting of five empty ovals. The ovals are arranged in a central column with two ovals on either side. They are connected by dotted lines that form a rectangular frame around the central oval and connect the side ovals to the central one.



## 1. JOURNAL REFLECTION

Respond to these questions in your journal.

Look back at the journal that you have kept.

What will you remember about your study of the turtle?

What part of Walking with Miskaadesi did you enjoy the most? Why?

What action project have you chosen to do? What is your responsibility in the project?

When you have completed the reflection, choose a symbol to add to the turtle shell on the cover of your journal to show that you have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 12th scute on the large turtle shell poster.

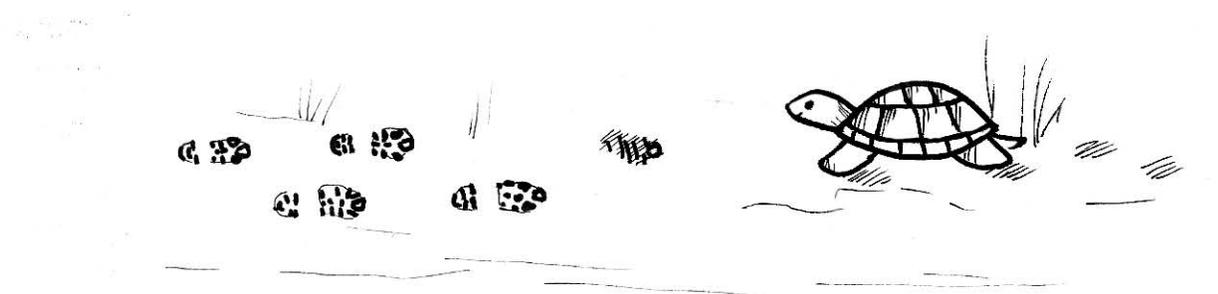
# ONE STEP MORE

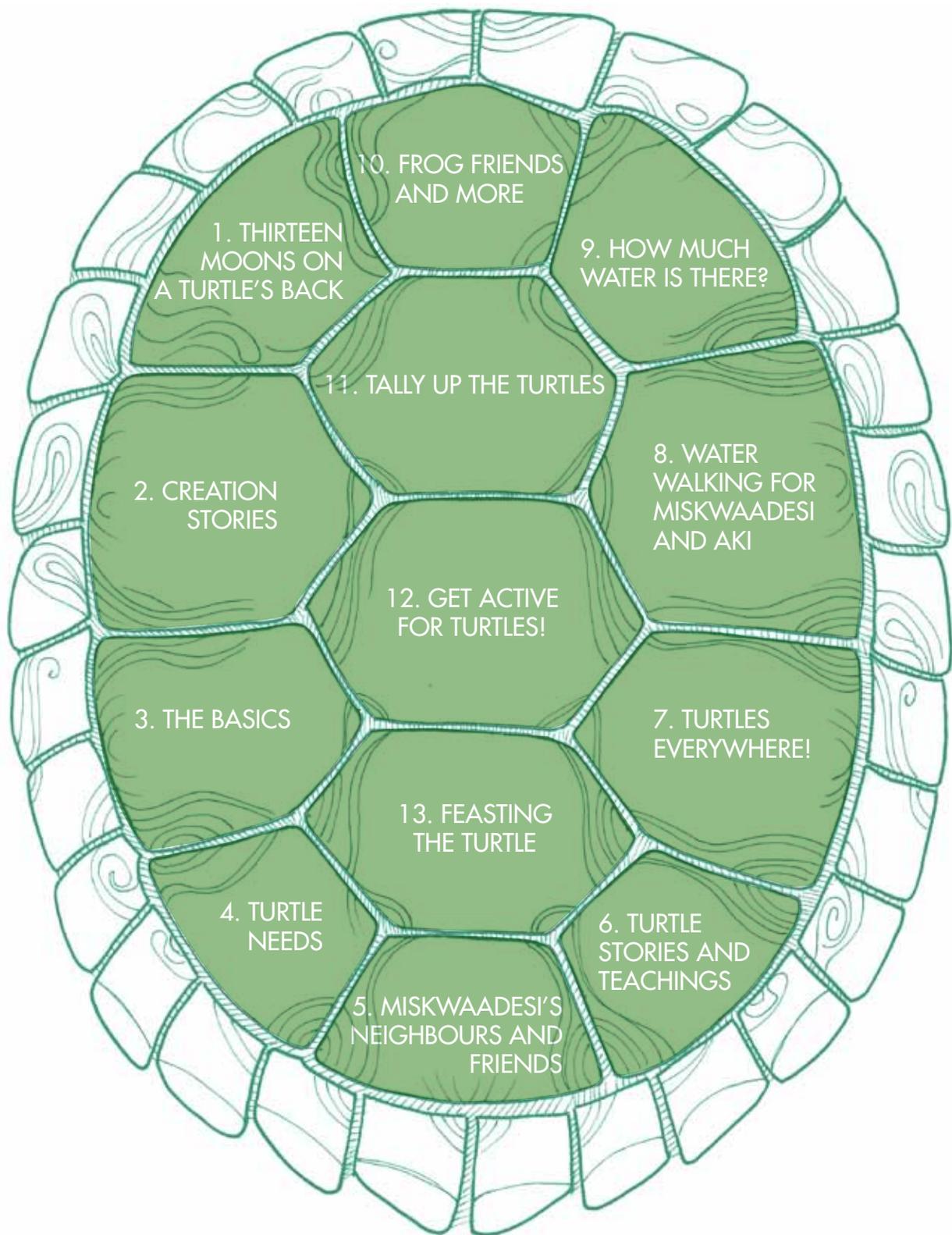
## DID YOU LEARN SOMETHING THAT MADE YOU WANT TO DO MORE?

