

Zoo Crew

TRAINING MANUAL

A SMITHSONIAN'S NATIONAL ZOO FAMILY EDUCATION GUIDE



JOIN THE ZOO CREW!

Are you ready to become a wildlife conservationist and part of the Zoo Crew? During your visit to the Smithsonian's National Zoo, check out the exhibits and use this booklet to learn what it takes to care for different animals here, many of which are endangered. Once you complete your training, you can continue to help animals and the environment by visiting the Zoo's website at nationalzoo.si.edu and learning more.

This guide is intended for grownups and kids to share. Each page represents a different area of the Zoo but not all areas are included in this booklet. You do not have to follow the pages in order. If you have limited time, choose the areas you want to see most. (You can always come back another day.) You're ready to go—have a great visit at the Zoo!



Asia Trail

Travel half way around the world without leaving Washington, D.C., by exploring the Asia Trail exhibit. Meet exciting animal species native to Asia.



Bird House

By 2021, the Zoo's historic Bird House will transform into a first-of-its-kind exhibit that will immerse you in the annual journeys of western hemisphere birds.



Small Mammals and Great Apes

Meet a variety of mini-mammals and birds from the nocturnal to the naked. Afterwards visit the Great Ape House to see gorillas and orangutans.



Reptile Discovery Center

See anacondas and amphibians inside and don't forget to sneak back to see the Zoo's Komodo dragon behind the building.



Great Cats

Being a member of the Zoo Crew takes the right cattitude! Visit the Zoo's fearless felines: tigers and lions.

Animal keepers and scientists at the Smithsonian's National Zoo have an important job—making sure the animals eat healthy diets, get plenty of exercise, and receive veterinary care. On top of that, the staff need to make sure the exhibits have all the necessary creature comforts. Keepers provide animals with tasty treats, special activities, and a variety of things to play with and explore. This is called “enrichment,” and it lets the animals demonstrate their natural behaviors, keeps their bodies in shape, and helps them thrive. Did you know that playing fetch with your dog or putting rock caves in your fish's tank are forms of enrichment?

Zoo Scientists at Work: **Clouded Leopards**

Clouded leopards are medium-size cats (20 to 50 pounds fully grown) and found in the forests of Southeast Asia, a habitat that is rapidly disappearing. They're shy and thus very hard to study in the wild. Thankfully, Zoo scientists have been working with this elusive species for more than 30 years in Thailand and here at the Zoo. Through their research, Smithsonian Conservation Biology Institute scientists learned that clouded leopards breed better when they are introduced to their intended mate as cubs and when they have lots of space to climb. By raising mates together and building enclosures with lots of trees to climb, vegetation to hide behind, and indoor spaces to retreat to, our scientists have since created one of the most successful clouded leopard breeding programs in the world. They're working hard so that this partly cloudy cat will have a bright and sunny future!

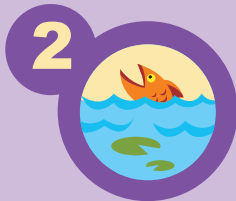
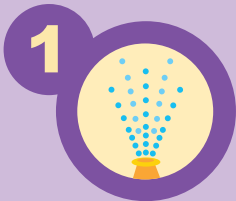
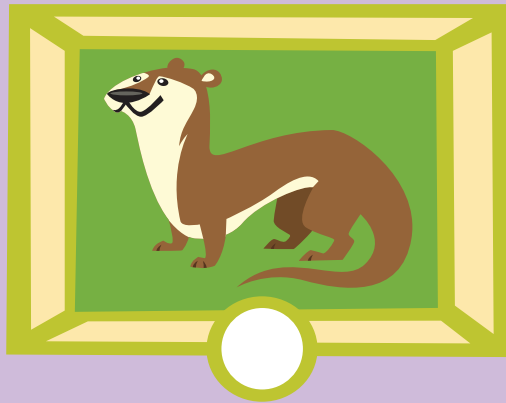


ASIA TRAIL

Have a Ball

Match each of the animals to the type of enrichment they enjoy. Use the space provided to list five things you could use as enrichment for pets at home.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____



Bird House keepers have to keep an eagle eye on all of the birds they care for. Since these animals can't tell us when their beaks are weak or their wings are out of whack, it's up to Zoo staff to observe each animal carefully. If a bird acts sick or stressed, staff can get them the help they need. This doesn't just apply to the birds in the Zoo's collection. More than 159 wild bird species make their home in the trees and park around the Zoo, like the black-crowned night herons that nest outside of the Bird House every spring. Observation is one of the main ways staff make sure animals all over the Zoo are thriving. Observing animals not only helps to understand each individual animal and what its typical behaviors might be, but it also helps identify normal behaviors for the entire species.

Zoo Scientists at Work: **Wood Thrush**

Wood thrushes are known for having a beautiful, flute-like song. Since 2011, Smithsonian Migratory Bird Center scientists have been studying these exciting songbirds in the field. They use a variety of tracking methods and observations to better understand the threats to wood thrushes both in the United States and in Latin American countries where they overwinter. Now, our scientists are also studying these birds in human care. By monitoring wood thrushes in the wild and at the Zoo, scientists hope to figure out how to conserve this species and its forest habitats.



BIRD HOUSE

Wingo Bingo



Whether we live in the country or city, birds are all around us! Take a look around the Zoo, or your home, school or neighborhood to observe local species of birds displaying their natural behaviors. How many of the animals, objects and behaviors can you and your family find? Once you've found all the items in a row or diagonally, WINGO BINGO, you've won!



Black and white and loved all over!

