

Discovery Building Interp Binder



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Interpretive Cart Guidelines:

When staffing the Discovery Building interpretive station:

1. Find all of the biofacts that you will need and place them into a box for transportation (a list of all of the biofacts you need can be found in this binder).
2. Bring chairs (optional, are located in the CEF building) and the box down with you to the silver table that is permanently set up near one of the observation decks.
3. Place tablecloth on the table.
4. Group and place the Biofacts and laminated info sheets based on species.
5. **KEEP AN EYE ON BIOFACTS AT ALL TIMES.**
6. An adult must accompany small children at all times.
7. Follow the talking point outline in the binder.
8. If you have to leave, put everything away in the box and take it back to DC. Do not leave anything unattended.
9. **Reminder: Zooteens must always travel in pairs, unless stated otherwise!**
10. **At the end of the day**, put **EVERYTHING** back in the box and pack it back up to DC. (If you brought chairs, put them back in the CEF building and lock it)
11. Record each topic discussed during your shift in the binder.
12. Return biofacts and binder to the docent area where they were found.

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Biofacts for Discovery Building Interpretation:

<u>Biofacts:</u>	
Biofact:	Use:
Ocelot Pelt	Use to talk about camouflage.
Pelican Beak and Skull	Use to compare bird beaks and specialization.
Maribou Stork Beak and Skull	Use to compare bird beaks and specialization.

Biofacts Talking Points:

1. (Beside Hyacinth Macaws) Bird Beak Specialization

Use the different bird beaks and skulls to talk about how beaks are shaped based on what food that bird eats.

Ex. Macaws have to crack hard nuts and shells open so their beaks are very large and sturdy.

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Animal Talking Points:

Hyacinth Macaws:

Habitat:

1. Hyacinth Macaws prefer semi-open habitats and can usually be found in forests.
 - a. These forests have a dry season that prevents the growth of extensive, tall, closed-canopy tropical forest.
2. Macaws also live in a variety of habitats, including deciduous woodland, cerrado and palm groves, and the palm-Savannas of the Pantanal.

Physical Characteristics:

1. These macaws are the largest of the parrots.
2. It uses its massive, black-hooked beak as a third foot to grasp trees and facilitate climbing.
3. They have short, sturdy legs useful for hanging sideways and upside-down.

Behavior:

1. These social birds often gather in flocks of 10 to 30 individuals.
 - a. They emit harsh guttural calls when alarmed.
 - b. They fly in groups of two to eight to and from their feeding grounds.
2. They are most active from morning to mid-afternoon.
 - a. These flocks sleep in trees at night and in the morning, they may fly long distances to find food.
3. Hyacinth macaws are monogamous, usually remaining with one partner for their entire life.

Diet:

1. These birds eat nuts, fruits, seeds, insects and grains.
 - a. These birds play an important role in their ecosystem by dispersing seeds and nuts throughout their territory.
 - b. Macaws use their powerful beaks to crack the nuts and seeds.
 - i. They also have dry, scaly tongues with a bone inside them that act as an effective tool for tapping into fruits.

Longevity:

1. Hyacinth macaws can live up to 50 years in the wild.

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Francois' Langurs:

Habitat:

1. Francois' Langurs are found in Southeast Asia from southeastern China to central Laos and northern Vietnam.
2. They prefer moist forests or well-sheltered rocky areas, depending on the season.
 - a. These monkeys are mostly arboreal but will spend some time on the ground foraging and moving from tree to tree.

Physical Characteristics:

1. Francois' langurs are characterized by a long-pointed crest and fine black fur, except for a white band from the angle of the mouth across the cheeks to the ears.
2. These langurs lack cheek pouches like other monkeys.
 - a. They do have enlarged salivary glands and a two-chambered stomach with specialized bacteria to help break down leaves.
3. They are known for the inquisitive expression created by the prominent brow ridge, which resemble raised eyebrows.

Behavior:

1. Francois' langurs typically live in small family groups consisting of one adult male, several females and their offspring.
 - a. Females lead groups that usually include 12 individuals but can range from 4-27.
2. These monkeys move tree to tree foraging and eating leaves.
 - a. They also need long periods of rest between feedings are required for the lengthy digestive process.
3. A female delivers a single offspring after a six to seven-month gestational period.
 - a. The infant is often released to a related female for babysitting intervals around the third week of life while the mother forages for food.

Diet:

1. These langurs eat a diet made up largely of leaves, as well as fruit, flowers and cultivated crops.
 - a. At the zoo, the langurs are fed a diet of leaves, fruit and monkey chow.

