



## Muskrat

### Land of the Midnight Sun Inspiration

Musk rats can be seen swimming in ponds, slow moving streams, and marshy lakes and rivers of the Northwest Territories. Although commonly thought to be a relative to the beaver, the muskrat is actually a large field mouse that has adapted to life in the water. Skilled swimmers, they are easily recognized by their dark, furry bodies and long, thin tails which trail out behind while swimming. Musk rats prefer to live in water that increases in depth near their burrow or lodge. This allows the muskrat access to aquatic plants all year and the ability to evade predators.

### **Hinterland Who's Who**

For more information on the muskrat.

### **SMART Board / Promixa Ready**

### **Northern Resources**

# Gr.4 Extreme Weather

## LAND OF THE MIDNIGHT SUN

**OBJECTIVE** Students will examine the impacts of flooding on local communities, the local environment and the plants and animals that live there. Students will develop an understanding of emergency preparedness.

Scientists believe that extreme weather is the new normal. As our climate changes, the prediction from climate models is that extreme weather events will occur more often and with more intensity. Increased retention of solar heat is causing polar ice to melt at a rate that is contributing to changes in the polar ice and in global weather patterns. In addition, the melting of polar icecaps is raising sea levels. Sea level change will affect communities located near the Arctic Ocean. Loss of ice and snow cover contributes to permafrost thawing and melting, which will raise freshwater levels and cause localized flooding. Although flooding adds important nutrients to the soil, it can also hasten permafrost slumping, which can cause sediments to be deposited into sources of drinking water. The summer of 2014 was the driest summer in the NWT in 40 years, which created unprecedented conditions for a record number of forest fires. For these reasons, northern residents are noticing the effects of climate change acutely.

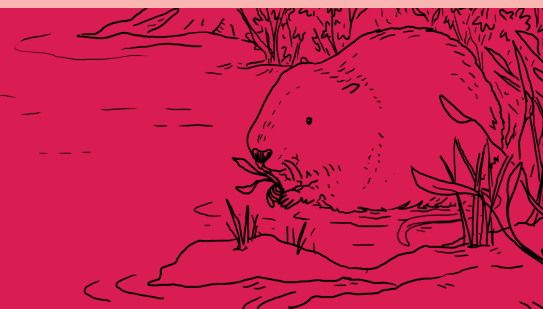
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# CURRICULUM Links



The activities and resources in this document are intended to tie in with Grade 4 science curriculum *Earth and Space Systems: Rocks, Minerals and Erosion and Life Systems – Habitat and Community*, Grade 4 language arts as well as the *Dene Kede* and *Inuuqatigiit* curriculum relating to the land. You can find specific learning outcomes for each of these by following the links below.

The Dene Kede and Inuuqatigiit curriculum contain a lot of useful advice about bringing northern culture, language and traditional knowledge into the classroom. In culture-based education, teachers are expected to offer students the opportunity to extend learning experiences necessary in K–12 skills. Teachers are to

involve students in key experiences, both on the land and in school. In addition, culture-based education is enhanced with the involvement of Elders. ECE has developed a resource to provide valuable information about inviting Elders to contribute to lessons and related activities. Interview templates are included as well as practical advice about compensation (see **Teacher’s Resources**).

Here are some examples of where the lessons in this resource connect with these different curricula. Some suggestions for making connections have been included in the lesson plans, too.

## Grade 4 Science and Technology

### General Learning Outcome

Students will investigate, test and compare the physical properties of rocks and minerals and investigate the factors that cause erosion of the landscape.

### Specific Learning Outcomes

Students will describe the effects of wind, water and ice on the landscape (e.g., ice breaking rocks into soil) and identify natural phenomena that cause rapid and significant changes in landscape (e.g., floods, break-up and heavy rain storms).

### Connected Lessons

#### **Lesson 2 – Erosion Experiment**

This lesson provides an opportunity to formulate questions, test ideas, gather data and present results related to erosion.

#### **Lesson 4 – Flood Prevention and Emergency Preparedness**

This lesson guides students to develop an emergency preparedness plan.

