



Field Trip Guide: African Exploration

Welcome:

This trip will bring you on an African adventure at the Jackson Zoo. As a guide, you will use questioning techniques to help students learn about what it takes to be a primate and how they are adapted to live in the wild.

Get ready to swing in to motion, you are about to have a great adventure at the Jackson Zoo!



Objectives:

1. Students will explain the differences between monkeys and apes.
2. Students will observe primates and identify adaptations they have.
3. Students will identify habitats where primates live and explain how they are able to live there.

Vocabulary

- **Adaptation**- anything a living thing (plant or animal) has on their body (fur, claws, fingers, etc) or a behavior they do (swim, wiggle, dance, fly, etc) that helps it survive.
- **Arboreal**-an animal that spends most of its life living in the trees.
- **Opposable Thumb** – A thumb that is able to move all around and can grasp things.

How to use this guide:

- Go to the exhibits indicated by each stop.
- Ask the students the questions written for you and wait for their responses.
- Use the answers listed below to help answer the student's questions.
Make sure you don't just give the answers. See if the students can answer the question first.
- Some of the stops have optional activities. Do these if you have time to enhance your students understanding of the knowledge presented.
- As bonus information, share all or some of the Fast Fact Bonuses with your students.

Stop 1: Quiet Area Near the African Forest Entrance (Near Spot G on your zoo map)

- **Location Objective**— Students will consider how animals are grouped together and name adaptations primates have.



- **Questions to Ask**

1. What are some ways animals are grouped together?
2. Apes and monkeys are grouped as primates. How can you tell the difference between a primate and other animal groups?
3. What is an adaptation?

- **Answers to the Questions**

1. Answers will vary: Ex. mammals, reptiles, big, small, live on land, live in water, etc.
2. How to tell if the animal is a primate:
 - Primates have eyes on the front of their faces
 - Have fingers that can grasp and hold things
 - Have an opposable thumb (it works like our thumb). It can move all around and pick up things.
 - They can make lots of different faces.
3. Adaptations are anything a living thing (plant or animal) has on their body (fur, claws, fingers, etc) or a behavior they do (swim, wiggle, dance, fly, etc) that helps it survive.

- **Optional Adaptations Activity**

Ask each student to hold up his/her hand and touch each finger with his/her thumb. Then ask each kid to twirl their thumb around. This is an opposable thumb. Compare it to their big toe. Can they touch their other toes with their big one? We don't have opposable toes.

Stop 2: Chimpanzee (#24 on your zoo map)

- **Location Objective** –Students will describe the difference between a monkey and an ape and how chimpanzees are adapted to live in their habitat.
- **Questions to Ask**
 1. What are some things that make an ape, an ape?
 2. What are some things that make a monkey, a monkey?
 3. Is the chimpanzee a monkey or an ape?
 4. Chimpanzees have many adaptations to help them survive in the rainforest. Observe the chimpanzees and find 2 things the animal has or does that would help it live in the forest.
- **Answers to the Questions**
 1. Apes do not have tails.
 2. Monkeys typically have tails.
 3. Ape. It does not have a tail
 4. Answers will vary. Ex: hair to keep bugs off, arms for climbing trees, move fast, use facial expressions to communicate, etc
- **Optional Adaptation Activity** – Ask the kids to try to knuckle walk like a chimp. They will find it difficult because human arms are too short and our legs are too long.
- **Fast Fact Bonus:**
 - 🐒 DNA studies show that Chimpanzees are 98.4% related to humans.
 - 🐒 They live in large family groups called **troops**.
 - 🐒 They make nests at night to sleep in high up in the trees.
 - 🐒 Chimpanzees spend their day foraging for food – plants, fruits, insects, and sometimes meat.
 - 🐒 Chimpanzees use tools:
 - **Small sticks**—used to poke into termite holes. The termites crawl up the stick and when the chimp pulls the stick out, it has just created a delicious bugs-on-a-stick treat.
 - **Leaves**—used to help absorb water like a sponge. Chimps will select a certain leaf, chew it up, then dunk it in water. This creates a refreshing gulp of water when needed.
 - **Big sticks and rocks**—used as weapons against approaching danger.
 - 🐒 Chimps are endangered because of habitat loss and over hunting.
 - 🐒 Chimpanzees are not good swimmers and don't like to be in water.
 - 🐒 Chimpanzees are seven times stronger than a man.

