

# ACTIVITY

## 6.1 TURTLE AND BEAR RACE STORYTELLING FESTIVAL

Using an arts-based learning strategy, this activity incorporates Traditional Teachings with literacy and performance.

### Materials:

- *Walking with Miskwaadesi* or *Walking with A'now:wara* book
- *Miskwaadesi Races with Makwa* story (located in Activity Worksheets section of document) or *Turtle Races with Beaver* (located in Chapter 6 of *Walking with A'now:ara*)
- Art supplies (paint, markers, modeling clay, variety of pieces of fabric, socks to make sock puppets, etc.)
- *Storytelling Festival Planning Guide* (located in Activity Worksheets section of document)

### Steps:

Gather a collection of teachings, legends, and stories for students to potentially read.

Read chapter six of *Walking with Miskwaadesi* or *Walking with A'now:wara* to the class.

After reading *Walking with Miskwaadesi*, read *Miskwaadesi Races with Makwa* to the class. The turtle story for Haudenosaunee students is found in chapter six of *Walking with A'now:ara*.

Ask students if they know any stories and teachings about animals from the wetlands and the water. Share what students already know. The names of stories can be written down so students can ask their parents, grandparents, or even Elders about these stories.

Have students work in pairs or small groups to choose a teaching to present to their class or to a primary class. Each student must present a portion of the story. Students will be given time to work on this in class.

Also, have students illustrate their story through the use of a story board, with puppets, shadow puppets, pictures, dioramas, plasticine figures, a PowerPoint presentation, or illustration software to help their audiences understand the story.

Students should create a talking stick to help remember important parts of the story. Provide students with a stick or small piece of wood to decorate. Students add symbols to help remember characters and elements of the story. Students can draw, paint, and decorate these symbols on the stick.

Once preparation for the festival is complete, students present in a storytelling circle. Remind students to use good voice techniques and pacing.

Have each group present their story or teaching to the audience. If possible, record the student presentations and display, or take pictures of the talking sticks to display for other classes to see.

## 6.2. TURTLE AND BEAR: THE GREAT CHASE/TURTLE AND BEAVER: THE GREAT CHASE (outdoor activity)

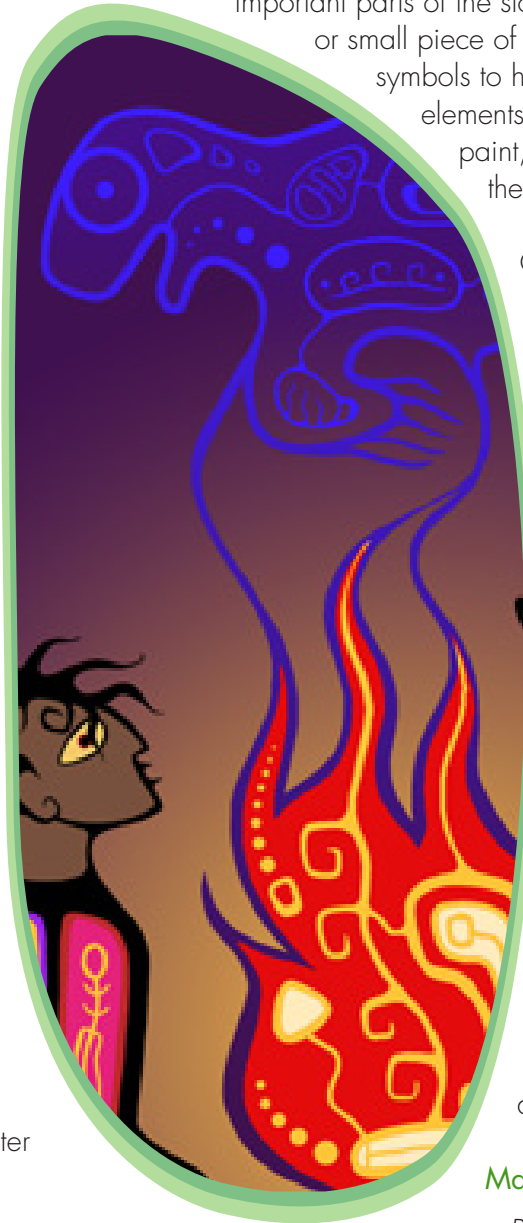
This activity incorporates physical activity while reinforcing a teaching from the story *Miskwaadesi Races with Makwa* and *Turtle Races with Beaver*.

