ANIMAL ADAPTATIONS

Scavenger Hunt
GRADES K-3

Saint Louis Zoo
Animals Always®

Scavenger Hunt
Animal Adaptations (K-3)
Teacher's Guide

Updated Summer 2013
APPROXIMATE TIME: 60 Minutes

Suggestions for Teachers:

1. Allow your students about 60 minutes for this scavenger hunt. The activities begin at The Living World and take you to different areas of the Saint Louis Zoo. Remember, during the colder months there will not be as many animals on display outdoors and there may be fewer birds populating The Bird Garden due to migration.

2. Divide the class into groups of six or less with an adult to help each group. This scavenger hunt is intended to be adult-led. There are hints throughout the hunt to help the adult steer the children through the exercises. A "Student Activity worksheet is at the end of this hunt and includes questions from select exhibits. Please review the questions to become familiar with the questions on the "Student Activity" worksheet.
3. Because the animals at the Zoo are living creatures with very special needs, some of the animals referred to in this scavenger hunt may not be on public display. **Please remind adults/students to do their best to complete the hunt by carefully observing the animals they find.**

4. **OPTIONAL ITEMS TO BRING:** Bring a piece of coarse sandpaper for your students to feel when you discuss the lion's tongue at Big Cat Country. Be ready to explain to them that because their tongues are rough like this, the lions are better able to lick flesh off the bone and "comb" their fur. Giraffes have purple tongues that are about 18" long. Their long tongues help them reach hard-to-get leaves high up in the trees. Bring an 18" length of yarn or fabric so your students can get a visual idea of the tongue's length.

Pre-visit activities:

1. With the other adults, look over the following pages of activities so that all of you will know where you will be going and what you will be looking for.

2. In class, discuss the meaning of the word ADAPTATION. **Adaptations are parts of an animal's body (e.g., a thick coat of fur or an opposable thumb), or things an animal does (e.g., hibernate), that help it survive.** Be ready with pictures or examples of animal adaptations and discuss why they are helpful to the animal's survival.

3. Discuss the terms, endangered and vulnerable with students before visiting the Zoo. As you tour the facility during your field trip keep a tally of animals classified as either endangered or vulnerable.

Post-visit activities:

1. Collect and mount pictures of obvious animal adaptations, (e.g. camouflage coloration, long legs and/or necks, etc.) Use them for discussion or journal- entry starters.

2. Give students pictures of different habitats and have them match pictures of appropriate animals with their habitat based on camouflage.

3. Compare and contrast animal adaptations with human ways of coping. (e.g., What do we do when we're cold? What are our shelters like? Etc).

4. Initiate a discussion of what the students observed during their field trip to the Zoo. Generate a running list of animals the students observed that were classified as either endangered or vulnerable. Make inquiries as to why the students thought these animals were in this situation. Guide the discussion to the role man plays in the destruction of many habitats. What can students do to reverse this action? Have students construct posters illustrating their ideas and display around the school.

BACKGROUND INFORMATION

adaptation – Something an animal has on its body or does to help it survive in its habitat

amphibian – a cold-blooded animal that has a backbone, wet skin and spends part of its life in water and part on land.

reptile – a cold-blooded animal that has a backbone, lives on land and has waterproof scales or plates

mammal – a warm-blooded animal that has a backbone and hair or fur; female mammals produce milk to feed to their young

bird – an warm-blooded animal that has a backbone, feathers, two wings, two legs, and a beak

camouflage – an adaptation that allows animals to blend in with their surroundings

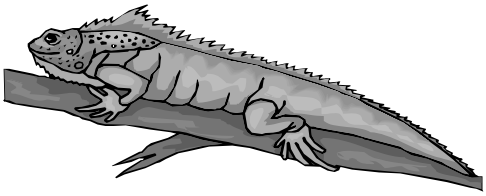
herbivore – an animal that only eats plants

carnivore – an animal that only eats meat (other animals)

omnivore – an animal that eats both plants and meat (other animals)

nocturnal – active at night

Scavenger Hunt
Animal Adaptations (K-3)
Adult-Leader's Guide



HERPETARIUM

AS YOU ENTER THE BUILDING, TURN RIGHT.