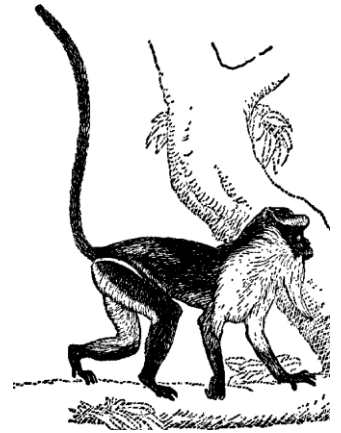


Stop 3: Diana Guenons (# 26 on your zoo map)

- **Location Objective** –Students will observe a primate to determine what type of habitat it lives in and how it is adapted to live there.

- **Questions to Ask**

1. Are these animals monkeys or apes? How do you know?
2. Where are these monkeys spending most of their time?
3. Why do you think they are spending their time there?
4. What adaptations do these monkeys have to help them be in that location inside their enclosure?
5. Do you think you could hang out in that area as long as a Diana's monkey? Why do you think that?



- **Answers to the Questions**

1. Monkeys. They have a tail
2. Answers will vary. If the students were to do multiple observations they would find these monkeys spend most of their time up high.
3. Answers will vary. If they are up high it is because these animals are adapted to live high up in the trees.
4. Answers will vary. Ex: tails for balance, hands for grasping branches, eyes in the front of their face to see the distance to the next tree branch, etc.
5. Answers will vary.

- **Bonus Fast Facts:**

- ☒ Diana Monkeys have a “sneeze call” they use as a warning call.
- ☒ Diana Monkeys are a newly discovered monkey.
- ☒ They live in places where few humans have traveled in the African rainforest.
- ☒ They live high in the canopy of the forest (top of the forest), where humans have a hard time seeing them.
- ☒ Diana Monkeys live in large groups called **Troops**. They may even live with other species of monkeys.
- ☒ Diana monkeys, like most primates groom each other to pick bugs and other items off each other's fur. This behavior is a way to build connections within the troop. We humans do it too. We give each other backrubs and brush each other's hair.
- ☒ Diana monkeys have large cheek pouches that hold food while on the run. These pouches can hold as much food as their stomachs can.

Stop 4: Colobus Monkeys (# 25 on your zoo map)

- **Location Objective** – Students will discuss ways an animal’s insides can help it survive in its habitat.

- **Questions to Ask**

1. How do your insides help you live?
2. Do you think all animals insides look the same as ours?
3. What type of food does this monkey eat?
4. Why don’t all animal’s stomachs look like ours?



- **Answers to the Questions**

1. Answers will vary. Ex: our heart pumps our blood, are lungs help us get air, etc
2. Answers will vary.
3. Colobus monkeys eat mostly leaves. Leaves are hard to digest so it has a stomach with many chambers that help breakdown and digest the food.
4. Animals eat different kinds of food and stomachs are shaped differently to help digest the food the animal eats.

- **Bonus Fast Facts**

- ☒ Colobus monkeys use branches as trampolines, jumping up and down on them to get liftoff for leaps of up to 50 feet. They leap up and then drop downward, falling with outstretched arms and legs to grab the next branch.
- ☒ Their long hair and tails are believed to act as a parachute during these long leaps.
- ☒ Colobus monkeys burp as a polite social gesture. All the leaves fermenting in their chambered stomach creates gas which makes these guys excellent burpers.

Stop 5: Golden bellied Mangabey (Spot 27 on your Zoo map)

- (Pronounced Man-ga-bee)
- **Location Objective** – Students will discuss and practice the importance of non-verbal communication.

- **Questions to Ask**

1. How can you communicate to somebody when you can't use any words or sound?
2. How do mangabeys and other primates communicate without using sound or words?
3. When living in the rainforest, how can it be beneficial to communicate without sounds or words?
4. Why would it be helpful for their facial markings to be white?



- **Answers to the Questions:**

1. Body language.
2. They make many different faces or flick their tails to communicate when they don't want to make a sound.
3. If there is danger close by, it might be better to be quiet than to be loud. Using silent messages they can communicate warnings to members in their troop.

- **Optional Activity** – Have the students pick 2 facial expressions and see if their partner can guess what they are communicating.

- **Fast Fact Bonus:**

- ☒ In some areas of the forest, the ground is swampy, but it's not a problem for the mangabeys. Webbing between their fingers and toes helps these amazing monkeys to swim!
- ☒ Mangabeys can be very noisy! A special throat sac gives them booming voices. The sac is larger in the adult male—he can make shrieking alarm calls to alert others to danger, and he barks, twitters, and grunts to let other mangabey troops in the area know where his troop is so they don't accidentally intrude. The adult females often join in with a loud chorus!
- ☒ Golden bellied mangabeys have white eye lids which they also use to communicate with each other. These white eyelids can be seen while in then dense rainforest.