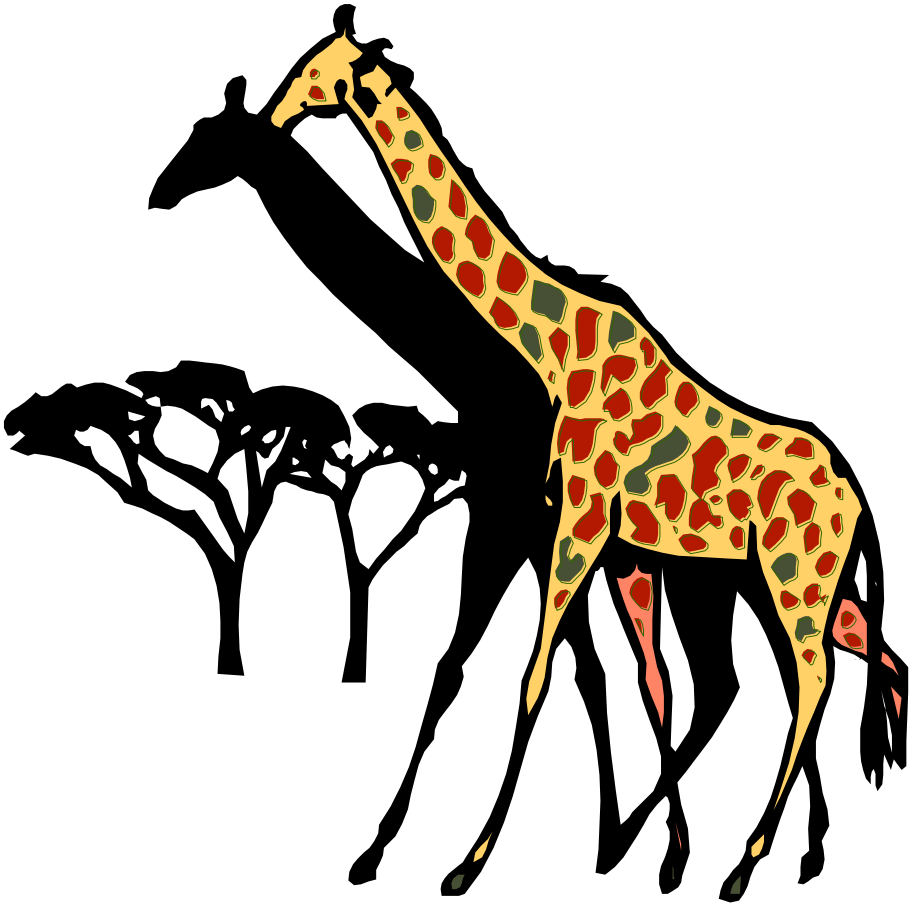
ANIMAL ADAPTATIONS

Scavenger Hunt

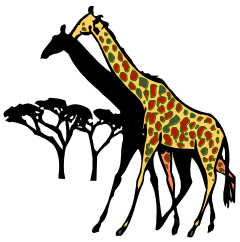
GRADES 4 - 5



Saint Louis Zoo

Animals Always®

Scavenger Hunt
Animal Adaptations (4-5)
Teacher's Guide



Updated Summer 2012
APPROXIMATE TIME: 90 Minutes

Suggestions for Teachers:

1. Allow your students about 90 minutes to complete this scavenger hunt. The questions will take to various areas around the Zoo. Remember during colder months there may not be as many animals on display outdoors.
2. Divide your class into smaller groups supervised by an adult. This scavenger hunt is intended to be a cooperative learning experience requiring group effort and participation. We suggest that you allow each group to decide which roles individual students will have before beginning the scavenger hunt. For example, one student might record answers for the group with the understanding that the group will meet for discussion and completion of their individual scavenger hunts after visiting each area of the Zoo.
3. Copies of the Saint Louis Zoo map are available and can be used to help direct the students to the various areas while completing the scavenger hunt.