1. Look for the **Garido's crested anole**. This animal has very good camouflage. It blends in so well with its surroundings that you may have a hard time finding it. How would the adaptation of camouflage be helpful to the animal? ***(ANSWER: It can blend to with its environment to avoid being seen by animals it would eat or animals that would eat it.)*** Can you draw a picture and hide an animal in it? ***(Have students complete this in their activity pages.)***

2. Find the **Tentacled snake**. When it is touched, its body turns rigid like a piece of wood. In Thailand, people call it the "board-like snake." How would this adaptation help the snake? ***(ANSWER: Whatever touches it will pass it by, thinking that it's just a stick.)***

3. Locate the **Dunn's hognosed pitviper**. The tip of its tail is very brightly colored. It wiggles its tail around to attract prey. Why would prey animals (like lizards) be attracted to this snake's tail? ***(ANSWER: It looks like their food (i.e. worms.) Have the students draw a picture of the Dunn's Hognosed Pitviper in their activity pages.)*** What other type of snake also has a special tail? ***(ANSWER: Rattle Snake)***

4. Observe the **Spotted turtles**. Look carefully at their feet. Watch how they swim. Do their feet remind you more of your own foot or a duck's foot? ***(ANSWER: Duck's feet.)*** Why? ***(ANSWER: Webbed feet that aid in swimming.)*** How can you tell a female spotted turtle from a male? ***(ANSWER: Males have tan chins and brown eyes, females have yellow chins and orange eyes. Have students color this in their activity pages)***

5. Find the **Western slender glass lizard**. If you thought this was a snake, guess again! It is actually a legless lizard. Compare the **Western slender glass lizard** to a snake. How are they alike? ***(ANSWER: They both have long slim bodies with no legs.)*** How are they different? ***(ANSWER: The lizard has ear holes and eyelids, snakes do not. Have students complete this in their activity pages.)***

EXIT THROUGH THE FRONT DOORS AND TURN RIGHT TO THE PRIMATE HOUSE.

PRIMATE HOUSE

ENTER THE MAIN DOORS OF THE PRIMATE HOUSE.

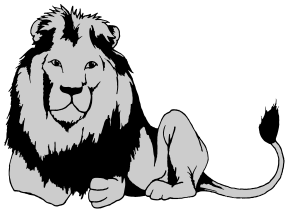
6. Look for the **Lion-tailed macaques**. In the wild, they live together in groups. How can this behavior be helpful for them? ***(ANSWER: Social groups can aid in protection and finding food.)*** There are two lion-tailed macaque exhibits. Students should notice a vast disparity in the types of interaction displayed by these two groups of macaques. Discuss the differences in behavior observed between the two exhibits of lion-tailed macaques.

7. Find the **Black lemurs**. Female black lemurs are not black. Describe the female that you see in the exhibit. ***(ANSWER: Females are brown with white ear tufts.)*** Discuss how females and males are alike **and** different in appearance.

8. Look at the **Black-handed spider monkey**. If you're lucky, they may be swinging around in their exhibit. Their hands and prehensile tails are especially good for this activity. They use their hands as hooks. Look for their thumbs–they are very small. They often use their tail as an extra hand. Draw a picture of a black-handed spider monkey using its prehensile tail as another hand. ***(Have students complete this in their activity pages.)*** What could you do if you had a prehensile tail like a spider monkey?

EXIT THROUGH THE FRONT DOORS AND TURN RIGHT TO BIG CAT COUNTRY.

BIG CAT COUNTRY



GO TO THE RIGHT AND AROUND THE LION EXHIBIT

9. Look at the **African lions.** You can't tell from here, but these animals have very special tongues. They are like sandpaper. (Pass around the coarse sandpaper for the students to feel and discuss why the cat's coarse tongue is useful.) If you had a tongue like these big cats what would you use it for?

10. Find the **Snow leopard.** Think about where this animal might live. Its thick coat of fur and its name should give you some clues. Discuss what type of habitat you think this cat lives in. ***(Have students complete this in their activity pages.)*** Why might some people hunt this animal?