# CURRICULUM Links



## Grade 4 English Language Arts

### General Outcome, Specific Outcome

1.1, 1.2, 2.2, 2.4, Lesson 1, 2, 3: Sun Notes Notebook

3.1, 3.2, 3.3, 3.4 – Lesson 2: Erosion in the NWT Experiment

## Dene Kede – Land

### General Learning Outcome

With the aid of the Dene language, students can explore the following thematic units: Sun, Land & Sky and Muskrat. Related legends include:

#### A Time of Two Winters Together (Legend 7)

A story about a large flood.

#### The Teachings of Paul Blondin (Legend 14)

#### The Story about Survival of a Baby (Legend 8)

legends 8 and 14 refer to the muskrat.

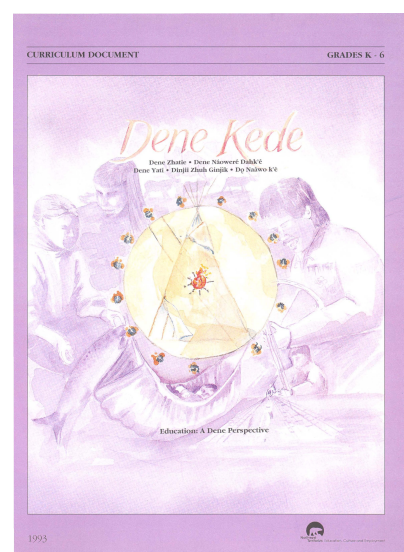
### Specific Cultural Expectations

Knowledge of the spiritual nature of the Sun and the gifts it gives to people will give students a great appreciation of it. Learning the survival skills that use the Sun will help them when on the land.

### Connected Lesson

#### **Lesson 3 - Traditional Knowledge – Understanding and Respecting Weather**

This lesson helps students understand the cultural importance of the Sun, muskrat and flooding to the Dene.



# CURRICULUM Links



## Inuuqatigiit – Land

### General Objectives

Students will learn how the bodies of water around your community can be dangerous, and about the precautions one can take to ensure safety near water.

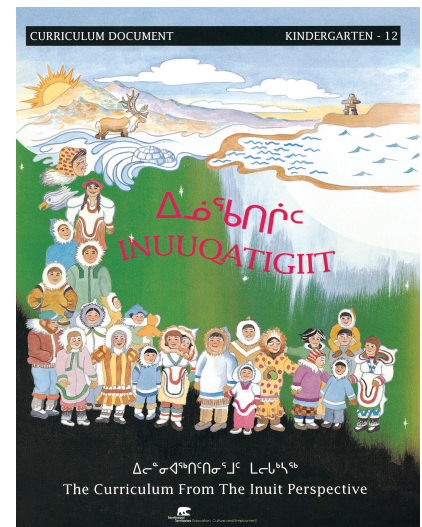
### Key Activities

Learn some traditional Inuit beliefs about water. Discuss the reasons for these beliefs — how they have or have not changed over time and how they might be relevant to students' lives today.

### Connected Lesson

#### **Lesson 3 – Traditional Knowledge – Understanding and Respecting Weather**

This lesson will provide an opportunity to learn some traditional Inuit beliefs about water and that water in rivers, lakes and the sea changes throughout the seasons.





# JOURNAL



## Sun Notes Notebooks

Students can design their own Sun notes notebooks for recording observations and questions as they explore the Sun. Keeping a field journal helps develop scientific inquiry and research skills. Journals can be simple, homemade books with lined pages or sections for note taking and plain sections for sketching. ***Great Stems*** has an excellent, step-by-step guide for making nature journals. You can find the link in the **Teacher's Resources** section on page 6.

Journals can be used as assessment tools for almost all of the lesson ideas in this resource. Some suggestions for how to use them have been included. Consider pairing students who need help writing their ideas down with a student who can scribe for them, allow them to complete their notebook on the classroom computer or create a video blog.

### **Green Teacher**

Issue 69, Fall 2002. Please see the section on evaluating nature journals.

