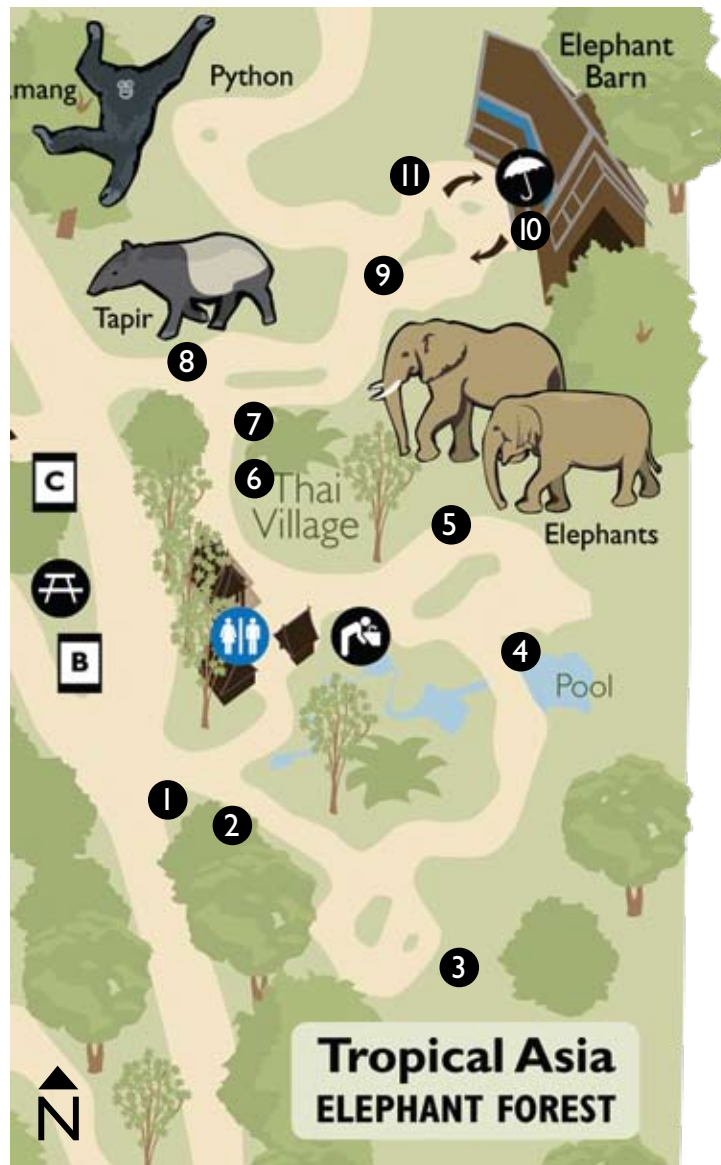




✧ ELEPHANT FOREST ✧

Self-guided Tour for Teachers and Chaperones



This guide is designed to help enhance your visit to the award-winning Elephant Forest. The graphics throughout the exhibit also offer beneficial and exciting information for you and your students. The segments in bold throughout this guide are questions or tasks for your students.

Exhibit Overview

The Elephant Forest at Woodland Park Zoo illustrates the important role of the elephant in its environment and in Asian culture. Elephants are considered keystone species because of their important role in their environment. Although elephants are sometimes very destructive, they are a natural part of forest biology. Elephants act as the forest's bulldozers, clearing patches for sun-loving plants to grow, such as bamboo. The growth of bamboo benefits elephants because it provides them with food. People also use bamboo for food as well as for building materials.

Since elephants have poor digestive systems, almost half of what they eat remains undigested. When elephants defecate, they help to plant new plants, and fertilize plants throughout the forest. Elephants have played a significant role in human societies for centuries. These large animals are used in logging practices, to help haul teak and other felled trees. Elephants also are used for hauling other materials or for carrying people on long trips. In addition to their use as labor animals, elephants and many other Asian animals hold a significant place in Asian religion. Many of the animals of Asia are believed to have special spirits which can help or harm humans.

While traveling through the Elephant Forest, ask your students to think about the important connections between animals, people, plants and the environment.

1. Entrance into the Elephant Forest

Stand by the posts at the south entrance to the Elephant Forest at the fork in the main path.

(The lion statues will be behind you and to the left.)

