



## Lesson: All About Beavers!

**Grade Level:** K-12

**Activity Duration:** 1 hour

### **Objectives:**

- Students will make observations about different beaver adaptations
- Students will understand the impact that beavers make on an ecosystem
- Students will identify that beavers almost went extinct during the 19th century, and will be able to identify the cause of this.
- Students will create a beaver dam, and make observations about how changes to the dam affect the ecosystem
- Students will understand the word *extinct*.

### **Kit Materials:**

- "Ecosystems" poster
- Beaver pelt
- Beaver skull
- Beaver tracks
- Beaver image
- List of beaver adaptations
- Craft sticks
- Rocks
- Tupperware containers (4)
- Pitcher

### **Classroom Materials:**

- Sand or dirt
- Water

## Lesson Procedure:

1. As a class, make observations about beavers by looking at the skull, tracks, and pelt. What do you think the beaver eats? What does it contribute to the ecosystem? Is it a predator?
2. Show students the picture of the beaver. Go over it as a class, and reveal the different beaver adaptations from the accompanying worksheet.
3. Explain that beaver dams are very important for the ecosystem. Tell students that they are going to build beaver dams, and make observations about how a dam might change or help the ecosystem.
4. Divide into 4 groups, and distribute the 4 tupperwares. Have each group make a riverbed with sand, dirt, or clay (it should be piled up along the sides with a gouge for the river in the middle).
5. Have students use the rocks and craft sticks to build a beaver dam across their river. When ready, use the pitcher to gently pour water into one side of the tupperware until the dam forms a pond.
6. Brainstorm with students about what kinds of animals and plants might grow near a pond. How does a pond help the ecosystem?
7. Explain to students that when people first explored the west from the East Coast, they discovered thousands of beavers in the rivers of Montana and the west. People on the East Coast loved to wear expensive coats and hats made of the soft inner fur of beavers. By trapping beavers and selling their pelts, people could make lots of money. Many mountain men and fur trappers came west to trap beavers. Soon, so many beavers were trapped that beavers almost went *extinct*.
  - a. *Extinct* means that there are no more living members of that species.
8. Lead a demonstration about what happens when there are fewer beavers. Have students measure the water in their pond and record this number. Then, do each of the following steps and measure after each one:
  - a. Remove 25% of the beaver dam - we will say this is one fewer beaver working on that dam.
  - b. Remove another 25% - this represents two fewer beavers
  - c. Remove the whole dam. This is what would happen if there were no beavers at all!
9. Ask students to consider what kinds of animals and plants would be affected if there were no beaver ponds or beaver dams. What would the rivers look like?
10. Explain to students that in the 19th century, the rivers in Montana actually changed course over the century because so many beavers were trapped and removed from the ecosystem!