# TEACHER'S Resources



## Books

### **Arctic Weather and Climate Through the Eyes of Nunavut's Children**

David Natcher, Mary Ellen Thomas,  
Neil Christopher  
Inhabit Media Inc, 2013  
ISBN 978-1927095492  
[www.inhabitmedia.com](http://www.inhabitmedia.com)

### **A Warmer World From Polar Bears to Butterflies, How Climate Change Affects Wildlife**

Caroline Arnold  
Illustrated by Jamie Hogan  
Charlesbridge, 2012  
ISBN 978-1-580892674  
[www.charlesbridge.com](http://www.charlesbridge.com)

### **Earth Rescue Book Club**

Moving Up with Literacy Place series  
Scholastic, 2009  
ISBN 978-0779178087  
[education.scholastic.ca/  
product/9780779178087](http://education.scholastic.ca/product/9780779178087)

### **The Delta is My Home**

Tom McLeod & Mindy Willett  
Photos by Tessa Macintosh  
*The Land is Our Storybook* series  
Fifth House Publishers, 2009  
ISBN 978-1897252840  
[www.fifthhousepublishers.ca](http://www.fifthhousepublishers.ca)

### **The Magic School Bus and the Climate Challenge**

Joanna Cole, Bruce Degen  
Scholastic, 2010  
ISBN 978-0545655996  
[www.scholastic.com/  
magicschoolbus](http://www.scholastic.com/magicschoolbus)

## Videos

### **Extreme Weather is the New Normal (2:00)**

[www.cbc.ca/player/News/  
Technology/ID/2451636005/](http://www.cbc.ca/player/News/Technology/ID/2451636005/)

### **Climate Change North (13:30)**

[https://www.youtube.com/watch?  
v=X3B1VQY9zN8&safe=active](https://www.youtube.com/watch?v=X3B1VQY9zN8&safe=active)

## Slideshows

### **2006 Flood in Aklavik (6:30)**

[https://www.youtube.com/  
watch?v=2lEaeqARwhQ](https://www.youtube.com/watch?v=2lEaeqARwhQ)  
Shows both aerial and ground level  
photos of a major flood. Subtitled.

## Websites

### **Elders in Schools Handbook**

[http://www.ece.gov.nt.ca/files/  
publications/elders\\_in\\_schools  
handbook\\_en\\_web.pdf](http://www.ece.gov.nt.ca/files/publications/elders_in_schools_handbook_en_web.pdf)

### **Erosion Experiment**

[https://www.youtube.com/  
watch?v=ZNJe6hrdL3M](https://www.youtube.com/watch?v=ZNJe6hrdL3M)

### **Great Stems**

[http://www.greatstems.  
com/2013/05/wildlife-projects-for-  
kids-making-a-nature-journal.html](http://www.greatstems.com/2013/05/wildlife-projects-for-kids-making-a-nature-journal.html)

Find a step-by-step guide for  
making journals.

### **Green Teacher Magazine**

[http://greenteacher.com/back-  
issues-index/green-teacher-69-  
fall-2002/](http://greenteacher.com/back-issues-index/green-teacher-69-fall-2002/)

This issue features a handy guide  
for evaluating students' nature  
journals.

### **Flooding Creates Weekend Mayhem in Yukon and the NWT**

[http://www.cbc.ca/news/canada/  
north/flooding-creates-weekend-  
mayhem-in-yukon-and-n-  
w-t-1.1146695](http://www.cbc.ca/news/canada/north/flooding-creates-weekend-mayhem-in-yukon-and-nw-t-1.1146695)

### **Flooding Events in Canada – Northwest Territories**

Ice dam flooding.  
[http://www.ec.gc.ca/  
eau-water/default.  
asp?lang=En&n=155A4B17-1](http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=155A4B17-1)

## Teacher Note

The easiest way to search for  
pictures of floods in the NWT is to  
use Google. Specifically, entering  
“NWT Floods” in Google will  
bring up many photos that can be  
used in a presentation. Clicking  
on “Images” will filter the search  
results to images or pictures only,  
while clicking on “Videos” will filter  
the search results to videos only.

