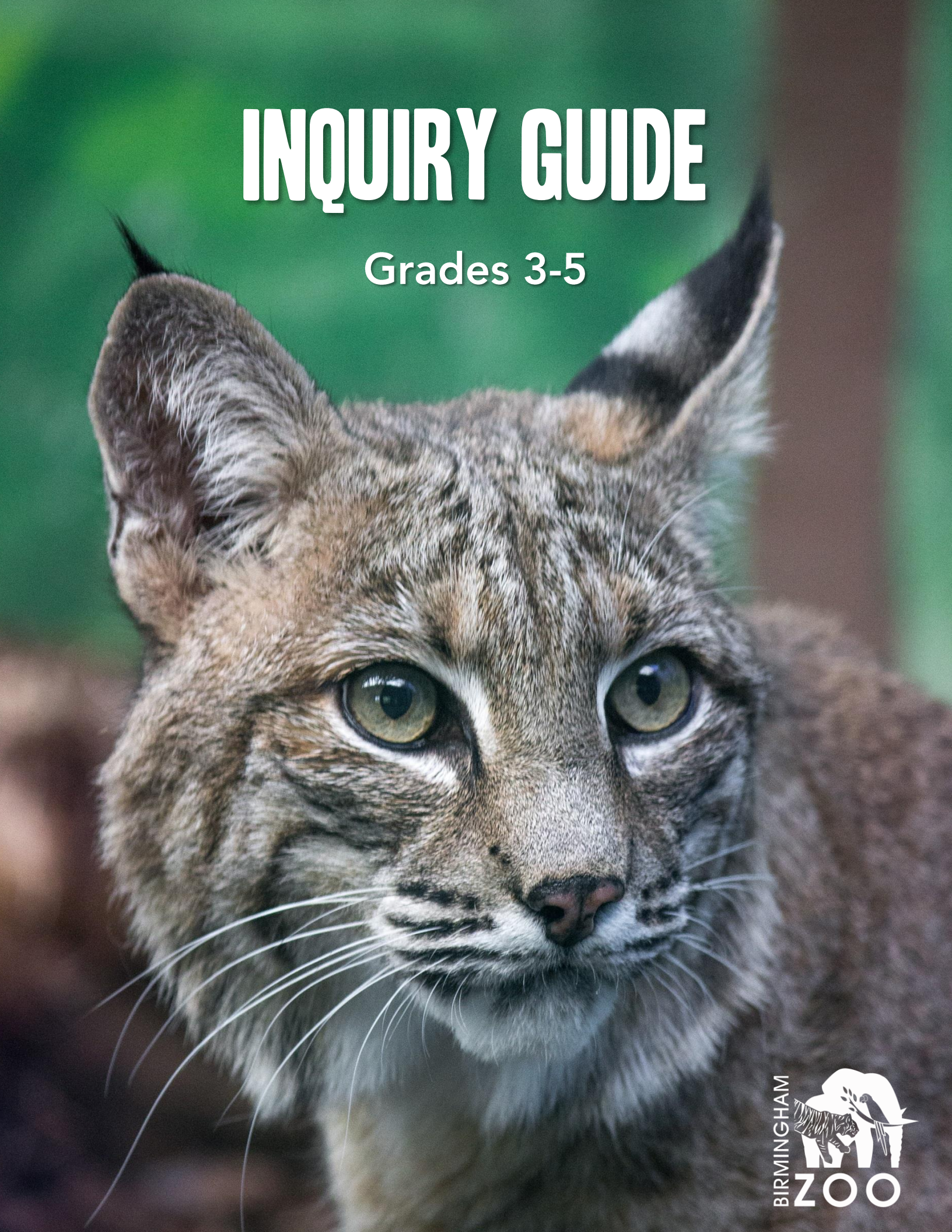
INQUIRY GUIDE

Grades 3-5



BIRMINGHAM ZOO

MAKE YOUR FIELD TRIP A SUCCESS!

The Birmingham Zoo promotes an experiential and inquiry-based approach to exploring the Zoo. While it can be tempting to try and see everything, we suggest that you slow down and look at a few things carefully in order to provide a more enriching experience.

Follow this guide as you visit each area of the zoo.

The packet is arranged as follows:

- Alabama Wilds/Children's Zoo
- Predators and Trails of Africa
- Primates of the World/Giants of the Amazon
- Southern Bayou
- Flamingos
- Reptiles

Tips for successful student engagement:

Observe - Let the students take the lead in what they find interesting. If the students are still engaged in what they are currently observing, continue to stay at that location and ask follow-up questions. Observation is a critical life skill and to be encouraged in young learners.

Reflect - It is important to talk to students about what they are experiencing. Ask questions to encourage descriptions about what they are seeing. This reflection helps to build understanding.

Question - Encourage your students to express wonder and ask questions. If you don't know the answer, be sure to check in this guide, but don't worry if you don't know the answer. The process of being curious is what is important. Work together to learn something new or ask more questions!

Describe - Ask your students to describe what they learned through observations and to explain how they might find out more. Encourage the use of new vocabulary.

