

BEAVER

"It is the beaver who taught the Dene how to store and ration food."
George Blondin, April 17, 1991



Primary Objective

The beaver is valued by the Dene because it has the gift of intelligence. It is the boss of intelligence. The beaver's existence on this land is very important to the shaping of Dene history

Goals:	<ul style="list-style-type: none">• Be familiar with local legends about the beaver• Know the spiritual characteristics of the beaver• Be familiar with the physical characteristics of beaver and to know why these are important to the beaver's way of life.• Be familiar with the beaver's habits and habitat: life cycle, food, shelter, and environment• Be aware of both the historical and present day importance to the beaver• Be familiar with beliefs and customs with respect to the beaver• Know the history of the very strong identifiable landmarks left by the beaver for the Dene
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Skills and Knowledge to be acquired by the student:

1. Students will be able to list the beaver's adaptive characteristics and to indicate how each helps the beaver to survive.
2. Students will be able to list the things necessary in an ideal beaver habitat and to give local examples of such.
3. Students will be able to give examples of the changes beaver can make in the environment.
4. Students will be able to draw/build a model beaver lodge and to describe its distinctive characteristics.
5. Students will know how to treat beaver according to local custom.
6. Students will know the traditional importance of beaver in the local economy.
7. Students will know the importance of beaver in the local bioregion.
8. Students will be able to indicate on a map of the local area the places where beaver are traditionally found.



Children's Books

The Beaver, Nentl- Crestwood House, 1983
The Beaver, Lane - Dial Press, 1981
The Life Cycle of the Beaver, Hogan - Raintree, 1979
The Beaver, How he Works, Rounds - Holiday House, 1976
A Beaver Tale, Rebel Williams
Busy Beavers, M. Barbara Brownell - National. Geographic
Tendi Goes Beaver Snaring, MacDiarmid - Dept. of Ed., NW Territories, 1972
Trouble in Beaver Hollow, Moran - Holt, Rinehart and Winston, 1973
Benjamin Beaver's Box, Jones

Beaver Legends

Zhamonzha and His Beaver Wife (Tlicho – Vital Thomas & June Helm)
The Great Zhamonzha (Tlicho – Tale Spinners)
The Old Woman in the Moon/ Ts'ôökoa Adzêzaà Yii Nàwoo (Tlicho)
How the Beaver Got His Tail (Gwichin – Johnny Simple)
The Story About Survival of a Baby (Sahtu -George Blondin)
A Time of Two Winters Together (George Blondin)
Yamoria (George Blondin)
The Man who Walked Around the Sky (The Book of Dene)
Hahtô Dene Chee Neeæî (Slavey – Joseph Farcy)



PHYSICAL CHARACTERISTICS - Notes to the teacher

You can emphasize the importance of the beaver's physical characteristics by asking students such questions as:


- 1) What would happen if a beaver lost his tail?
- 2) What would happen if the beaver couldn't oil his coat?
- 3) What would happen if a beaver broke his tooth and it wouldn't grow again?
- 4) What would happen if a beaver didn't have the little flaps of skin to close behind his teeth?

Experiment: Oil and water don't mix!

Have the student's speculate as to:

- Why beaver don't get soaking wet when they spend so much time in the water?
- What keeps them from getting really cold in the icy water?

The beaver has oil glands under its tail. When beavers groom themselves, they spread the oil through their fur to make it waterproof. The water never gets near their skin. That's how they can stay dry and warm even in cold water. Wet fur would conduct heat away from the body. Since the fur doesn't get wet, the warmth stays in.

- 1) Put some cooking oil in a bottle. Pour water on top and shake. Gradually the oil and water will separate and the water will sink to the bottom. Oil and water don't mix!
 - 2) Pour some oil on a piece of construction paper so it soaks into a large area. Pour some water on top of the oil. The water will form globules or will run off. This is what happens when water touches a beaver's oiled fur. Oil and water don't mix!
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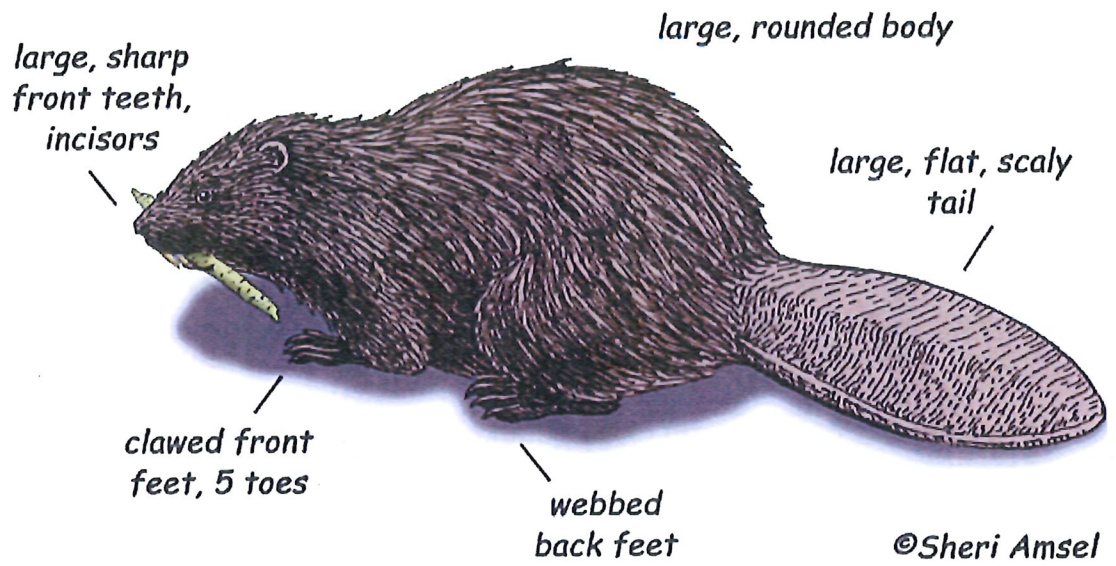
Physical Characteristics of the Beaver