With less than 2,000 giant pandas remaining in the wild, they need all the love they can get. Be part of the solution by joining the Zoo Crew to learn how you can help save species like giant pandas. Then spread the love so your friends and family can help too! Learn more at nationalzoo.si.edu.



Smithsonian
National Zoological Park
Conservation Biology Institute



SMALL MAMMALS/ GREAT APES

Classifying Animals



Animal exhibits are organized in different ways. Some exhibits include many different species of animals while others house only a single species. For example, in the Small Mammal House, golden lion tamarins, an endangered monkey, share their exhibit with many other animals like sloths and armadillos. However, in the Great Ape House, gorillas live in family groups only with other gorillas. The apes in the Great Ape House and the monkeys in the Small Mammal House are not only both mammals, but are also in a related animal group called primates. Hands and hair, feet and fingers—there's another familiar primate with all of these features: humans are primates too!

Zoo Scientists at Work: Golden Lion Tamarin

Golden lion tamarins (GLTs) are small monkeys native to rapidly vanishing rainforests in eastern Brazil. By the early 1970s, only 200 of these monkeys were left in the wild and GLTs became endangered. As a result, the Zoo and other conservation organizations decided to take action! Zoos now breed GLTs in human care and then reintroduce the monkeys into their natural habitat. Thanks to these efforts, GLTs are doing much better and more than 3,200 live in their native rainforests. Now, conservation efforts have shifted from reintroducing GLTs to connecting and protecting the rainforest habitat they depend upon for survival.

WHAT'S THE DIFFERENCE? Although monkeys and apes are both classified as primates, they have some characteristics or features that make them distinct from each other. Here's how you can tell them apart:

MONKEYS

- **Tails**—most monkeys have them (lemurs do too!)
- **Size**—they are generally smaller than apes

APES

- **Tails**—don't have 'em
- **Brains**—big ones for problem solving



SMALL MAMMALS/ GREAT APES

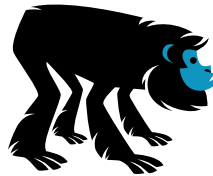
Primate Rump Roundup

Can you match the animal butts to the correct tails? Give it a try!
Tails may be used more than once or not at all.

SAKI



HOWLER



MARMOSET



TAMARIN

HUMAN



GORILLA



ORANGUTAN



GIBBON



A

B

C

D

E

F

REPTILE DISCOVERY CENTER

Creating Habitats

An animal's home is called its habitat, and it contains everything the animal needs to survive. For an animal to thrive, its habitat needs to have shelter, food, water, and plenty of space for the animal to live, grow, and reproduce. Because animals at zoos don't choose their habitats themselves, zoo staff are responsible for designing them with natural features to promote natural behaviors. The maybe not-so-cuddly reptiles and amphibians you'll find in the Reptile Discovery Center live in some of the most extreme habitats around the world, like snakes that live in the hottest deserts. Zoo staff need to consider many factors when designing each habitat. As you walk through the exhibit, how many different types of habitats can you spy? Also, pay attention to the objects in the enclosures that meet the species' needs.

Zoo Scientists at Work: **Cuban Croc Conservation**

Cuban crocodiles are found in only two swamps in Cuba! Their habitat has changed so much that they are now competing with other crocodylian species for food and nesting areas. To help save this species, zoos in North America are working with scientists to increase the number of Cuban crocodile babies hatched in zoos. Keepers observe the adult crocs to look for signs of nesting, and may pull any fertilized eggs to carefully monitor them. They keep a close eye on incubating temperature, which determines whether the hatchlings will be male or female! Male hatchlings emerge from eggs incubated between 89.6 and 90.5 degrees Fahrenheit, but a difference of one degree in either direction means the hatchling will be female or a mix of males and females!



Creepers and Habitat Keepers



You don't have to come to the Zoo to learn about habitats—you can create habitats for wildlife in your own backyard. Just make sure your backyard provides food and shelter for local species. This example of a backyard is home to many different species.

Can find the differences between the two pictures?

Wild cats, both big and small, are threatened by habitat loss and poaching. Zoos can help to study and protect these threatened species and their habitats. For many endangered species, zoos can also serve as an “insurance policy” against extinction. By maintaining populations in zoos, scientists hope these animals will never disappear completely. The Smithsonian’s National Zoo is home to lions and tigers. Lions are very social—they live together in the grasslands of Africa in groups called prides, with related females and only a few males. Females do most of the hunting together as a group, while the males protect the pride and its territory from hyenas and other rival lion prides. Tigers are very different—they hunt and live alone in their jungle habitats in Asia, except when they are breeding or when a female has cubs. Because these cats have very different social structures and thrive in vastly different habitats, zoo staff must use different techniques in their exhibits.

Zoo Scientists at Work: **Smithsonian’s Tiger Conservation Partnership**

Poaching, habitat loss, and other issues have reduced the tiger populations to fewer than 3,200 animals in the wild. Recently, some tiger range countries have reported an increase in their tiger populations—rare and the first good news for tiger population recovery in decades. Sumatran tigers, like the ones at the Zoo, are only found on the island of Sumatra, Indonesia, and are one of the most endangered subspecies of tigers, with only about 300 to 400 adult animals left in the wild. To help save these amazing predators, Smithsonian Conservation Biology Institute scientists are working with international partners to protect as much tiger habitat as possible, train local people to study and enhance conservation of tigers, control poaching and illegal trade and trafficking. These efforts from our scientists in tiger range countries, in collaboration with partners, can change the fate of wild tigers and keep them from disappearing.



GREAT CATS



Copy Cat

Using the pictures above, play a game of Copy Cat and see if you can move the same way great cats do.