A BEAVER CALENDAR

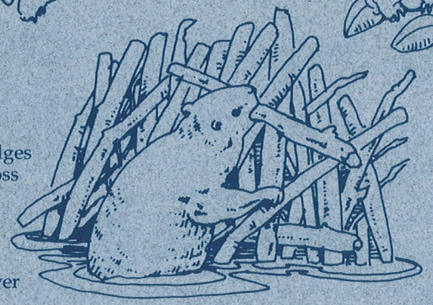
Follow the beaver's life through the year and see how each season brings new activities and challenges for survival. Then try making a calendar for a different animal of your choice.

November-January
Beavers spend most of the winter in their lodges or swimming under the ice to get food from their storage pile. An average adult beaver eats about half a kilogram of bark per day.

February-May
Adult beavers mate. Beavers keep the same partner for life and live in family groups called colonies. Mother beavers are pregnant for four months.

October
An underwater larder is being completed as branches and twigs are dragged down to the mud on the bottom of the pond near the beaver's lodge.

June
Three to four young beavers, called kits, are born in June (or as late as September). The kits are fully furred at birth and are able to swim after an hour or so. Young beavers stay with their parents for two years.



July-September
Beavers build or repair dams and lodges in summer and fall. Most lodges are 4.5 metres across and 1.5-1.8 metres high. Eating is another important activity as beavers put on an extra layer of fat for warmth.

Rodent Relatives

Beavers are the largest rodents in North America and have some surprising relatives. Unscramble the names of these familiar rodents. You'll find the answers at the bottom of the page.

munchkip
wodema love
rede sueom
sturkam
ragy requilrs
coduckhow

Suggested Reading

Check your local library or bookstore for these books.

1. **A Guide to Nature in Winter** by Donald Stokes. Little, Brown and Company, Boston, 1976.
2. **Beaver, Hinterland Who's Who.** Canadian Wildlife Service, Ottawa, 1978.
3. **Getting to Know Nature's Children**, Volume 1: Chipmunks/Beavers, by Elin Kelsey. Grolier Limited, Toronto, 1985.
4. **The Adventures of Paddy the Beaver** by Thornton W. Burgess. McClelland and Stewart Limited, Toronto, 1932.
5. **The Mammals of Canada** by A.W.F. Banfield. University of Toronto Press, Toronto, 1974.

Answers chipmunk, meadow vole, deer mouse, muskrat, gray squirrel, woodchuck

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Beavers in Winter

Written by Pamela Hickman
Illustrations by Judie Shore

How have you prepared for winter this year? Maybe you have gotten your cold-weather clothes out of storage or sharpened your skates and waxed your skis. It doesn't take people very long to get ready for the icy blasts and snowfalls of winter, but if you were a beaver, you would have begun your preparations away back in the summer. July and August find beavers hard at work cutting trees for dams, lodges and food. The gnawed stumps of aspen, poplar, willow and birch trees-the beaver's preferred food-are easy to find in winter and usually lead to the discovery of a nearby dam and lodge. Dams are built to block the flow of water in a stream, enough to create a pond. The higher the dam is, the deeper the pond will be. Beaver dams up to 2.4 metres high have been found! The pond is useful for a number of reasons: it provides a safe place in which to build a home surrounded by water, like a castle with a moat; since the pond floods land where trees grow, the beaver can swim to trees instead of having to waddle awkwardly on land; once the trees are cut, the beaver can float them in the water to its lodge or food storage area more easily than dragging them over land; and a deep pond will not freeze to the bottom so the beaver can stay active all winter under the ice.

Once the dam is finished, the beaver sets to work to make its home. If the nearby banks are steep, beavers will burrow into them; however, in areas where banks are shallow, beavers will usually build lodges. A dome-shaped mound of sticks and mud in the pond is a well-known sign of a beaver family or colony. Beavers continually pack layers of mud on the outside of their lodges, using their front paws like hands and patting the mud into a smooth coating as high up on the lodge as they can reach.

When the temperature drops to freezing, the mud hardens into a concrete-like siding on the lodge and prevents predators like wolves, coyotes, foxes or lynxes from crashing through. Too bad the little pig who made its house of sticks didn't know this trick! A beaver's lodge may look messy on the outside, but inside it contains a large room with a mud floor that sits high and dry above the water. The room may be divided into an eating area and a sleeping area, which has wood chips covering the floor to keep it drier and warmer. If you're out walking on a cold winter's day, you may see steam rising from the top of a beaver's lodge. There isn't a fireplace in there, but there is a lot of heat. The body heat generated from the four to ten beavers living inside is enough to keep the whole family warm. In fact, studies have found that the inside of a lodge in winter can be as much as 35°C warmer than the outside air temperature.