Beaver Characteristic

Why is this important?

Strong, stocky body; short, thick neck	Allows beaver to move heavy logs
Strong, flat, paddle-shaped tail	Acts as a rudder when swimming acts as a prop when beaver cuts tree slaps water to give warning
Two layers of thick fur	Undercoat is soft & fine for warmth guard hairs protect undercoat
Front paws have flexible fingers	Used like human hands to pack & pat mud, hold and move sticks
Back feet are webbed	Used for swimming
Nose and small ears have watertight valve	Close when beaver dives under water
Eyes have a clear eyelid	Beaver can see under water
Special flap of the lip can close behind teeth	Keeps water, wood chips out of throat when chewing under water
Oil glands under tail	Allows beaver to oil fur to keep dry
One split claw on each back foot	Used for grooming
Teeth - incisors with very hard covering	Allow beaver to cut through wood
Teeth - keep growing all the time	Beaver would die without good teeth
Teeth - molars	Grind up what beaver eats
Teeth - space between incisors and molars	Allow beaver to carry sticks by mouth

Beaver
Castor canadensis



Anatomy

Beaver

thick, insulating brown fur

small, dark eyes

teeth that grow constantly

5-fingered hands

5-toed feet that are webbed

thick, flat, and heavy black tail

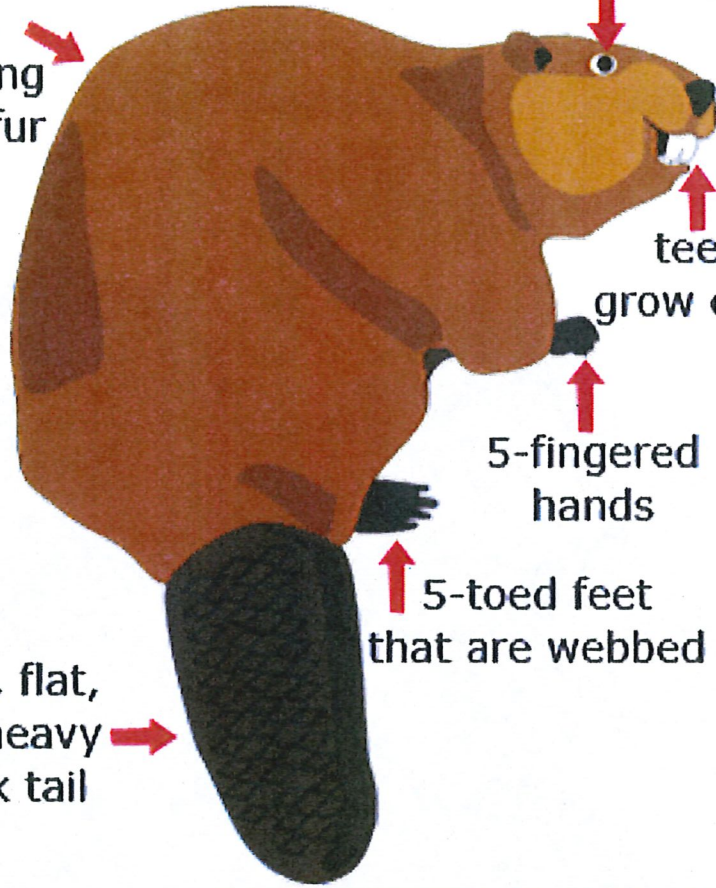
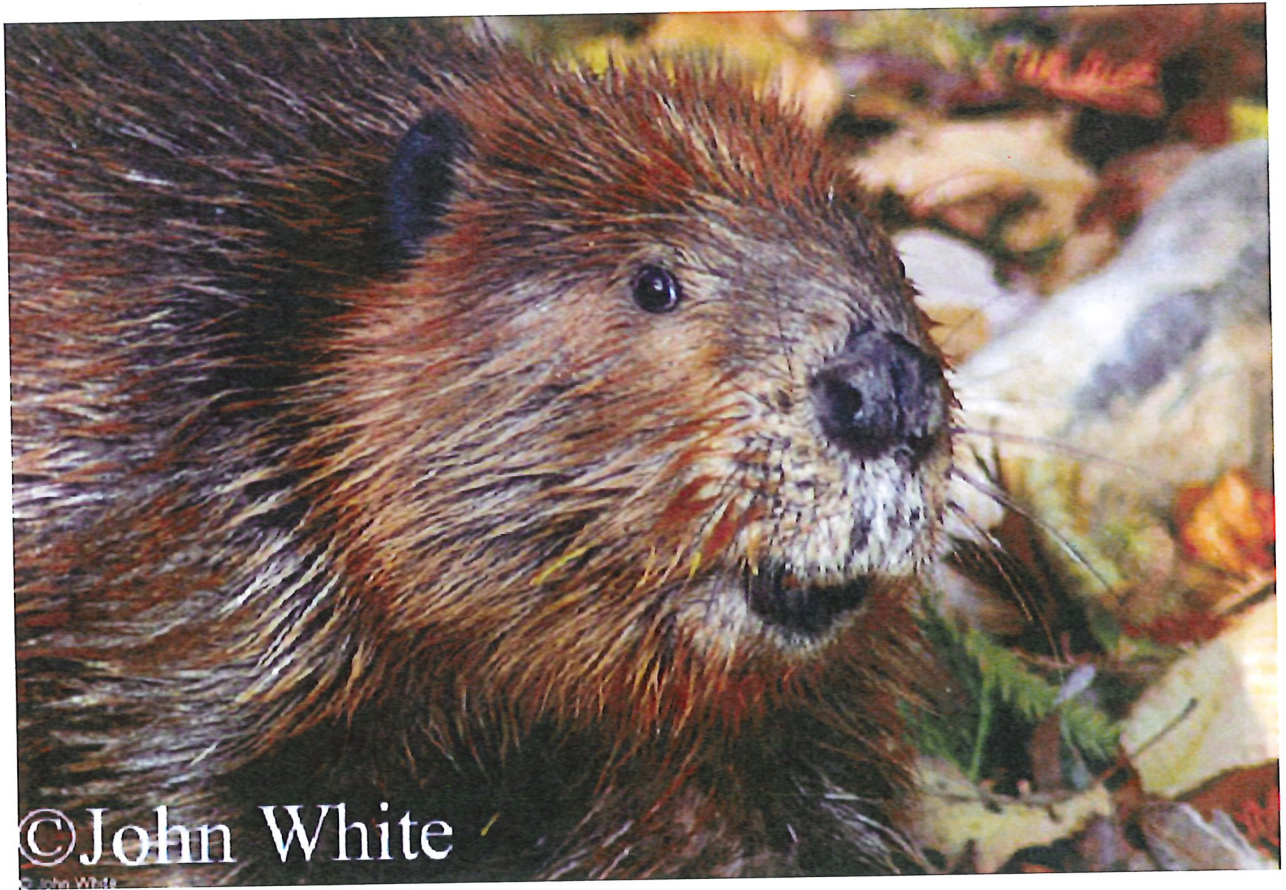


