African Journey Scavenger Hunt Answers

1. Eeeww! When threatened, I vomit before flying away. Who am I? **Lappet-faced vulture.** Lappet-faced and other vultures have acidic digestive juices that help digest bones, cartilage and other body parts of the carrion on which they feed. These caustic fluids strongly deter would-be predators. Being bald helps lappet-faced vultures clean themselves after feeding on messy carcasses. Also called carrion vultures, lappet-faced vultures have ear-like flaps, called lappets, on the each side of their head. The huge, hatchet-like beak allows this bird to easily tear into the hides of large carcasses. Unlike some species of vultures, lappet-faced vultures do not have a strong sense of smell. Therefore, they rely on vision to locate carcasses. The circling behavior of other vultures often clues them into the location of a kill. Lappet-faced vultures have also been known to raid flamingo colonies to eat the eggs and young. Sometimes tagged as sinister or meddlesome, vultures and other scavengers actually act as valuable clean-up crews.

2. I'm an antelope that lives in marshes. Who am I and how do you think I hide from predators? **Sitatunga.** Sitatungas submerge themselves in water to avoid detection. Because they are poor runners (unlike most other antelope), they prefer to take to the water when threatened. Their hooves splay wide to make it easier to walk through mud. The hornless sitatungas in our exhibit are all female. The zoo has five females on exhibit: Joanie, Akili, Risa, Mama, Pandora, and a young male born to Joanie named Jet. A male remains off-exhibit so that the Mammal Department can control which females are introduced to him for breeding. The Zoo has been working with sitatungas for over 30 years.

3. I'm a rodent with “modified hair.” Who am I? **African crested porcupine.** Large chisel-like front teeth and flat, grinding back teeth identify the African crested porcupine as a rodent. Rodents – members of the mammalian order Rodentia – use their front teeth to gnaw on hard (and soft) items like seeds, wood, leaves, bones and just about anything else. Rodents must gnaw because their teeth never stop growing. By gnawing, they “file” their teeth regularly just as we file our fingernails. Our porcupine, Kayin (a male born in 2005), is fed rodent chow, apples, yams, bananas, kale and other produce. The hairs of the African crested porcupine, like those of the American porcupine native to Maryland, are stiff and sharply pointed. Being primarily nocturnal (active at night), African Crested porcupines have white marks encircling their quills that alert potential predators to back off or suffer the consequences - a muzzle full of quills. Contrary to popular belief, porcupines cannot “shoot” their quills.

4. Surprisingly, I am not really white. Who am I and how do you explain my name? **White rhinoceros.** The word “white” used to describe this species of rhinoceros actually derives from the Dutch word *veid,* meaning “wide.” A white rhinoceros’ mouth is particularly wide, allowing it to graze easily on grasses. The related black rhino has a narrower mouth; it prefers to browse leaves from woody bushes and trees. White (and black!) rhinoceroses are actually gray, although this can be difficult to see because most rhinos – ours included – tend to wear a protective coating of mud to ward off insects and prevent overheating! Large shoulder muscles allow white rhinos to manipulate their enormously heavy heads. Daisy Mae, our female, was born in the wild around 1968 and has much larger horns than our considerably younger male Stubby, who was born in Knoxville in 1993.

5. We're big birds, too heavy, in fact, to move like most other birds, but we hide ourselves well when we need to. Who are we and why do you think hiding is important to us? **Ostriches.** Both male and female ostriches are “cryptically colored,” or camouflaged. Male ostriches do not have the flashy, colorful plumage that many male birds rely upon to attract mates. Ostriches nest on the ground. Male ostriches are black, which allows them to sit unnoticed on the nest at night. Females are gray, which allows them to sit unnoticed on the nest by day. Several female ostriches may lay eggs in one nest but only the dominant female and the male care for them. The dominant female’s eggs occupy the center of the nest.
The Maryland Zoo in Baltimore
where they are better protected from predators and environmental threats. Ostriches grow 7 to 8 feet tall and can weigh as much as 345 pounds. Their eyes are as large as tennis balls. Our female ostriches are Lavern, born in 1998, and Mathilda, born in 2005.

6. We’re slow but we live a LOOOONG time (from 80 to 100 years)! We love vegetables, we love our wooden cave, and we’re not out on display during the winter because we are cold-blooded. Who are we? African spur-thigh tortoises. Sweet Pea (female) was born in 1970 and tips the scales at nearly 200 pounds. Buttercup is the younger and smaller female. All tortoises are essentially land-dwelling turtles. Their built-in armor protects them remarkably well from predators. When a tortoise is attacked, it pulls its head inside its shell and shields the opening with its thickly scaled legs. Most tortoises, including these, have exceptionally large, thick legs that help them support their bulk. African spur-thigh tortoises – the third largest species of tortoise in the world – dig burrows that can measure 100 feet long and 40 feet deep. They spend approximately 80% of their time inside their burrows. These tortoises are very strong and can negotiate most obstacles in their path by either moving them aside or climbing over them.