Sensory Stop-Look for this symbol to explore your senses (touch, smell, look, listen) for a fully immersive zoo experience.

Conservation Connection-When you see this symbol, find the conservation resource mentioned and learn more about the ways the Birmingham Zoo is helping to conserve the natural world.

BIRMINGHAM ZOO

Inspiring Passion to Conserve the Natural World.

ACCREDITED BY THE ASSOCIATION OF ZOOS & AQUARIUMS

The Birmingham Zoo is a private, non-profit 501 (c)(3) organization.

205.879.0409
www.birminghamzoo.com

kinetic communications

REGULAR ZOO HOURS

9am-5pm Monday – Sunday
Christmas Eve 9am-1pm
(Closed Thanksgiving & Christmas Day)

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ZOO MANNERS Outside food & drink are not allowed inside the Zoo. Please guide children to use the play area properly. Pets are not allowed. If you are here with a service dog, please check with Guest Services. Thank you for not using tobacco products (including E-cigarettes) while at the Zoo.

RESPECT THE ANIMALS Please do not feed the animals or throw items into the habitats. "People food" can cause health problems for them. Please stay on the walkways and viewing areas. If you see anyone disregarding these requests, please call 205.397.3870.

PHOTO/VIDEO IMAGE USE POLICY Upon entering the Zoo, you acknowledge and agree that you may be photographed or videotaped, and agree that any such image may be used for advertising purposes at the discretion of the Zoo. No person may sell or promote for commercial use.

The Birmingham Zoo has partnered with KultureCity to develop the Sensory Inclusive Zoo Initiative to improve our capacity to serve guests with sensory processing needs. The goals of this initiative are to raise awareness of challenges facing people with sensory processing needs among our staff and throughout the community, increase accessibility throughout the Zoo grounds for guests with sensory processing needs and promote an inclusive experience for guests with sensory processing needs.

SENSORY AREAS

Quiet Zones
Areas which have less activity and seating to regroup after becoming overstimulated.

Headphones Zones
On busy days, these areas could be especially noisy.

Weighted Lap Pads
Attractions which may require visitors to remain seated for extended periods of time. Weighted lap pads are available.

Sensory Bags
These bags, which contain noise reducing headphones, fidget toys and other resources are available for checkout in the Membership Office.

CONVERSATION STARTERS

The questions below can be applied to ANY animal at the Birmingham Zoo. As you make your way through the zoo's diverse spaces, compare and contrast what you see using the questions below as a guide.

A habitat is the home of a plant or animal. All animal habitats provide four basic needs: food, water, shelter, and space. Just like your own home, an animal habitat is where the animal eats, sleeps, and plays. The zoo has designed each habitat specifically for each animal.

What is in your personal habitat at home?

What is similar about your personal habitat and this animal's habitat at the zoo?

Why do you think this habitat is designed in this way?

What differs in this habitat from other habitats you have seen? Why do you think this is?

As you observe animals in their habitats, see if you can spot where they could go to:

- *Get away from noise*
- *Warm up*
- *Cool down*
- *Rest*
- *Search for food*

Adaptations are parts of an animal or its behaviors that help it survive. For example, sea lions have strong flippers to help them swim, bears have long claws that help them climb and access food, and elephants have a long trunk to help them manipulate objects in their environment.

What kind of adaptations do you have to help you explore the zoo?

How is a habitat designed to suit this animal's adaptations?

Enrichment is anything that encourages the natural behaviors of our animals. Animal Care Professionals use a variety of enrichment including new things to see, different smells, new things to taste, and a variety of items to touch and interact with. An example of providing enrichment through food can be offering food in a tube to encourage foraging, ropes and netting for climbing, and puzzle feeders to stimulate problem solving.

What kind of enrichment do YOU have in your personal habitat at home?

What types of enrichment do you see in this animal's habitat?

What natural behavior do you think this enrichment encourages with this animal?

CHILDREN'S ZOO/ALABAMA WILDS

For the Extension Activity: Alabama Wilds Scavenger Hunt, follow the link provided:

Sensory Stop!
Stop at the pond area on the boardwalk. What do you see? What do you hear? What do you smell? Take 1-2 minutes to be still and use your senses to experience this area. Afterward, ask your students to share what they heard or saw.

All of the animals that live in this area of the zoo are from Alabama. Have you seen any of these animals in the wild or in your backyard?

North American River Otters

The Birmingham Zoo has three North American river otters, two females and one male. Their names are Lenora, Maisy, and Slim. Observe the otters swimming and notice what floats out of their fur. Their thick coats trap air to make them buoyant, which is why you might see bubbles rising from their fur!

Otters are naturally curious animals. They are intelligent and inquisitive, and they are usually busy hunting, investigating, or playing with something. Look at the otters' habitat.

What do you see in their habitat that encourages their curiosity?

What else do you see in their habitat and why do you think it's there?

Black Vulture

Vultures are the clean-up crew of the environment. They like to eat animals that have already died. We call animals that eat dead things **scavengers**. To defend themselves, vultures can vomit up to 10 feet away in the direction of their predator! This acidic display deters predators from attacking the vulture.