### 1. TELL 2 MORE

What can you do to let people in other places know about Miskaadesi's needs and issues?

Think of a way to "tell 2 more" - tell your story about Miskaadesi to two people who have not yet heard. Record what you do and how you do it!



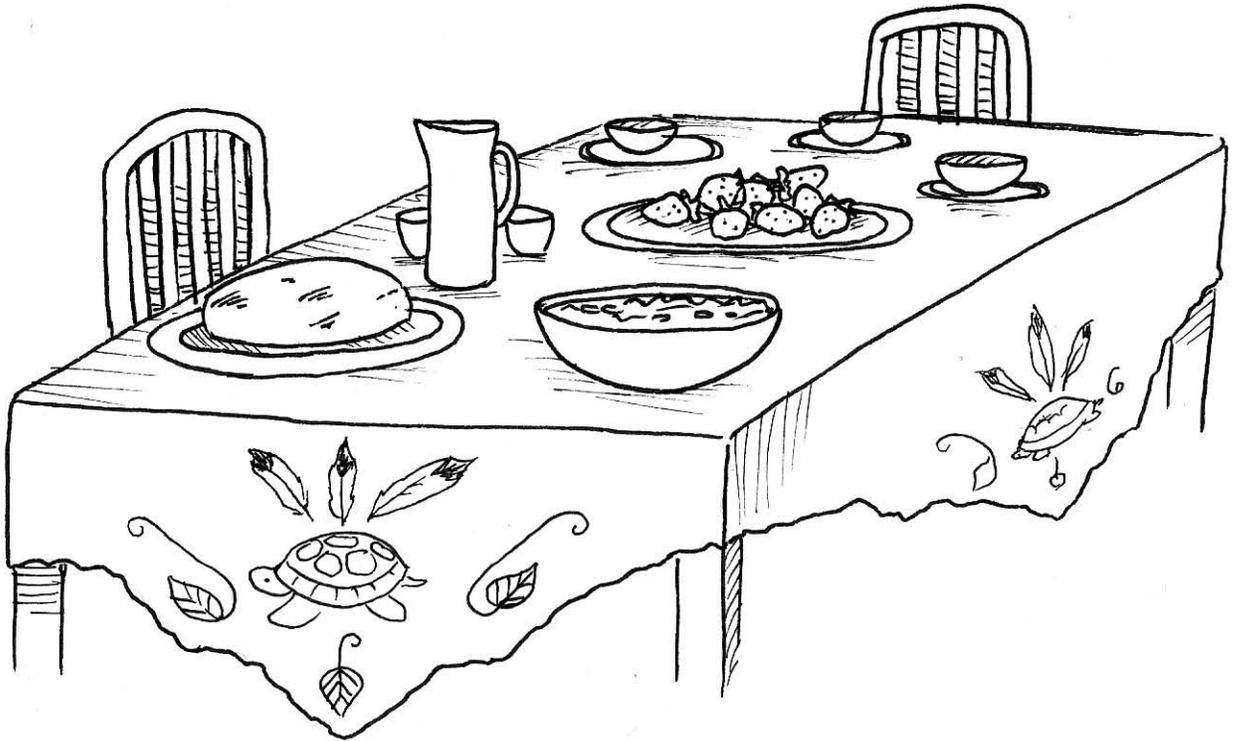


# THE THIRTEENTH CHALLENGE

WALKING WITH MISKWAADESI

# THE THIRTEENTH CHALLENGE

FEASTING THE TURTLE - A CELEBRATION



Are you ready to feast the turtle?

Plan for and celebrate the great works that you have completed to honour the turtle and to help restore habitat and clean water for the turtle clans.

How will you acknowledge those who have helped you to complete your challenges?

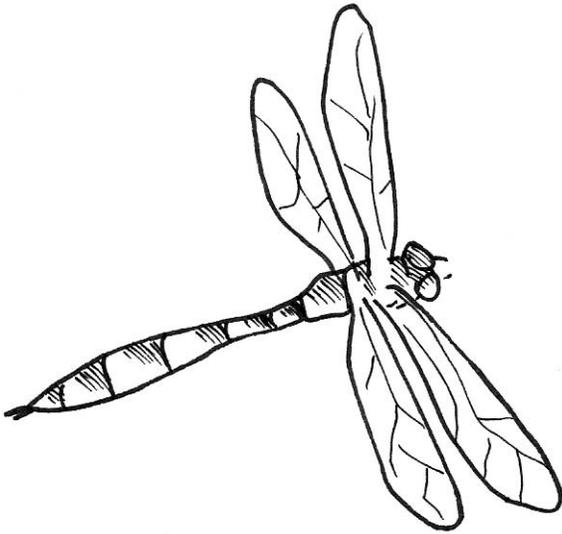
# EXPECTATIONS

## DEMONSTRATING THE LEARNING - WALKING IN OUR OWN FOOTSTEPS

| TITLE OF ACTIVITY   | ONTARIO CURRICULUM EXPECTATION | WORKSHEET       |
|---------------------|--------------------------------|-----------------|
| Planning a Feast    | 4e88, 4e89, 4e49               | Checklist       |
| Feasting the Turtle | 4e88, 4e41                     |                 |
| Saying Miigwetch    | 4e46                           | Thank You Cards |
| Journal Reflection  | 4e46, 4e72                     | Writing         |

**WORD WALL:** conservation, action

# LINKS TO OTHER CURRICULUM



## 13<sup>th</sup> CHALLENGE

Ways of Knowing Guide – Responsibility – Seven Generations Teaching – pg 98

[http://www.torontozoo.com/pdfs/Stewardship\\_Guide.pdf](http://www.torontozoo.com/pdfs/Stewardship_Guide.pdf)

# KOKOM ANNIE'S JOURNAL

## CHI-MIGWETCH MISKWAADESI!



Well, this has been a great adventure! Walking with Miskwaadesi has taught me many things. I learned about the eight turtle clans in this part of Turtle Island and I found out how much they need help to keep on living here.