7. We are next-door neighbors at the zoo and we sport spots, long tails, short ears, and long, sharp canine teeth. If you look closely, you’ll notice that we’re not as similar as we seem at first glance. Who are we and how many differences can you spot? (Construct a Venn diagram) Leopard and cheetah. A leopard’s spots are actually rosettes (black circles with light centers) while a cheetah’s are solid. Cheetahs also have “tear streak” markings on their faces that are unique among the larger size cats. Long and lanky like greyhounds cheetahs are built for speed. Leopards are stout and thickly muscled, which allows them to spring suddenly and drag even large, heavy prey into the trees. Leopards are nocturnal hunters; cheetahs hunt mainly during the day. Leopards have adapted to a number of forested habitats while cheetahs specialize exclusively in hunting in open grasslands and savanna. In addition, the leopards are considered true big cats while cheetahs are not; big cats can roar. Our male leopard (Hobbes) was born in 1994. He was rescued as a one-day-old orphaned cub and raised by South African park rangers. He has been with us since 1996. Amari (Swahili for “princess”), our smaller leopard, also was orphaned when poachers killed her mother. She came here at age two in 1995.

8. My speed distinguishes me from other cats in more ways than one. I can’t retract my claws, for example. Who am I? Cheetah. Cheetahs move like greased lightning by running on their toes and stretching their extremely flexible spines in order to extend the length of each stride (up to 20 feet). This lets them cover short distances faster than any other land mammal. (They’ve been clocked up to 70 mph!) When sprinting, cheetahs get extra traction and stability from their permanently extended claws. They often catch prey successfully but – given their litheness – have trouble protecting it from stronger, more aggressive predators like lions and hyenas. Alix was born in 2000 and Rafiki was born in 1999.

9. My eyes are on the sides of my head, I have a very formidable beak and when I sit down, my legs appear to be bent backwards at the knees. Who am I? Hint: If I’m female, my eyes are yellow. If I’m male, my eyes are brown. (Note: We are inside for the winter) Saddle-billed stork. Like many creatures that are preyed upon, saddle-billed storks have eyes on the sides of their heads so that they can look in almost any direction without turning. This wide field of view lets them spot predators faster. When the stork sits down, its legs actually bend in the same direction as ours. However, the knob in the middle of a bird’s leg (which looks like its knee) is actually the beginning of its foot (i.e. its ankle). This gives the appearance of the stork’s (or any other bird’s) leg bending the wrong way.

10. Like my barnyard relatives, I like to wallow in mud. When I run, my tail sticks straight up. Who am I? Warthog. Warthogs – like elephants, rhinos, and domesticated pigs – wallow in mud to keep cool and to protect against biting insects. Warthogs hear and smell exceptionally well, and use their oddly shaped snouts like shovels to forage for food and dig dens (although many in the wild prefer to take over Aardvark
When sparring during breeding season, male warthogs use their tusks to deliver blows to the sides of the head and their snouts to upend rivals. The padded warts on the side of the head help protect against serious injury during such bouts. Our male, Frazier, born in 1998, seems to like it when visitors talk softly to him. Kumari, our female, has smaller tusks, no warts, and was born in 2005.

11. In our families, females do most of the work while males seem to do nothing but lie around. Who are we? **African lions.** Lions live in family groups called prides that may include up to 30 cats. All females, or lionesses, in a pride are related and they do the lion’s share of the hunting. Male lions are very capable hunters, but mature males in prides tend to focus on defending territory rather than catching prey. All males eventually leave the pride in which they were born and try to join another pride by overcoming rivals. Some succeed; others spend the better part of their lives roaming as solitary hunters or in bachelor coalitions. Weighing as much as 500 pounds, lions are the largest of Africa’s carnivores. Our lioness, Cuma, the newest member of our pride, was born in 1996. Our lion, Tsavo, was born in 1992 and came here in 2000.

12. I look as if I have many more bones in my neck than you do, but actually, like you, I only have seven. **Who am I? Giraffe.** Being long-necked has its advantages. Giraffes can reach succulent leaves high in treetops while also keeping a watchful eye out for predators. (They have excellent eyesight.) Bull giraffes sometimes grab leaves 19 feet off the ground, gaining extra reach from their flexible, foot-and-a-half-long tongues! You would think that a giraffe’s blood would rush straight to its head when it leans over to drink, but a remarkably adapted network of small blood vessels known as rete mirablis prevents this from happening. Acting much like a wetland absorbing the floodwaters of a river, these blood vessels intercept excess blood heading to the brain. Giraffes also rely upon their massive hearts (weighing over 20 pounds) to pump blood upwards of nine feet to their brains. The zoo currently has five reticulated giraffes: Gretchen is the lightest in color of our four giraffes. Mary, and her two daughters, Zoe and Angel, sport distinctive butterfly-shaped chest patterns. And our newest addition is a male named Cesar, born in 2006 from Jacksonville.