ILLUSTRATION BY ANNA SERRAO





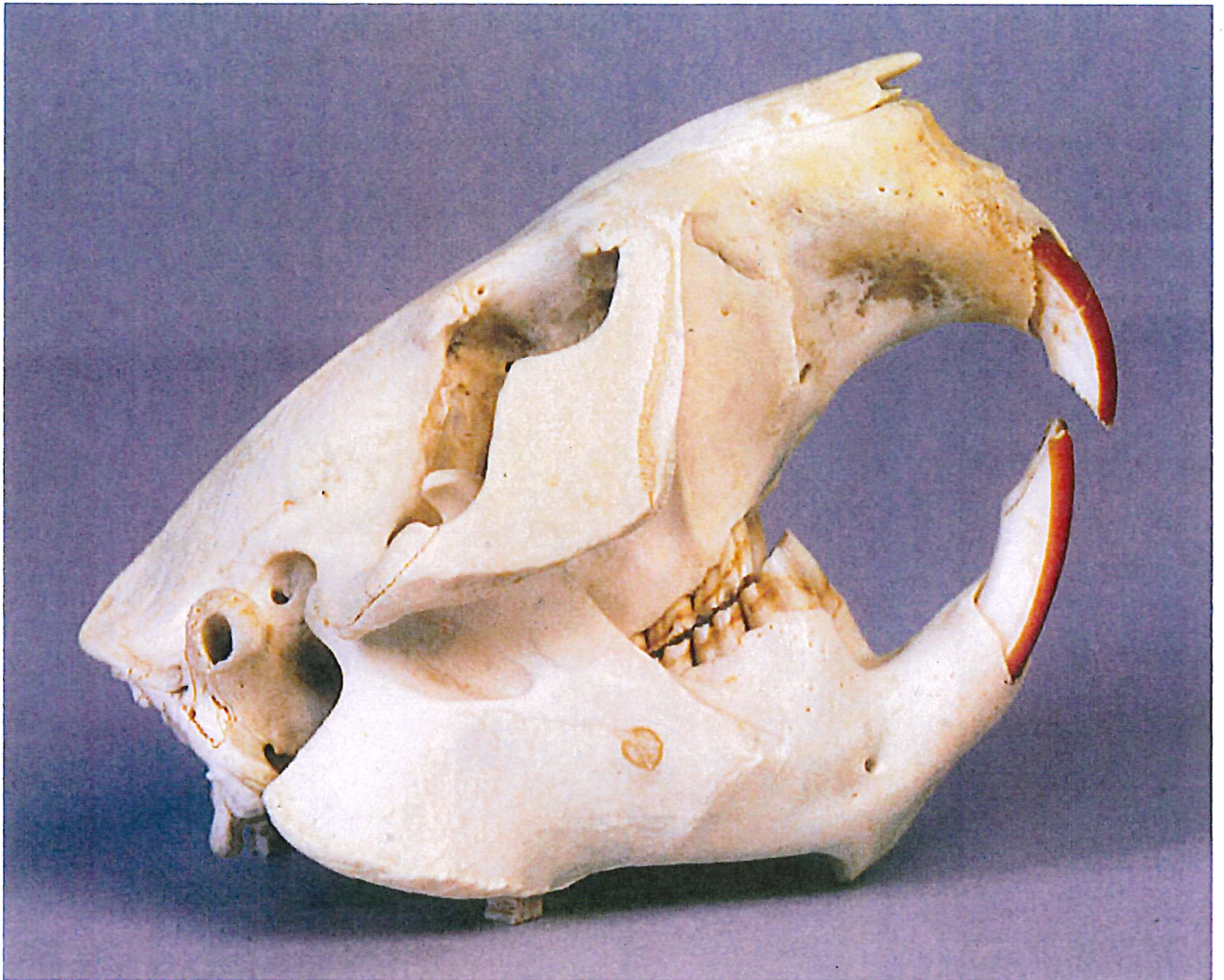


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