Library Resources:
Check out our library resources at http://www.stlzoo.org.

Scavenger Hunt

Animal Adaptations (4-5)
Answer Key

Because the animals at the Zoo are living creatures with very special needs, at certain times some of the animals referred to in this scavenger hunt may not be on public display. **Please remind your student to do their best to complete the hunt by carefully observing the animals they find and not to worry about any that are off display.** We update our scavenger hunts on an annual basis during the summer months to be able to provide you with the most accurate information about our animals.

Answers

1. On land, the black-necked swan would have difficulty walking. The position of their legs makes it easy for them to swim in the water.
2. b
3. It looks like a broken tree branch. Answers to the second part of the question may vary, but they should demonstrate that the students looked at the birds and thought about the ways it has adapted to its surroundings. For example, students might mention the tawny frogmouth's body position when it sleeps, the brownish-grayish mottling in its feathers that looks like bark, etc.
4. One way is that the female seals herself inside her nest hole in the tree where she will incubate the eggs. Another precautionary measure is that the female must rely entirely on her mate to bring food for both her and the chicks until the young are ready to break out of the walled-in nest. That way, the young are never alone in the nest where they would be vulnerable to predators.
5. a
6. b
7. d
8. *Anodorhynchus hyacinthinus*; *Homo sapiens* or *Homo sapiens sapiens*
9. b
10. On land, the position of their legs makes it more difficult for the black-necked swan to walk. In the water, however, it makes it easier for them to swim.
11. c
12. Drawings may vary but must include at least a prehensile tail, which is the only primary adaptation listed on the sign. Other emphasized characteristics may include the skink's elongated body and sharp claws, and its color (green).
13. b
14. d
15. d
16. a
17. d
18. Both (a) and (c)

VOCABULARY

Adaptation - A physical characteristic or behavior used to help an animal survive.

Amphibian - A cold-blooded animal that spends part of its life in water and part of its life on land.

Arboreal - Tree dwelling

Bird - A warm-blooded animal that has feathers, two legs, two wings and a beak.

Brachiating - Able to swing by the arms from branch to branch

Diurnal - Active during the day

Endangered - Close to extinction, in need of protection

Herbivore - An animal that eats only plants

Mammal - A warm-blooded vertebrate that has hair or fur and milk feeds its young

Nocturnal - Active at night

Omnivore - Eats plants and other animals

Prehensile - Able to grasp

Reptile - Cold-blooded vertebrate that lives on land and has waterproof scales or plates

Specialized - Changed greatly during the course of evolutionary development and highly developed to a special function in life

Survival - To remain alive or in existence

Torpedo - Cigar-shaped underwater projectile

Territorial - A particular area or region inhabited by an individual or group of animals and defended against intruders

Vulnerable - Reduced population in the wild and in need of protection

Name _____

Scavenger Hunt

Animal Adaptations 4 – 5

Student Activity Pages

Over millions of years, many animals species have appeared and become extinct (died out.) The species that have survived adapted to modern conditions. They have evolved (developed over time) in ways that help them find food, escape predators, cope with their environments, and reproduce. These changes are all called adaptations.

Some adaptations are **physical characteristics** that you can see, or that involve how an animal's body works. Other adaptations are **behavioral characteristics** and include how an animal acts or what an animal does. Here are some examples of these adaptations:

Physical *Cat whiskers*. Long hairs growing out from the face to increase the sense of touch and help the animal to feel its way around at night.

Frog skin. Thin, moist skin with glands that open externally to secrete toxins.

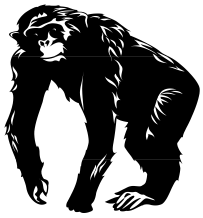
Behavioral *Antelope herds*. Living in large groups (herds) helps to protect antelope from predators. With more eyes and ears alert to potential danger, predators are less likely to take the antelopes by surprise.