# TEACHER'S Resources



## Websites

### Erosion Lesson Plans

<http://www.uen.org/Lessonplan/preview?LPid=9862>

### Environment Canada

<http://ec.gc.ca/meteo-weather/default>

[asp?lang=En&n=6A4A3AC5-1](http://ec.gc.ca/meteo-weather/default.asp?lang=En&n=6A4A3AC5-1)

History of extreme weather events in the North.

### Top 5 weather stories for the North in 2013

<http://ec.gc.ca/meteo-weather/default>

[asp?lang=En&n=5BA5EAF-1&offset=18&toc=show#rh1](http://ec.gc.ca/meteo-weather/default.asp?lang=En&n=5BA5EAF-1&offset=18&toc=show#rh1)

### Public Safety: Floods

<http://www.maca.gov.nt.ca/home/for-residents/public-safety/floods/>

### Floods: What to Do

<http://www.maca.gov.nt.ca/wp-content/uploads/2011/09/flds-wtd-eng1.pdf>

### Family Emergency Preparedness

<http://www.maca.gov.nt.ca/home/for-residents/public-safety/familyemergency-preparedness/>

<http://www.maca.gov.nt.ca/wp-content/uploads/2011/09/MACA-family-emergency-brochure.pdf>

### NWT Fire Smart Program

<http://www.nwtfire.com/cms/>

### Community Emergency Contacts

[http://www.maca.gov.nt.ca/?page\\_id=482](http://www.maca.gov.nt.ca/?page_id=482)

### Pet Emergency Preparedness

[http://www.maca.gov.nt.ca/wp-content/uploads/2011/10/GNWT\\_4941\\_family\\_pet\\_brochure\\_P2.pdf](http://www.maca.gov.nt.ca/wp-content/uploads/2011/10/GNWT_4941_family_pet_brochure_P2.pdf)

# LESSON Plans



## Lesson 1: Characteristics of Extreme Weather in the NWT

**1 to 2 class periods. Covers concepts such as flooding, weather data and extreme weather.**

Introduce the concept of extreme weather events in the world using the following online materials and guiding questions:

### **Extreme Weather is the New Normal (2:00)**

CBC's The National, April 23, 2014

This video highlights some recent and dramatic extreme weather events that have occurred in Canada.

*Who can share another example of an extreme weather event?* Typhoons in Asia (December 2013), flooding in Calgary (summer 2013), drought and forest fires in the NWT (2014)

### **Environment Canada**

History of extreme weather events in the North.  
Share the list of Canadian extreme weather events of the 20th century.

*How many of the most extreme weather events of the last 100 years affected northern communities?*

Now we are going to look at local weather events. Not all these events are considered record-breaking, but they are still disruptive to northern people, plants and animals.

### **Top 5 weather stories for the North in 2013**

### **Top 5 weather stories for the North in 2012**

As we look at the top 5 stories from the last few years, we can see several stories refer to ice, winter storms, rains and floods. As a class, have a closer look at the effects of flooding.

### **Focus on Flooding**

Each and every NWT community is located on the ocean coast, along a major river or on the shore of a lake. Some communities are so close to the water's edge that the community has required relocating. In the 1950s, the GNWT selected a new site for the community of Aklavik. The new site, Inuvik, was chosen for its high ground and good drainage. However, a number of residents did not agree to the relocation, preferring to remain in the community, a productive hunting and fishing area. There are approximately 628 residents who continue to call Aklavik home. These residents chose the motto of "Never Say Die" to reflect their passion for remaining in their traditional community, even in light of its frequent floods.

Spring breakup starts in April in the southern region of the Mackenzie River, works its way northward and is completed in about ten weeks. The communities that are most likely to be affected by spring flooding include: Hay River, Fort Simpson, Fort Liard, Nahanni Butte, Tulita, Fort Good Hope, Fort McPherson, Aklavik and Tuktoyaktuk.

View the slideshow on a massive flood in Aklavik

### **2006 Flood in Aklavik (6:30)**

Shows both aerial and ground level photos of a major flood. Subtitled.

Guide your students to the conclusion that, out of all of the extreme weather events, flooding is most likely to affect the majority of northern communities directly or indirectly (e.g., through road closures).