I discovered a whole new world of life in the marsh down the road from my little house. I remembered stories and teachings that have been shared with me since I was a little girl and I have a better understanding of how everything and everyone needs to work together on Turtle Island.

I really enjoyed sitting outside in the spring evenings before the blackflies woke up, listening to the songs of the frogs and toads as they raised their voices in thanksgiving for the arrival of another spring. My almost daily walks down to the marsh and the wetland have given me more energy and my arthritis does not seem so bad now!



I especially enjoyed working with my beautiful grandchildren Nodin and Seegwun. It was a very special occasion when we walked together looking for signs of the turtles and when we were planning on how we could help our turtles to thrive and survive right here in Wasauksing.

I will never forget meeting with Josephine and sharing her story of her waterwalk - she is such an inspiration to all of us!

There are so many gifts that we have been given in Creation! I am grateful to Miskwaadesi for opening my eyes, my ears, and my heart to the joys of the waters and the wetlands that are home to our turtle relations.

It was such a good day when we finished our action project! The band office gave us garbage and recycling bags and we cleaned up the big marsh. Everyone came out to help - the big boys and the men even got their canoes out to make sure the wetland was clean out in the deeper water. When we were done we had two trucks full of litter and trash, and the wetland looked so much better.

Then the youth brought down the wooden bench that they had made and set it up at the edge of the marsh near the Elders Lodge - now the Elders can go down to the water and sit and enjoy the sights and sounds of the water again. Just as we finished, one of the little girls from the school came

to tell us that she saw a turtle sitting on top of a log over by the muskrat pushup. I looked and I am sure it was Miskwaadesi... and it seemed to me that there was a smile on her face. I waved to the old turtle and paused for a moment to say a special 'chi-miigwetch' to her for continuing to follow the original instructions that she received at creation. Then I turned to follow everyone to the band hall for the feast - we are feasting the turtle and our connections to the turtle today!

I have made a promise to continue to work for the turtle and the water, and to think about ways that I can conserve water right here at home so that there will be more water in the wetland and the watershed for everyone else to share. I will write letters to the band office and also to the newspaper about the turtles and their needs for clean and healthy habitat.

My evening walks in the spring to listen for frogs helped me with my arthritis and the exercise was a good one for diabetes prevention, so I am going to continue to go walking past the wetlands every day, winter and summer, spring and fall and while I'm walking I will think about Miskwaadesi and her clan. I have made a promise to Miskaadesi to become her helper (oshkabewis), to bring the turtle stories and teachings to the next generations.

I can only say "chi-miigwetch to Miskwaadesi and to her clan family for helping me to see, to listen, to think, and to act in a new way!

"Chi-miigwetch Miskwaadesi!"

# TEACHER BACKGROUND

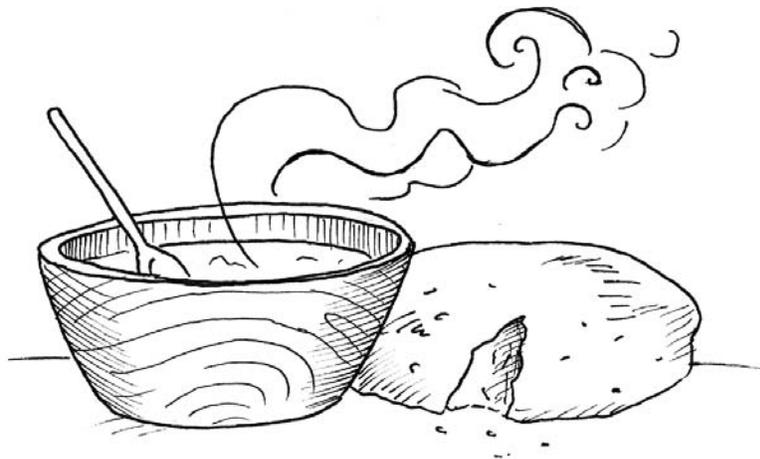
First Nations peoples have a tradition of showing appreciation and thanks by holding a feast. Feasts are one way of bringing the community together to show honour and respect. Feasts are a celebration and a ceremony. Traditional foods are prepared with great care and love and shared with everyone who will come to the feast. Everyone who comes brings something to add to the table. The tradition of feasting is tied directly to our values of sharing, caring, and thankfulness.