What adaptations do you see that allows this bird to survive in its environment and be a successful scavenger?

Why do you think scavengers have an important job in nature?

What would happen if nature did not have a clean-up crew?

American Black Bears

Black bears have an excellent sense of smell, which they use to find food. This means that they are sometimes found digging around in trashcans that people leave out. Take 30 seconds and try and sniff out at least 3 different smells around you!

How did zoo engineers design the habitat to encourage natural behaviors? For example, this habitat has a lot of trees for the bears to scent mark, scratch, and even climb. Notice, however, that there aren't many trees near the fence. Why do you think that is?

Goats

Goats have been important to people for many years. Domestic goats around the world provide meat and milk. Take a moment and observe the eyes of one of our goats.

What is different about their eyes compared to our eyes?

Goat eyes are shaped in a horizontal rectangle to give wide peripheral vision. This lets them watch for predators, and helps them see their entire surroundings when they feel threatened.

For the Extension Activity: Goatally Awesome, follow the link provided:

Conservation Connection

As you're walking near the splash pads, look up! It might look like a roof, but right over your head is a set of solar panels. ***How do plants and animals use the sun's energy?*** These panels soak up the sun's energy, just like a plant. Have you ever used something that needs batteries to work? The sun's energy works like batteries to power things around the zoo! That energy helps us turn on heat lamps in the reptile habitat and keep food cool for animals.

PREDATORS

A **predator** is a creature that preys on other creatures. Predators aren't just lions and alligators; they can also be plants, insects, spiders, and eagles! Explore the predator area while keeping these thoughts in mind:

Where are your eyes? Why do you think predators' eyes face forward on the front of their face instead of being located on the sides?

What colors do you see on the predators? Where else can you find similar colors in nature? How might these colors help these predators?

African Lions

Many people believe a common misconception that lions are lazy animals. While not lazy animals, lions really do sleep a lot; they can spend about 18 hours sleeping each day!

Why do you think cats like lions sleep so much?

Lions sleep so often because hunting prey takes a lot of energy, even if you hunt as a team like female lions! They reserve energy for running, pouncing, and stalking. While resting, lions often groom each other, nap, and survey the savanna from a large rocky outcropping, like the one you might find in the lion habitat.

Lions live in large groups, called prides. Prides can be as small as 2 or 3 members, or as large as 40 members. Prides spend a lot of time together; the females hunt for the pride, while the males guard the females and cubs from other males.

What do you think are the benefits and problems of living in a pride?

Living in a pride gives the lions a large team to catch prey and more lions guarding their food. However, more lions in a pride mean more food that the lions must catch to feed every pride member. Animals that live close to each other also face higher risks of spreading diseases.

Black-Footed Cats

Black-footed cats are the most successful feline hunter. Although they are Africa's smallest cat, they are successful 6 out of 10 of the times they hunt. Their prey includes small mammals, reptiles, birds, and insects.

What do you see in their habitat that allows them to practice hunting behaviors such as stalking, hiding, running, and leaping?

The black-footed cat habitat provides plenty of areas for the cats to hide such as tubes and hollow logs, as well as platforms to practice jumping behavior.

Even though the black-footed cat is the smallest cat in Africa, how do you think its size helps it be a successful hunter?

Because of their size, these cats move more stealthily through their environment and are more difficult to see in the long savanna grasses.

Coyotes

The Birmingham Zoo has two coyotes, Yuma and Kaya, who are brother and sister. These two coyotes were found abandoned by their mother on the side of the road when they were pups. They were brought to a wildlife center in Arizona to be cared for in hopes that they could one day be released back into the wild. Due to their young age, however, the pups became used to people and comfortable being around them, which meant they could not be released.

What do you think the wildlife center was worried would happen to the coyotes if they were put back in the wild?

Once animals have become used to humans, they will often come closer to humans than many people are comfortable with. Oftentimes, they will approach humans for food. Because these are still wild animals and not pets, this can become dangerous for the people and the coyote.

What do you think might happen if the coyotes continued coming close to humans? How do you think humans can help keep wild animals wild?

Many people feed wild animals, and the animals get used to people providing food. We can help wild animals by letting them find food for themselves.

The animals in this area of the zoo have many different hunting strategies to catch their prey. Some animals hunt with others of their own kind at night, some hunt alone during the day, and many predators have their own distinct way of hunting.

What hunting strategies do you think coyotes use? How do you think they might differ from other animals, such as cats and birds, in the predator area of the zoo?

Coyotes have a long snout to help with their excellent sense of smell. Coyotes often hunt alone, but may also hunt in small packs.

Sensory Stop!

Predators often **camouflage**, or blend in, with their environment because of their patterns. Can you camouflage like a predator? Find an object that matches the color of your clothes so you can camouflage, just like a predator!

TRAILS OF AFRICA

African Elephants

Take a minute to observe one of our elephants. Notice his trunk. An elephants' trunk has over 100,000 muscles and 0 bones.

