**BIG Zoo Lesson Expert Lessons**

**2023-2024**

### ANIMAL ADAPTATIONS TOUR OR ENCOUNTER

How do animals survive in different conditions? What physical and behavioral changes do they adopt? Explore the answers to these questions in this program, which can be a tour led by volunteers or an indoor encounter. As an encounter, a staff member will use artifacts to illustrate physical and behavioral adaptations (different from those used in teacher-led skull, pelt, and antler-horn-tusk lessons that teachers have selected), and will present a 30-minute live animal example.

Objectives:

* Understand the concept of animal adaptations and how those adaptations give an animal a better chance of surviving in the wild
* Differentiate between physical and behavioral adaptations
* Understand that animals typically have adaptive behaviors that correspond to each physical adaptation
* Understand that by observing physical adaptations of a species we can often predict/deduce many of their behaviors and habitat use
* Understand that for each adaptation there are both advantages and disadvantages

Keywords: Physical adaptations, behavioral adaptations, behavior, tools, habitat, instinct, learned, camouflage, prehensile, eye/ear location

**BECOMING A MODERN ZOO TOUR**

Potter Park Zoo is 103! How did we get from a park that has some elk, raccoons, and a bear to a zoo that offers quality animal care, educates visitors, and produces an endangered baby black rhino? This tour weaves history and changing knowledge and attitudes into the story of what Potter Park Zoo does today as a modern zoo**.**

Objectives:

* Define a modern zoo
* Identify major changes that led to the modern zoo (elephant leaving, large moats closing, renovation of Feline/Primate House)
* Explain why the zoo no longer has bears
* Explain why the zoo no longer has elephants
* Compare and contrast old and new versions of exhibits (Lion House vs. renovated Feline/Primate House, otter, Arctic fox, bald eagle, binturong, red panda, rhino
* Define animal wellness
* Give examples of quality care that the zoo animals receive (exhibit, husbandry, medical, enrichment, training)
* Describe the importance of the birth of the baby black rhino at Potter Park Zoo
* Identify things you can do to help endangered animals

Keywords: Animal wellness, quality animal care, training, natural behaviors

**CONSERVATION STATION HOP TOUR**

Potter Park Zoo is home to many species that are facing threats in the wild. On the station hop, students will visit five different stations located at animal habitats (exhibits) throughout the zoo. At each station, they will learn about the natural history of the animal and a conservation issue facing their wild counterparts. Students will then learn what is being done to protect those animals and brainstorm ways they can help. This lesson includes a suggested concluding activity that may be done back in the classroom. Please note that each class will be split into two groups, and each group must be accompanied by an adult as they move around the zoo.

Objectives:

* Learn basic natural history of five different zoo animals
* Explain some conservation issues that are facing animals in the wild
* Understand that changes to an ecosystem can cause problems for animals
* Understand that threats to animals are often human caused
* Identify at least one action students can take to help conserve animals and the environment

Keywords: Conservation, pollution, poaching, habitat loss or fragmentation, biomagnification, invasive species

### DESIGNING ZOO HABITATS TOUR

Making wild animals comfortable in a zoo is not easy! Learn what is behind the design of our zoo habitats and how the animals' needs sometimes conflict with the public's expectations. You will also hear about some of the different experiences the zoo has had with different animals and their zoo habitats. This lesson is only available as a zoo tour.

### Objectives:

### List seven needs of animals in captivity

### List seven basic considerations of habitat design based on the needs of the animals to be housed

### Describe three different barrier designs to prevent animals from escaping

### Design an exhibit which incorporates what they have learned

**RHINO LESSON**

Catch up with the rhinos in the zoo as well as those in the wild, focusing on adaptations, conservation, and the zoo habitat. This lesson includes a PowerPoint and close-up look at artifacts indoors as well as a special visit in the barn to see a rhino. Hand sanitizing and masks are required in the barn. If COVID protocols change, the indoor portion may be canceled. In that case the visit will focus on the outdoor rhino habitats.

Objectives:

* Identify adaptations (senses; short, stout limbs; prehensile lip; horn; wallowing)
* Identify features (indoor and outdoor) of the black rhino habitat at Potter Park
* Identify examples of the quality animal care that the rhinos receive
* Identify conservation concerns and actions taken to improve the situation
* Respect the roles that zoo animals and staff have in contributing to wildlife conservation

Keywords: Adaptations, herbivore, keratin, prehensile, endangered, poaching, quality animal care, animal training, confiscated, conservation, conservation organization, gestation, courting

### WHAT’S FOR LUNCH TOUR

It is eat or be eaten in the Wild Kingdom! Learn about animals’ amazing strategies for obtaining food and avoiding becoming dinner themselves. Basic concepts include predator and prey adaptations, food chains, and camouflage. The tour includes a behind-the-scenes visit to two food storage areas in the zoo and includes a suggested concluding activity that may be led by the teacher for fourth grade and up.

Objectives:

* Compare and contrast herbivore, carnivore, and omnivore, including a discussion of eye and ear placement and differences in dentition (identify and describe the use of the canine, incisor, and molar teeth)
* Explain beak adaptations for food eaten by different birds
* Discuss how both prey and predators avoid detection (lack of movement, camouflage, etc.)
* Discuss relationships within a food chain, including photosynthesis and the importance of scavengers
* (For fourth graders and up) Compare digestive systems of carnivores, omnivores, and herbivores.

Keywords: Carnivore, herbivore, omnivore, predator, prey, scavenger, Jacobson’s organ, camouflage, detritus, nutrition, food chain, photosynthesis, producers, consumers

**LED BY STAFF**

**SSP LESSON**

Discover what zoos are doing to help endangered animals and how Species Survival Plans work – with a step-by-step example from Potter Park Zoo, featuring the rhinos.

Objectives:

* What is a modern zoo?
* Explain what a Species Survival Plan is
* Define endangered and extinct
* Identify the major cause of animals becoming endangered
* Explain what scientific captive breeding is and how it helps animals in the wild
* Identify some of the problems that can occur once two animals are matched for scientific captive breeding

Keywords: Species Survival Plan, endangered, extinct, habitat, poaching, conservation, scientific captive breeding, genetic reservoir, reintroduction, gestation

**ENRICHMENT LESSON**

Discover what zoos are doing to encourage natural behaviors in zoo animals. This lesson includes students working in groups to make enrichments for selected animals and observing the animals in action.

Objectives:

* Define enrichment
* Describe examples seen around the zoo
* Work in a group to make an enrichment
* Evaluate the animals’ reaction to the enrichment

Keywords: Enrichment, foraging, predatory behaviors