11. Locate the **Amur tiger**. Looking at his coat will give you some clues as to this cat's habitat. Describe where you think this cat lives based on his use of camouflage. ***(ANSWER: Forests, bush covered mountains)***

ADVANCE TO THE HOOFED MAMMAL AREA, (RED ROCKS)

HOOFED ANIMALS AT RED ROCKS

ZEBRA YARDS ARE DIRECTLY BEHIND BIG CAT COUNTRY

12. Look for the **Grevy's zebras**. In the wild, zebras often stand next to each other but each one faces the opposite direction. Why would this be a smart behavior? ***(ANSWER: Zebras can keep an eye out for predators in all directions. Have students complete this in their activity pages)***

13. Find the **Reticulated giraffes**. Notice that their necks are very tall and their tongues are **very** long. (Show string.) What do you think giraffes eat? ***(ANSWER: Leaves towards the tops of trees.)***

14. Locate the **Bactrian camels**. What noticeable adaptation helps them survive in the wild? ***(ANSWER: Their humps.)*** What is stored in their humps? ***(ANSWER: Fat.)*** Camels' adaptations to a desert lifestyle are well known. Their long eyelashes and nostrils protect them from blowing sand. They can live without water for a long time and the fat stored in their humps helps them survive for extended periods of time without food.

15. Find the **Bongo**. Each of these hoofed mammals possesses a unique stripe pattern. How does this adaptation help the bongo survive in the wild? ***(ANSWER: Their vertical stripes are good camouflage for blending in with the forest.)***

HEAD BACK DOWN HISTORIC HILL ON THE SIDE OPPOSITE THE PRIMATE HOUSE. GO TO THE BIRD HOUSE.

BIRD HOUSE

ENTER FRONT DOORS OF THE BIRD HOUSE AND TURN RIGHT.

16. Locate the **Tawny frogmouth**. This bird is a master of disguise. What parts of his body are used as camouflage? ***(ANSWER: Their feathers.)*** How is this adaptation useful to this bird? ***(ANSWER: Feathers help it hide from its prey.)***

17. Look closely at the **Hyacinth macaw**. What does this bird eat? ***(ANSWER: Fruits and nuts.)*** Notice this bird's strong beak. How does this adaptation help the macaw eat? ***(ANSWER: Their strong beak aids in cracking nuts and opening fruit with tough skin.)***

18. Observe the **Bateleur eagle**. This impressive bird of prey possesses strong claws and a powerful beak. These adaptations are necessary for its primary diet of live prey. What role do you think the eagle's claws and beak play in the gathering and consumption of food? ***(ANSWER: The claws are for capturing, grasping, and killing prey, the beak is for tearing meat off the body.)***

19. Locate the **Blacksmith plover**. How does this bird's beak differ from those of the macaw or eagle? ***(ANSWER: The beak is long, straight, and pointed.)*** Why do you think this is? ***(ANSWER: So they can stab at their food.)*** What do you think the blacksmith plover eats? ***(ANSWER: Small insects. Have students complete the last activity in their pages using the beaks of the macaw, eagle, and plover.)***

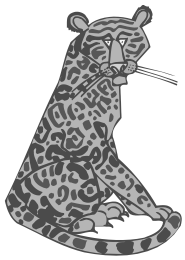
20. Observe the **Burrowing owl**. Why has this land-dwelling bird of prey adapted to lay more eggs than any other North American bird of prey? ***(ANSWER: Because they live in burrows, their eggs are prone to breaking more than birds that nest in trees.)***

CLOSURE: Remind students that adaptations are both physical AND behavioral!

STUDENT ACTIVITY PAGES

(Copy the following pages for each student before arriving at the zoo)

NAME: _____

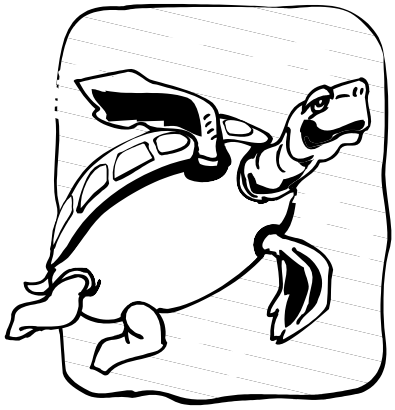


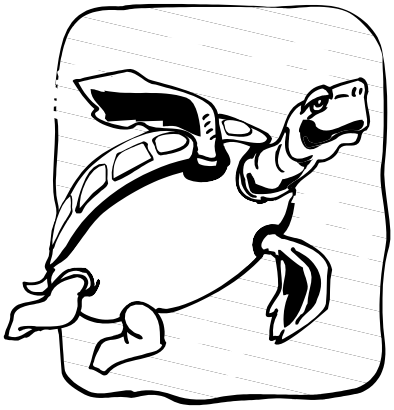
Scavenger Hunt
Animal Adaptations (K-3)
Student Activity Pages

