

ACE Network Roundtable Discussion:

Using Empathy to Reach Audiences Beyond Programs
February 19, 2020



Northwest Trek Wildlife Park

METRO PARKS TACOMA

Jessica Moore

Education Curator

Northwest Trek Wildlife Park

Northwest Trek Wildlife Park



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WHO BUILDS IN NATURE?

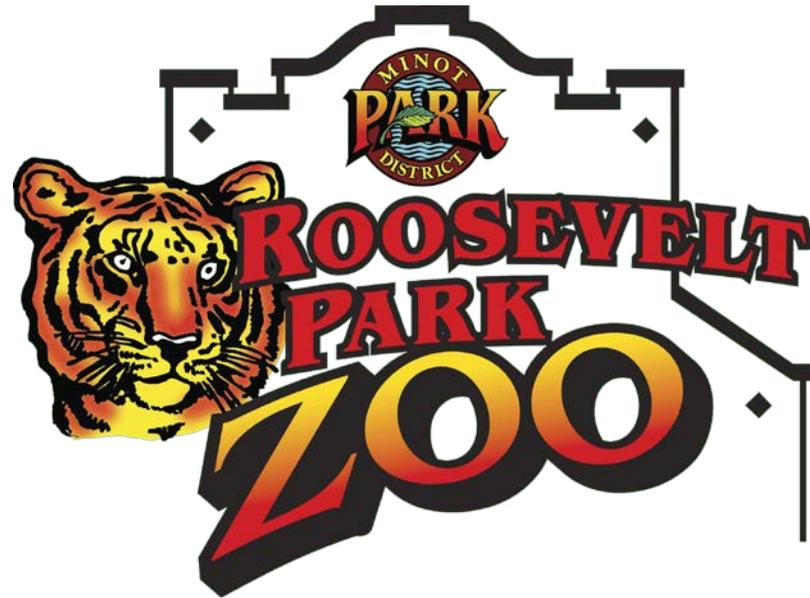
CAN YOU BUILD LIKE A BEAVER?

CARPENTERS USE MANY DIFFERENT TOOLS AND MATERIALS TO BUILD OUR HOMES, BUT BEAVERS ARE NATURE'S BUILDERS. THEY CREATE THEIR LODGES AND DAMS OUT OF STONES, ROCKS AND MUD BY USING THEIR TEETH AND TAILS AS TOOLS.

BEAVERS ARE SECOND ONLY TO HUMANS IN BEING ABLE TO CREATE AND CHANGE THEIR HABITAT. BY BUILDING DAMS, THEY CAN HOLD BACK WATER AND CREATE THE PERFECT POOLS FOR THEIR LODGES. POOLS ALSO MAKE PERFECT HABITAT FOR OTHER ANIMALS LIKE MUSKRATS, FROGS, TURTLES AND FISH. BEAVERS ARE CALLED A KEystone SPECIES BECAUSE THEY HAVE SUCH A LARGE IMPACT ON THE ENVIRONMENT AROUND THEM.

HOW DO YOU CHANGE YOUR ENVIRONMENT?

