

Grade 5

Self – Guided Tour Forest of Uco



Aligns with the following Arizona State Science Standards

S3C3-01, S3C3-02, S3C3-03, S3C3-04, S3C3-05

S4C3-01, S4C3-01, S4C3-02, S4C3-03

S4C4-01, S4C4-02

This self-guided tour through the Forest of Uco is offered by the Phoenix Zoo as an aid for **fifth grade** teachers planning a visit to the zoo. The tour outlines discussion points for each location on the Forest of Uco trail. These discussions can be the starting point for further activity in the classroom or a means to reinforce or review concepts already discussed.

Animals in the Forest of Uco

Spectacled Bear

Pacu

Black and Gold Howler Monkey

Toco Toucan

Scarlet Macaw

Dexter Cow

Common Boa constrictor

1. Base Camp

This area is where Uco's fictional resident scientist got her jeep stuck in the mud and set up camp. Scientists have a large role in the well-being of the rainforest. They research the plants and animals in the rainforest, what conditions they need to survive, how we can use them sustainably, and what economic value they can offer to humans.

- Discuss with students the importance of scientific research. Have them brainstorm reasons why the rainforest might be an important piece to study for a scientist.
- Discuss the rainforest ecosystem. Have the students begin to point out the components of the rainforest ecosystem.

2. Spectacled Bear

The spectacled bear is an important seed disperser in the rainforest. A large percentage of their diet is fruits. The seeds are passed through the body in their droppings and spread throughout the forest. This helps the forest to propagate itself. Seed dispersers are an essential part of the rainforest ecosystem. Without them the plants could not propagate as easily.

- Discuss the concept of seed dispersers with students. What other roles might animals play in the rainforest ecosystem that the ecosystem would need to survive? (decomposition, pollination)
- What adaptations does the bear have to survive in the rainforest?

3. Pacu

Above the pacu tank is a fig tree. The figs fall into the water and the Pacu eat the fruits. They help disperse the seeds through their droppings. The fig is only pollinated by a particular type of wasp. This is an example of a very interdependent group of organisms. Discuss this concept with your students.

4. Howler Monkey/Toco Toucan/Scarlet Macaw

These three animals live in the canopy layer of the rainforest while the spectacled bear lives in the understory. Each layer is dependent upon the other layers to exist. Different organisms survive in each layer due to the varied conditions between them.

- Discuss the rainforest layers with students and how each layer contributes to the overall ecosystem of the forest, while being a mini-system in itself.
- Have students consider how each layer would be affected without the others.
- What adaptations do these animals have that might help them survive in the rainforest?

5. Clear cut area and family farm

This is an example of a clear cut area in the rainforest. Look off to the side and notice a pile of burnt wood.

- Just before you get to this area, have students stop and listen to the sounds around them and notice the temperature, amount of shade, anything they can about that area. Have them do the same thing in the clear cut area. What differences do they notice?
- In this area discuss how the elements of the rainforest ecosystem are affected by these actions. What are the conditions that aren't being met for the animals and plants to be able to survive? In this area the temperature and amount of sunlight are different.

6. Tairona artifacts

Just before the clear cut area you'll see a bear-like statue and an archeological dig site.

These are artifacts and relics left over from a fictional group called the Tairona (the Tairona are based upon the Kogi which actually existed in Colombia). These humans lived peacefully with the rainforest for years. There are many indigenous groups that were able to. The message stones spread throughout the forest give suggestions as to how these people lived peacefully in the forest.

- How do the students think they lived peacefully?
- What solutions can we find for modern problems in how they lived?

7. Wrapping it up

At the end of your hike, take a few moments to consider the following questions with your students? What were some of the adaptations that they noticed the rainforest animals had? Could any of these adaptations help them in other environments? What might the animals in the rainforest do to adjust for the changes caused by clear cutting and other factors? What happens when animals are not able to adapt to changes in the environment?