Self-directed Tour

Preschool and kindergarten
(also appropriate for first grade)

What Animal Am I?

Teacher Guide

This packet provides information and activities for teachers to use in developing a program for a field trip to the Milwaukee County Zoo.

Goals:
- To encourage children to identify and classify animals according to their body coverings (birds - feathers, mammals - hair, fish - slimy scales and fins, and reptiles - dry scales or plates).
- To introduce the concept of animal adaptation and encourage children to learn how animals survive in their environment.
- To learn how to focus on a group of animals. (The bear group is used as the example)

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This curriculum packet has been provided by the Zoological Society of Milwaukee County and the Ladish Company Foundation.
### VOCABULARY

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**Mammal:**
Animals that are warmblooded, have live births, feed their young milk made in the mother’s mammary glands, and breathe using lungs.

**Reptile:**
Coldblooded animals that have dry scales or plates covering their bodies, lay eggs, and breathe with lungs.

**Fish:**
Animals that have slimy scales on their bodies, live in the water, lay eggs, use fins for swimming, and breathe using gills.

**Birds:**
Warmblooded animals that have feathers and wings on their bodies and that lay eggs.

**Environment:**
Combination of climate, soil, and living organisms that impact any one organism.

**Habitat:**
The food, water, shelter and space needed by a living organism.

**Coldblooded:**
Animals with body temperatures that change depending upon the external temperature.

**Warmblooded:**
Animals with a body temperature that remains constant and that is not regulated by environmental changes in temperature.

**Adaptation:**
Anything an animal has as part of its body or behavior that helps it survive.
Suggestions for the pre-visit activities

Introduction to the Zoo Trip

Activity 1: Zoo Rules
Make a list of “Zoo Rules” -- prepare the children for their Zoo visit by making a list of “rules” that need to be followed to help protect the animals at the Zoo. Encourage the children to make up the rules and list them on a blackboard or large sheet of paper.

Sometimes people visiting the zoo do not understand that some of the things they may do could injure or make the animals sick. For example, the Zoo has NO FEEDING signs because the animals are on special healthful diets designed just for them. If visitors feed the animals human food, animals will not eat their Zoo diet, which provides the minerals and vitamins needed for the animal to stay healthy. Some foods like marshmallows, popcorn, and peanuts can harm the animals. These foods may contain too much sugar that will lead to tooth decay, or too much salt that will affect how the animal's body operates. The Zoo has animal dentists and veterinarians who take very good care of the animals. However, since animals cannot talk, many times the doctors have a hard time finding out what is really wrong with an animal until that animal is very sick and showing signs of pain or weakness. NO FEEDING is very important - the only place at the Zoo where you are permitted to feed the animals is in the goat yard in Stackner Heritage Farm. You can feed the goats only the special food found in vending machines located by the goat yard. The goat yard area is open only in the warmer months.

Now see how many rules the children can come up with and have them explain why they think each should be a rule. If your students come up with some really cute ideas and you want to share them with us, send your children's comments to: Zoo Education, 10005 W. Blue Mound Rd., Milwaukee, WI 53226.

To help get you started, here are some rules the Zoo has: No tapping on the glass, making loud noises or playing a radio, No sudden movements or using skateboards or roller blades, climbing over fences or railings, No touching animals except those in the petting ring (which is open Memorial Day to Labor Day), and No throwing of food items into the exhibit. Many of the children will give you the right reason -- but you never know -- children do say the most interesting things!

Introduction to identification and classification of animals by their body coverings.

Activity 2: Body Coverings
Make a poster or bulletin board with four sections labeled MAMMAL, FISH, BIRD, and REPTILE. Make copies and cut out the four body covering pictures found in Section Four and place the pictures above the appropriate classification name. Cut apart the pictures of animals as well (all featured animals live in Wisconsin). Tell the children, “One way to help a person decide if an animal is a mammal, fish, bird or a reptile is to think about what type of covering the animal has on its body.” If you have any animals in your classroom, use these or photographs as visual aids. Ask the children what type of covering they have on their bodies (SKIN AND HAIR). Most will have hair on their heads. Hair is what mammals have. Sometimes people call it fur, but fur is hair. You may wish to bring in a realistic plush-toy animal or fake fur and use these as examples. Show the children the pictures from Section Four and have them think about what type of body covering these animals have. The children should try to identify each animal, state its proper classification and share what type of covering each animal has.
A variation is...
Have the children find and cut out pictures from magazines or draw animals and place them into the four categories. This packet covers mammals, fish, birds and reptiles. You may wish to add another category called OTHER. That way, if the children find or draw insects, frogs, salamanders, etc., they can place them under OTHER.