Look up! **Do you know how tall you are?** The three posts rising on both sides of the path leading into the Elephant Forest are 11 feet tall. Their height is approximately the maximum height (at the shoulder) of an Asian bull elephant. The three posts foreshadow the three faces of the elephant to be revealed in the exhibit; (1) elephants in the wild, (2) elephants as work animals in Thailand and (3) elephants in Thai culture.

2. Pathways

As you walk through the exhibit, search the pathways. Notice how dense the vegetation is and how you can seldom see great distances in any direction. Even the path disappears around corners. While wandering through tropical rain forests, you can never see very far in any direction due to the mass of vegetation.

You are roaming through dense vegetation similar to that of a tropical forest. This exhibit is filled with more than 12,000 plants and the largest public collection of bamboo in the Pacific Northwest. The diversity of plant species, even within a small area of tropical forest, is amazing, and the 186 different species in the Elephant Forest represent this. The vegetation in this exhibit also represents adaptations found among tropical

plants. **Why do you think so many leaves have pointed tips?** Many tropical plants have drip tips, an adaptation for shedding water quickly off leaf surfaces and delivers water to the plant's roots. **Why do they have thorns?** They help keep herbivores from eating the plants!

Can you point out any special adaptations you see on different plants?

3. Forest Clearing

Take the right side of the fork in the path, and look for signs of the elephants in the exhibit clearing. **Can you see tracks on the ground or other signs that elephants have been nearby?** Learning about animals in the wild often results from watching what marks the animals have left behind. Look very carefully and you might be able to find a half-buried, weathered skull of an elephant.

From eight viewpoints, you can look out onto a one-acre elephant clearing. However, you can never see the whole



Ryan Hawk

exhibit from one viewpoint. Just like in the forests of Asia, there are plants preventing you from seeing too far. **If there are so many plants throughout tropical forests, do you think there would be clearings like this one? Why or why not?** Actually, there are frequently wide pathways and clearings in the forest and often they are made by elephants. **How do you think those pathways are made?** In the wild, elephants create their own travel routes. As they move through the forest elephants knock down many trees for food or simply to clear paths for their massive bodies. When an elephant pushes down large trees, sunlight can finally reach the forest floor. Sunlight helps new plants to grow up and fill the gaps. Many animals then use these plants for food, and the pathways to find other food. Some of the paths frequently used by elephants do not grow over since the animals are constantly moving along these routes and they wear permanent paths on the forest floor.

4. The Elephant Pool

As you leave the forest clearing, take the path that leads to the right. A winding stream travels from a pond on your left, and makes its way to a waterfall and a large pool on your right. The water in this pool reaches a depth of 11 feet, allowing the elephants to submerge themselves completely as they bathe or swim. This pool is filled with approximately 60,000 gallons of water; the equivalent of 1,333 bathtubs full of water. **How do you think elephants breathe when they are swimming?** They use their trunks as snorkels! **Look at an elephant – what do you notice about her back?** It's probably covered with dirt. Elephants in the wild and in captivity frequently can be seen mud bathing or tossing dirt across their backs. Rolling in the mud helps regulate the elephant's temperature. Both the dirt and the mud help protect the elephant's sensitive skin from the sun and insects.



Dennis Dow

5. Saddle Shed

Observe the objects hanging on the rack. **What do you think they are made from and how are they used?** Unlike that of a horse, the elephant's backbone forms a prominent ridge, and can be easily damaged if any weight is put directly upon it. A bark saddle pad is placed on the elephant's back to prevent chafing. The dragging ropes are inserted through the openings on the saddle, and the ropes are then extended behind the elephant. At this point, the ropes are attached to the crupper, which is a bamboo loop passing under the elephant's tail. The crupper prevents the saddle from moving forward on the elephant, and stabilizes the load. In Thailand the elephants are released at night to graze on their own. A wooden bell is hung around the neck of an elephant so that the mahout (elephant handler) can locate his animal in the morning. **What do all of these products have in common?** All of the elephants' tack is made from natural products gathered from the forests. Even the rope is made of plant fibers.

6. Thai Logging Camp

In Northern Thailand, elephants have been trained for more than 3,000 years to assist in the harvest of teak. They pull and drag heavy logs over steep ground and long, narrow trails inaccessible to machinery. The skilled elephant handlers of Northern Thailand are called Kwon Chang or mahouts. They develop a close, often lifelong relationship with an elephant, which can learn to respond to as many as 30 commands. Logging in Thailand is now illegal due to deforestation and land erosion. However, elephants are still used to demonstrate logging techniques for tourists. Logging does still occur in other parts of Asia, such as Myanmar (formerly Burma).

