



The Bull Boat

Grade Level:

K-6

Subject Areas:

Science, Social Studies,
Math, Language Arts

SD Standards:Science

4.S.1.1

4.S.1.2

Social Studies

4.US.1.1

4.G.1.2

4.G.2.1

Math

4.M.1.4

Language Arts

4.L.2.1

4.L.2.2

Setting:

Classroom

Skills:

Observation, Analyzing,
Applying, Comprehending

Prior Preparation:

Read aloud the Crossing Rivers, Indian Style short story. As you read the story hold up the pictures that go along with it. Use this activity with the *Water Crossings* activity in this trunk.

Objective: As part of the “Water Crossings” activity, students will identify vessels that were used to transport goods up and down the Missouri River, to include the bull boat which was also used by Lewis and Clark. Students will then build their own model bull boat and then use it to experiment floating it and transporting objects with it.

Materials:

Pipe Cleaners

Aluminum Foil

Objects for transport (i.e. pennies, rocks)

Cake Pans

[Crossing Rivers, Indian Style story](#) - laminated

Photos of bull boats (3)

[Bull Boat Instructions](#)

Background:

Long before roads, the Missouri River served as a travel route in South Dakota. Native Americans, fur traders, soldiers, and settlers traveled up and down by bull boat, canoe, keelboat, and steamboat. Ferries carried people, animals and goods across the river at different points. The Missouri's swirling waters were full of dangers- snags, sandbars, strong currents, and shallows. The river was shallow much of the years, and shifted constantly. One riverbank would erode and the opposite bank would build up, moving the river channel. Ice presented another danger. In 1881, steamboats tied up at Yankton for the winter were smashed by ice flowing down the river. When the water eroded the shoreline and trees fell in, they sank to the bottom and became dangerous snags.

The Mandan and other tribes made bull boats by stretching a bull buffalo hide over a frame of willow branches. The boats moved easily and quietly through the water. Lewis and Clark learned the skill of building bull boats from the Native Americans. Fur traders also used bull boats to transport furs. Taking the bull boat out of the water every day or two and drying it out made the boat last longer. In this activity, students will make a model bull boat and experiment to find out how much weight the boat can hold.

Procedure:

- This activity should be done in small groups. Share background information above with the groups. Have them verbally identify three different kinds of river vessels (i.e. bull boat, keelboat, ferry, canoe, steamboat).

- Give each group 6 pipe cleaners, a square of aluminum foil and a copy of the bull boat instructions. Have them construct a boat.
- Once the boats are built, gather as a group and take turns floating each boat in the cake pans filled with water. Add pennies or other weights (marbles, pebbles, etc) to the floating boats. Keep track of how much weight each boat holds before tearing or sinking. Which groups bull boat held the most?
- Discuss: What types of vessels were used on the Missouri? Who used bull boats? What were bull boats made from?

This activity was adapted from Crossing Rivers, Indian Style (<http://lewis-clark.org>) and South Dakota Transportation (<http://history.sd.gov/>)