Longevity:

1. This species has an average lifespan of 25 years.

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Red Pandas:

Habitat:

1. Red pandas live in high-altitude, temperate forests with bamboo understories in the Himalayas and other high mountains.
 - a. They range from northern Myanmar to the west Sichuan and Yunnan Provinces of China.

Physical Characteristics:

1. Red Pandas can easily be identified by their unique ruddy coat color.
 - a. This acts like camouflage within the canopy of fir trees where branches are covered with clumps of reddish-brown moss and white lichens.
2. They have large, round heads and short snouts with big, pointed ears.
 - a. Their faces are white with reddish-brown “tear” marks that extend from the eyes to the corner of the mouth.
 - i. These markings could have evolved to help keep the sun out of their eyes.

Behavior:

1. Red pandas scent-mark territories using anal glands and urine as well as scent glands located between their footpads.
2. These animals are skilled climbers, using trees for shelter to escape predators and to sunbathe in the winter.
 - a. Their ankles are extremely flexible, and the fibula and tibia are attached to allow the fibula to rotate about its axis.
 - i. These features make it possible for red pandas to adeptly climb headfirst down tree trunks.

Diet:

1. Bamboo constitutes about 95% of the red panda’s diet.
 - a. Red pandas feed selectively on the most nutritious leaf tips and tender shoots.
2. They may also forage for roots, succulent grasses, fruits, insects and grubs.

Longevity:

1. Red pandas may live as long as 23 years.
 - a. They show symptoms of age around 12 to 14 years.

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Pygmy Slow Loris:

Habitat:

1. The pygmy slow loris lives in Vietnam, eastern Cambodia, Laos, and the Yunnan province in the south of China.
2. These animals are arboreal and nocturnal.
 - a. They like to curl up in balls in hollowed-out trees, tree crevices, or branches.

Physical Characteristics:

1. As nocturnal hunters and foragers, these primates use their huge eyes to detect its next meal.
 - a. Their eyes also have a reflective layer of tissue behind the retina called the tapetum lucidum to enhance their night vision.
2. The pygmy slow loris has a short, dense, woolly coat that varies between light brownish to deep reddish brown, with a white chest and belly and light-colored outlines on its face.
 - a. Its tail is short to nonexistent.
 - b. Its dexterous hands and feet make climbing and hanging around in trees a breeze.

Behavior:

1. The loris produces a secretion from glands on the insides of its elbows.
 - a. When mixed with its saliva, it serves to venomize its bite.
2. A loris can hang still from a branch for hours.
 - a. They have extra vascular bundles in its arms and legs called retia mirabilia allowing blood to flow to its extremities.
3. These animals are largely solitary and nocturnal so they communicate with each other with calls and scent markings.

Diet:

1. The pygmy slow loris eats different types of plant and animal matter.
 - a. Fruits and gums make up more than half of the diet and insects and small prey items make up another 30 percent.

Longevity:

1. They can live to over 20 years in captivity, however the average lifespan of wild individuals is not well known.

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Clouded Leopard:

Habitat:

1. Clouded leopards live in Southeast Asia.
 - a. They mostly inhabit tropical rain forests, but also journey into grassland, scrubland, and wetlands.

Physical Characteristics:

1. They have a stocky build and are larger than small cat species, but smaller than the large cats.
2. The pupils of the clouded leopard's eyes are different from any other cat's pupils.
 - a. They never get fully round like a big cat's pupils do, yet they never shrink to vertical slits like a small cat's pupils do.
 - b. They stay in an oblong shape.
3. Their tail is the longest in relation to body size of any cat's tail, which gives the clouded leopard great balance when strolling along tree branches.

Behavior:

1. The clouded leopards live solitary lives, unless a mother is caring for cubs.
2. Although these leopards are known to share their habitat with tigers and common leopards, the clouded leopard seems to be more nocturnal and arboreal.
 - a. This is to avoid competition for food.
3. Clouded leopards can purr like small cats, but they also have a low moaning roar, a soft chuffle, a growl, a hiss, and meows as part of their calls.

Diet:

1. Despite their small size, clouded leopards can take down large hoofed animals.
2. They generally hunt on the ground and are thought to eat a variety of birds, squirrels, monkeys, and wild pigs.

Longevity:

1. The average lifespan of the clouded leopard is 12 to 15 years.
2. They may live up to 17 years in human care.

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Ocelot:

Habitat:

1. Ocelots range throughout humid rainforests of southwest Texas to Paraguay and northern Argentina.

Physical Characteristics:

1. An ocelot's fur is short haired and marked with both black spots and rosettes.
 - a. Their base color ranges from grayish to reddish.
 - b. Their stomachs tend to be lighter or white in color.
2. Their spots help break up their body outline and resemble the pattern that sunlight makes on the ground through the forest's canopy.