How do you see the elephant using his trunk?

He spends most of the day using his trunk in a variety of ways! Elephants can pick up objects as large as a log or as small as a single blade of grass using the two finger-like projections on the tip of their trunks. Despite popular belief, elephants cannot suck water through their trunk like a straw. Instead, elephants draw water about halfway up their trunk and then spray it into their mouths.

How do you see him using his ears?

Elephants use their ears both as a cooling system and to pick up noises around their environment. An elephant's ears have many large veins and blood vessels, similar to the inside of your wrist. The veins carry the warm blood up to the ears, where the blood is able to let off heat and cool down away from the elephant's warm body.

Bulwagi, our oldest male elephant, weights 12,000 lbs. What is the heaviest thing you use every day? How many of that item do you think it would take to equal Bulwagi's weight?

As an example, the average car weighs 3,000 pounds; it would take four cars to weigh the same as Bulwagi!

Giraffes

Take a moment to observe the giraffes. Look closely at their bodies and compare them to the structures on your body. Watch how they move.

How do you think a giraffe eats its food?

A giraffe spends most of its day eating, using its long tongue to grasp and pull leaves into its mouth.

What color is a giraffe's tongue? Are there any other examples of this kind of tongue in nature?

Scientists think a giraffe's tongue is purple to prevent it from being sunburned while eating for long periods of the day. While some other animals have darkly colored tongues (polar bears), and some animals have very long tongues (giant anteaters), giraffes are the only animal with a long, dark tongue that is **prehensile**—meaning it can grab and pull.

Sensory Stop!

Giraffes have quite a unique way of walking! When they walk, giraffes move both legs on one side of their body and then both legs on the other side. Try it! Try walking by moving your right leg and right arm at the same time, then your left leg and left arm at the same time. See who can walk like this the farthest.

Conservation Connection

The "wooden" boards at the giraffe feeding station are made out of recycled plastic! How does it look different from regular wood from trees? How does it feel under your feet?

Grant's Zebras

Take a minute to observe one of the Grant's zebras.

Why do you think that the zebra has such bold and unique markings?

While zebras may look very similar, each one has a unique stripe pattern that we can use to identify individuals. Scientists are unsure as to the benefit of the striking pattern of the zebra. Some scientists think that the stripes help the animals to blend into the African grasslands that they call home, while others suggest that the stripes can confuse predators as the zebras travel as a herd.

For the Extension Activity: Striking Stripes, follow the link provided:

Southern White Rhinoceroses

Take a moment to observe the white rhinos.

What are the first few observations that you make about their appearance?

You might notice the large size of the rhino! The white rhinoceros is the biggest of all the rhino species. It can weigh up to 8,000 pounds! That's about 3 small cars stacked on top of each other! To maintain their size, these animals have to eat about 120 pounds of grass or hay every single day. That's about the same weight as eating 480 hamburgers!

There are five species of rhinoceroses across the globe, with white rhinos and black rhinos being the more common species found in human care. It is easy for visitors to tell the difference between these two species; white rhinos have a square upper lip, whereas black rhinos have a triangular upper lip. Can you see the lip on one of our three rhinos?

Show students the rhino carrying crate near the habitat. One of our white rhinos was transported to the Birmingham Zoo in this large crate. Point out the hole in the top of the crate. White rhinos are incredibly strong and have a tough horn made out of keratin, the same material your hair and fingernails are made of.

How do you think the hole was made in the top of the crate?

During transport to the Birmingham Zoo, one of our past rhinos made this hole with his horn!

PRIMATES OF THE WORLD- GIANTS OF THE AMAZON

Take a moment to observe several primates. Many primates have a **prehensile tail** which allows it to grasp and hold objects. Take a few minutes to observe how these animals use their tails.

How do they move? What adaptations do you think are most useful for their movement?

Can you see a primate using its feet to grasp a tree? Why do you think primates can do that?

How would you move if you could grasp objects with your feet?

For the Extension Activity: Ethogram, follow the link provided:

Squirrel Monkeys

These monkeys may seem very cute, and even like they may make a good pet, but you might want to reconsider! These highly active monkeys will pee on their hands and feet and run around their habitat to make it smell like them—yuck!

Because primates spend so much time climbing, it is important that the Animal Care Professionals build safe structures that encourage this natural behavior. The fire department donates old firehoses they can no longer use to the Birmingham Zoo for use in these habitats. Can you spot any?

Look at your hands. How do they look similar to the squirrel monkeys' hands? How do they look different? Do you think you use your hands in the same way?

Sensory Stop!

Thumbs are very important to primates, like squirrel monkeys. Fold your thumb down onto your palm (like you're making the number 4) and try to shake your neighbor's hand! Try to write your name or tie your shoes. Can you do it?

For the Extension Activity: Gone Extinct, follow the link provided:

Jaguar

Khan, our male jaguar, is the largest cat species in South America. The jaguar's jaw is so powerful that they have even been spotted eating caimans (a species of crocodilian) in the wild. In the room at the far end of the hall, you will find tools researchers use to find their study subjects and a short video on how the Birmingham Zoo and researchers in South America are studying and learning how to protect this elusive feline!