### **Assessment Opportunity**

In their Sun notes notebooks (see **Journal** section), students reflect on their knowledge of extreme weather and a recent extreme weather event in their community.

# Lesson Plans



## Lesson 2: Erosion in the NWT

**1 to 2 class periods. Covers concepts such as flooding and erosion.**

### Introduction: What is Erosion?

Announce that you are going to learn about something that can be one of the strongest and most destructive forces on Earth — erosion! *What is erosion? What causes erosion?* Wind, waves, flowing water, chemicals, biological weathering...

### Active Break: Life of a Mountain

Get your class to feel what it is like to be a mountain going through erosion. Have everyone find a partner and start on the floor. Describe the following with your class acting along:

1. One way mountains form is two major plates crash into each other. Bump into your friend and grow up tall (rise up against your partner and raise your arms).
2. As a young, jagged mountain, the rain will try to bring you down (bring fingers and elbows in).
3. A huge wind storm is happening and is carving out your belly (curve in body).
4. A river running beside you is eating away at your feet (bow legs).
5. Snow melting in a crack breaks you apart from your friend (lean away).
6. A glacier scrapes over you (shrink down).
7. This happens for millions of years until you become sand in the lakes and oceans (slowly melt down to the floor).

### What Does Erosion Look Like?

Create a slideshow or print out images that depict erosional forces. Have students categorize the photos by erosional force: wind, wave action, flowing water, ice, chemicals, biological weathering. Kick-start a discussion about climate change and how it might affect communities on river edges and coastlines.

Note: The easiest way to search for pictures of erosion in the NWT is to use Google. Specifically, entering “NWT Erosion” in Google will bring up many photos that can be used in a presentation. Clicking on “Images” will filter the search results to images or pictures only, while clicking on “Videos” will filter the search results to videos only.

### Erosion Experiment

Use this experiment to model soil erosion and explain how floods can cause damage through erosion. Each experiment can be modeled first for the whole class and then each type (wind, wave, flowing water, mountain) can have its own station so the students can rotate through in groups and try modeling the types of erosion themselves. This may get messy so it would be best to do this outside or in a multi-purpose room. The students can use the Erosion worksheet on the page 11 to help guide them through the stations and preliminary class discussion.

#### **Erosion Lab (8:00)**

An easy-to-follow video representation of this experiment.



# Lesson Plans



You'll need: A large bin of sand; 3 clear trays (large Tupperware works well); rocks and sticks; straws; piece of plastic (like a mouse pad) to wave water; a spray bottle

## Wind Erosion

High winds can mean extreme weather! Fill a small tray with rocks and sand. Cover with saran wrap or a clear lid. Through holes in the side of the tray, blow air through a straw to model how wind can move earth around. Have students draw a before and after picture.

## Wave Erosion

Pile sand about  $\frac{3}{4}$  up one side of a deep tray. Fill the tray with water and have students draw a before picture. It should look like a beach with a steep bank to the water. Now, use a bit of plastic to gently push the water up to the sand in a wave motion. Slowly, the sand will be pulled into the water and the cliff will disintegrate. Have students draw an after picture. Try it again, this time with rocks and sticks. *What do you notice?*

## Flowing Water

A long Tupperware is best for this; if you can, place it in a larger tray and cut one end so the water can drain out. The tray should be elevated a small amount on one end so water will flow. Fill the tray with wet sand and carve a small winding path. Slowly add water at the top and watch it widen the path and even cut curves off. Try it again, this time with rocks and sticks to form a bank. This is a fun one to experiment with!

## Mountain Erosion

Build a mountain with the wet sand. Using the spray bottle "rain" water on the top and watch as the mountain becomes a smaller, round hill over time.

In the follow-up discussion, students should reflect on the effects erosion has on people and plant and animal species. *How does erosion affect the muskrat?*

## Extension

- Animal and plant life buried by soil can be exposed after weathering and erosion! Bring in some examples of fossils, or take a field trip to somewhere with fossil beds. Have the students look at the different fossils, identify what made them and imagine what they looked like when they were alive.
- Look for examples of erosion around the school. Talk about the animals that make use of erosion (bank swallows) and look for fossils.

