



Children's Museum of Houston

Pre/Post Classroom Activities

Houston Wildlife Adaptations

Rationale

EcoStation is an active, outdoor/indoor environmental exhibit where visitors engage in ecological studies and explore environmental issues by visiting a native plant garden, a woodland area, the bayou table, the pond and a research pavilion. Through these and several other exhibit areas, visitors can participate in diverse hands-on activities such as stream bed creation, insect collecting, tree rubbings, footprint identification, and more!

TEKS Objectives (Science)

5.9A: Compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem.

5.9B: Analyze and describe adaptive characteristics that result in an organism's unique niche in an ecosystem.

5.9C: Predict some adaptive characteristics required for survival and reproduction by an organism in an ecosystem.

Background

In this lesson, children become familiar with Houston ecosystems and how the living organisms in that ecosystem depend on each other. Children will be able to identify and describe the different ecosystems of the Houston area, and compare, analyze, describe, and predict how the living organisms in the Houston ecosystems use adaptive characteristics to survive. Children will later be able to further explore plants in their visit to the *EcoStation* exhibit.

Vocabulary

Biome – A large community of plants and animals that occupies a distinct region.

Habitat – The natural environment of an organism.

Ecosystem – A system formed by the interaction of a community of organisms with their environment

Adaptation – The ability of a species to survive in a particular ecological niche

Food chain/web – A series of organisms interrelated in their feeding habits, the smallest being feed upon by a larger one, which in turn feeds a still larger one, etc.

Materials (per group of students)

- Computers
- Books from recommended reading list

- Research materials (reference books, index cards, highlighters, etc.)
- Wildlife Data Sheets

Procedure

1. After completing the project *Getting to Know the Ecosystems of Houston*, students will complete a case study in which students will visit one of the Houston Wilderness Sites at least 4 times in a span of six weeks to collect specimens and gather data about native wildlife to the area.
2. When data collection is complete, students report data back to the rest of their class in the form of a PowerPoint Presentation.

Questions to ask

1. What did you learn about the specimens and wildlife you collected data from in at your Houston Wilderness Site?
2. How can this information be used to help this ecosystem survive?
3. What are some ways you could help in fighting issues that are harming this Houston ecosystem?

Extensions

Students volunteer at a local Houston Wilderness Site to gain experience and knowledge in native wildlife.

Resources

Recommended Reading:

- Houston Atlas of Biodiversity by Rick Bass (Texas A&M University Press) Focuses on habitats, animal and plant communities, and broad multi-county ecoregions of Houston.
- Science of Living Things Series Books including What are Food Chains and Webs, How do Animals Adapt?, How do Animals Find Food? , What are Camouflage and Mimicry?, What is hibernation?, What is Migration?

Websites

- Houston Wilderness <http://www.houstonwilderness.org>. Houston Wilderness provides an in depth look at the different ecosystems and wildlife of the Houston and surrounding areas including an interactive map and other resources.
- Dirtmeister's Science Reporters: Animal Adaptations <http://teacher.scholastic.com/dirtrep/animal/index.htm>. This Dirtmeister learning activity asks students to observe an animal and look for specific adaptations that aid its survival.
- EcoKids: Animal Adaptations http://www.ecokidsonline.com/pub/eco_info/topics/climate/adaptations/index.cfm. An interactive website that helps students learn about animal adaptations.

- Utah Education Network: Animal Adaptations
http://www.uen.org/utahlink/activities/view_activity.cgi?activity_id=4750. Explains what an adaptation is and examples of different animal adaptations.
- Biology of Plants: Plant Adaptations <http://www.mbgnet.net/bioplants/adapt.html>. Explains what an adaptation is and gives examples of adaptations of various plants in different biomes.
- NatureWorks: Structural and Behavioral Adaptations
<http://www.nhptv.org/NatureWorks/nwep1.htm>. Explains the difference between structural and behavioral adaptations.