



MINNESOTA ZOO™
Changing how you see the world

Beaver Lodges

Grades 1-3

Pre-visit Activity

MN Graduation Standards supported:

Kindergarten Strand IV. G

The student will understand that people have five senses that can be used to learn about the environment.

Grade 2 Strand IV. C.

The student will understand that organisms live in different environments.

Introduction:

Beavers live in each county of Minnesota. This is a credit to conservationists and the beaver for making a comeback as the beaver was near to extinction in the 1930's.

Well known as the engineer of the animal world, beavers fell trees, build dams and lodges and dig canals. All of these activities result in securing the lodge from predators. A water depth of about 6 ft is necessary to allow the construction of island-like lodges. The dam is made of mud, grass, logs 6" thick, twigs and stones. Ponds vary from 1-10 acres. Canals are dug from feeding grounds to the pond for safe travel and floating of logs.

In the fall, the beaver begin to build their dome shaped home, called a lodge, by piling up parts of trees and filling in mud to make insulation. The lodge is a two story home with the bottom level used as an underwater entry. The upper level is a living area which is also where kits are born from April to June.

Two to four kits are born each year. This family will stay together until the kits begin their second winter when they go off on their own. After they have learned to build and maintain dams, lodges, they go looking for a mate and build a home for themselves. The beavers also build a cache of food close by their lodge so they can easily get food in the winter

In the summers, beavers forage for food, often far from their lodge. Beavers are herbivores, eating aquatic plants like pond weeds, water-lilies, cattails, and the soft tissue of new wood and bark of hardwood trees, including birch, aspen, willow, cottonwood, and alder.

The following site has many pictures and more information about the beaver lodge:

<http://www.geocities.com/bobarnebeck/lodges.html>

Objectives:

Students will build a beaver lodge similar to a real beaver lodge to learn more about the behaviors and lifestyle of the beavers.

Links:

<http://www.geocities.com/bobarnbeck/lodges.html>

<http://www.dnr.state.mn.us/snapsshots/mammals/beaver.html>

<http://www.mnzo.org/animals/minnesota-trail/beaver>

Procedure:

Students will discover that homes provide protection for animals with their specific environments. Students will build a beaver lodge using material found around them in the outdoors.

1. Use the attached sheet to make a transparency of a beaver lodge. Use this to help build a discussion.
 - a. Where do beavers build their homes?
 - b. What might happen if the beavers did not build a home?
Answers: they would not be protected. Enemies like the bear, coyote, wolf, red fox, bobcat, otter, great horned owl and goshawk would eat them or they might die from exposure to weather.
 - c. Can you think of another animal whose home is in the water?
Answers: muskrat, fish, insects, ducks.
2. Direction for building a replica of a beaver home.
 - a. Explain: The North American beaver builds dams and lodges of branches, sticks and mud. The dam creates a pond that protects them from their enemies and provides them with a place to build their lodge. The lodge measures six or more feet across and extends several feet above the water. The lodge is home to a beaver family of two adults and 2 to 4 young called kits.
3. Have the students build a beaver lodge out of clay.
 - a. Divide the students into groups.
 - b. Provide each group with 16 oz. of clay and a waterproof tray.
 - c. Fill the tray with $\frac{1}{4}$ to $\frac{1}{2}$ inches of water.
 - d. Build the base of the lodge with about $\frac{1}{3}$ of the clay. Ask the students, "Why do beavers build their platforms so they stand above the water?" Answer: beavers need a dry den to rest, sleep and raise their young. Place grass on the floor of the platform to make it nice bed for the beaver.
 - e. Build a dome to place over the platform. Ask the students, "How do beavers get into their home?" Answer: beavers enter their homes by swimming through underwater tunnels. This keeps their homes safe from enemies.
 - f. Remove the dome from the base and add an underwater entrance into the base. Place the dome onto the base.
 - g. Provide each group with small sticks and twigs.
 - h. Decorate the outside of the lodge with the sticks and twigs.
4. Follow up discussion:
 - a. Why is the beaver lodge a good home for the beaver family?
 - b. What did you learn about a beaver's home?
 - c. How large would the actual home be in a pond?
 - d. What would it be like inside the home? Think about the walls and floor and basement.