Zoo Field Trip – The relationship between habitat and Threatened and Endangered Species.
The zoo identifies animals as threatened or endangered in accordance with the definitions set by the U.S. Endangered Species Act (ESA) administered by the US Fish and Wildlife Service (USFWS) and by the Convention on International Trade in Endangered Species (CITES). They currently have more than 50 species that are recognized as threatened or endangered. On this field trip, you will learn about the consequences of habitat loss and how it affects threatened and endangered species and from around the world.

OVERVIEW
To earn credit for the field trip you will need to complete three tasks:

1. Visit the “Touch the Earth…” display at the south gate. On the exhibit are two counters: one showing the current human population and the other showing the habitat loss. Write the numbers shown on the day you visit (these will be changing fast, so just write down one example for each).
   a. Current Human Population: _____________________________
   b. Current # acres of wildland remaining ____________________________

2. You are required to visit at least four of the following exhibits (you may choose any four): Temperate Forest, African Savannah, Day and Night Exhibit, Tropical Rain Forest, Tropical Asia and answer questions related to adaptations, habitat and conservation within each of these exhibits (questions for each section are listed below). To answer many of these questions you will need to find the informational signs that are part of the exhibits. Use the map to help you locate the different exhibits. Before you turn in your assignment please list the four exhibits you chose today.

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3. While you are visiting the various exhibits in the zoo, choose a total of four representative endangered species to observe and write short profiles about their niche and habitat requirements. Conservation status is indicated on the information labels in front of the enclosures. You must choose at least one mammal, one bird, and one reptile (you may also choose an amphibian but there are not a lot of choices from this group). I have provided forms for you to fill out. Before you turn in your assignment please fill in the names of the four species you chose to profile.

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PART 2. Habitats and Conservation: Below are questions for each of the major exhibit areas in Woodland Park Zoo. You need to choose any four (4) of them and answer the relevant questions for that section.

A. African Savanna- you should start at the “African Village” near the South Gate where you will find interpretative displays to help you answer the general questions below. The exhibit winds around the east side of the zoo and includes hippos, Patas monkeys, African wild dogs and lions.

a. What are the characteristics of this ecosystem?

b. What are some of the survival adaptations found in animals that live in the African Savanna?

c. What are three primary threats to the animals of the savannah ecosystem? What measures being undertaken to try a counter these threats?

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d. What is your favorite animal in this habitat and why?

B. Temperate Forest (with wetlands).

a. Visit the wetlands portion of the exhibit. Why are wetlands important? List some of the ecological roles of wetlands?

b. What is happening to wetlands around the world and why?

c. What actions can you take now to help preserve wetlands?

d. What types of animals are primarily found in this section?

e. What is your favorite animal in this habitat and why?
C. Tropical Rain Forest. Start at the jaguar exhibit and go through the indoor exhibit and end at the red ruffed lemurs.
   a. What are the characteristics of this ecosystem?
   
   b. What are the primary threats to tropical rainforests around the world?
   
   c. What is shade grown coffee and why is it important from a conservation perspective? What types of species benefit from shade grown coffee?
   
   d. What is your favorite animal in this habitat and why?
   
   e. What can you do to help conserve rainforests?
   
D. Day and Night Exhibit. This is an entirely indoor exhibit. The “Day Exhibit” portion has many species of reptiles and amphibians. The “Night Exhibit” contains examples of many nocturnal animals.
   a. What are some adaptations to desert living seen in the reptiles in this exhibit? (use your powers of observation – think about color, metabolism etc…)
   
   b. Frogs are disappearing around the world? What are some hypotheses that have been proposed to explain this? What has happened to the Golden Toad?
   
   c. What are some adaptations found in nocturnal animals?
d. The bat order is Chiroptera has been divided into two suborders: Megachiroptera and Microchiroptera. What are the major differences between the two suborders? Which suborder is found in Seattle?

e. Why are bats important in ecosystems?

f. What is your favorite animal in the Day and Night Exhibits and why?