1. Can you draw a picture and hide an animal in it?

2. Draw a picture of the Dunn's hognosed pitviper in the space provided.

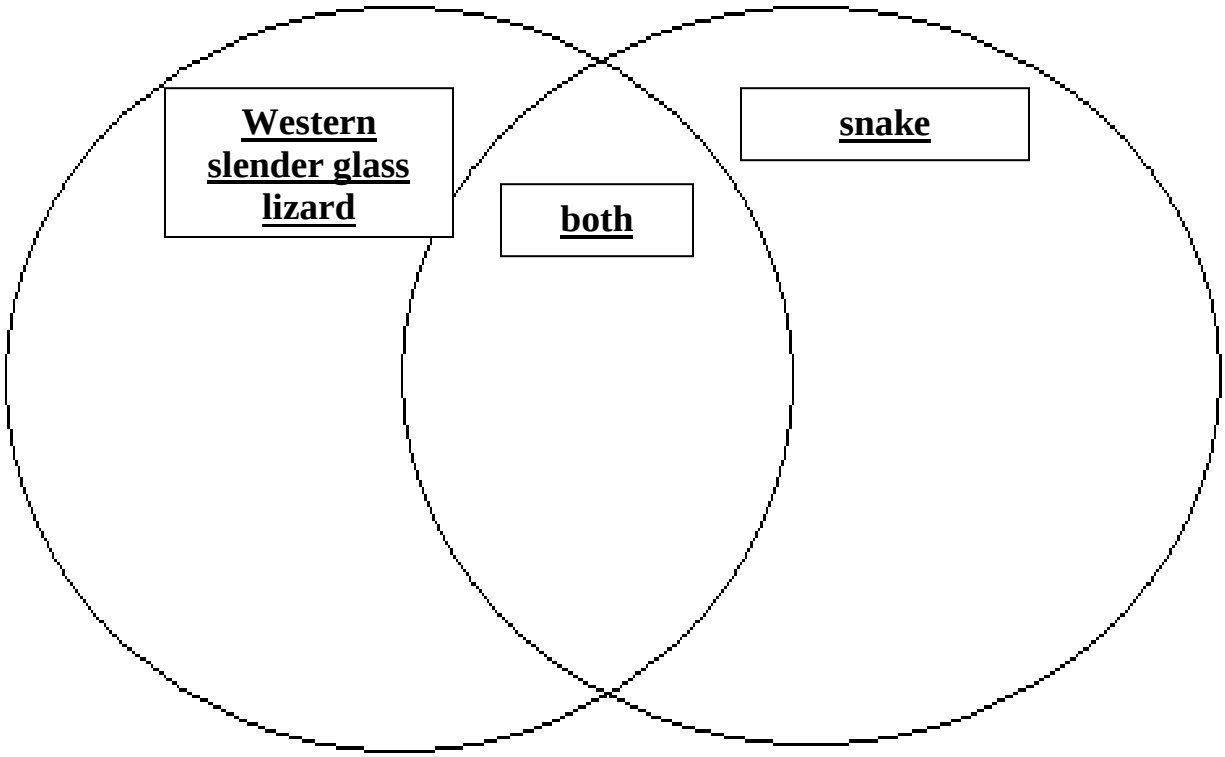
3. Color the turtles below to resemble a male and female spotted turtle. Label each turtle.





_____ _____

4. A Western slender glass lizard is not a snake. It is a legless lizard. Compare the Western slender glass lizard to a snake. How are they alike? How are they different? Use the diagram below to show your answer.



5. What color is the **female** black lemur?

a. black
b. brown & white
c. red
d. purple

6. A black-handed spider monkey's thumbs are small so that they don't get in the way when it swings from branch to branch. In addition, recall how its long prehensile tail helped it move through the trees. This allows it to use its hands to handle other things such as fruits, which may be difficult to handle. Lay your hand on the back of this paper and tuck your thumb under your hand. Now, trace around your hand. This is almost what a Black-handed spider monkey's hand looks like.

7. Many monkeys have opposable thumbs and opposable big toes, which can be closed against the other fingers or toes to create a tight grip. We also have opposable thumbs, which we use, in a manner of ways. Try to tie your shoelace without the use of your thumbs. Was this an easy or difficult task?

8. Look at the picture below. Circle the picture of the snow leopard's habitat.

9. Stand back-to-back with another student. Tell everything you see. Do you both see the same thing? Is this good or bad? Why would it be a smart thing to do in the wild?

10. Use the boxes below to draw the shape of the beak adapted to the following diets:

Fruit and Seeds	Small Insects	Live Prey