Orangutans

We have three orangutans here at the Birmingham Zoo, Oliver, the male, Lipz, the female, and their daughter, Nairi. They are also known as the "red ape" due to the color of their fur.

In the wild, orangutans are frugivorous*. What do you think that means they eat?*

Orangutans eat over 300 types of fruit in their rainforest home. However, the fruit they eat in the rainforest is very different than the fruit in our supermarkets. Very little of it is sweet and would taste much more like our vegetables. They have also been spotted eating insects!

Conservation Connection

Orangutans can be found across Indonesia and Malaysia. They like to live in green and luscious tropical rainforests. Recently, however, people have been clearing these rainforests in order to plant palm trees. People then harvest the palm fruit and make oil out of it, which is used in everything from popcorn to soap and even peanut butter. One way you can help the orangutans is to buy products that use sustainable palm oil. This is palm oil that is grown and harvested in a way that is friendlier to the environment and to the orangutans. You can also download the Sustainable Palm Oil Shopping app from the Cheyenne Mountain Zoo on your phone.

SOUTHERN BAYOU

American Alligators

The Birmingham Zoo is home to 3 male alligators: Sparkles, Lemmy, and Clyde. Can you spot all three of them? Take a moment to observe the alligators and their habitat.

Your nose, ears, eyes, and mouth help you sense the world around you. Where do you think these features are located on an alligator and what direction do these features face? Where are these features on your body compared to an alligators?

All of your sensing features face forward, but the alligator's senses face upward. This helps the alligator see, hear, smell, and taste above the water, even while its body is below the water!

Look at the water in the bayou. How does it look different from the water in the ponds outside of the exhibit?

If you look into the water of Southern Bayou, the water may look bright green. This is because the surface of the water is covered with a plant called duckweed. Each leaf is about the size of a pencil eraser! But this plant is not here just to make the water look cool; alligators can **camouflage**, or blend in, with the duckweed. Being able to hide helps young alligators avoid danger, and can help adult alligators sneak up on their next meal. Even though it might seem like the water is dirty, the duckweed actually keeps the water very clean by preventing algae from growing.

For the Extension Activity: Swampy Survivors, follow the link provided:

Conservation Connection

The American alligator is Alabama's largest native reptile! Hundreds of years ago, settlers who came to the United States hunted alligators for their meat and strong leathery skin, causing alligators to nearly go extinct. People took action to protect the alligator, and passed laws that kept the alligators from being hunted. Today, American alligators are doing well because people worked hard to protect them!

Sensory Stop!

Take a moment and feel your teeth. Smile wide and look at your neighbor's teeth. What are some words to describe your teeth? Now think about the teeth of an alligator. Do you think that their teeth are the same as yours? Would they feel the same? What do you use your teeth for? Does the alligator eat the same foods you do? Of course not! So why would an alligator's teeth need to be different from yours?

FLAMINGOS

What makes a bird a bird? All birds have feathers and lay eggs, and most have light bones made from a structure that looks similar to a honeycomb! The Birmingham Zoo is home to a flock, also known as a **flamboyance**, of Caribbean flamingos.

As you observe the flamingos, notice what is on their legs.

What colors do you see on the bands? What do you think those are for?

These bands help zoo staff members correctly identify the flamingos.

You may have seen bird nests near your home. Typically these nests are made from twigs, sticks, and other forest objects. Look around the flamingo habitat.

What materials do you think these flamingos might use to make their nests?

Because they live near the water, flamingos actually build their nests out of mud! These birds build their nests out of a 1-foot tall mud pile, with space for the female to lay her eggs and incubate them.

Do you think flamingos are born pink? If you don't think flamingos are born pink, how do you think they became pink?

Flamingos are famous for their vibrant pink coloration. They get their name from the Spanish word *flama* which means flame. They're actually born a grayish-white color and don't turn pink until around two-years-old. Flamingos' favorite food is small brine shrimp and algae, which contain beta carotene that helps them turn pink when they're about 2-years-old.

Sensory Stop!

Flamingos often stand on one foot to rest. Some scientists think that this might be to rest their opposite leg or conserve energy, but we still don't know for sure. Practice standing like a flamingo! See who can stand on one leg without touching any surfaces for the longest amount of time.

REPTILES

For the Extension Activity: Habitat Design, follow the link provided:

What makes a reptile unique? **Reptiles** are air-breathing vertebrates, meaning that they have spines. They are **ectothermic,** which means cold-blooded. To warm themselves, reptiles must seek a source of heat. Most lay eggs, which have a flexible but tough leathery shell.

Snakes

Observe the reptiles, and particularly the snakes in this space.

How would you describe the skin of a snake just by looking at it? What do you think it would feel like? Do you imagine it feels rough, smooth, wet, bumpy, or dry?

Many people describe snakes as slimy, but this is actually just a myth! Since snakes are reptiles, they have dry skin which is covered in scales. Their smooth, dry scales help the snake to move and climb, and act like a suit of armor against some predators.