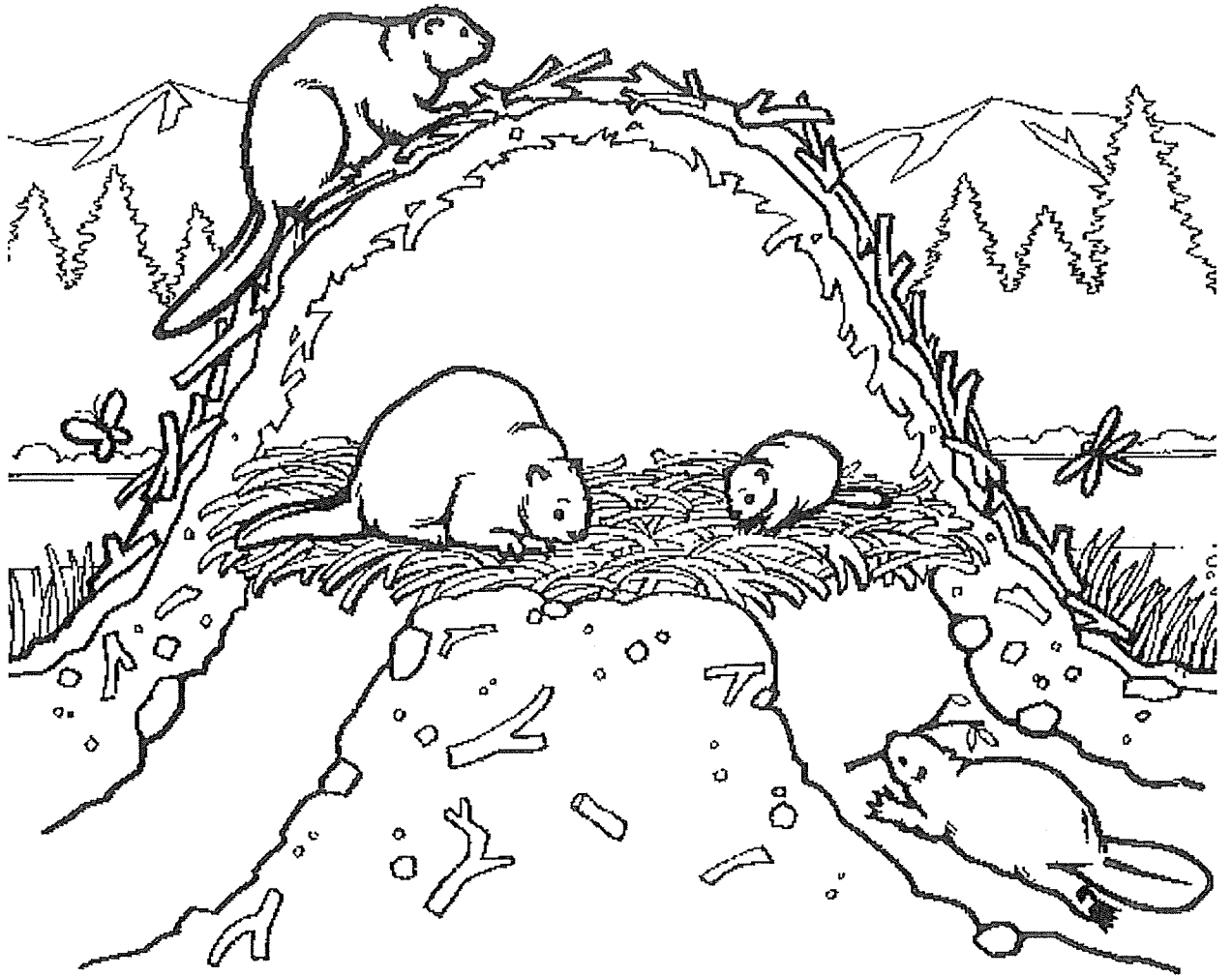
Beaver Skull – Lateral view



Beaver skull – Frontal view



Beavers build their homes
with sticks and mud.