Or label and divide your classroom into the four areas. Give each child a picture of an animal and have the child move to the right area. Then have the children check each one in their group or you can check to make sure the children are in the right group. Some animals are hard -- the ones we found difficult for children are turtles (Reptile), toad or frog (Other), penguin (Bird), whales or dolphins (Mammals), insects (Other), and monkeys or apes (Mammals).

Introduction to adaptation:

Activity 3
The purpose of this activity is to encourage children to begin thinking about how animals survive in their environment or specific habitat.

The word **adaptation** will be a hard word for the children. Introduce children to the word by explaining that an adaptation is something an animal has as part of its body that helps it survive. [Behaviors that increase chances for survival are also considered adaptations.] Provide some examples to the children: giraffes have long necks (part of their body), which help them reach the leaves that they eat (helps them survive); elephants have trunks that are really long noses (part of their body), which they also can use to pick up food or water to place in their mouths (helps them survive).

Discuss the following information with your class. People use their senses of smell, taste, sight, and hearing to help them survive. We use our sight (physical adaptation) to look both ways for cars (behavioral adaptation) when we cross the street. We can taste spoiled milk. We can smell smoke in our house. We hear someone shouting to us for help or warning us to get out of the way of danger. Using our senses can save our lives (helping us to survive). Animals use their senses to decide many things, such as what they will eat, where they will rest and make their homes, where they will move to if there is danger, and which babies are their young. Some animals have larger ears and eyes to help them hear and see danger or to find their young. A good sense of smell helps them locate food, identify danger, recognize their young, etc.

People have other adaptations that help them survive. Our arms and hands give us the ability to reach and pick up things, draw objects and build things. Our legs and feet help us walk, jump and skip. If we cannot physically, for whatever reason, do some of these things, we have used our brains (physical adaptation) and intelligence to find ways to adapt to a situation and overcome a disability. Wheelchairs were designed (adaptive behavior) as a tool to help people move around. Seeing-eye dogs are trained (adaptive behavior) to help people who are blind to walk without fear of being injured.

Our skin is also an adaptation. Our skin helps keep us cool when it’s hot and warm when it’s cold. When it is too cold, we need to use other adaptations, like putting on layers of clothes to keep us warm. Our skin keeps germs from entering our bodies.
All of these examples are ways adaptations help people survive in our world. Animals have many similar adaptations that help them survive in their environments, but they also have many unique adaptations or abilities to survive that we do not have.

Body parts help animals to move easily in their world – animals generally have to move either to find food or to avoid becoming food. Examples: Mammals - most monkeys use their long arms and legs to swing from branch to branch. Hoofed animals have long legs and hoofed feet to move easily through grasses, bushes, etc. An example is the deer. Its long, strong legs help it move swiftly away from animals that may attack it. Birds - most have wings so they can fly from place to place. Penguins “fly” through water by using their wings like boat oars. Ostriches, which have very small wings, do not really use their wings to move but rely on their very strong and long legs for running. Reptiles - turtles and tortoises have hard, scale-plated shells that protect their bodies from attack; alligators use their tails and teeth to protect themselves. Fish have fins to help them steer and move through the water.

Animals’ body coverings protect them in many of the same ways our skin protects us. The hair on mammals and the feathers on birds help to keep them cool in warm weather and warm when it is cold. Hair, feathers, dry scales on reptiles, and the slimy covered scales of fish all help keep germs from entering the animals’ bodies. Body coverings also help protect animals from injuries such as scratches from branches or rocks and bites by other animals.

Activity 4
Divide the class into four groups (birds, fish, reptiles and mammals). Give each group one or two large pieces of paper. Each group or subgroup should work together to make a picture of a make-believe animal. The children can mix up the animals and give them all kinds of different body parts (wings, large scales, horns, hoofs, long neck, etc.) that will help their animal survive. Have the children share with the class: 1) where their animal would live, 2) what their animal would eat, 3) how their animal would move, etc. Note: The children could complete this activity individually, but the group interaction would encourage a great deal of discussion among the children and make it much more fun.

Focusing on an animal group

Activity 5: What Animal Am I?
The Zoo has a great variety of animals. Before or after you come to the Zoo you may wish to select one group of animals -- for example, bears -- and play “what animal am I”?