Incorporating Empathy Through Exhibit Signs



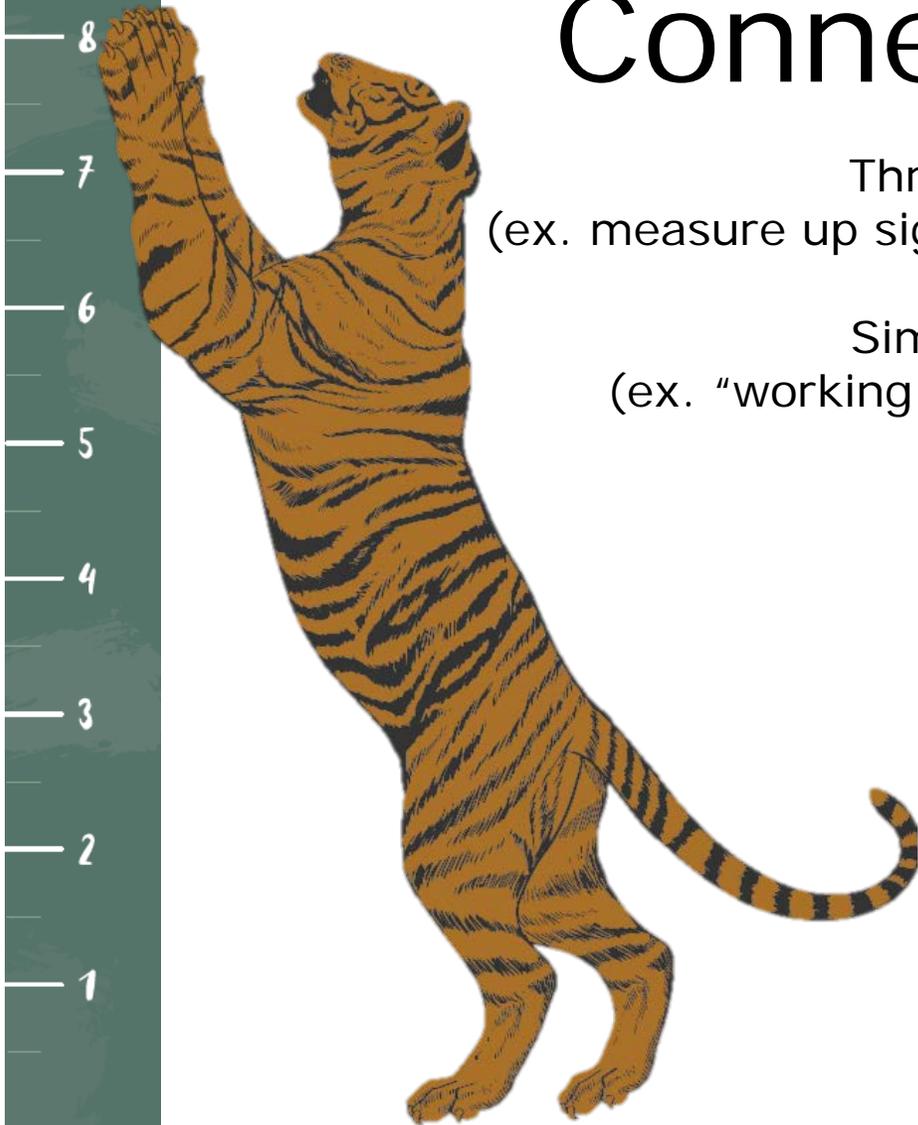
Nicole Barnhart
Education, Conservation & Outreach Coordinator



Making Connections

Through comparisons
(ex. measure up sign at tiger exhibit)

Similar terms & ideas
(ex. "working women" lion sign)



Tiger Exhibit

WORKING WOMEN

Lionesses are in charge of the pride. They do not establish a dominance hierarchy among themselves, but rather work together to hunt and rear the cubs. Female offspring typically stay in the pride they were born into. Mothers and daughters may live together for life.

Hunting is critical to the survival of the pride. Lionesses are known to do a majority of the hunting, working together to stalk and hunt large prey. Hunting is most frequently done at dusk and dawn but if prey is present, they may hunt at anytime.

Sex dimorphism, a characteristic in which the sex attributes that are vastly different

Male size and also their manes - a male lion may be 40% larger than a female.

WEIGHT



270 - 400 lbs

LIFESPAN



10 - 14 yrs

TAIL LENGTH



26 - 39 in

TOP SPEED



50 mph
(at full gallop)



In the United States, researchers have recovered lion fossils in seven states: California, Idaho, Nevada, Texas, Nebraska, Mississippi, and Florida

ROOM TO ROAM

Due to habitat loss and conflict with humans, African lion populations have plummeted approximately 50% in the last few decades. In 2019, there were around 20,000 African lions recorded in the wild.

Fossil evidence reveals that lions once inhabited most of Africa, Europe, Asia, North America, and northern South America. Today, most lions are found in sub-Saharan Africa, with 80% in eastern or southern Africa.

Unlike other large cats, lions prefer flat landscapes. The optimal habitat for a lion includes grassy plains, savannas, open woodlands, and scrublands. These areas support the large prey that lions hunt, while providing water and shelter.



Lion Exhibit



PHOTO BY AMANDA CONE

Conquering the Cold

Amur tigers are the largest tiger subspecies with adaptations to help tolerate the cold climate of their home range in the Russian Far East.

