



Field Trip Guide: Meat Mississippi's Predators

Welcome:

This trip will focus on both the Zoo's fiercest and most timid animals. As a guide, you will use questioning techniques to help students learn about adaptations predator animals have to help them catch their food.

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



Objectives:

- Students will be able to define and properly use the words:
 - **Predator**-An animal that eats another animal for survival.
 - **Prey**-An animal that is eaten by a predator.
 - **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.
- Students will name predators and recognize that they come in different shapes and sizes.
- Students will be able to give examples of adaptations animals have.
- Students will demonstrate respect for animals as they explore the zoo.

How to use this guide:

- Go to the exhibit indicated by the location above each section.
- Ask the students the indicated questions 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.**
- As bonus information, share all or some of the Fast Fact Bonuses with your students.

Stop 1: Near Theater or Giraffes

- **Location Objective** – Students will learn and use the words predator, prey and adaptation.

- **Questions to Ask the Students**

1. What does the word “predator” mean? Give an example of a predator animal.
2. Can you tell me what predator animals have on their bodies that help them hunt for food?
3. What does the word “prey” mean? Give an example of a prey animal.
4. Can you tell me what predator animals have on their bodies to help them survive?
5. What is an adaptation?

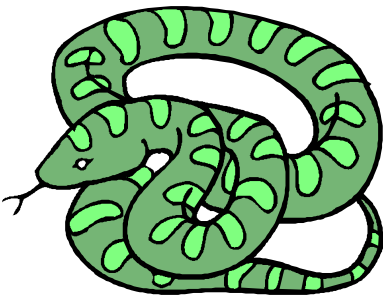


- **Answers to the Questions**

1. An animal that eats another animal for survival.
2. Answers will vary: ex, fangs, fur, eyes, etc. All of these are adaptations.
3. An animal that is eaten by a predator.
4. Answers will vary: teeth, camouflage, eyes, etc. All of these are adaptations.
5. An adaptation is anything an animal does or has to help it survive. Examples include fur to keep it warm, hissing to scare predators and teeth to chew food.

Stop 2: Backyard Creatures (Building J on your Zoo Map)

- **Location Objective** – Students will describe how snakes use their adaptations to catch prey and scare away potential threats.



- **Questions to Ask the Students**

1. What do Rattlesnakes eat?
2. What adaptations do they have to help them get their food?
3. What do they have to keep them safe from predators?
4. What animal eats rattlesnakes?

- **Answers the Questions**

1. They are carnivores which mean they eat meat. They will eat rats, mice, and other small animals.
2. Ex: Camouflage, fangs, long bodies, etc.
3. Ex: Same answers as question #2 and importantly their Rattle
 - A rattlesnake does not use its rattle to catch food. Instead it uses it's rattle to **scare** predators and other large animals away.
4. Answers may vary. Ex: birds, cats, some snakes, etc

- **Fast Fact Bonus:**

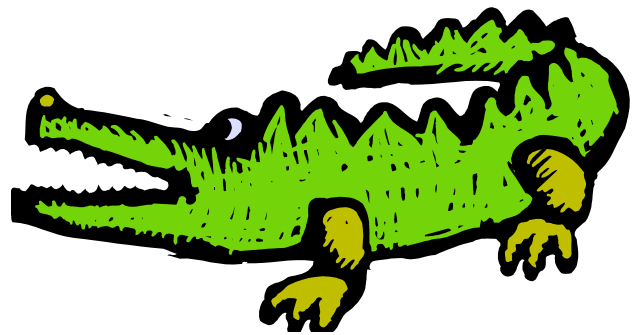
- 🐍 The eastern diamond back rattlesnake is the largest venomous snake in North America. They can be up to 8 feet long and weigh up to 10 pounds.
- 🐍 Snakes are natural exterminators, surviving on such household pests as rats and mice, as well as squirrels and birds.
- 🐍 Feared as deadly and aggressive, diamondbacks are actually very scared of humans and only attack in defense. Most bites occur when humans taunt or try to capture or kill a rattlesnake.
- 🐍 When cornered, rattlers shake their tail rattles as a warning to back off. Snakes add a new rattle segment each time they shed.
- 🐍 Rattles break off frequently but a new scale is added each time they shed their scales.

Stop 3: Alligator (# 12 on your zoo map)

- **Location Objective** – Students will discuss what adaptations alligators have to help them be at the top of the food chain.

- **Questions to Ask the Students**

1. Alligators are the top of their food chain, what does that mean?
2. What adaptations do alligators have to help them be at the top of the food chain?
3. How are humans and alligators similar in their hunting techniques?