### Materials:

- Play area

### Steps:

Take the class outdoors to play a version of Tag. Students become either bears and turtles or beavers and turtles, depending on the classes reading of *Walking with Miskwaadesi* or *Walking with A'now:ara*. The bears or beavers will chase the turtles. If a bear/beaver catches a turtle, the turtle is frozen and must wait until another turtle comes to touch it and release it.



# CURRICULUM ACTIVITY CHAPTER SEVEN

## TURTLES OF THE WORLD

### TEACHER BACKGROUND

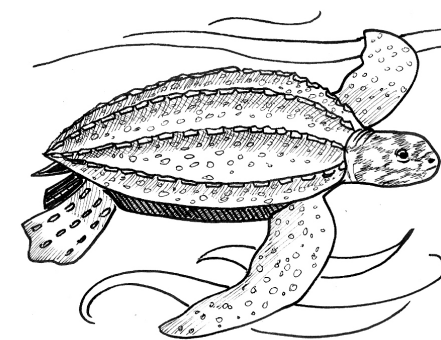
The activities in this chapter demonstrate the worldwide connection to turtles. The chapter outlines an understanding that turtles everywhere face dangers, and issues regarding Ontario turtle species apply to other turtles as well. It is suggested that the lessons focus on the leatherback, a species found off the Atlantic and Pacific Coasts of Turtle Island.

The activities incorporate experiential learning, map use, and artistic expression to educate students about the risks and threats to turtles around the world. It also identifies the importance of turtles to Aboriginal people worldwide.

## THE EIGHT SPECIES OF SEA TURTLES:

### The Leatherback (*Dermochelys coriacea*)

- Found in oceans off the coasts of Atlantic and Pacific Canada
- The largest sea turtle; grows up to 7 feet long and weighs at least 1200 pounds
- Has thin, tough, rubbery skin instead of a hard shell; 5 distinct ridges are formed by small bones buried in the skin
- Feed off Nova Scotia, but each fall travel to the Caribbean to nest
- Carapace is black with white spots; the plastron is whitish to black
- Can dive the deepest and travel the furthest of any other sea turtle
- Have powerful front flippers to aid in strong swimming
- Rarely seen, except on nesting beaches
- Jellyfish are the main component of their diet
- Exploited for eggs



### The Loggerhead (*Caretta caretta*)

- Has an anti-tropical distribution
- 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 grow between 32-41 inches and can weigh up to 350 pounds
- Identified by its large head and reddish brown carapace (upper shell) and dull brown or yellow plastron
- Has powerful jaws for eating shellfish living on the bottom of the ocean
- Suffers from accidental capture



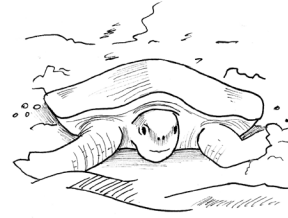
### The Black Turtle (*Chelonia agassazii*)

- Confined to the Eastern Pacific Ocean
- Protected in the Galapagos and nominally in Mexico; subject to illegal harvest elsewhere named for the black or gray color of its shell



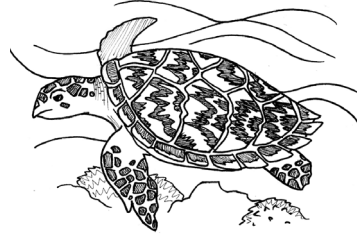
### The Flatback Turtle (*Natator depressus*)

- Confined to the Eastern Pacific Ocean
- Protected in the Galapagos and nominally in Mexico; subject to illegal harvest elsewhere
- Named for the black or gray color of its shell



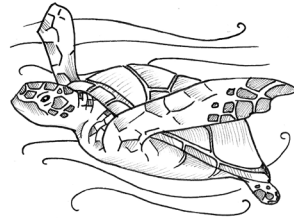
### The Hawksbill (*Eretmochelys imbricata*)

- Common in tropical reefs of the Caribbean islands and Australia
- One of the smaller sea turtle species; grows 30-36 inches and weighs 100-150 pounds
- Narrow head and beak make it look like a hawk; shell is reddish brown with yellow streaks
- Feeds on encrusting animals such as sponges, sea barnacles, and seaweed
- These turtles are subject to intense intentional trade; beautifully patterned shell is a source of tortoise shell used to make jewelry and combs