Unlike their smaller cousins who live in warmer climates, Amur tigers rely on their large body size to conserve heat. A layer of fat on their flanks and belly adds needed protection for the extreme elements in the north and their dense fur coats add a layer of insulation during the cold winter months. This combination makes Amur tigers the ultimate cold-weather predator.

Built-In Snow Shoes

Amur tigers are equipped with large, padded paws that act as snow shoes when navigating through deep, snowy terrain.

Temperatures in the Russian Far East reach -22°F and lower. Thick fur between their toes provides necessary insulation and enables them to silently stalk hard to find prey. Their 4 long, retractable claws can reach 4 inches (10 centimeters) in length and allow them to grip and hold onto prey.



PHOTO BY AMANDA CONE

An Amur tiger's front paws have an extra claw, called a dewclaw, which aid in grasping and climbing.

Creating Dialogue

Signs designed for all ages



Cold Climate Gear

Unlike Amur tigers, humans need a little help staying warm in the blustery cold. To survive the cold climate of the north, Amur tigers are equipped with thick fur around their neck and a layer of fat around their belly.

What gear do you wear to stay warm?



Tiger Exhibit

Lion Exhibit



Inspiring Action

"Be a" action phrases incorporated at tiger (i.e. Be a leader... organize a clean up)

Lion exhibit promotes actions through career focused clipboards (i.e. geologist, vet, etc.)

It's up to us

The future of the endangered Amur tiger is in all of our hands. Be a conservation hero. You can save species with your everyday actions.

BE A KIND TOURIST
When traveling, research places you plan to visit to ensure they are doing their part to conserve species.

BE A LEADER
Organize a clean up or start a conservation club in your community or school.

BE A SUPPORTER
Become a Roosevelt Park Zoo member or visit other AZA zoos and aquariums.

BE A RESPONSIBLE SHOPPER
Know how and where the products you buy are produced.

BE THEIR VOICE
Spread the word by teaching friends and family about how they can help.

PHOTO BY AMANDA CONE

Tiger Exhibit

GEOLOGIST LOG: KOPJES

Saturday, August 13th 4:19pm
Clear Skies, 79°F
Serengeti National Park - Tanzania, Africa

NOTES:
Kopjes (KAH-PEES) are the exposed tops of ancient granite rock domes, formed after softer rock was worn away by erosion. The rocks of Africa's Kopjes are 550 million years old!

Some plants that grow here are not found elsewhere in the savanna.

Tall peaks make for great lion's vantage points!

can reach up to 45 feet above the African savanna!

Over time, kopjes' boulders became cracked and split, often being sculpted into magnificent forms.

Lion Exhibit



Alaska SeaLife Center®

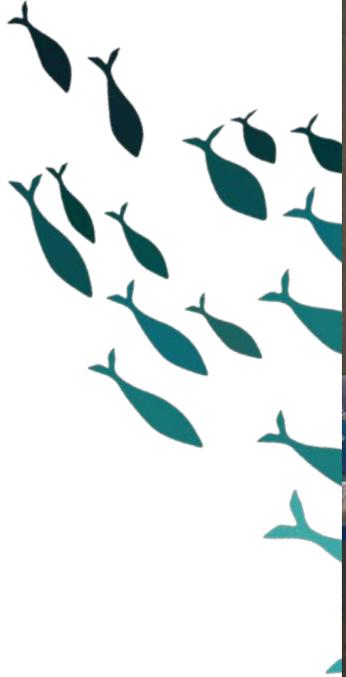
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Jeff Dillon

Senior Education Manager

Alaska Sealife Center

Seward, Alaska



Environmental Enrichment

It is not uncommon for animals kept in captivity to show abnormal behavior patterns if they cannot channel their energy and intellect in constructive ways. Animals in the wild will devote much of their time to:

- ★ Searching for food, water and shelter
- ★ Competing with other animals
- ★ Avoiding predators
- ★ Feeding and protecting young
- ★ Searching for a mate
- ★ Protecting territory

In captivity food and water is always available, territory is defined, social groupings are small, early stable and structured, there are often no predators to avoid, and mates are readily always selected for them. With all the extra free time, the animal will have a need for new, entertaining and challenging activities. This is where environmental enrichment is needed.

Forms of Enrichment

There are many different forms of environmental enrichment, ranging from a simple toy to more complex puzzles and activities. Here at the Alaska SeaLife Center we employ several types of enrichment including habitat design, social interactions with other animals, interesting feeding methods, toys, visual stimulation, audio stimulation and training. The panel on the right shows some examples of environmental enrichment devices that we actually use here at the Alaska SeaLife Center.