Take a moment to feel your back. What is in the middle of your back? Your spine! Your spine is very important for keeping your body upright. Did you know that snakes have a spine too? Their spine takes up almost their entire body; from their neck to their tail. How would you move if your body was one long backbone without arms or legs? Try it!

What enrichment is given to our desert-dwellers or forest snakes? Where do you think each animal might warm up, cool down, or get away from noise?

Sensory Stop!
Snakes swallow their food whole, rather than chewing it. They can expand their jaw and swallow something as wide as the widest part of its body. Try it! Open your mouth as wide as you can and see if you could eat something as wide as your shoulders. Can you do it?

Turtles

The reptile house is home to several species of turtles and tortoises. Turtles generally have webbed feet and live near or around water. Tortoises usually have a dome-shaped shell and lack webbed feet. This means that tortoises do not have the ability to swim.

Sometimes we see a turtle on a cartoon that has jumped out of its shell. In reality, a turtle's shell is part of its backbone and grows with the turtle over the course of its life.

KEEP THE EXPERIENCE GOING IN THE CLASSROOM!

What was your favorite memory of our trip to the Birmingham Zoo?
Allowing students to express what "stuck with them" brings awareness to the personal connections that were made on that trip. Those connections are at the forefront of the learning process!

What new words did you learn on our visit?
A large part of the science world is building up a reserve of important terminology. Understanding these words allows young individuals to connect and better function within the scientific world.

What are some ways that the Birmingham Zoo cares for their animals?
Many animals have specific adaptations that require a specially designed habitat and care plan at the zoo. Use this opportunity to discuss the requirements of these animals, or take it a step further and talk about the conservation efforts set in place!

How do the Birmingham Zoo's animals help connect people to animals in the wild?
By providing the opportunity to connect to wild animals people may not otherwise see, the Birmingham Zoo offers a unique perspective into the ecosystems of the world.

How are physical and behavioral adaptations similar or different among species? Why do you think that is?
This question aims to recap some of the unique adaptations your students may have seen today and how that impacts their survival in their natural habitats.

What can people do here and around the world to help animals and ecosystems?
Use this question as a reminder of the Conservation Connections seen throughout the zoo and the student's own role in their community.

What animal would you like to learn more about?
This is an excellent opportunity to reinforce those personal connections and to apply some research skills! This could potentially be in the form of a project.

What questions do you still have? What are you curious about?
This is a good opportunity to allow students to explore their own questions and interests. There are a variety of options on how to use this in the classroom. Consider group discussions, peer-to-peer tutoring, or journals to explore this topic!

THANK YOU!

We hope you have enjoyed your experience at the Birmingham Zoo and we look forward to seeing you on another adventure soon!

Please contact us at 205-397-3877 or visit us at www.birminghamzoo.com and let us help you find new ways to engage your students in our 122 acre classroom!

ALABAMA WILDS SCAVENGER HUNT

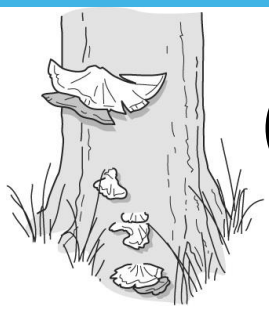
Location: Along Alabama Wilds trail

The forest is an ecological community where plants and animals coexist. Can you find the following items?

Please help us keep wild things wild by returning anything you find back to its habitat.

FUNGUS

Decomposes, or breaks down, fallen trees, leaf litter, and other organic material on the forest floor.

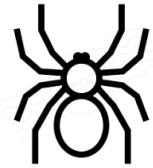


ROLY POLY

Also known as the pill bug, this tiny crustacean will roll into a ball for defense.

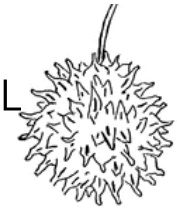
SPIDER

Predator that eats insects. If you can't find a spider, can you find a web?



SWEET GUM BALL

The seed pod of the Sweet Gum Tree.



ACORN

The nut of an oak tree, with a seed inside.

THIN LEAF

This leaf can hold on to water for long periods. What is the thinnest leaf you can find?

ROUGH TREE BARK

The non-living outer layer of trees protects the living tissue found within.

WIDE LEAF

This leaf takes in a lot of light. Can you find a leaf wider than our hand? How about your face?

WHAT ELSE DID YOU DISCOVER?