Life as an Engineer

Beavers are large herbivores which live together in family groups. Beavers build their own homes and will also cut down trees for food and create canals and dams which change the landscape.

Powerful jaws and sharp teeth for gnawing through wood.

Ears and nostrils can be closed underwater with special valves.

Thick coat: woolly underfur and waterproof guard hairs on the outside keep the beaver dry and warm.

Lips can fold in behind the front teeth so beavers can gnaw on wood without getting a mouth full of sawdust.

Gripping paws help the beaver to carry things. The front feet are not webbed and they have an opposable little finger instead of an opposable thumb like humans have.

Webbed hind feet to help with swimming. There is a special grooming claw on each hind foot.

Large flat tail is used like a flipper to help the beaver move fast in the water. Beavers sit on their tails in cold weather to keep their feet warm.

Question: A beaver's front teeth never stop growing. Why do you think this is useful?

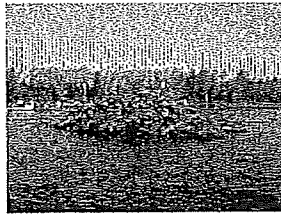
Question: Beavers can make a loud noise by slapping their tail on the water. Why might they do this?



Beaver Life Cycle

Beavers live together in family groups. Young beavers are called kits. Kits quickly learn all the skills that they need to survive from their parents but they may stay with them until they are several years old.

1. Beaver kits are born inside the lodge in late spring or early summer.



2. The kits drink milk from their mother at first but they may start eating other food when they are only 2 weeks old. Kits can swim at four days old and can dive by the time they are twelve days old.



5. Adult beaver. Kits stay with their parents for 1-2 years, even though they are fully grown before this age.



4. At six months old, the young beavers are capable of building their own lodge.



3. Young beavers will start carrying sticks around when they are two weeks old. By the time they are seven weeks old they have all the building skills of the adults but they don't always put things in the right place.

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Question: Why might it be a good thing for young beavers to stay with their parents for a few years?



A beaver lodge

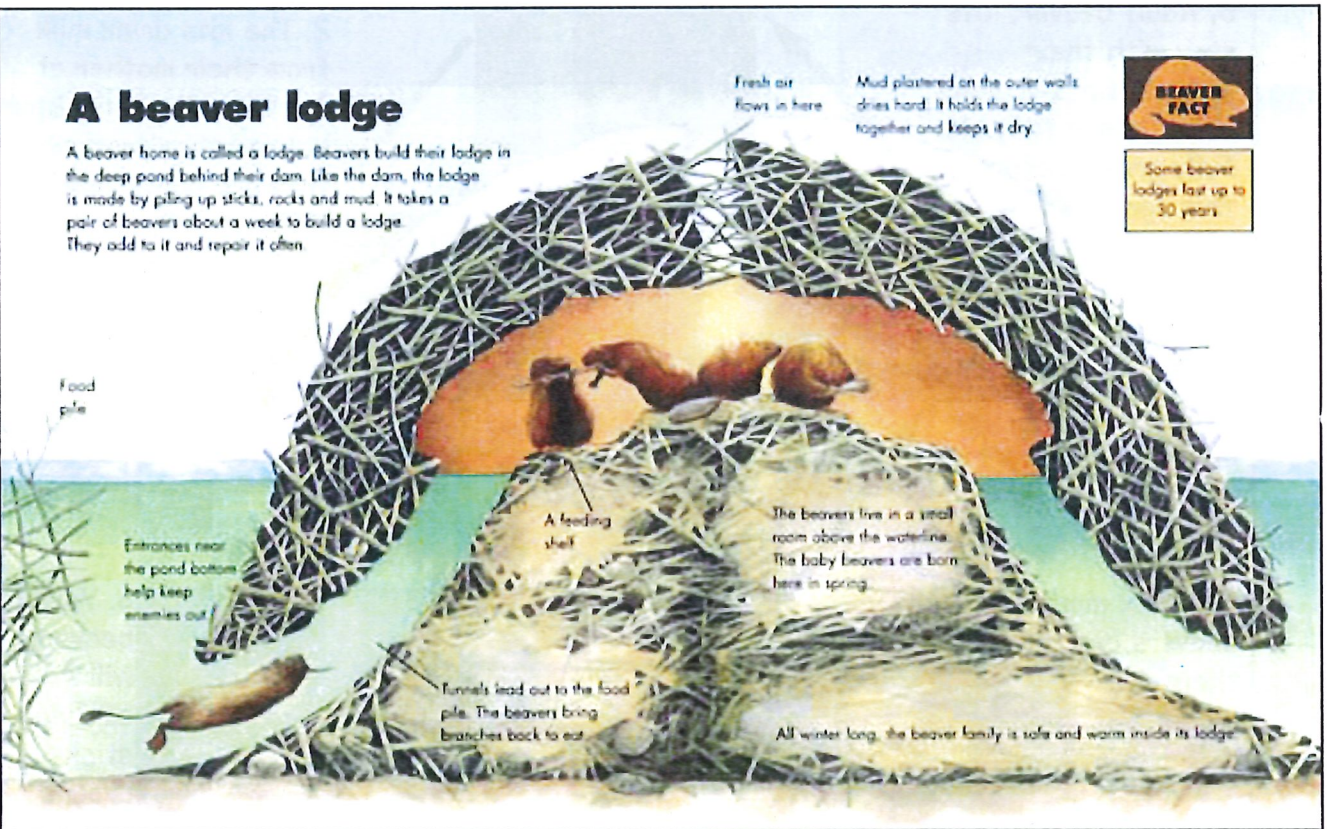
A beaver home is called a lodge. Beavers build their lodge in the deep pond behind their dam. Like the dam, the lodge is made by piling up sticks, rocks and mud. It takes a pair of beavers about a week to build a lodge. They add to it and repair it often.