Having completed 12 challenges, it is time to turn our attention to celebrating the turtle and the things that have been accomplished to help the turtle and to restore its habitat. For the 13th challenge, there are no “Practicing the Learning” activities. Instead, each class that participates in Miskwaadesi’s challenges will plan and participate in a feast for the turtle as their “Demonstration of the Learning” that has occurred.

In planning the menu for the feast, it is hoped that some traditional foods will be prepared by the students. Several recipes (and video demonstrations) have been included and suggested for classes to preview.

It is hoped that teachers and students have the opportunity to record their feast and perhaps broadcast it on their local radio station.

Teachers and students are encouraged to set up displays of the learning to share with guests and Elders. Displays of student work can be used to decorate the feast site. Teachers and students are encouraged to send a message to the Toronto Zoo’s Turtle Island Conservation Initiative to share the success stories of their learning.



# DEMONSTRATING THE LEARNING

## MAKING YOUR OWN FOOTSTEPS



THE 13TH CHALLENGE IS ONE OF CELEBRATION! FEAST THE TURTLE AND THE GOOD WORK THAT YOU HAVE ACCOMPLISHED WITH THE OTHER 12 CHALLENGES.

### 1. PLAN THE FEAST

Contact the Toronto Zoo to let them know that you have completed the challenges and that you are ready to receive your turtle banner.

Sit in a circle to plan the feast. Use chart paper or the white board to record ideas as everyone brainstorms the 5 w's of the feast -

### CHECK LIST

- Who will be invited?
- When will the feast happen?
- Where will the feast happen?
- What food will we eat?
- What kinds of decorations or displays will be included?
- Who will we ask to help us prepare the feast food?
- Will we have entertainment - who?
- Who will be our master of ceremonies?
- Who will present the class/school with their turtle banner?
- What information will we leave for the next class that comes after us that will encourage them to continue with the turtle challenges (place the info in a time capsule), etc.

When the ideas have been discussed, form committees to answer the questions - some ideas for committees include - invitation committee, menu and food committee, entertainment committee, cleanup committee, decorations and display committee, media committee, time capsule committee.

### 2. FEASTING THE TURTLE

Plan to hold part of your feast outdoors - perhaps with a walk to the wetland where an Elder can put down some tobacco and say a few words about the turtles in your community.

Record the feast for next year.

Receive and hang the turtle banner for the class/school

What kind of time capsule will you leave for the next class?

Challenge the next class to continue the turtle work that you have begun.

# Student Worksheet

COLOURING PAGE





### 3. SAYING MIIGWETCH

Make a list of people and organizations to send Thank you cards to. Work with a partner to make a thank-you card or two. Send your cards to those organizations and people who have helped you with the challenges and the feast.

### 4. JOURNAL REFLECTION

What did you learn from completing the 13 challenges?  
What will you remember about Walking with Miskwaadesi?  
Which part of the walk was difficult for you? Which part was easy?  
What will you tell next year's class about the challenges?

Students create a suitable symbol to attach to the cover of their duo-tang to show that they have completed this challenge. As a class, decide upon a suitable symbol to use to cover the 13th scute on the turtle shell poster.



### TRADITIONAL RECIPES THAT MAY BE PART OF YOUR FEAST

The following websites and video clips will help you to learn about some of the traditional foods that are often part of a feast. Look for corn soup; hominy; frybread (bannock, scone); stew, etc. Following the list, there are several recipes that can be cooked for the feast. Enjoy!