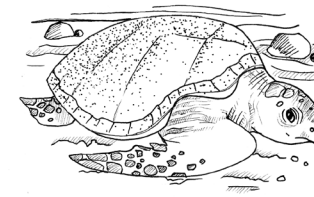
### The Green Turtle (*Chelonia mydas*)

- Circum-global species; nesting and feeding grounds are in the tropics
- Most common of the eight sea turtles
- One of the largest species of sea turtles; shells can be up to 3 feet long and weigh up to 300 pounds
- Named for the green color of the fat under the shell, not for the actual color of the shell, which can range from a greenish shade, to brown, black, or even gray
- Feed on sea grasses and seaweed
- Harvested for meat and eggs in Costa Rica, Caribbean, Indonesia, and Panama; cartilage is used in Asian countries for turtle soup



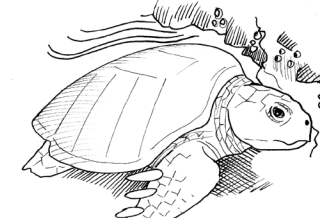
### The Olive Ridley (*Lepidochelys olivacea*)

- Nests mainly in the Pacific Ocean, around Costa Rica, Mexico and Nicaragua, as well as the Northern India Ocean
- One of the smallest, weighing less than 100 pounds
- Olive green in color, giving it its name
- Most abundant species of sea turtle



### The Kemp's Ridley (*Lepidochelys kemp*)

- Only nests on one beach in the world, in Rancho Nuevo, Mexico
- The smallest sea turtle; grows to be 24-28 inches and weighs 77-100 pounds
- Carapace is olive green, and its plastron is yellowish
- The rarest species of sea turtle as well as the most endangered



## TURTLES AROUND THE WORLD:

**1. North America:** North America: In many First Nation Creation Stories, the turtle has the responsibility of carrying the Earth on its back. The great turtle which holds up the earth is a symbol of wisdom and kindness. Turtle rattles are 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.

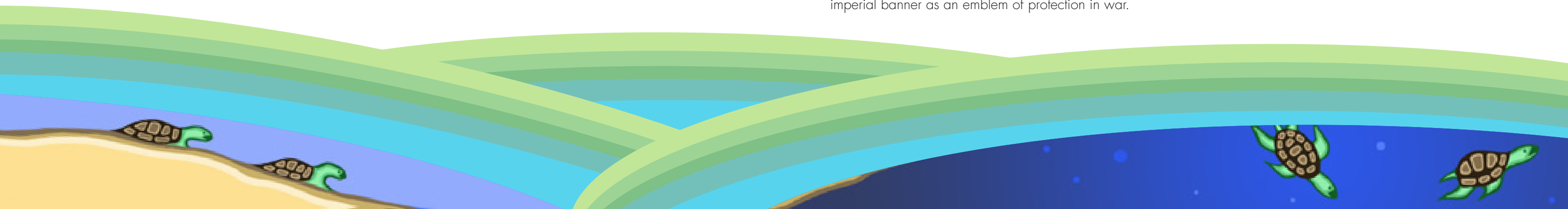
**8. Tonga:** Sea turtles are a special symbol of longevity, good fortune, and fertility.

**9. Samoa:** Sea turtle is a graceful swimmer and also represents freedom.

**10. New Zealand:** The sea turtle is 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.

**Mating:** During the mating season, all species of marine turtles migrate from feeding areas to mating areas. After mating, the males return to foraging areas while females proceed to nesting beaches. Some turtles migrate more than 2600 kilometres, but most travel less than 1000 kilometres. Female turtles generally do not reproduce every year but males may breed every year. Mating can occur anywhere in the water, but it usually takes place at the surface.

**Nesting:** Most females lay over 100 eggs in several clutches, reducing the risk of potential hatchling loss. This can be done at 2 week intervals. Eggs hatch after



6 to 13 weeks of incubation, depending on the temperature. They generally hatch in the early evening. Hatchlings can tell whether it is evening or daytime based on the temperature of the sand. If eggs hatch during the day, they would have to face excessive heat and predation. Hatchlings wait until evening to break the sand's surface. If they start digging and the sand gets progressively warmer, they will wait until the sand cools.

**Navigation:** After hatching, sea turtles primarily use vision to find the sea, moving 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. Turtles emerge from their nests without an established directional preference. The hatchlings also follow the intensity of the earth's magnetic field, not the poles.