Our animals are given interesting feeding methods to challenge and stimulate their minds. Our seals and sea lions may be given fish frozen in a block of ice or fish inside a milk crate. (left)

Alone: Our mammal staff uses training to facilitate research and as a method of enrichment for the animals.

Alone: ERN, a rehabilitated sea otter tries out some toys in his pool.

Hey Folks, Help Us!

Can you help us come up with new ideas to enrich our animal's lives? Use the idea forms below to suggest some new and exciting environmental enrichment activities that our animals may enjoy doing. But remember the enrichment equipment must be designed so that:

- ✓ The animals cannot swallow, rip, break, or crush it
- ✓ The animal cannot become trapped or entangled in it
- ✓ The animal cannot be hurt by it

MINIMUM AGE: 3 YEARS

Mermaid Purse Mysteries

This strange looking pouch wasn't dropped by a mermaid like the name suggests. Instead, it is an egg case of an Alaska skate.

Alaska skate
Suboplocheilichthys

Males are often referred to as sharks and there are 12 species are found in Alaska's marine waters.

Females deposit egg cases containing a single embryo on the ocean floor. Embryonic development is much slower in cold northern waters and may take as long as 5 years for hatching to occur in the Arctic Ocean. The clear tubes below contain embryos removed from egg cases. These transparent "mermaid purses" allow our aquarists to observe development of the young skates in the water. Learn more about this unique survival strategy for young fish.

Skate embryos can be carefully cultured from their case and placed into artificial cases to track their development.

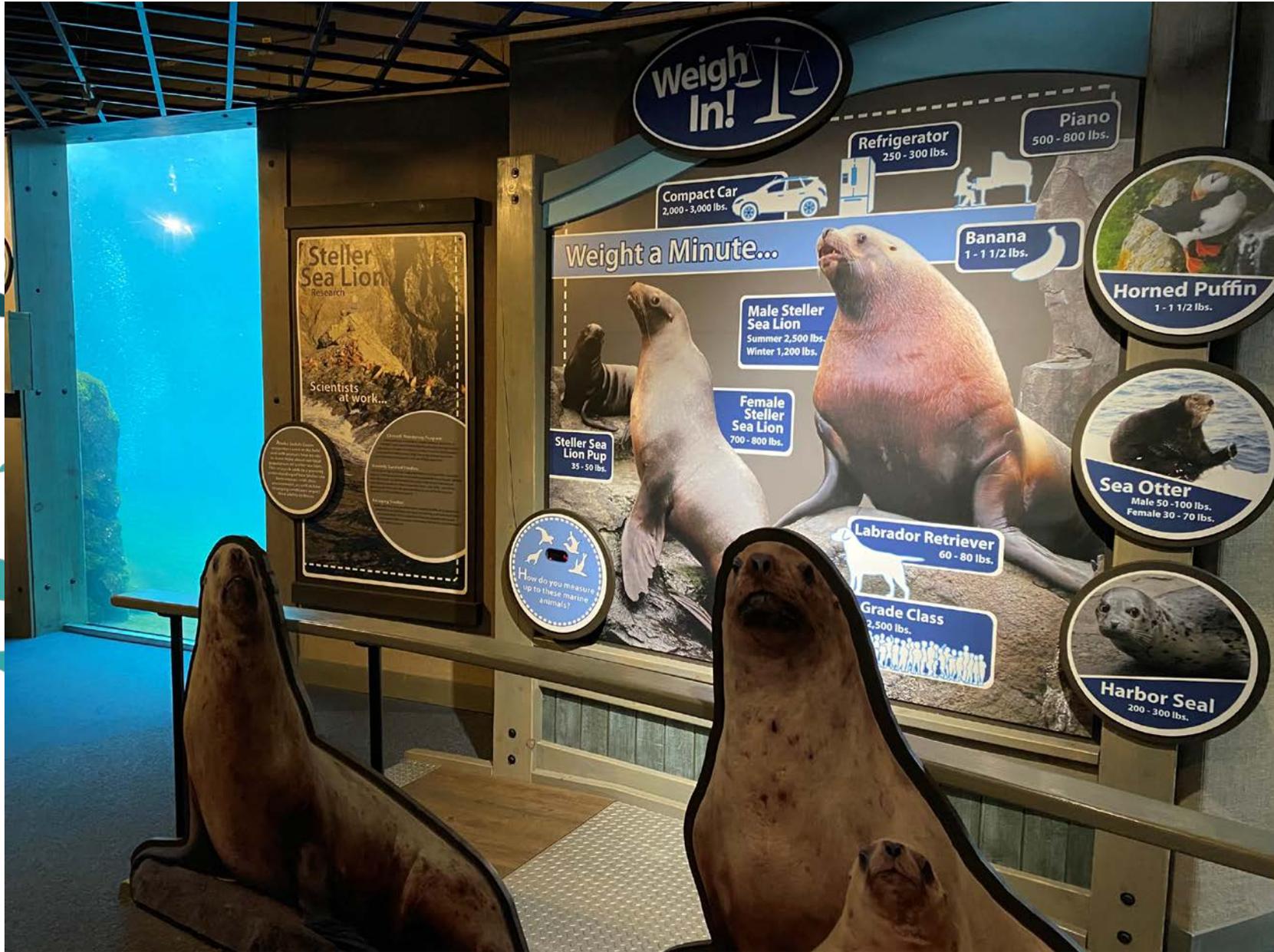
The pups are born as fish attached to the bottom of the case and are able to breathe through membranes, but the placental period is over.