Fresh air flows in here

Mud plastered on the outer walls dries hard. It holds the lodge together and keeps it dry.

BEAVER FACT

Some beaver lodges last up to 30 years.



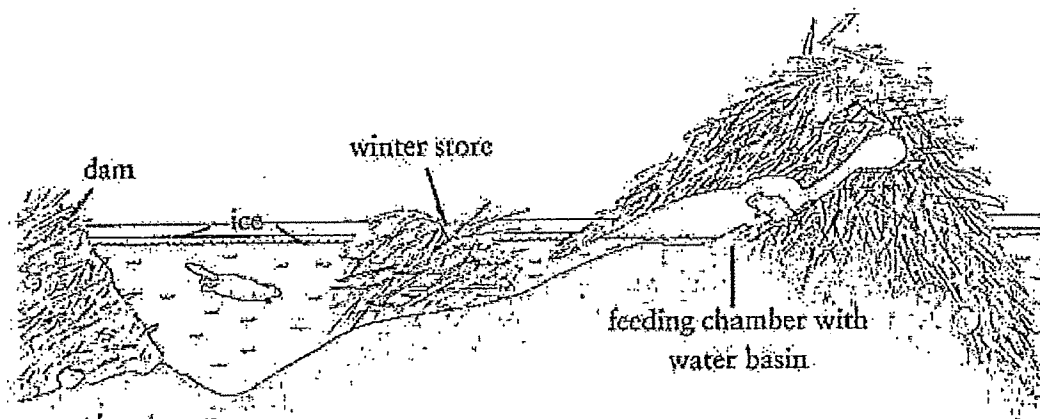
Habitats and Homes

Beavers are always found living near water. They also need trees nearby for food and to build their lodge. Beavers are brilliant engineers and so they will alter the landscape to suit them - just like humans do!

Many people think that beavers live in dams but they don't. They build dams but their home is called a lodge. Beavers like to have a constant water level around their lodge so that they can get in and out of it under the water.

This is why they build dams.

The dam also makes a large pond where the beavers can store food.



Look inside the beaver lodge in the picture. There is a feeding chamber where beavers eat, just like a dining room in a human house. They have another room for sleeping in, just like humans have a bedroom.

European beavers will often tunnel into riverbanks, rather than building dams and lodges. North American beavers, on the other hand, are famous for their dams - one in Alberta, Canada, was nearly 850m long!

Beavers are considered to be keystone species because they change their habitat and create wetlands. Wetland habitat is very important and nowadays it is quite rare. People often drain wetlands to make room for farming and houses but they are very important habitats for birds, reptiles, amphibians and endangered mammals, such as water voles and otters.

Beavers use their front feet for digging. Digging is important for making a tunnel into the lodge and also when beavers are building canals. Canals lead from feeding areas back to the water around the lodge. Beavers use them to make a quick getaway if predators are about and they also use them to transport food and wood for building.

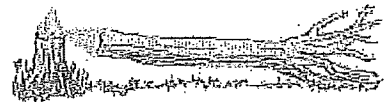


Tracks and Signs

Like most wild animals, beavers are shy of humans which means that they are not easy to find. They are also nocturnal so they are rarely seen in the daytime. If you want to find out about beavers and where they live, you need to become a beaver detective and look for the signs that beavers leave behind.

Gnawed-down trees or gnawed branches

When beavers cut a tree down using their teeth, they leave a stump behind that looks like a badly sharpened pencil. Beavers don't kill the tree when they gnaw it down. The tree will sprout new shoots from the stump. Branches or twigs that have been gnawed by beavers also have pointed ends like pencils. If you get a close look, you may be able to see teeth marks on the wood.



Tracks

Beavers may leave tracks in the mud by the edges of rivers, lakes or streams. The tracks from their front and back paws look different because their back feet are webbed but their front feet aren't.