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You may be lucky enough to find beaver tracks in the snow, but they're not common since the animals don't have to venture outside above the ice very often. In the fall, beavers harvest enough trees to last them through the winter. The branches and twigs are cut and dragged to the pond where they are stuck into the mud at the bottom. Eventually a large pile of food is ready for a winter of feasting. When hungry, beavers leave their lodge through an underwater exit, swim below the ice to their food pile and pick out some tasty branches to take back home to eat. Only the bark is eaten, not the wood. Like a person eating corn on the cob, the beaver picks up the branch with its front paws and nibbles off the bark as it slowly turns the branch around.

While hiking near a woodland pond or stream this winter, watch for signs of beaver-chewed stumps, dams, lodges or bark-stripped saplings. Beavers are now quite common in many wooded areas of Ontario, and some have even adjusted to life in the river valleys of big cities. Despite their current success, beaver populations were nearly wiped out in some areas due to over-trapping during the 1800s and early 1900s. The demand for beaver pelts in Europe began in the 1600s when the fur trade started in North America. As more furs were needed, trappers and fur traders spread farther across Canada, opening up new territories and exploring vast, unknown lands. Unfortunately, a high demand for beaver pelts eventually led to a dramatic decline in beavers, since more beavers were killed than were being born. Stricter controls on trapping, reintroduction of beavers into former habitats and a better understanding of conservation principles allow you a much better chance of seeing these beautiful creatures and their remarkable homes today.

Bravo for Beavers
Beaver ponds not only give beavers a place to live, but they also create new habitats for lots of other wildlife, including fish, mink, otter, moose, insects, frogs, turtles and ducks. By slowing down the water flow in a stream, dams help reduce the erosion, or washing away, of stream beds and banks. The dams also help hold back flood water in spring. However, too many beavers in one area can create problems,since they can flood farm fields or roads and destroy large areas of trees.

A pocket full of beavers
The trappers' search for beavers is a very important part of Canada's history, and beavers are a recognized symbol of our country. In fact, you may even have a beaver in your pocket. They are found on Canadian nickels, many stamps and logos and in many place names throughout the nation. Look on a map of Canada to see how many places you can find with the name *beaver* in it. Are there any places named after beavers near your home?

Although the beaver pond may be frozen over with ice and snow, the beavers are warm and well-fed below.

Super Swimmers

You wouldn't consider a swim outdoors on a winter's day but beavers don't feel the cold. During the fall, beavers "pig out" on bark and add an extra layer of fat to keep warm in the winter. Their thick, shiny fur is actually made of two layers of fur: a short, fluffy layer next to their skin and a layer of long hairs over top. The fur traps air around the beaver's body, providing insulation against the cold. When you go swimming, your hair gets soaked and flattened down against your head, but a beaver's fur is waterproof. Two special glands near a beaver's anus produce an oily liquid that the animal spreads all over its fur to repel water. Even when beavers are under water for 30 minutes, their skin stays dry.

Terrific Teeth
Imagine if your teeth kept growing all the time, like your fingernails! That's what a beaver's big orange front teeth do. Since a beaver can't cut its teeth the way you cut your nails, it has to chew on wood all the time to keep its teeth from getting too big. The backs of the teeth are softer and more easily worn down than the hard orange enamel on the front of the teeth. The result is super sharp, chisel-shaped teeth that are perfect for cutting trees. Did you know a beaver can cut through a willow tree trunk half as wide as this page in just three minutes?!

cross-section of a beaver lodge

food pile

Imagine if you could eat without even opening your mouth! Beavers can gnaw bark under water because their lips can close behind their huge, orange incisors (big front teeth), sealing off their mouth from the water. Water doesn't go up their nose or in their ears, either. Tiny valves close off these openings while the beaver swims, and it even has an extra set of see-through eyelids to protect its eyes while swimming under water.

If you've ever seen a beaver on land, you know that it moves slowly and awkwardly, because of its large, flat, scaly tail and big webbed hind feet.
But a beaver is a swimmer's delight in the water.
Its tail acts as a perfect rudder, while its duck-like hind feet propel it steadily and smoothly on its course.