**Conservation:** Sea turtles worldwide are being protected under the endangered species list in addition to federal agencies. Efforts are being made to educate local people about the importance of these marine reptiles, not only for future generations, but also for the health of the environment.

Unfortunately, sea turtles continue to be killed in drift nets; in feeding areas; when nearing the shore to nest; taken as eggs for alcoholic beverages; and are killed as

adults for souvenirs, food, and shell products. Worldwide, help is needed to save these remarkable, ancient, endangered animals. Currently, there are attempts being made to help protect these species and increase their populations. Fishermen help the Leatherback Working Group in Nova Scotia to release leatherbacks caught in nets. Shrimp trawling is another large problem for sea turtles as many are caught in the nets and drown. TEDs (Turtle Exclusion Devices) were developed to reduce the number of sea turtles caught in trawling nets. TED's are trap doors in nets which allow the sea turtles, but not the shrimp, to escape. Shrimp farms are also being established to limit the accidental capture of turtles and other marine animals. Turtle hatcheries help reduce the decline of sea turtle populations by removing the eggs from nests where they may be eaten by predators or removed by poachers. The eggs are taken to a 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 which 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>

**Additional Resources:**  
Nova Scotia Leatherbacks  
[www.seaturtle.ca](http://www.seaturtle.ca)

**Hinterland Who's Who: Amphibian & Reptile Fact Sheet**  
Leatherback Seaturtle  
<http://www.hww.ca/hww2.asp?id=33>

**Sea Turtle Conservancy: Information About Sea Turtles, Their Habitats and Threats to Their Survival**  
<http://conserveturtles.org/seaturtleinformation.php>

**Sea Turtle Conservation Bonaire**  
<http://www.bonaireturtles.org>

**Sea World: Sea turtles**  
<http://www.seaworld.org/animal-info/info-books/sea-turtle/index.htm>  
Challenge Seven- Turtles of the World

## ACTIVITY

### 7.1 TURTLES OF THE WORLD

With the use of various learning strategies including guided exploration and map making, this activity incorporates map use and literacy, while demonstrating the importance of turtles to cultures all over the world.

#### Materials:

- *Turtles of the World information sheets (found in Teacher Background)*
- *Map of the world*
- *Atlases*

#### Steps:

Read the information from 'Turtles of the World,' found in the Teacher Background, to introduce students to Turtle Teachings from around the world. Make a chart identifying the characteristics that people identify with turtles globally.

Demonstrate or review how to use an atlas. This includes how to use the index.

Ask students to work in pairs or small groups with an atlas and the teacher

provided map. Students will find the thirteen countries that have a special relationship with turtles and label them on the world map.

Create a legend on the map to identify the various places and nations. Distinct symbols and colours can be used to express locations or themes. This makes the map easier to read, and will assist in understanding the map.

### 7.2 NETTING HEADACHES

This activity incorporates experiential learning related to biodiversity and sustainability through the use of an activity-based learning strategy, simulation.

#### Materials:

- *Small paper cups (2 per each group)*
- *Large spoons*
- *Large bag of coloured candies (Smarties, Skittles, etc.)*
- *Two or three boxes of pop rocks*
- *Netting Headaches Chart (located in Activity Worksheets section of document)*

#### Steps:

Premix the two types of candies (Pop Rocks and larger candies) in a large bowl.

Divide the class into small groups. Give each group a spoon (trawling net), an empty cup (boat), and a tally chart. As a class, review the colours for the captured sea creatures. The coloured candies represent different ocean species that are accidentally caught in traps. The Pop Rocks represent 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).

Provide each group with half a cup of the mixed candy. 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 candy they catch in the chart.

Each group member 'goes fishing' and compiles the results. Subtract the total number of shrimp caught from the overall total in order to see the amount of by catch that results in shrimp harvesting.

Discuss the findings and the overall costs of trawling and net fishing to the marine environment. Discuss why this is decreasing sea turtle populations, and what can be done to prevent this (type of nets, etc.). Extension: This activity could also be used to demonstrate how to create a pie chart.

### 7.3 SEA TURTLE AWARENESS POSTER

This activity incorporates artistic expression with knowledge related to biodiversity and conservation.

#### Materials:

- *Paper and writing tools*
- *Art supplies (markers, crayons, etc.)*

#### Steps:

Have students individually create an awareness poster for Canada's leatherback sea turtles. The poster should include an explanation of why there are problems for sea turtles, what would happen if sea turtles no longer existed, and how each student can make a difference. The poster should also include artistic elements.