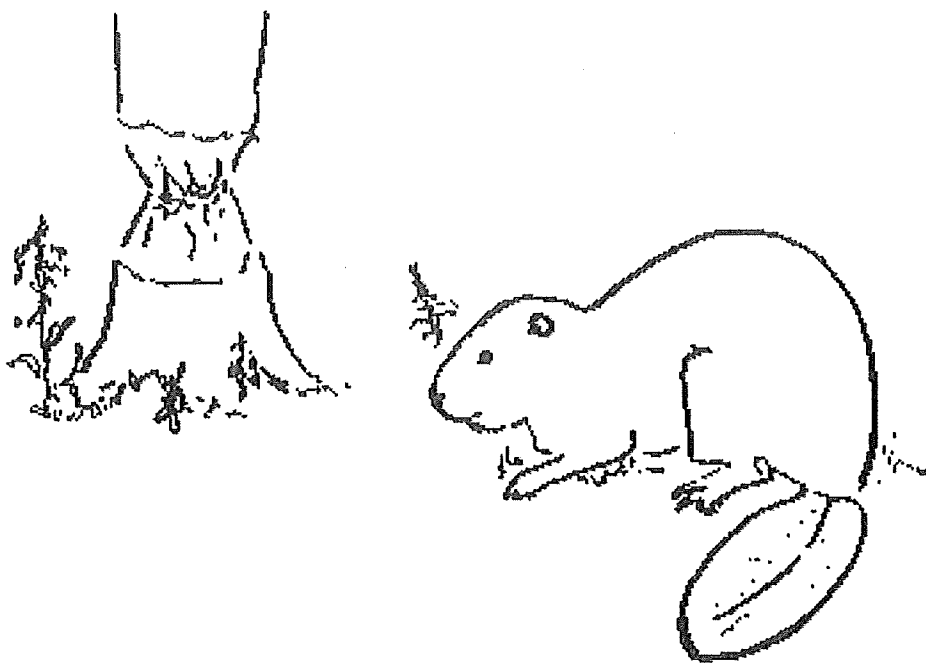
Beaver poo

This looks a lot like little balls of sawdust because of all the wood the beavers eat. Beavers normally go to the toilet in the water, so you won't see much poo on the banks beside their pond.



Can you see any signs of beavers in our beaver enclosure? Write down or draw a picture of any signs you see.



