

Oh Those Otters!

Designing an Otter Exhibit

As a project, have students research, design and create an exhibit for our River Otters! Students will use the process of science inquiry, observation skills and knowledge of the basic concepts and principles of life science to complete this task.

North Dakota State Standards 3.2.2. 3.2.2. 4.2.2. 5.2.1. 6.2.2 6.2.4. 7.2.1. 8.2.4. 9-10.2.1. 11-12.2.1. 11-12.2.7.

Introduction

The Red River Zoo has announced the construction of an exciting new exhibit! The Zoo will soon begin construction of a North American River Otter exhibit. The new exhibit will have a naturalistic design, complete with a water feature which will incorporate a waterfall, river, and pool for swimming. The design of the indoor viewing area will give the visitor the feeling of being inside an otter's den, immersing them in the world of an otter. Underwater viewing will allow visitors to enjoy the otters in a naturalistic habitat and above ground viewing will also be available.



This activity encourages students to use their research skills and creativity to design an enclosure for our River Otters.

** As a variation to this activity, you may divide the students into several groups and have each of them pick a different animal at the zoo to research and design an enclosure for.*

Inquiry

- ✚ Start a discussion revolving around the basic survival needs of animals. *What do animals/humans need to survive? (ie: food, water, shelter).* Ask them what they know about otters. You may want to write down their answers on the board.

- ✚ Have the class brainstorm a list of factors a zoo would need to consider when designing an exhibit. *How might the needs of animals with highly specialized diets or physical and behavioral adaptations change when they live in a zoo?*
- ✚ Go over the Animal Bill of Rights with you students. All animals have:

The right to peace
The right to proper food
The right to protect their own territory
The right to live free of torment
The right to health

- ✚ Tell the class that you will be visiting the zoo to observe the otters' behavior as well as the location of their future exhibit and their task will be to use their observation skills and life science knowledge to design a new enclosure for them.
- ✚ On top of taking into consideration the Animal Bill of Rights, when designing enclosures, zoos must consider the following factors:
 - **Position of feeding structures and drinking area**
 - **Types of structures that will enable the animals to climb, run, dig, swim exercise**
 - **Areas where the animals can rest, nest, or have privacy from zoo visitors**
 - **Adequate light, darkness, heating and/or cooling**
 - **An easy and efficient way for zookeepers to clean the enclosure**
 - **A barrier between the animals and visitors to keep both safe**
 - **A way to keep the enclosure as natural as possible**
 - **Signage**
- ✚ Have students research some background information about River Otters so that are familiar with their dietary and habitat requirements.
- ✚ Pass out a copy of the *Field Trip Activity* sheet to review before visiting the zoo. Plan your visit around the time the otters will be out for viewing.

Date: _____

Name: _____

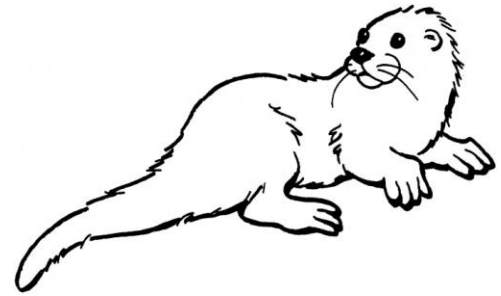
Partner (s): _____

Field Trip Activity: Designing an Otter Enclosure

Directions: Find the location of the River Otter exhibit and use your observational skills to answer the following questions. Take the time to ask the Zookeeper any questions you may have about the River Otter.

How are you going to make this enclosure meet the otters' needs?

- Where do the otters like to find their food or play with their toys?
- Do you notice that they spend the majority of their time in the water or on land?
- How big is their pool? How big do you think it will need to be?
- What kind of shelter do they need?
- How are you going to give the otters privacy?
- Do you notice the Zookeeper performing training activities with the otters? How can you make your enclosure conducive to training techniques?
- Are the otters quiet and calm, or playful and excited? How do you know if they are happy or bored? What are you going to put in their enclosure to ensure they don't get bored?



How are you going to make this enclosure meet the visitors' needs?

- How are you going to ensure the guests can see the otters both in the water and on land?
- ✚ How are you going to make your enclosure accessible to visitors with special mobility needs? (ie: strollers, wheelchairs)
- ✚ How big are you going to make the viewing area?

Draw a rough sketch of your future exhibit:

Conclusion and Extension Activities

- ✚ Depending on the age group and level of the students, there are a variety of ways for the students to design their exhibits: creating a poster of their exhibit, a 3-D diorama, a technical/scale drawing, a power point presentation, a flyer in Microsoft publisher, etc.

- ✚ You can also extend this activity by:
 - Having them design a sign that is going to be placed next to their enclosure

 - Reading the story “An Otter Legend Derived from the Cree Indians” by John Mulvill <http://otternet.com/ROA/Fall1999/legend.htm> and start a discussion about Indian folklore. How might Cree Indian folklore be integrated into a zoo exhibit? You may want your students to create their own animal legend.

 - Talking about animal enrichment - ways that keepers encourage natural behavior from the animals (training, varying their habitat, varying feeding techniques, etc.) and what types of enrichment could be done for the River Otters