Using the pictures of the bears provided in Section Four (remember you can use any group of animals - cats, birds, turtles, etc.), and a bulletin or poster board, post pictures of the different types of bears that live around the world or at the Zoo. At the Zoo we have American black bears, grizzly bears, Alaskan brown bears, polar bears and Asiatic black bears (also called Himalayan black bears). Discuss the bears’ noticeable differences with the children. Share with the children the animal information provided in this packet. You may wish to mention some of the interesting features these bears possess:

Polar bears have a transparent whitish fur/hair and black skin. You can tell the polar bear has black skin -- when you come to the Zoo, look at the bottom of its paws, nose and the skin around the eyes and mouth. This black skin helps to absorb solar energy and keeps the bear warmer. The hairs on polar bears are actually clear hollow tubes. These “tube” hairs may trap heat better than solid hairs.

Asiatic black bear’s usually have white crescents on their chests; their nickname is the “moon bear.”
The American black bear’s (the wild bear found in Wisconsin) name is actually a misnomer since its hair (fur) color can range from white to cinnamon to brown and black. Reduce the pictures of the bears on a copier. Then hand them out to each child to play at matching the bear with the big pictures you have on the board. You also can find pictures in magazines and continue playing the matching game.

**Koalas are not bears.** It may be appropriate at this time to mention this fact. Koalas are animals with pouches (marsupials) just like the kangaroo.

**Pandas?** The scientific world finally has decided that the giant panda is a bear -- while the red panda is not. The Zoo has koalas and red pandas, but no giant pandas.

Remember, you can do this with any group of animals. If you want to select an animal group that has a variety of members represented at the Zoo, we suggest cats, fish, snakes, monkeys, and birds.

If you want to do more, then try -

**Activity 6: Where Do Bears Live?**

**Materials:** Blocks, sticks, construction paper, small scraps of material, crayons, magic markers, any other materials necessary for a building project.

**Instructions:** Discuss with the children where bears live. Elicit ideas from the children. For example, they might suggest forests, places where it's very cold (Alaska, Canada), caves, dens, etc. (You may want to point out that during the winter bears may sleep in their dens for long periods of time, but they do not truly hibernate. Hibernation implies a marked reduction in the metabolic rate of the animal. Bears do not experience this reduction. Some may give birth in their dens during the winter.) Providing a variety of materials (blocks, sticks, construction paper, small scraps of material), ask the children to build a place similar to where bears might live. This can be done as a group or individually.*

*Adaptation of a lesson plan by teacher Carol Hackbarth

**Activity 7: What Do Bears Eat?**

**Materials:** Pictures of the types of food bears eat.

Place pictures of the things bears eat around the room. (These can be hidden or out in the open depending on the abilities of your group.) Explain to the children that no one brings food to the bears in the wild. Bears must either hunt for their food (fish, small mammals, seals, etc.) or gather their food (nuts, berries, grass, roots, etc.). Tell the children to pretend they are bears and find the "food" around the room. Come together in a group to show the different types of food that were found. You may want to discuss with the children what might happen to bears that cannot find food. To extend this activity, you may want to serve some "bear" food (nuts and berries) during snack time.
Activity 1: Looking at animal body coverings
Make copies and give each child a set of the body covering cards found in Section Four. The cards can be placed on a string that the students can wear around their necks if you wish. As the children observe animals at the Zoo, have the children pick the card that represents the type of body covering seen on each animal. Alternatively, give each group leader a set of laminated cards so that they can do the activity with their group while touring the Zoo.

Animal body parts
As the children observe animals on their tour of the Zoo, have the children describe the animals in terms of body parts. For example, the penguin is an animal with two wings, two eyes, a beak, feathers, and two feet. Each child could take a different animal to describe. As a group, have the children share some of the physical differences of the animals you have seen. For example: The penguin had wings and two feet, the snakes had no feet, the bears had four feet and claws, etc.). Have each child think of one animal when picturing the differences. For this activity you may have to help. Ask how many students had animals with two eyes -- all should raise their hands. How many students had animals with wings. Which students had animals without wings, animals with long necks, animals with short necks, animals with no necks, animals with scales, animals with feathers, etc? If time permits, encourage the children to describe how their animal used its body parts to move.

Activity 2: Looking at bears
Remember, you could select any group of animals you wish. Recommendations: farm animals, fish, reptiles, birds, or, in the mammal group, bears, primates, cats.

Materials: Larger and smaller bear pictures provided in Section Four, string, and staples.

Instructions: Give each child a set of bear cards. These cards can be placed on a string and worn around the children's necks. As the children observe the bears at the Zoo, they can match the bears with the bear on the card.