Animals look and act the way they do for a reason. By observing the animal's body structure and its behavior, and by using information from the signs found at each exhibit, you will discover how animals are adapted for their specific lifestyles. You will also bring knowledge from your own past experiences that will help you understand why animals make adaptations for their survival and specific lifestyles.

You will now begin your Animal Adaptations Scavenger Hunt. Be sure that you have a copy of the Saint Louis Zoo Map.

Using your map, start at ***The Living World and proceed in a southeast direction, around Lakeside Cafe, towards Fragile Forest.*** *When you arrive, place an X on your map to show the Fragile Forest area. Use information from the adaptation clues on the posted signs in the exhibit areas to help you answer your scavenger hunt questions.*

Fragile Forest / Jungle of the Apes



1. Orangutans are the only truly *arboreal* (live in trees) "great ape". There are two species—the Bornean Orangutan and the Sumatran Orangutan. The Saint Louis Zoo has the Sumatran Orangutan. Orangutans move by brachiating (swinging by their arms) from branch to branch. From looking at them, what do you notice about their arms that makes them especially good at this?

a. the length
b. the fingers can be "fixed" into hooks
c. the thumbs are small
d. all of the above

2. Chimpanzees have highly developed brains and are anatomically close to humans. They have learned to imitate a number of human actions. From looking at the chimps and at the signs around their exhibit, which of the following is ***not*** true of chimpanzees?

a. Their arms and legs are about the same length.
b. They use their facial expressions to communicate.
c. They rub hair off their face to help cool their body temperature.
d. Usually only one young is born at a time.

Leave the Fragile Forest / Jungle of the Apes area and head towards the Bird House. *Place an X on the Bird House on your map as you arrive.*

Bird House/ Bird Garden

3. What does the **Tawny Frogmouth** look like when it is sleeping (roosting) during the day? From looking at the bird, what do you think it is about the tawny frogmouths that creates this effect?

4. The **Red-billed Hornbills** take extreme measures to protect their young. List two of these characteristic behaviors.

a. _____

b. _____

5. Mimicry is an unusual way that some animals protect themselves. They trick their predators into thinking they are a different, bigger or more dangerous animal by making a sound resembling that of another animal, or by using camouflage. Find the **Burrowing Owl**. What sound does a ***young*** burrowing owl mimic?

a. the sound of a rattlesnake
b. the sound of a raging chicken
c. the sound of stampeding cattle
d. the roar of a lion

6. The burrowing owl nests below ground level. This makes its eggs much easier for predators to get to and eat. How has the burrowing owl adapted to make up for this?

a. It plugs the entrance of the hole when it is sitting on eggs.
b. It lays up to 12 eggs at a time, which is more than any other North American bird lays.
c. It changes its plumage to blend in even better with its burrow.
d. Both (b) and (c).

7. The **Toco Toucan** has numerous characteristics. Which item listed is **not** a characteristic of this toucan?

a. Can grow up to 25 inches long, with its beak making up almost half of that length
b. Nest in tree cavities
c. Can hear its calls from over a ½ mile away
d. Rests quietly on the forest floor

8. The naming system developed by Carolus Linnaeus uses the classification system of organisms. The first part of an organism's name lists the genus and the second part of its name gives its species. The scientific name of the **Hyacinth Macaw** is

_____ _____

What is the scientific classification of humans?

_____ _____

Exit the Bird House and head towards the Chain of Lakes. *Place an X on the map to show its location when you arrive.*

Chain of Lakes

9. River Otters have elongated bodies and short legs that they tuck alongside their bodies when they swim. They have five webbed toes with claws. They spend several hours every day cleaning their short, dense fur. Why do you think this is important?

a. They need the fur to stay afloat.
b. It is water impermeable and keeps their skin dry.
c. It makes their coat attractive for mating.
d. It covers their ear membrane when they dive.