13. My tongue is one-foot long and I vaguely resemble my 3,000-pound closest living relative. (Hint! My relatives and I live in the same house in the zoo) Who am I? **Okapi.** The mysterious okapi was not discovered until the early 1900’s, making it one of the last large mammals to be documented by science. Prior to its discovery, rumors circulated of a woodland form of zebra, no doubt based on sightings of the okapi with its striped hind legs. The stripes help camouflage okapis (as is also true of zebras) and help young okapis identify their mothers. The okapi is actually a relatively diminutive cousin of the giraffe. Like the giraffe, it has velvet-covered, initially cartilaginous horns that turn to bone and fuse with the skull over time. Okapis walk similarly to giraffes, splay their legs in similar fashion when leaning over, and use their long tongues to gather food, like giraffes. Karen, our female, is on loan from the Bronx Zoo and, like all female okapis, has no horns. She was born in 2004. Hiari, our male okapi, was born in 1996.

14. Some call us “living bulldozers.” Before 1990, more than 100,000 of us each year were killed for a particular body part. Who are we? **African elephants.** Although poachers continue to kill elephants for their ivory tusks, international trade treaties including the Convention on International Trade of Endangered Species (CITES) now make the slaughter illegal and include other provisions to protect remaining elephants in the wild. Both of The Zoo’s elephants – Dolly (who was born in 1976 and can be identified by the sharp dip in her back) and Anna (who is one year older) – were born in the wild. Extremely intelligent and powerful, elephants can be quite dangerous, which is why The Zoo’s elephant keepers spend so much time training Dolly and Anna and earning their trust. For example, Dolly and Anna agree to undergo routine health checks and minor treatments while awake which is safer for them. African elephants have exceptionally large ears; all the better to hear and radiate heat with. Elephants use their trunks to smell, spray...
The Maryland Zoo in Baltimore

their bodies with water, joust, snorkel, and gather food! (An elephant can pick up an object as thin as a dime with its trunk.) In the wild, elephants profoundly affect the ecology of their environment. As powerful as they are, they easily trample and tear down trees and brush. Grasses and other forbs then take root, providing new forage for grazing animals such as wildebeest and gazelles. Elephants are considered a “keystone species;” if they disappeared from a given area, remaining plant and animal life would be altered drastically.

15. Why don’t polar bears eat penguins? Because they don’t live anywhere near each other! Penguins are found only in the Southern Hemisphere (including but not restricted to Antarctica) while polar bears live exclusively in the Arctic. Contrary to popular belief, not all penguins live in cold climates. Black-footed penguins like those in our Rock Island exhibit are native to the South African coast where the climate is warm. Because they bray like donkeys, black-footed penguins are also called jackass penguins. They lay one to two eggs at a time and typically nest on small coastal islands free of ground-dwelling predators. Recently, some colonies have also established themselves on the South African mainland. Wild black-footed penguins used to nest most often in holes dug into piles of guano (bird droppings), but today most of the guano piles have been removed, to be used as fertilizer. Now it’s more common to find black-footed penguins nesting under rocks, in sand burrows or sometimes in the open. Today, only about 120,000 black-footed penguins remain in the wild. Several factors are to blame for the alarming decline in their numbers, including the harvesting of guano, which has reduced nesting sites; oil spills that have caused periodic penguin exterminations; and egg poaching by humans. In an effort to insure the survival of this endangered species, The Maryland Zoo participates in the Black-Footed Penguin Species Survival Plan. Among other endeavors, participating zoos engage in captive breeding with an eye toward reintroducing healthy, genetically diverse offspring to the wild. Captive breeding is, in a sense, a form of insurance against ultimate extinction.