## Assessment Opportunity

In their homemade journals students can attach their completed **Erosion** worksheet.

# EROSION



Date:

.....

What is erosion?

.....

.....

.....

What causes erosion?

1. ....

4. ....

2. ....

5. ....

3. ....

6. ....

What can be done to protect shorelines from erosion?

.....

.....

.....

What are some examples of erosion around  
your school?

.....

.....

.....

Grade 4/theme 2. This resource is available as a free download from WWF-  
Canada Schools for a Living Planet. Visit [schools.wwf.ca](http://schools.wwf.ca).

## Erosion Experiments!

### Wave Erosion

Before	After
<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>	<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>

### Wave Erosion

Before	After
<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>	<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>

### Flowing Water Erosion

Before	After
<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>	<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>

### Mountain Erosion

Before	After
<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>	<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>

# Lesson Plans



## Lesson 3: Traditional Knowledge - Understanding and Respecting Weather

**1 to 2 class periods. Students will develop respect for weather and water.**

Traditional knowledge regarding understanding of and respect for weather can be shared with the students. This knowledge reflects cultural beliefs as well as practical safety messages.

### A Time of Two Winters Together

Read the legend as a class.

- Listen to traditional stories and information about water. If possible, record the stories and information. Stories may be found in your school library, in the language room or you may invite someone from the community who is well-known for their storytelling and traditional knowledge to speak to your class.
- Get outside and visit several bodies of water close to your community in different weather conditions and seasons (ongoing). Notice the water conditions. Notice the weather. *How do these affect the water?* Discuss the important safety precautions around water, and be aware of changing conditions.
- Select a recent extreme weather event that has affected your community. Ask the students to create a story about it, so they can become the storytellers.

## Assessment Opportunity

In their homemade journals, students can reflect on what they have learned from the above activities. Students can record their understanding as a drawing, story or make a video about what they have learned.

### Extension

In their homemade journals, students can record their knowledge about water safety. Identify the water bodies in their community and highlight how they use the water. *What do they do to make sure they stay safe on the water?* If a student highlights a skill that they would like to develop (e.g., learn to swim, learn to canoe) encourage the student to make plans to achieve their goal.



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# Lesson Plans



## Lesson 4: Flood Prevention and Emergency Preparedness

**2 to 3 class periods. Includes the creation of an emergency preparedness plan.**

The goal of this lesson is to prepare your students for an extreme weather event (e.g., a flood, long-term power outage or evacuation due to the threat of forest fires).

The previous lessons have provided your students with information on flooding, erosion, traditional knowledge and water safety. Your students can now learn about community efforts to reduce the impact and severity of floods and other extreme weather events as part of emergency preparedness.

### **Flood Season in the NWT**

Municipal and Community Affairs (MACA), a department of the Government of the Northwest Territories, has a dedicated flood watch link on their website. Use the site to generate a discussion about what has happened in your community or a neighbouring community.

### **Questions about flooding**

- *What types of emergency has our community had?*
- *Do you think we will have similar emergencies in the future?*
- *Do you know how many hours residents should be able to take care of their needs before relying on the hamlet/town or city council? 72 hours*
- *Why is it important for residents to take responsibility for their own well-being?*

Assign the class a small group project where they will work on an emergency preparedness plan. Groups should choose one of: flood, family, pet or fire.

By beginning with brochures and websites (see **Teacher's Resources**), the student groups should develop a plan that could be used in their community. Their plans might include a list of contact numbers, checklist for emergency kit (one for home, one for vehicle), a page for each family to list family members and responsibilities (so every member knows their role), etc. The end result should be a comprehensive set of plans that can be used by families in the community.

## Assessment Opportunity

Groups present their plans to the class and attach a copy to their journal. Consider providing an opportunity for the students to deliver their safety plans to your hamlet or town council.



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## Conduct a Case Study

Conduct a case study of the Nahanni Butte flooding in 2013 or of a nearby community that has experienced flooding. Research the extent and occurrence of floods in the NWT. Create a slideshow of images showing the destructive power of water and ice at spring breakup.