<http://www.ganondagan.org/recipes.html>

Ganondagan website home page- traditional Haudenosaunee recipes

<http://www.youtube.com/watch?v=KSIVg5tG300>

Ononda - how to make hominy – a traditional Seneca recipe

[http://www.youtube.com/user/yoendzade#p/a/u/0/CIAdXIP\\_csU](http://www.youtube.com/user/yoendzade#p/a/u/0/CIAdXIP_csU)

How to make corn soup – Seneca language instruction (3:45 min)

<http://www.youtube.com/watch?v=NNn0Hjv-jEU>

Helen Roy, Ojibway Language teacher makes frybread, speaking in both Ojibway and English (9:42min)

<http://www.youtube.com/watch?v=J5f8GqWjw6Q>

Helen Roy, Ojibway language teacher makes corn soup, speaking in both Ojibway and English (9:44 min)

<http://www.youtube.com/watch?v=aFG8gwmFT2M>

Helen Roy, Ojibway Language Teacher making fish pie, speaking in both Ojibway and English (9:20 min)

# RECIPES

## BASIC BANNOCK/SCONE

3 c All-purpose or wholewheat flour

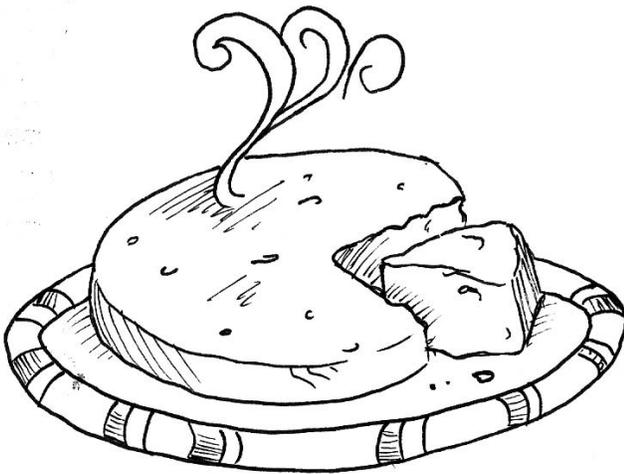
1 Tb Baking powder

1 1/2 tsp Salt

1 1/2 c Water

1 c Blueberries (optional)

In a large bowl, mix the dry ingredients together. Add the water quickly & continue to stir. Place batter on a clean counter or cookie sheet. Knead it just enough to mix everything together. Place batter in a pie plate & put in a preheated oven heated to 425F. Bake about 20 minutes. Cut in pieces & serve hot or cold.



## PAKWEJIGAN (Fry Bread)

1 c All-purpose flour

1/4 tsp Salt

1/2 tsp Baking powder

3 Tbsp Sunflower oil

1/3 c Water

1/4 c Corn oil

Mix all dry ingredients together and add the sunflower oil. Stir to mix well. Add the water & knead well. Heat the oil in a frying pan. Carefully spoon the bread dough into the hot oil and fry until it is a golden brown, turning once. Remove from oil and drain. Serve hot with butter or jam.

## BAKED SQUASH

4 Acorn squash (cut in half and cleaned of all seeds)

1/4 cup olive oil

pinch of salt for each squash

sprinkling of cinnamon for each squash

1/4 cup maple syrup for each half



Cut and clean each squash. Spread with oil, sprinkle on salt and cinnamon and add the maple syrup to the middle of each half. Bake at 350 for 30-40 minutes until ready. Either scoop the squash from the shell or cut the halves into smaller sections

## ACORN SQUASH AND WILD RICE

6 seeded acorn squash, cut in half and baked about 45 minutes at 350 (place cut side down in a baking dish with about 1cm of water.

2 cups wild rice (cooked)

3 tbsp olive oil

1 onion, cut into small pieces

2 apples

Sage and nutmeg – a sprinkling

3 tbsp apple juice or apple cider

Sauté onions in oil until just browned. Add apples, sage and nutmeg and cook until apples are soft. Add apple juice or cider and cook for 5 more minutes.

Take the cooked squash and scoop out flesh. Puree flesh until smooth. Refill each squash shell with about 2/3 of puree and top with wild rice mixture.

Place in oven and broil for 3-5 minutes. Serves 12.