Behavior:

1. These predatory cats hunt during the day and are very secretive.
 - a. They keep to areas of dense underbrush.
2. A male's territory overlaps several adjacent female territories.
 - a. They use scent marks to mark the borders of their territories.
3. They climb down trees headfirst to keep their eyes on the surrounding area.

Diet:

1. Ocelots prey upon small to medium-sized mammals, birds, amphibians and reptiles.

Longevity:

1. The median life expectancy for ocelots is 15.4 years.

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Hellbenders:

Habitat:

1. Hellbenders can be found in the Appalachian and Ozark Mountains of eastern and central United States.

Physical Characteristics:

1. Hellbenders are built for life in the water.

a. Their slippery, flattened body moves easily through water and their well-developed legs and oar-like tail help them walk against the current with little resistance.

2. The amphibians have natural camouflage.

a. Their skin is brown with black splotches, perfect for blending in with their surroundings and avoiding potential predators.

Behavior:

1. Hellbenders hunt at night, so they depend on smell and touch to find their prey.

2. Except for the breeding season, hellbenders are solitary creatures living alone.

a. In the fall, a male hellbender sets up a nesting site under a large stone and waits for a willing female to enter.

i. After a brief courtship, the female deposits a clutch of eggs: between 200 and 500!

ii. After the male fertilizes the eggs, the female leaves the nest for the male to defend it for the next 45 to 60 days until the eggs hatch into larvae.

Diet:

1. Crayfish is the food of choice for hellbenders.

a. This makes up 90% of their diet.

2. Hellbenders also feed on fish and other small aquatic animals.

Longevity:

1. Hellbender's lifespan is uncertain.

a. Captive individuals have lived up to 29 years.

b. One study suggests hellbenders may live 50 years or more in the wild.

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Conservation Highlights:

Hellbender Conservation Efforts:

1. Hellbenders are habitat specialists with little tolerance of environmental change.
 - a. Their principal threat is degradation of habitat due to activities causing sedimentation, thermal pollution and oxygen loss.
 - b. Over-collecting in the 1990s as well as injuries and death when hooked by anglers have also decimated local populations.
2. At Mesker Park Zoo & Botanic Garden visitors can see young larvae hellbenders being reared for wild release in the nearby Blue River.
 - a. A number of zoos across the country assist with “head starting” Eastern hellbender larvae which are reared from wild-collected eggs and then released once they reach a size less likely to succumb to predators.
 - b. Indiana has only recently begun to collect eggs and rear larvae in an attempt to save this endangered species, and Mesker Park Zoo & Botanic Garden offers a very unique opportunity for visitors to view what it takes to make this possible.



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Facts about Our Individuals:

Hyacinth Macaws:

Name	Gender	Defining Features
N/A	Male	Longer tail feathers.
N/A	Female	Shorter tail feathers.

Francois's Langurs:

Name	Gender	Defining Features
Badu	Male	Big male.
Kiki	Female	Has a kink in her tail.
Sai	Female	Has small white/grey dot on cheek below her eye.
Liang	Female	

Red Pandas:

Name	Gender	Defining Features
Tenzing	Male	Darker coloring, red between his eyes.
Celeste	Female	Red color between her eyes.
Carys	Female	More white on her face (mother to Aurora and Xena)
Aurora	Female	
Xena	Female	

Pygmy Slow Loris:

Name	Gender	Defining Features
Skeeter	Male	
Junebug	Female	

Clouded Leopard:

Name	Gender	Defining Features
Miri	Female	Only one on exhibit.

Ocelot:

Name	Gender	Defining Features
Frisco	Male	Only one on exhibit.

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Animal ID Photos:

Clouded Leopard (Miri):



Red Panda (Carys):



Hellbender:



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Resources:

Hyacinth Macaw: <https://www.zoonewengland.org/stone-zoo/our-animals/birds/hyacinth-macaw/>

Francois's Langur: <http://www.sfzoo.org/animals/mammals/francoislangur.htm>

Red Pandas: <https://nationalzoo.si.edu/animals/red-panda>

Pygmy Slow Loris: <https://animals.sandiegozoo.org/animals/pygmy-slow-loris>

Clouded Leopard: <https://animals.sandiegozoo.org/animals/clouded-leopard>

Ocelot: <https://www.zoonewengland.org/franklin-park-zoo/our-animals/mammals/big-cats/ocelot/>

Hellbenders:
<https://www.stlzoo.org/animals/abouttheanimals/amphibians/salamandersandnewts/hellbender>