7. In a Place of Honor

The logging camp is located in a village inspired by mid-19th century architecture found in Northern Thailand. Look at the roofs of these buildings. **Using what you know about rain forest regions, why do you think the roofs of these buildings are so steep?** These picturesque buildings feature steeply pitched roofs with overlapping layers of roof lines. The steep slope of the roofs helps the heavy rains pour off the building. At the very top, the roof beams at the front and rear of the building extend beyond the ridgepole to form v-shaped designs called kalae. The kalae represent the historic tradition of placing water buffalo horns on the roofs of Thai houses to show the wealth of the family.

8. Malayan Tapirs

After leaving the village you will follow the path north towards the Elephant Pavilion. Stop to see the tapirs.

Are they a kind of elephant? No, but they do have a rather long and flexible nose that resembles a small trunk. This animal looks a lot like an elephant or a pig but it is actually more closely related to the horse. Its long snout (nose and mouth) help it to search out and grab its food. Tapirs live in the same forest as the Asian elephants, and also make pathways – but they are much smaller animals, and their pathways are correspondingly smaller.

9. Elephants

When you see the elephants, take a few minutes to look at them, and to watch them move. Watch an elephant walk.

What do you notice about her feet as she walks that would help her walk through the rain forest? Elephants have very soft cushions in the middle of their feet, under the foot bones. When the elephant puts weight on a foot, it spreads out, and sinks less deeply into the mud. When the elephant picks up the foot, it contracts, making it less likely to get stuck in the mud.

If you were a scientist studying these elephants, how would you tell them apart? Can you find some individual differences that would help you to identify each elephant?

10. Rong Chang – The House of Elephants

A large temple-like structure rising more than 50 feet, Rong Chang is designed to be a place of honor for the elephants and their stewards. It can comfortably hold up to six elephants. Elephants are the largest living land mammal and

as such they need a large amount of space and a strong structure in which to live...not to mention wide doors!

The steeply-pitched roof features gabled finials shaped in the form of two elephant heads facing each other with their trunks arching toward the sky. Elephant doorways are capped with arches, representing rainbows in traditional Thai culture. Within the archways, ceramic artwork incorporates icons from Thai art, including elephants, lotus flowers and foliage. The elephant barriers inside are designed to resemble those forming the royal elephant stockade in Thailand. Rong Chang offers a wealth of insight into Thai culture, but more importantly, it has a practical side. The building contains a large holding area where the elephants sleep, a quarantine area and a large indoor shower for bathing the elephants when the outdoor pool is too cold.

11. Baby Elephant Sculpture

This tour ends next to the sculpture of the baby elephant. The sculpture is on your right hand side as you leave the north side of the elephant barn. **What do you think about the size?** The sculpture is the size of a newborn elephant. Baby elephants weigh from 150 to 300 pounds. **Did you notice that the sculpture looks hairy?** Baby elephants are quite hairy. As they grow, the hairs get further and further apart, making the adult elephant look a lot less hairy than a young one.

The End

As you leave the Elephant Forest, think about and discuss the following question: **What can you do to save elephants?** Plenty – and you're doing a lot of it already! Learn about animals! Share what you have learned today about elephants with your family and friends. Get them excited about wildlife.

Reduce, reuse, recycle: We know you've heard about these things but.... **do you know why they are important?** Recycling, reducing or reusing paper reduces the demand for both tropical and temperate timber. Aluminum contains bauxite which is mined in many areas, including tropical rain forests. If we reduce the amount of aluminum we use, or recycle what we do use, we can help reduce deforestation. This is true for many other products. **What can you recycle, reduce or reuse which would help save rain forests? Would these actions help any other habitats?**

Woodland Park Zoo supports the Sri Lankan Elephant Awareness Project. Children are taught about the biology, habits and social life of the nearly 2,500 elephants that exist on the small island nation. Most of the children have only had negative contacts with elephants. Through this program, it is hoped that a deeper understanding of the elephants' needs will be fostered in upcoming generations. Learning about elephants, whether you are a child in Sri Lanka or a child in Washington state, can help to ensure a positive future for all elephants.

Additional background information on the zoo's Tropical Asia exhibit is provided in Woodland Park Zoo's Tropical Asia Teacher Packet available by calling the ZooStore at 206.548.1535.