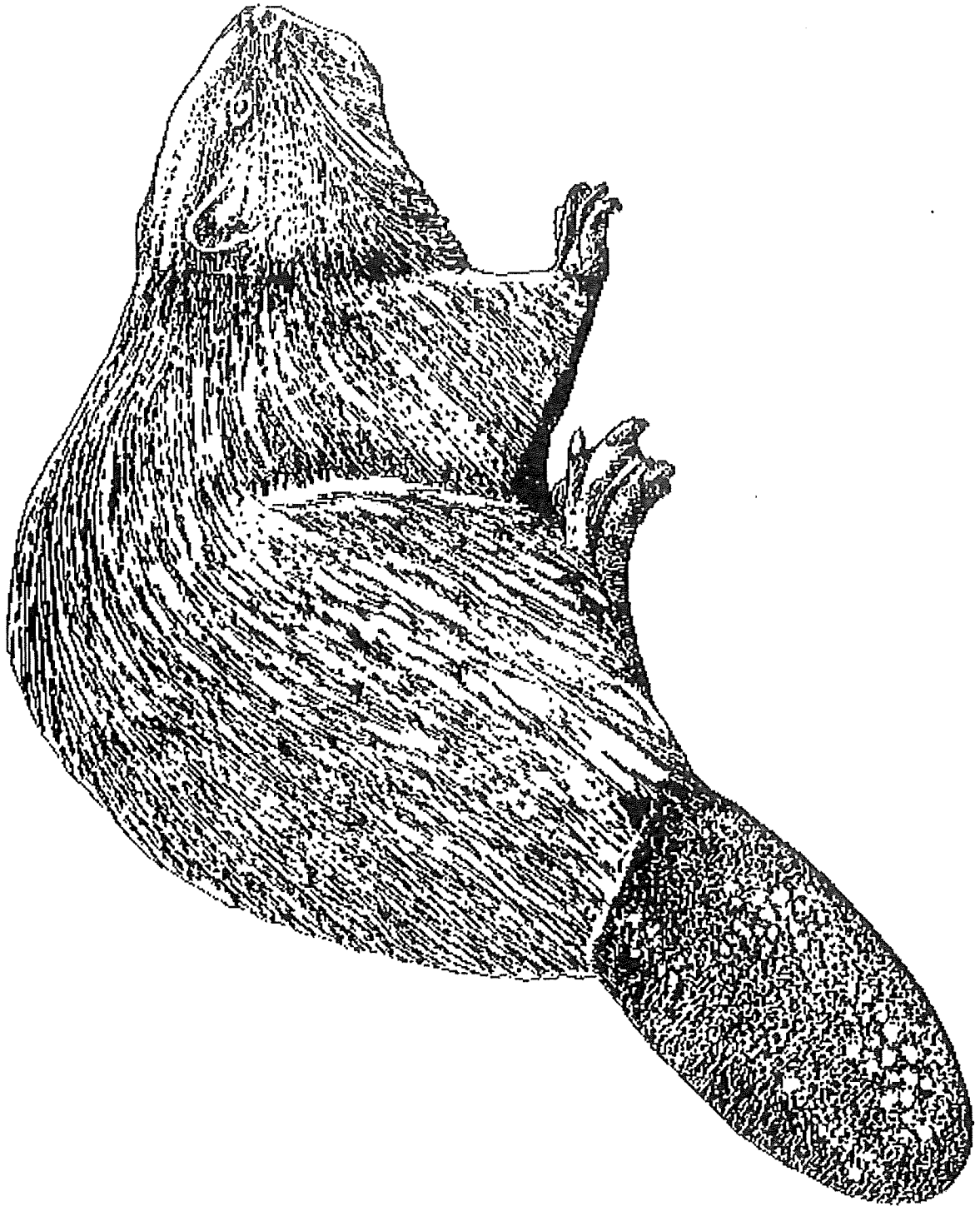


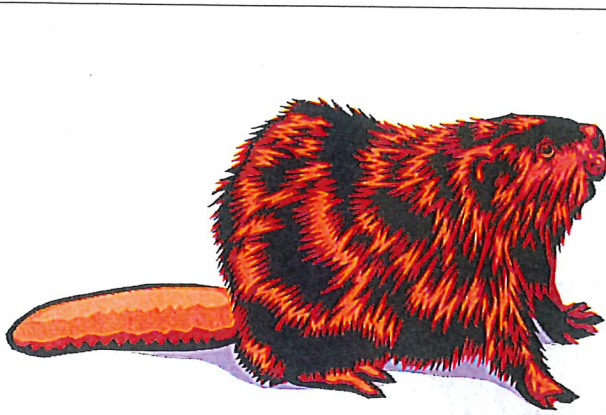
LEARNING ABOUT BEAVER

Some questions to consider when introducing the topic of the beaver:

- 1) What kind of an animal is a beaver?
- 2) How and where do beaver live? Are there any around here? Where?
- 3) How do you catch a beaver?
- 4) How do you skin a beaver?
- 5) What are the different ways of stretching the skin? Why do you stretch it?
- 6) What are the different ways of tanning the skin?
- 7) What things do people make out of beaver skin?
- 8) What parts of the beaver do people cook and eat?
- 9) What other parts of the beaver do people use, and for what?
- 10) What are the traditional beliefs or taboos about beaver?
- 11) Are there traditional stories or songs about beaver?

LABEL THE PARTS





Beaver

Dene Kede

- “It is the beaver who taught the Dene how to store and ration food”
- The beaver is valued by the Dene because it has the gift of intelligence
- It is a very concise builder
- The beaver is a very clean animal

BEAVER



Dene Kede

- “It is the beaver who taught the Dene how to store and ration food”
- The beaver is valued by the Dene because it has the gift of intelligence. It is the most intelligent of all the animals
- It is a very concise builder
- The beaver is a very clean animal
- The winter season is best for hunting beaver
- The beaver never has more than 8 kits
- The beaver builds their dams facing the sun

Economic Importance of Beaver

Goal: Become aware of both the historical and present day importance of the beaver

Objectives

1. Listen to stories about the fur trade and how it affected the history of the Dene people
2. Identify the different uses of the beaver
3. Understand the need for conservation of the beaver and how this is done
4. Be familiar with the fur industry as it relates to the beaver pelt market today
5. Be able to explain how Dene history was shaped by the beaver's existence on the land, and by the consequent fur trade.

Activities:

1. Discuss why beaver is such an important animal to the Dene people
2. List the various traditional uses of beaver
3. Make a chart relating the use to the parts of the beaver used. How is beaver used today? Does it still have the same importance?
4. Read about beaver camp or trapping beaver:
 - Tendi Goes Beaver Snaring
 - Beaver Trapping
5. Invite an elder or other community member to come to class and talk about beaver trapping. Have students prepare some questions ahead of time.
6. Have students list ways beaver can be caught. Examine a snare and a trap.
7. Discuss ways of preparing beaver meat. Cook and eat some beaver.
8. Review drying and tanning methods. Compare commercially tanned skins with home tanned. Look at Items made with beaver fur.

USES OF BEAVER

- Clothing:** Beaver hats, beaver mittens, beaver coat or vest, trimming for slippers and boots
- Blankets:** Skins used to be cut in strips and woven or braided to make blankets.
- Food:** Beaver meat can be boiled or roasted.
Beaver feet can be boiled or pickled.
Beaver tail can be boiled or roasted.
The head, feet and tail and be boiled and cleaned to make "beaver cheese".
- Tools:** Traditionally beaver teeth were made into chisels and draw knives for working on wood.
- Other:** Beaver teeth can be decorated with beads and hung on the wall.
Beaver feet can be skinned and the skin made into a little bag.
Beaver castors are used for bait for trapping.
Certain beaver bones were used to test a person's strength.
Beaver claws were sometimes made into necklaces.