Variations: A set of bear cards can be made using the larger bear pictures for each adult group leader and the children can do the matching activity as a group.

The smaller bear cards can be made into a book prior to the children coming to the Zoo. Each child could bring the "bear book" and do the matching activity using the book. The bear book also could be taken home and shared with parents.

Activity 3: Animal body parts
Instructions: As the children are observing the bears, encourage them to notice the similarities among all kinds of bears. For example, all bears have four legs, four paws with claws, fur covering their bodies, etc. You may want to encourage the children to think of ways in which bears' body parts serve as adaptations to their environment. For example, fur helps the bears stay warm in winter, their paws help them to catch fish or climb trees, etc.
Things to remember when visiting the Milwaukee County Zoo...

1. One chaperone is required for every 10 students.

2. Teachers and chaperones must accompany their students at all times and monitor their behavior.

3. The animals are on special diets to promote good health and prevent disease. Please do not feed them.

4. Please do not enter “restricted areas”.

5. Treat the animals with respect. Don’t harass or mistreat them.
SECTION THREE

POST-ZOO VISIT ACTIVITIES

Activity 1: Variation of “Simon Says” called “Birds Have Feathers”

You play the game as follows:

If you, the teacher, say, “Birds have feathers or penguins have feathers,” all the students should flap their arms because your statement is correct. If you say, “Mammals (lions, bears, etc.) have feathers,” no one should flap his or her arms because this is not true. So for all feathered animals (birds), they should flap.

If the teacher says, “Bears have hair or fur,” all the children should get down on hands and knees because this is correct. If you say, “Penguins have fur,” no one should be on hands and knees.

If the teacher says, “Bluegills have slimy scales,” all the children should put their two hands next to their mouths and slightly wave them -- just like the gills of a fish -- because this is correct. If you say, “Turtles or lions, etc. have slimy scales,” no one should wave his or her hands next to the mouth.

If the teacher says, “Snakes have dry scales,” the students should flick their tongues in and out like many reptiles do -- or you can come up with another idea for true reptile statements. If you say, “Lions have dry scales,” no one should be sticking out his or her tongue.

Activity 2: If Only I Had Wings

Explain to the children that they are going to play an imagination game. As you call on each child, ask her or him to pretend she has wings, or he has a beak, or she has a long neck or some other type of adaptation. Then ask the child to describe what a human could do or could not do with that body part. Begin by saying, “If you had a beak, how would life be different?”

Activity 3: Exploring Bears

Instructions: Teach the children the following song about bears:

BEAR SONG
(sung to the tune "Daisy, Daisy")
Black bears
Brown bears
Polar bears, too
Long claws
Strong paws
Smelling helps find food, too.
Some eat juicy berries
And some eat bitter cherries.
Others eat fish or some eat meat
Oh, and honey's a special treat.

CREATED BY: Carol Majerowski '92
Activity 4: Five Little Bears

Instructions: Teach the children Five Little Bears:

One little bear walking at the zoo
Along came another bear and then there were two.  (Hold up 1 finger, make a walking motion)

Two little bears climbing a tree
Along came another bear and then there were three.  (Hold up 2 fingers, make a climbing motion)

Three little bears nursing and wanting more
Along came another bear and then there were four.  (Hold up 3 fingers, fold arms across chest, make a rocking motion)

Four little bears sniffing at a hive
Along came another bear and then there were five.  (Hold up 4 fingers, point to nose)

Five little bears wandering away
Along came mother bear and saved the day.  (Hold up 5 fingers, make a walking away motion, give yourself a hug when mother arrives)

Activity 5: Tube Bear

Materials Needed: Toilet paper rolls, bear patterns included in this package, crayons, magic markers, cotton balls, bits of material, and paper fasteners.

Have the children create their own bear with movable parts. Use a toilet paper roll for the body and the patterns included in Section Four of this booklet for the body parts. Children can use crayons, magic markers, cotton balls (for tails), or even bits of fur material to decorate their bears. Legs can be attached with paper fasteners.*

*Adaptation of a lesson plan by Carol Hackbarth.
Included in this section are materials for the following sections...

Pre-visit activities
Activity 1: body-covering cards
Activity 1: animal pictures
Activity 5: pictures of bears

Zoo Visit activities
Activity 1: body-covering cards
Activity 2: pictures of bears

Post-visit activities
Activity 5: bear patterns
scales and fins

scales

feathers

hair
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<td>Largemouth Bass</td>
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<tr>
<td>Box Turtle</td>
<td>Timber Wolf</td>
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<tr>
<td>Garter Snake</td>
<td>Rainbow Trout</td>
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Polar Bear

Range
Arctic Ocean south to ice edge. Occur up to 93 miles inland. Found in Alaska, Canada and parts of Greenland.

