

CONSERVATION CASE STUDIES

TEACHER GUIDE FOR EXPEDITION



PROGRAM OVERVIEW

- This 45 to 60 minute program leads students on an exploration of endangered species in Seneca Park Zoo.
- Students engage in activities and discussions with a Zoo educator to investigate the factors that can cause a species to become endangered and explore the ways that people can help prevent extinction.



LEARNING STANDARDS

NextGen & New York State P-12 Science Learning Standards:

- **High School:** Interdependent Relationships in Ecosystems, Natural Selection and Evolution, Engineering Design



HOW TO PREPARE YOUR STUDENTS

Logistics

- Have your students split into groups of 15 or fewer.
- Assign 1-2 chaperones/teachers per group.
- Make sure that students are dressed for the weather.
- Provide name tags for students to wear.

Content

- Students should be able to get information from a bar graph and map.
- It is helpful to pre-teach some of the factors that can cause a species to become endangered (habitat loss, poaching, illegal pet trade, and pollution).



WHAT TO EXPECT WHEN YOU ARRIVE

- Your buses will pull up to the drop off area at the Front Gate.
- A Zoo staff person will check in your bus.
- You will check in with Admissions. Make sure that you know the total number of guests (students, teachers, and chaperones) in your group. Have payment ready unless you have already submitted a purchase order.
- While you are checking in with Admissions a Zoo staff member will greet your group and give a brief presentation on Zoo etiquette and safety. Your group will enter the Zoo and wait at a designated flag area.
- The Zoo Educator will take your first group and begin your Expedition. Subsequent Expedition groups will meet the Zoo Educator at the entrance to Genesee Trail at the times listed on the schedule provided to begin their Expedition.



ESSENTIAL QUESTIONS

- What factors can lead to the endangerment and extinction of species?
- How can humans have both negative and positive impacts on the conservation of an animal species?
- What are the costs and benefits to different approaches to conservation?



WHAT YOU WILL SEE DURING YOUR EXPEDITION



bald eagles



Panamanian golden frogs

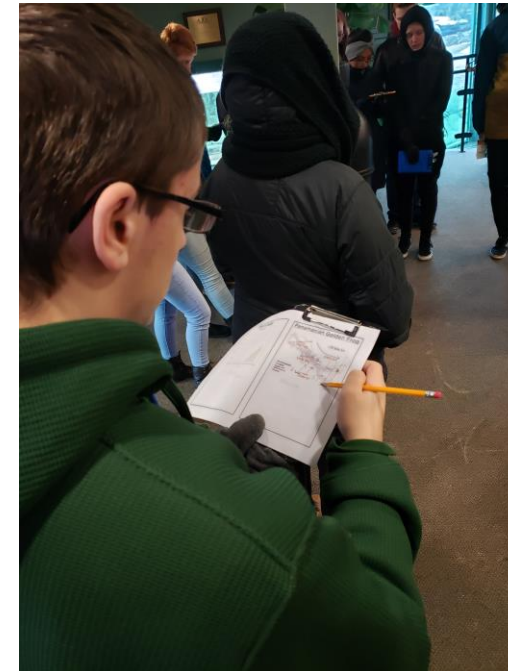


snow leopards



WHAT YOUR STUDENTS WILL DO

- Make observations
- Record observations in Field Guides provided by Zoo educator
- Engage in activities and discussions led by Zoo educator



POST VISIT SUGGESTIONS

Vulnerability Index Activity:

- Students complete a Vulnerability Assessment Chart for each of the species that they observed during their Zoo visit.
- A template for this chart can be found here:
https://c402277.ssl.cf1.rackcdn.com/publications/1069/files/original/WWF_CCVA_for_Species.pdf?1496678094
- Have students look at the scores each species received. Which is the most vulnerable? Which is the least? Did all the students rank the species similarly? Why or why not?
- Discuss with students how a vulnerability score might be useful to wildlife managers, wildlife advocacy groups, and individuals. Do students anticipate these species' vulnerability increasing, decreasing, or staying the same in the next 20 years? Why?



RESOURCES

- Seneca Park Zoo <http://senecaparkzoo.org/>
- Snow Leopard Trust <https://www.snowleopard.org/>
- Amphibian Rescue and Conservation Project <http://amphibianrescue.org/>
- U.S. Fish & Wildlife Service <https://www.fws.gov/midwest/eagle/recovery/biologue.html>
- Overview of Chytridiomycosis <https://amphibiaweb.org/chytrid/chytridiomycosis.html>