16. Watch the chimpanzees in the Chimpanzee Forest closely for a few minutes and observe some of their behaviors. Describe a particular behavior that you’ve observed. Our chimpanzees exhibit many interesting behaviors. Those that involve eating, sleeping, grooming and drinking are known as maintenance behaviors because they serve to keep the animals healthy. One particular feeding behavior that stands out in chimps is the use of tools in securing food. When the keepers feed the chimps, they don’t just put food bowls in front of them. They present food in ways that encourage the chimps to employ natural curiosity, intelligence and foraging skills to find and get their food first. Enrichment techniques such as these help to keep animals from getting bored. Chimpanzees are very good puzzle solvers and enjoy the challenge. Chimpanzees are social animals. They seem to enjoy interacting with each other and with Zoo visitors. Social behaviors include communication through vocalizations, gestures and facial expressions; fighting; mutual grooming; and dominance/threat or submissive/appeasing actions. As in many other species of mammals, the different sounds, movements and facial expressions that chimpanzees make have different meanings. For instance, a chimpanzee making a barking sound is angry while one smacking its lips is expressing enjoyment. Like wolves, chimpanzees exist in hierarchical groups with dominant and subdominant individuals. Joice, born in 1972, is the dominant female. Dominant animals intervene to resolve disagreements between lower-ranking individuals. The troop also includes Rustie (born in 1985), her daughter Raven (born here in 1995), Renee (born in 1992), Carole (born in 1988), Charley, our lone male, (born in 1980) and Bunny (born in 1990). Our newest additions to the chimpanzee group are Rustie’s daughter Rozi (born in May, 2005), Asali (born in April, 2005) and Joice’s daughter Jambo (born in January 2006). Asali came from the Sedgewick County Zoo and was initially raised by Maryland Zoo keepers and volunteers with Rozi. They have since been introduced and accepted by the other chimpanzees in our group. Chimpanzees have been known to live up to 55 years in captivity.

17. What species of monkeys live in the Chimpanzee Forest? Black and white colobus monkeys. The Zoo has three colobus monkeys: Bisi (born in 1992), Keri (born in 1997) and Hera (born in 1991). They share their enclosure with rock hyraxes and, occasionally a Diana monkey named Digit. The scientific name given
The Maryland Zoo in Baltimore

to black-and-white colobus monkeys is *Colobus guerza* (Latin for “mutilated thumb”) because of their exceptionally small thumbs. They are native to equatorial Africa and feed on leaves, flowers and fruits which is unusual among primates. Like cows and other ruminants, they have chambered stomachs that allow them to digest and detoxify coarse plant materials. Black-and-white *Colobus* monkeys live up to 30 years and females give birth to single offspring. Because wild populations are at risk, zoo populations fall under the supervision of a Species Survival Plan (See Penguin entry for an explanation of Species Survival Plan).

**Diana monkeys** (*Cercopithecus Diana*) belong to a group of primates called Old World Monkeys. They are arboreal, or tree dwelling monkeys living in large family groups (around 30 individuals). They travel among the upper level of the forests in western Africa and forage for fruit, the primary component of their diet. Diana monkeys can live up to 19 years and females give birth to a single offspring. They are seriously threatened by hunting and forest destruction.

We also have three **sifakas**: Brutus (born in 2001), Leo (born in 2002), and Crispus (born in 2003). They occupy the enclosure on the far side of the chimpanzee building next to the crocodiles. Sifakas are a type of lemur which belongs to a primitive group of primates called prosimians. Unlike monkeys or apes, lemurs have fox-like faces with an elongated muzzle (nose). Because they are unable to pluck parasites off their fur with their fingers like monkeys and apes can, lemurs use specially designed “comb teeth” on their bottom jaw to clean their coats and the fur of their companions. They also sport a grooming claw on their hind feet. Like monkeys and apes, they do have opposable thumbs and big toes that help them effectively climb trees. Lemurs only live on the island of Madagascar. Sifakas are unique from others lemurs in the way they move; they leap with long strides that can reach a distance of 32 ft (10 m) in trees. They begin their leap horizontally and the finish the leap and land upright. On the ground, they can run upright or hop with their arms at head height. Sifakas live in small family groups of around four to six members, primarily eat fruit, and are diurnal (active during the day). Wild coquerel’s sifakas experience low nighttime temperatures. As a result they will sleep huddled together. When the sun comes up, they climb to higher limbs and hold their arms up to collect as much heat as possible. Because of this sunbathing behavior, natives consider them sacred; the sun gives them great healing powers. Single young are born in June to August and are cared for by the mothers for six to seven months.

18. **How do Alligators differ from Crocodiles? Look closely and you’ll see. Create a T-chart and fill it in with as many details as possible.** Alligators have broader snouts than crocodiles. Also, when a crocodile closes its mouth, upper and lower teeth remain exposed, whereas when an alligator closes its mouth, only its upper teeth remain visible. Crocodiles live on every continent except Antarctica; alligators live only in Asia and North America. (Caimans, which are most closely related to alligators, are found in South America.) Both of our slender-snouted crocodiles – Captain Crook (a male named for his crooked snout) and Tick Tock (a female) – were born in 1978. This species of crocodile can grow 12 feet long and weigh up to 400 pounds. Tick Tock has exhibited nesting behavior in the past and hopefully will breed successfully in the future. Like alligators, female crocodiles protect their nests while eggs are developing. They dig the young out of the nest as they are hatching.