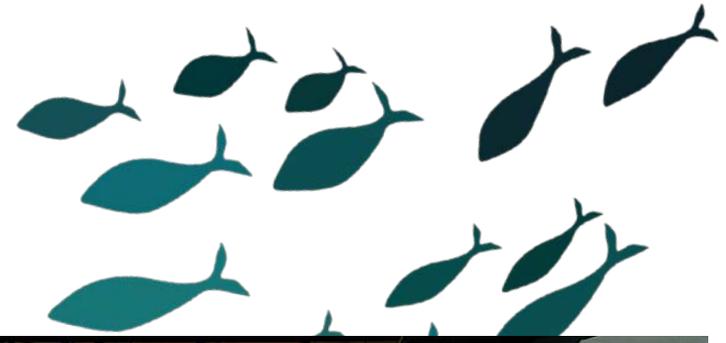


Catching Food

How do you Compare?

How many people does it take to raise the weight of a seal?





Into the Deep

Can you hold your breath long enough to follow a sea otter on its search for shellfish?

Marine mammals can hold their breath for extended amounts of time. Diving deep underwater allows them to find food and travel great distances.

Sea otters 5 minutes 150-300 feet

Polar Bear 1-3 minutes Unknown depth

Human 1-2 minutes
The world record for a human holding their breath underwater is 20 minutes and 21 seconds!

Walrus 30 minutes 300 feet

Orca 12 minutes 300 feet

Harbor Seals 30 minutes 650 feet

Humpback 15-30 minutes 500-700 feet
Deepest human dive 701 Feet!

Sea lions 12 minutes 900 feet

Elephant Seal 120 minutes 5,000 feet

Sperm whale 90 minutes 10,000 feet

Light Zone
Twilight Zone
Midnight Zone

The light spectrum is a wheel full of colors! How does the water and atmosphere affect it?

After 200 feet, air bubbles rise and escape your lungs as you ascend!

Below 1000 feet, the water becomes dark cold and heavy. Special adaptations are required to survive in the water pressure of the deep.

Which mammals you know swimmers?

Gully's Gulf Realty

Gully

Housing Wanted

Gully thinks she has housing available for all 5 animals looking for a new home.

Can you help her match these 5 animals to their ideal property?

For Sale
Small protected 1 bed 1 bath apt for sale.
Lots of loose rock available for the home owner.
This cozy dwelling has room for a few more.
No neighbors in close proximity, but lots of outdoor life nearby.

For Rent
Close to the ocean.
Full of great views.
Full of life.
Great location and great price.
Long term lease only.

For Lease
Temporary help services available for short term lease.
Multi level condos, all with sweeping ocean views and full algae coverage.
Close proximity to town, but all units are well grounded to withstand heavy storm action.
Brown and green units still available, but filling up quick!

For Sale
Partially developed lot provides recreational areas and amenities, as well as scenic views of gulf.
Owner must be willing to allow business for sale through this property.
Great stage area with some scenic view.
Must be seen to be appreciated.