_____

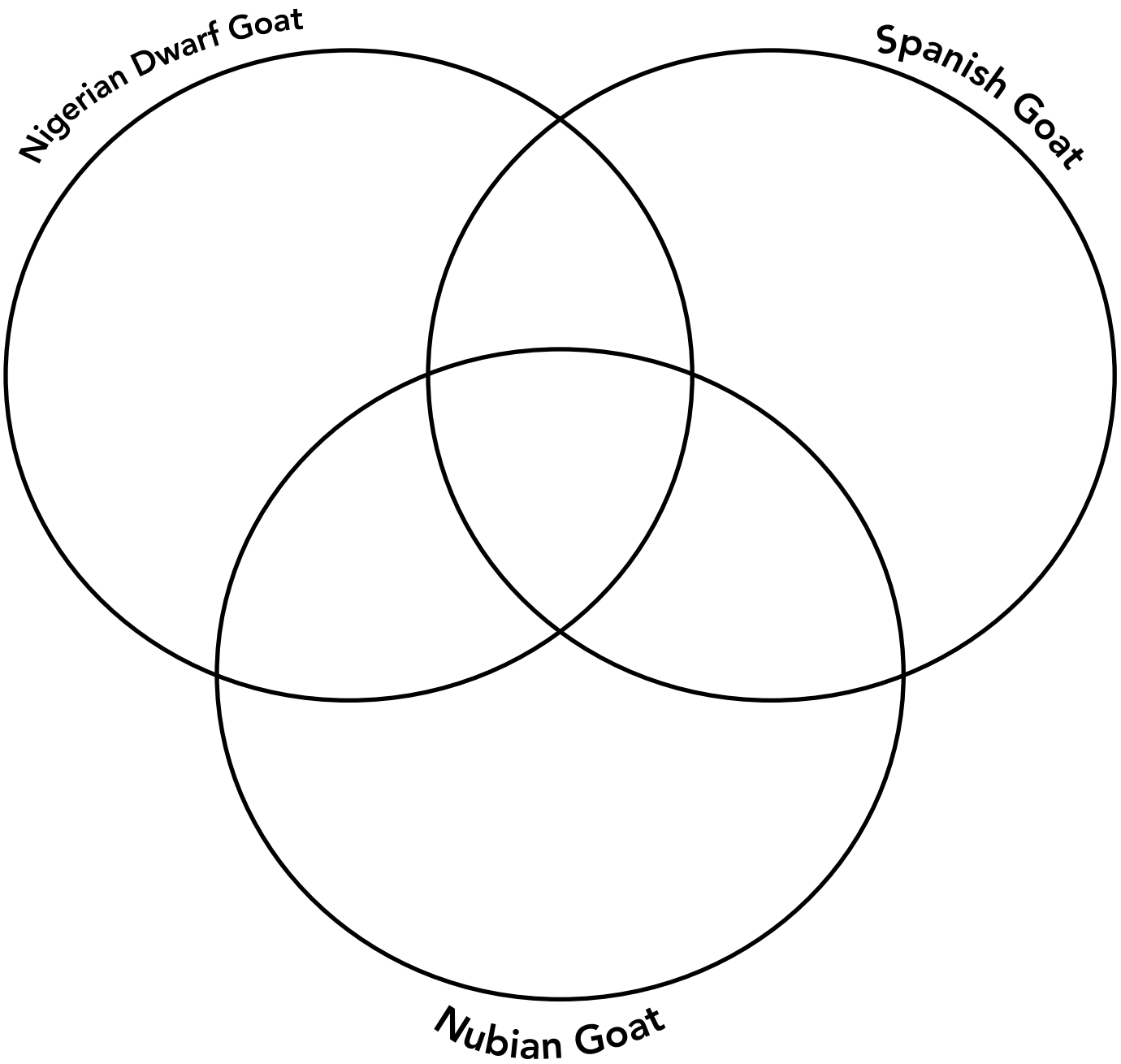
_____

_____

GOAT-ALLY AWESOME

Location: Barn in Children's Zoo

The Birmingham Zoo has three different kinds of goats here in the barn. Fill out the Venn diagram below to describe their similarities and differences.

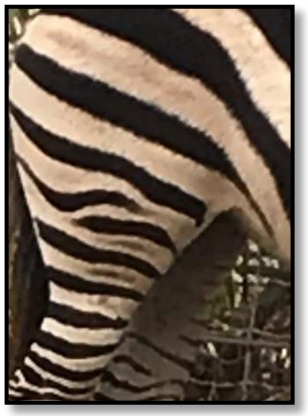


All of the goats here have horns of different shapes and sizes. Can you find Batman the goat? He has the biggest horns of all!

STRIKING STRIPES

Location: Zebra Habitat- Trails of Africa

Just like our fingerprints, the stripes and patterns on a zebra are unique to each animal. Some scientists believe that these patterns help them to blend in with the grasslands where they live. Using the key below, identify which zebra or zebras you see on the habitat.



Malia

Has wavy lines on back legs and greying hair on her face. She is the mother of Sam and Kabibe.

Sam

Has the thickest stripes, a wide stripe above his tail and a T-shape on his chest.

Kabibe

Has a spot in the shape of a guitar pick on the right side of her neck near her mane.

Now, design your own, unique zebra pattern!

ETHOGRAM

Location: Primates of The World, or any habitat with visible and active animals

Read the ethogram, a chart that shares the behavior of the animal, every 15 seconds. Then choose an animal to watch for the 1 minute and 30 seconds to record the data. Every 15 seconds circle the action the animal is doing at that moment.