Habitat
Water and ice and snow areas.

Diet
Ringed seals, clams, vegetation, marine algae, waterfowl and berries.

Life Span
25 to 30 years.

Weight
600 to 1000 lbs.

General Information
Their hairs have transparent tubes inside that may help absorption from the sun. Their toes are webbed halfway down and they have fur on the bottom of their feet. They are excellent swimmers. They do not hibernate.

Grizzly Bear

Range
Northern U.S., Canada, and parts of Alaska.

Habitat
Forest.

Diet
White bark and pine nuts, new grass, sedge shoots, bulbs, tubers, roots, clover, carrion, elk and marmots.

Life Span
20 to 30 years.

Weight
Up to 1000 lbs.

General Information
Grizzlies are members of the Brown Bear Family. They have home ranges from 20 square miles to 125 square miles. They are solitary but in summer they congregate in meadows. They are not true hibernators.
**Asiatic Black Bear**

**Range**
Iran eastward to Indochina and Russia, including the Himalayas.

**Habitat**
Forest areas.

**Diet**
Nuts, grass, berries, wild grapes, corn, rosehips, apricots, apples, insects.

**Life Span**
27 to 33 years.

**Weight**
150 to 300 lbs.

**General Information**
Large external ear flaps indicate that they probably have very good hearing. They are good climbers. They den up in the winter and sleep but rouse easily, so this would not be considered true hibernation.

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**Alaskan Brown Bear**

**Range**
Alaska

**Habitat**
Forest and coastal areas.

**Diet**
Salmon, seaweed, stranded whales, white bark, pine nuts, new grass, sedge shoots, bulbs, tubers, roots, clover and carrion.

**Life Span**
20 to 30 years.

**Weight**
Up to 1300 lbs.

**General Information**
They are members of the brown bear family. Brown bears are listed as endangered animals. They have an excellent sense of smell and hearing. Their eyesight is not very good. They have extremely long claws.
Black Bear

Range
Occurs quite extensively throughout North America.

Habitat
Heavily wooded or dense brush areas.

Diet
Carrion, insects, grass, acorns, fish, small mammals and birds.

Life Span
12 to 15 years.

Weight
200 to 475 lbs.

General Information
The name black bear is a misnomer because this bear can range from white to cinnamon to black. They can run up to a speed of 35 mph. They are not true hibernators. Black bears are mainly nocturnal.

A MILWAUKEE COUNTY ZOO AND ZOOLOGICAL SOCIETY PARTNERSHIP
SECTION FIVE

SOME INTERESTING ANIMAL FACTS

An adult giraffe's average height is 16 feet. At birth a newborn giraffe is 5 feet tall. Giraffes are vegetarians. Their long necks and tongues help them reach the leaves at the top of trees.

The African elephant is larger than the Asian elephant. African elephants weigh 3 - 6 tons. A newborn's average weight is 200 pounds. Elephants are vegetarians. They use their long trunks to reach and pick up food and place it in their mouths.

A polar bear's head is wedge-shaped to cut down on water resistance when the bear is swimming.

A rhino's feet are three-toed. They are massive and flat on the bottom in order to support the animal's weight of 2 - 3 tons.

A flamingo feeds from side to side, filtering small plants and animals out of the water. Its beak acts like a strainer. They get their pink color from the small crustaceans that they eat.

The lion's tail (like most cats) is used to stabilize the animal while running, to swat insects, and to communicate with other lions when it is stalking its prey.

Both male and female reindeer (caribou) have antlers. In all other deer only the males have antlers.

Cheetahs are the fastest land mammals. They can reach speeds up to 70 miles per hour.

Ostriches are the largest bird in the world and lay the largest eggs.

Koalas sleep 18 hours a day. Koalas are very fussy eaters. Of the 600 species of eucalyptus trees in Australia, the koala will eat the leaves of only 35. Koalas get most of their water by eating these leaves.

There are approximately 30,000 kinds of spiders in the world. It takes about 1 hour for a spider to spin its web. The web may look fragile, but it can hold 4,000 times the spider's own weight.

The two-toed sloth spends most of its life hanging upside down in trees. It eats, sleeps, mates, gives birth, and nurses its young in this upside down position.