For Rent
Newly renovated home for rent. Light airy feel with view to a blue gulf.
On corner, close to walk to public parks and nearby shopping.
Double door entry provides great view and security.
Long term lease only.

Fixer Upper!

Great Travellers!

Hook and Crutney!

Great Security!

Prowfish
"Looking for a cozy seafoam-level rental unit, preferably with full rock coverage and a hidden entrance. Must have live halibut and crab nearby."

Sunflower Sea Star
"Interested in a rocky coastal area. Large lot with room to roam, possibly the museum. Don't mind occasional company, but if they get too close they might get eaten."

Pacific Herring
"Seeking a spring, shallow, sandy beach. Prefer hundreds of conspecifics, with many spreading all day together."

China Rockfish
"Interested about looking to inhabit a rocky outcrop with numerous crevices, preferably no further than 500 feet from a rich feeding ground. Benthic and well adapted to the temperate climate."

Kelp Crab
"In search of a large south-facing spot. Must have good algae coverage and many hiding spots."











Rena Ashton
Education Director
Zoo Boise

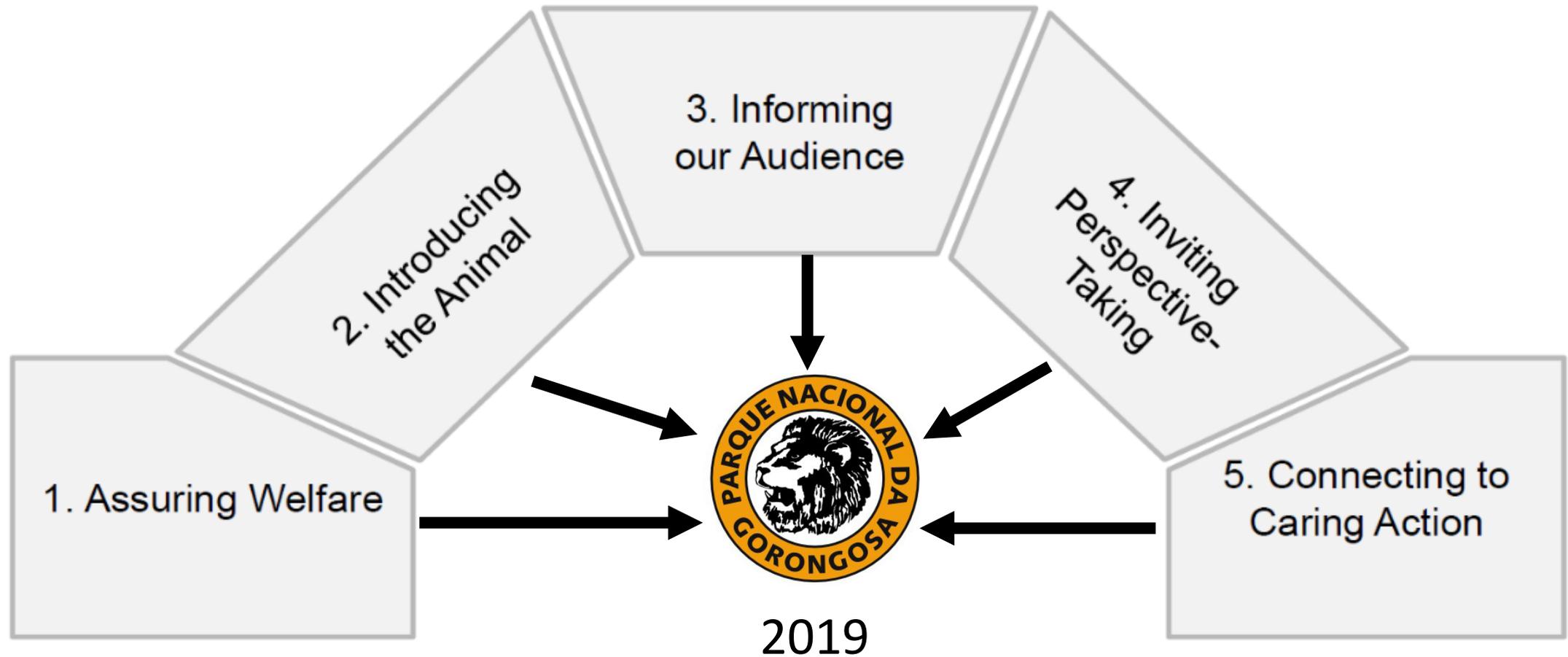
Fostering Empathy Best Practices: Did Application to Exhibit Design Impact Visitors'?