- **Answers to the Questions:**

1. There are no natural predators, other than man, that will hunt and eat adults. Baby alligators are not at the top of the food chain. Animals like birds, snakes and other alligators might eat them.

2. Ex: They look like floating logs (camouflage), move slowly, sharp teeth, strong bite...
3. They both are patient hunters. They will wait patiently for food to come near them or in man's case, fall into their traps.

- **Fast Facts Bonus**

- 🦎 Female alligators are about 8 feet long and males are about 11 feet long.
- 🦎 Alligators don't have to eat every day. Instead, they eat a lot all in one meal and may wait up to a week before eating again.
- 🦎 Their eyes and nostrils are located on top of their head so they can see and breathe above the water while they soak. This helps them see danger, and locate land animal
- 🦎 Alligators have between 74 and 80 teeth in their mouth at a time. An alligator can go through 2,000 to 3,000 teeth in a lifetime.
- 🦎 Alligators are usually found in freshwater such as: slow-moving rivers, swamps, marshes, and lakes.

Stop 4: Frogs (#6 on your Zoo map in the back of Jewels of South America)

- **Location Objective** – Students will see that predators come in all shapes and sizes and not are all at the top of the food chain.

- **Questions to Ask the Students**

1. What do frogs eat?
2. How do they get their food?
3. What adaptations do they have on their bodies that help them catch their food?
4. Who eats frogs?
5. How do frogs keep from being eaten?



- **Answers**

1. Insects. Frogs are responsible for keeping a large part of the world's insect population under control. Gardeners encourage them to live nearby because they eat so many insect pests.
2. Frogs use their long sticky tongue to help catch moving prey
3. Ex: Camouflage, webbed feet for fast swimming, big eyes to find prey, etc.
4. Ex: birds, snakes, fish, humans, etc.
5. Same as answer 3.

Fast Fact Bonus:

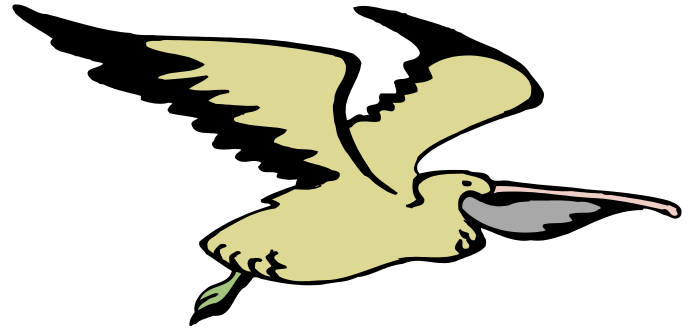
- All toads are frogs but not all frogs are toads.
- The African Giant is the world's largest frog. It weighs 10 pounds and can be 26 inches long.
- The smallest frog is less than 1/2 in. from Cuba
- Frogs don't drink water but absorb it through their skin.
- Some frogs can jump 20 times their own body length.
- Female frogs are usually larger than the males.
- There are over 4000 species of frogs and on every continent except Antarctica.

Stop 5: Pelicans (# 13 on your Zoo map)

- **Location Objective** – Students will see the water habitat pelicans are designed to live in and discuss how they are adapted to live in that environment.

- **Questions to Ask the Students**

1. What do pelicans eat?
2. What adaptation on their head do they use to catch fish.
3. How do they hunt for fish?
4. What other adaptations, besides beak, do pelicans have that help them to be successful water predators.



- **Answers**

1. Fish, this means they are water predators.
2. Answers will vary but you are looking for “beak” or “bill.”
3. There are 2 ways pelicans in Mississippi hunt.
 - **American White Pelicans** use the buddy system. They flock together and fly in a line to scare fish up close to shore where they can catch them easily.
 - **Brown pelicans** soar high above the water searching for schools of fish. When they find a school, they dive straight down into the water and catch the fish in their bills.
4. Ex. big webbed feet, good eyesight, communication, wings,...

- **Fast Facts -**

- Pelicans scoop up the fish, water and all in their bills. When it brings his bill out of the water, the water is filtered out of his pouch leaving the fish. The pelican eats the fish whole.
- Pelican bills can hold up to 3 fish at a time.

- 👉 Gulls (a seabird) often steal fish from a pelican's bill before they get the chance to swallow their hard earned catch.
- 👉 By 1970 North American pelicans were almost extinct due to a chemical called DDT. DDT is a pesticide used by farmers on their crops. They were placed on the Federal Endangered Species List throughout its range. Their growing abundance in the U.S. since the banning of DDT represents a conservation success story.