Minutes: Seconds	Eating/ Drinking	Moving	Resting/ Standing	Social	Self-Groom	Not Visible
0:15						Not Visible
0:30						Not Visible
0:45						Not Visible
1:00						Not Visible
1:15						Not Visible
1:30						Not Visible

GONE EXTINCT

Location: Primates of the World building between the Squirrel Monkey and Howler Monkey Habitats

Many of the animals in this room went extinct due to human interference. Mark an "X" in the box for each animal affected by the following:

Boat Collisions					
Poaching					
Overfishing/ Overhunting					
Habitat Loss					
Pollution					
Invasive Species					
Climate Change					

What was the leading cause of extinction for these animals? Why do you think this is?

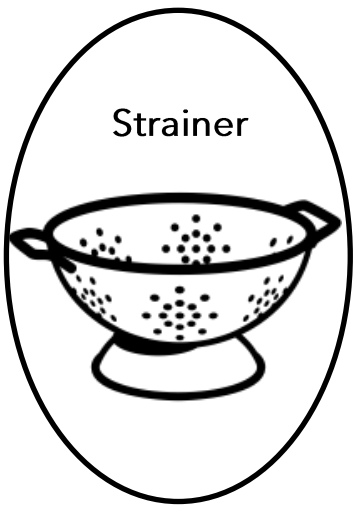
In this space, there are four species that were saved from the brink of extinction. Had you heard of these animals before?

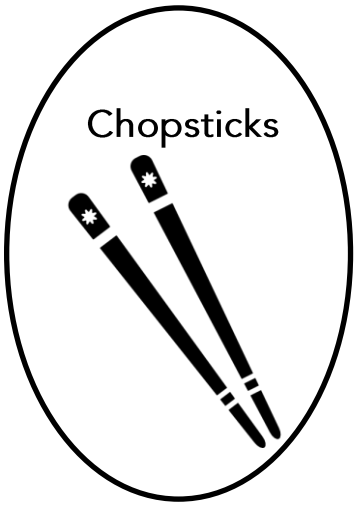
Which one do you find the most interesting and why?

SWAMPY SURVIVORS

Location: Southern Bayou

Surviving a swamp can be tough for a bird; they need to have the right set of tools in order to live! A bird's beak is its special tool that it uses to catch and eat its food. Look at the types of bills on the wood stork, roseate spoonbill, and the ruddy duck. Which utensil below do you think best matches the way they use their bill?





The wood stork uses its beak used to **spear** and **grab**. What utensil is this like? Why?

_____

The ruddy duck uses its short bill to **scoop** and **strain** food. What utensil is this like? Why? _____

The roseate spoonbill uses its long, rounded bill to **stir** up the water to find food. What utensil is this like? Why? _____

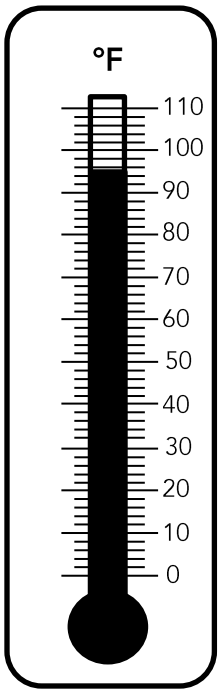
Now, design a beak for a bird that must catch and eat mice, rats, and small reptiles. For additional help, consider the barred owl and the red-shouldered hawk!

HABITAT DESIGN

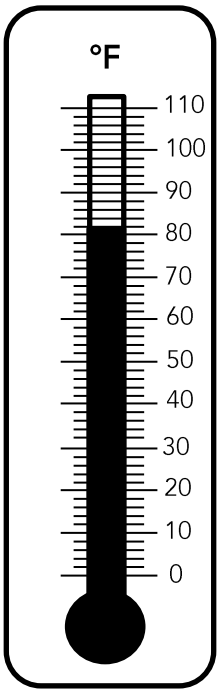
Location: Reptile Building

Animal care professionals make considerations during the design process to encourage natural behaviors. Get into the mindset of a zoo designer as you observe the Komodo dragon habitat.

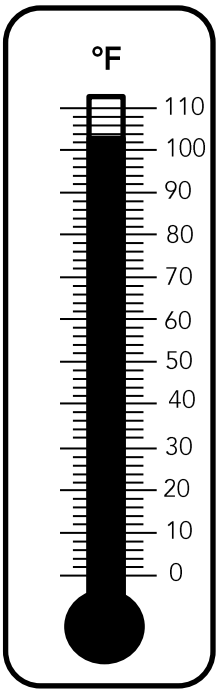
Because the Komodo dragon is cold-blooded, the zoo engineers created 3 heated zones to help it control its body temperature. Read the thermometers below to find out what each zone temperature is. Keeping the heated zones in mind, observe what additional features the habitat designer placed in the habitat.



Zone One



Zone Two



Zone Three

How could the Komodo dragon warm up? What area of the habitat looks warmer to you?

How could the Komodo dragon cool down? What area of the habitat looks cooler to you?

How could the Komodo dragon get away from noise?

What else would the habitat designers consider when making this habitat?