Zoo Boise connects our visitors with animals to inspire and involve our community in the conservation of wildlife world wide.

Zoo Boise turns
the **ACT** of visiting the Zoo into a
CONSERVATION ACTION.



Fostering Empathy - Bridge Model



Behavior-Based Exhibit Design

Interpretive Graphics

Interpretive Programs

African Plains (Before)



Patas M·o·n·k·e·y

Genus & Species: *Erythrocebus patas*
 Status: Common

Order: Primates
 Family: Cercopithecoidea

Patas Monkey Facts

Life Span: Maximum of 11 to 14 years.
 Males & females: Gestates for 6-7 months. Males are slightly larger than females. Weight is 15 to 20 pounds. Length is 19 to 28 inches not including tail which can be nearly as long as the body.
 Offspring: Usually 1 offspring per year. Born in December or January.
 Gestation: 7.5 - 8 months.
 Diet: In the wild, they are omnivorous, feeding mainly on grasses, fruits, seeds and insects but may also eat roots, earth, and bird eggs.
 Diet in the Zoo: Fruits, vegetables, insects, hard-boiled eggs, commercial pet-store biscuits and soft breads.
 Habitat & Range: Savanna and woodland habitats of central Africa.

Lifestyle and Adaptations

Patas monkeys are physically adapted for life on the ground and for speed. With long thin legs, they are probably the fastest primate on Earth, using all 4 limbs to move at speeds of up to 30 mph. In great savanna areas, avoiding predators. Their long tails are used for balance and can act as a brace when the monkey is descending from a tree.
 Patas monkeys live in social groups with 7 to 80 females and 1 adult male. The male acts as a sentinel and leads the group when a predator is near. When the females are young, males guard them in the group. The status of a female is determined by the support of other females in the group.

Conservation

This species is hunted as a part of the "bushmeat trade" which is the hunting of wild animals for food, medicine or traditional ritual uses. The bushmeat trade has had an devastating impact on the number of patas monkeys. However, in better-managed national parks and reserves, where a better protection and management plan is in place, the population in some countries is being replenished of these animals.

What's the difference?

Gorongosa Ntl. Park (After)



WHO'S WHO IN THE TROOP?

IN BABOON SOCIETY, EVERYONE KNOWS THEIR PLACE.

You can tell a baboon's role by its behavior.

Following social rules is important in baboon troops, which can number more than 100 individuals. Baboons display certain behaviors according to their rank within the troop. Upsetting the social order can result in fights or punishment.



Infants can get away with climbing on the dominant male, but only if he's in the right mood.



Young females may help care for their siblings or another female's infant.



Mothers carry their own infants for several months.



Dominant males usually sit alone, keeping a watchful eye on the troop.



Grooming helps cement friendships between two baboons. If the animals take turns grooming each other, they may be social equals. The dominant male is groomed by others but may not groom them in return.

To learn more about these animals and help identify them in the wild, go to www.WildCamGorongosa.org.

WE ❤️ BABOONS

SPECIAL FEATURES IN THIS HABITAT ENCOURAGE ACTIVITY AND SOCIAL LIFE.

At Zoo Boise, we give the baboons choices & variety.
 The exhibit's many surfaces, textures, rocks, soil and branches provide baboons with options for where they spend their time.

We make food-finding fun.
 The animal care team employs a variety of methods for distributing and hiding food to encourage baboons to forage. Food may be tossed about using scatter feeders or hidden in rock crevices requiring the baboons to use sticks to pry out food.



Digging is a natural activity for baboons, so we provided dirt for them.
 Baboons naturally hunt for bugs in the soil, and this exhibit creates a place for them to engage in that activity. Working together as a troop to find food builds bonds between the monkeys.

Project Method

Audience	Evaluation Method	Results
Adults	<u>Onsite Survey</u> Before/After <u>Exhibit Open</u> Entire 1.5 acre exhibit	In process!
Children	<u>Observation</u> Before/After <u>Exhibit Open</u> Specific similar exhibits	In process!