10. Black-necked Swans have legs that are set unusually far back on their bodies. How do you think this would affect them on land? In the water? (Hint: Think about how a motor boat moves with the motor at the back of the boat versus how a motor boat *would* move if the motor were in the middle of the boat.)

Locate the Herpetarium on your map and head in that direction. *Place an X on the Herpetarium when you arrive at the entrance.*

Herpetarium

11. Find **Garrido's Crested Anole**. This animal is an excellent example of the use of _____?

a. Parenting skills
b. Varied sound vocalizations
c. Camouflage that enables it to imitate the bark of trees on which it lives.
d. None of the above

12. Draw a picture of the **Solomon Island Prehensile-tailed Skink** using its primary adaptation.

Exit the Herpatarium through the door through which you entered and make a right. Continue up the hill to the Primate House. *Place an X on the map when you reach your destination.*

Primate House

13. The **Black and White Colobus Monkeys** have a strict plant diet and have developed bacteria in their stomach. What is the purpose of the bacteria?

a. It dissolves sand and small stones the monkey accidentally swallows.
b. It assists in the digestion of the plants the colobus monkeys eat.
c. It cleans the colobus monkey's teeth after it eats.
d. It does all of the above.

Exit the Primate House and continue up Historic Hill until you reach Red Rocks. *Locate and mark your destination with an X on the map.*

Red Rocks / Hoofed Mammal Area

14. How do you think the white coat of the **Addax** helps to make this animal a desert specialist?

a. The coat reflects the heat and helps to keep it cooler.
b. The coat is a valuable bounty for hunters
c. The coat color acts as camouflage and helps them avoid predators
d. Both (a) and (c).

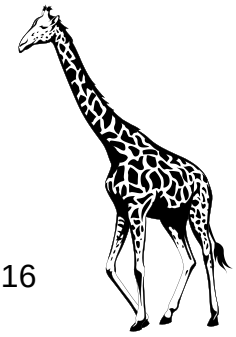
15. The **Okapi** and the **Lesser Kudu** have stripes that allow them to camouflage themselves in their habitat. The okapi lives in the dense rainforests of eastern Zaire. Where is the lesser kudu's habitat located?

a. Midwestern plains of North America
b. Rainforest of South America
c. Rainforest of eastern Zaire in west central Africa
d. Deep thickets of Eastern Africa

16. What do lesser kudus and okapis have in common that helps them hide from their predator?

a. They both have stripes on their body or legs
b. They both have long, spiral horns
c. They both have the same shape of head, lips and tongue of a giraffe
d. Both (a) and (c)

17. What is unique about the **Reticulated Giraffe?**



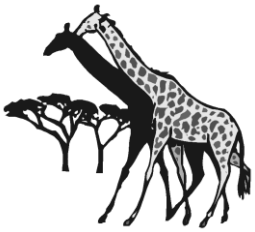
a. They have horns.
b. The giraffes' diets are plant-based.
c. Their nostrils can close when there is a sand storm.
d. With males standing at 16-18 feet tall and females standing at 14-16 feet tall, they are the tallest land animal.

18. How do you think the giraffe's long neck make survival on the savannahs of Africa easier? (Hint: More than one answer is correct.)

a. They can see and smell their enemies for great distances and take action if necessary.
b. They can be sociable with lions, one of their main enemies.
c. They can graze on the leaves that other hoofed mammals can't reach.
d. They are able to keep their nostrils above any blowing sand.

Scavenger Hunt

ANIMAL ADAPTATIONS 4 – 5



Student Summary Activity

DIRECTIONS: *Using at least four of the physical and behavioral adaptations you have encountered on this scavenger hunt, draw an imaginary animal that exemplifies these characteristics. Give your animal a common name. Then use the naming system developed by Carolus Linnaeus to develop a scientific name. Remember, the first name refers to the genus and the second names the species.*

Common Name: _____

Scientific Name: _____ _____