## LYED CORN SOUP

1 l (about 4 cups) lyed white corn or canned white hominy

300 ml (about 1 cup) White navy beans

1 kg side pork or ½ kg Side pork and ½ kg salt pork

Salt and pepper to taste

Beans - put the beans in a pot. Cover beans with 5cm water and soak overnight. If using canned hominy corn, rinse the corn in several changes of water to remove excess salt.

Combine beans and corn and cook until tender.

Meat - cut up pork into small pieces and place in soup pot, and cover with about 5cm water and bring to a boil. Reduce heat and simmer in covered pot until meat is tender – about 2 hours. Drain the meat, save and refrigerate the broth to separate the fat from the liquid.

Skim fat from the broth. Mash half of the beans to thicken the soup. Add the meat and broth together with the beans. Season with pepper and a pinch of salt. Bring to a mild boil and serve. Place salt and pepper shakers near the soup for individuals to use to season their serving. Yields 6-8 servings

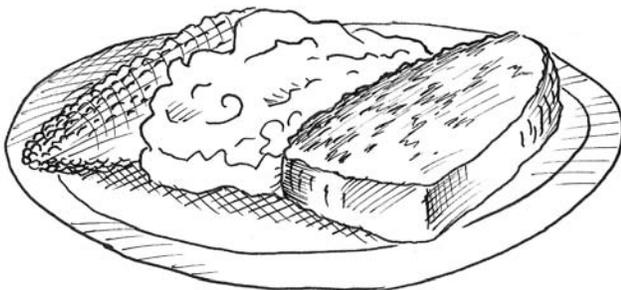




### SQUASH SOUP

- 1 medium-large butternut or squash, peeled and cubed or 1 large can pumpkin
- 2 medium sweet potatoes, peeled and cubed
- 1 Tbsp olive oil
- 1 Tbsp minced garlic
- 1 medium onion, chopped
- 8 cups vegetable broth or water
- Pepper and salt to taste (½ tsp ground ginger and 1 tsp curry powder optional)
- 2 Tbsp honey or 1/3 cup maple syrup (to taste)

Heat the oil in a large pot. Add garlic and onions and ginger and curry powder if using. Sauté for 3-4 minutes. Add squash and sweet potato. Sauté for 3-4 minutes. Add water or broth. Simmer until tender, about 20 minutes. Add pepper, and sweetener to taste. Serve salt on the side for anyone who needs it.



### MOOSE/VENISON MEATLOAF

- 2 pounds ground lean meat (moose, venison, caribou)
- 2 cups rolled oats
- 1 cup onion, finely chopped
- 1 cup tomato juice
- 4 eggs
- 4 Tbsp Worcestershire sauce or bbq sauce (optional)

Heat oven to 375 and grease 2 loaf pans with vegetable oil. Combine all ingredients in large bowl. Mix well. Divide mixture into 2 pans. Bake in oven about one hour or until meat is no longer pink. Serves 8.



#### MAPLE SPICE CAKE (FROM THE GANONDAGAN WEBSITE)

- 1 ½ cups sifted flour
- 2 tsp. baking powder
- ½ tsp. salt
- ½ tsp. cinnamon
- 1/8 tsp. ground ginger
- ¼ tsp. nutmeg
- ¼ cup butter
- 1 cup maple syrup
- 1 cup apple sauce
- 2 eggs, beaten
- 1/3 cup milk

Sift together dry ingredients into a large mixing bowl. Set aside. In a separate bowl combine remaining ingredients. Stir dry ingredients gradually into liquid mixture. Blend well. Pour batter into a 9-inch square greased pan. Bake 350 degrees F. oven for 40-50 minutes. Frost with maple icing.

#### MAPLE ICING

- 2 cups confectioners' sugar
- 1 Tbs. butter, softened
- 1/8 tsp. salt
- ½ tsp. vanilla
- ½ cup maple syrup

Into a small bowl sift the confectioner's sugar. Blend in remaining ingredients and beat. Add more confectioners' sugar if necessary.