E. Northern Trail

a. There are three ecosystems being highlighted here. What are they and what are their major characteristics?

b. What are the primary threats to these ecosystems and the animals that live in them?

c. In the taiga viewing center there are brown bears and river otters. There is a poster about the conservation concerns about bears around the world. What are the primary threats to bears generally?

d. Which bear is the most endangered? What actions are being taken to try and conserve bears in general?

e. What is your favorite animal in this exhibit and why?
F. Tropical Asia
   a. What is happening to orangutans in the wild?

   b. What are the threats to the habitats occupied by the animals seen in the Tropical Asia section?

   c. Why is it difficult to rehabilitate orangutans?

   d. What is your favorite animals in this habitat and why?

PART THREE: ENDANGERED SPECIES PROFILES

Species 1. Latin name: ___________________________ Common name: ________________________
What is the natural geographic range: _____________________________________________
What type of habitat does it live in: _______________________________________________
What type of food does it eat? ____________________________________________________
Primary threats: __________________________________________________________________
Conservation actions being taken (if indicated): _______________________________________

Species 2. Latin name: ___________________________ Common name: ________________________
What is the natural geographic range: _____________________________________________
What type of habitat does it live in: _______________________________________________
What type of food does it eat? ____________________________________________________
Primary threats: __________________________________________________________________
Conservation actions being taken (if indicated): _______________________________________
Species 3. Latin name: ___________________________ Common name: ________________________

What is the natural geographic range: ________________________________________________

What type of habitat does it live in: _________________________________________________

What type of food does it eat? ______________________________________________________

Primary threats: __________________________________________________________________

Conservation actions being taken (if indicated): ________________________________________


Species 4. Latin name: ___________________________ Common name: ________________________

What is the natural geographic range: ________________________________________________

What type of habitat does it live in: _________________________________________________

What type of food does it eat? ______________________________________________________

Primary threats: __________________________________________________________________

Conservation actions being taken (if indicated): ________________________________________

Final Questions: Are there any common threads in the threats to all of these animals? Pick one of the animals and speculate what would happen if that animal were to go completely extinct.

What actions can you take today to make a difference in conservation of natural habitats and to protect endangered and threatened species?
List of Threatened and Endangered Species at Woodland Park Zoo (from www.zoo.org)

Woodland Park Zoo identifies an animal or plant as endangered if it is listed as endangered (in any part of its range) on the federal list of Endangered and Threatened Wildlife and Plants (†) or if it is listed on Appendix I to the Convention on International Trade in Endangered Species (CITES)‡. This list is current as of January 1, 2004.

**Birds:**
- Bald eagle†
- Bali mynah†‡
- Cabot’s tragopan†‡
- Gyrfalcon†
- Himalayan impeyan pheasant†
- Humboldt penguin†
- Palawan peacock pheasant†‡
- Peregrine falcon†
- Red-crowned crane†‡
- White eared-pheasant†‡
- White-naped crane†‡

**Mammals:**
- African elephant†
- African wild dog‡
- Asian elephant†‡
- Chinese goral†‡
- Clouded leopard‡
- Cougar†‡
- Fat-tailed dwarf lemur†‡
- Goeldi’s monkey†‡
- Golden lion tamarin†‡
- Jaguar†‡
- Lion-tailed macaque†‡
- Lowland anoa†‡

**Reptiles, Amphibians and Plants**
- Malayan sun bear†
- Malayan tapir†‡
- Ocelot†‡
- Orangutan†‡
- Red panda†
- Red ruffed lemur†‡
- Rodrigues fruit bat†‡
- Serow‡
- Siamang†‡
- Sloth bear†
- Snow leopard†‡
- Southern pudu†‡
- Sumatran tiger†‡
- Western lowland gorilla†‡

Reptiles and Amphibians:
- Dumeril’s boa†
- Egyptian tortoise†
- Indian python†‡
- Komodo dragon†‡
- Madagascar tree boa†
- West African dwarf crocodile†‡
- Yellow-spotted side-necked turtle‡