## Fossils and Floods

Conduct an online search for fossils uncovered after flooding. Discuss the results!

## Royal Tyrell Museum

As a follow-up to this discussion, take your students on a virtual tour of the Royal Tyrell Museum.

## Water Walk

Throughout the school year, get outside and visit several bodies of water close to your community in different weather conditions and seasons. Notice how the water level changes, and the different safety concerns at different times of year (e.g., temperature of water, current, thickness of ice in winter/spring).



# URLS



Some hyperlinks have been embedded throughout the **Extreme Weather** resource. If a link appears to be broken, try visiting the homepage or keying in the URL as it's written below.

#### Hinterland Who's Who

<http://www.hww.ca/en/species/mammals/muskrat.html>

#### Grade 4 science curriculum

<http://www.ece.gov.nt.ca/files/Early-Childhood/K-6%20Science%20%26%20Technology%20CurriculumFINAL%20.pdf>

#### Dene Kede curriculum

<http://www.ece.gov.nt.ca/early-childhood-and-school-services/school-services/curriculum-k-12/aboriginal-languages#dene-kede-grade-6>

#### Inuuqatigiit curriculum

<http://www.ece.gov.nt.ca/early-childhood-and-school-services/school-services/curriculum-k-12/aboriginal-languages#inuuqatigiit>

#### Great Stems

<http://www.greatstems.com/2013/05/wildlife-projects-for-kids-making-a-nature-journal.html>

#### Extreme Weather is the New Normal

<http://www.cbc.ca/player/News/Technology/ID/2451636005/>

#### History of extreme weather events

<http://ec.gc.ca/meteo-weather/default.asp?lang=En&n=6A4A3AC5-1>

#### 2012 weather stories

<http://ec.gc.ca/meteo-weather/default.asp?lang=En&n=5BA5EAF-1&offset=18&toc=show#rh1>

#### 2012 weather stories

<http://ec.gc.ca/meteo-weather/default.asp?lang=En&n=28CD8158-CD69-45A2-91EC>

#### 2006 Flood in Aklavik

<https://www.youtube.com/watch?v=2IEaeqARwhQ>

#### Erosion Lab

<https://www.youtube.com/watch?v=ZNJe6hrdL3M>

#### A Time of Two Winters Together

<http://www.ece.gov.nt.ca/files/K-12/Curriculum/dene-kede/Legends/story7.pdf>

#### MACA site

<http://www.maca.gov.nt.ca/home/for-residents/public-safety/floods/>

#### Royal Tyrell Museum

[http://www.tyrellmuseum.com/programs/distance\\_learning.htm](http://www.tyrellmuseum.com/programs/distance_learning.htm)



**ECOLOGY NORTH**



WWF is Canada's largest international conservation organization, working to build a future where people live in harmony with nature. The Schools for a Living Planet program empowers educators and students of all ages with the tools they need to lead us into a sustainable future. Schools for a Living Planet is grounded in the principles that make WWF a global success - including strong science and a focus on solutions.

Ecology North is a charitable, non-profit organization that has engaged Northerners in hands-on learning opportunities in the Northwest Territories since 1971. Our mission is to bring people and knowledge together for a healthy Northern environment. Education, public engagement and youth involvement are integral to all of our program streams that include climate change adaptation, watershed protection planning, waste reduction, food sustainability and alternative energy promotion.

This project was made possible with the financial support of CIBC. For more information, visit [www.cibc.com](http://www.cibc.com).

WWF-Canada and Ecology North would like to thank the classroom teachers across the Northwest Territories who contributed many of the ideas presented here, especially Ellie Baxter, Margaret Gordon, Marlene Martin, and Shawn Mosey. Ecology North Education Committee member Mindy Willet also provided guidance. This resource is available as a free download from WWF Canada Schools for a Living Planet. Visit [schools.wwf.ca](http://schools.wwf.ca). © 1986 Panda symbol WWF-World Wide Fund For Nature (also known as World Wildlife Fund). ® "WWF" is a WWF Registered Trademark.