Neighborhood Wildlife: Ohio Live Animals (Grades 9 to 12)

DESCRIPTION

Live animal programs provide an up-close look at native Ohio species and provide an exciting and memorable learning experience. Each program is customized based on the grade level of your group. Students may investigate types of animals, adaptations, or animal roles within an ecosystem as part of the lesson.

Save time after your program to take your group outside to meet the rest of our animal ambassadors in the Ralph Perkins II Wildlife Center & Woods Garden - Presented by KeyBank.

OBJECTIVES

- Identify and classify animals based on the similarities and differences in characteristics between 3 major groups: mammals, birds, and reptiles.
- Describe behaviors, interactions, and adaptations of each presented animal that help them thrive in their habitats.
- Analyze the impacts of change on wildlife within an ecosystem caused by natural or man-made disturbances and availability of resources.

OHIO'S LEARNING STANDARDS

High School - BIOLOGY

Biodiversity -- Genetic diversity

- Use a model or simulation to analyze the impact of an environmental stressor on the genetic diversity and long-term survival of a population

Biodiversity -- Species diversity

- Propose and justify suggestions to increase diversity and stability of an ecosystem
- Design, evaluate, and refine a solution to reduce the impacts of human activities on the environment and biodiversity.

Loss of diversity -- Climate change

- Describe feedback loops that exist between sunlight, the ocean, the atmosphere, and the biosphere.

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Before your Program

If this will be your first trip to the Museum for some of your students, you may want to discuss the following questions:

- What is a Museum? Why are we going to the Cleveland Museum of Natural History?
- How should we handle objects at the Museum?
- Use the vocabulary and additional resources provided in this Teacher Guide to preview or review program content with your class

VOCABULARY

adaptation – The process by which a species is fitted to their environment.

amphibian – an ectothermic, vertebrate animal with moist skin, produces eggs without a shell and undergoes metamorphosis with its young in a larval stage. Most amphibians move between aquatic and terrestrial environments in their life cycle.

aquatic – living in the water.

arboreal – living in trees.

biologist – a person who studies plant and animal life.

bird – an endothermic, vertebrate animal that lays hard shelled eggs, and has feathers as a body covering.

brumation – the hibernation of reptiles and amphibians in which body temperature drops, heart and respiratory rates slow, but animals may move on warmer days to find water.

carnivore – a primarily meat-eating animal. Carnivore teeth are all sharp and pointed.

classification – an orderly system based on physical and/or behavioral characteristics.

diurnal – active during the daytime.

ecosystem – an energy processing system involving the interactions of biotic and abiotic parts of the environment.

ectothermic – an organism that cannot generate and conserve heat to maintain a stable body temperature. Ectotherms move between warm and cool environments, and body temperature can vary (reptiles, amphibians and most fish).

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endothermic – the ability of an organism to generate and conserve heat in order to maintain a stable, warm body temperature (mammals, birds and some fish).

feral – domestic animals living in the wild (example: wild horses or mustangs).

fish – an aquatic, ectothermic, vertebrate animal with scales, breathes using gills and moves using fins.

food chain – the transfer of energy and nutrients by an organism consuming another.

habitat – the place in which an animal lives to reproduce, find food, water and shelter.

herbivore – a primarily plant-eating animal. Herbivores have teeth that tend to be flat or rounded.

herpetologist – a scientist that studied amphibians and reptiles.

hibernation – deep winter sleep in which some endothermic animals live off stored fat and slows its metabolism.

ichthyologist – a scientist who studies fish.

indigenous – native to a particular area.

mammal – an endothermic, vertebrate animal, that has hair or fur as covering and feeds its young milk.

marsupial – mammals that have a marsupium (pouch) for holding and nursing their young.

migration – periodic or seasonal travel of a group of animals from one area to another.

nocturnal – active at night.

omnivore – an animal that readily eats both plants and meat. Omnivores tend to have many different teeth with many different shapes.

ornithologist – a scientist who studies birds.

reptile – an animal that is ectothermic (cannot produce its own heat), has scales, breathes air with lungs and generally lays eggs with soft or leathery shells.

terrestrial – living on land.

vertebrates – animals with backbones.

zoologist – a scientist who studies animals.

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EXTENSION ACTIVITIES

1. Use the outdoor space available to you to bring attention to the world of nature outside your classroom. Build a BioCube. Record your observations. Do this at different seasons of the year. Do you observe things that are similar? Different? Some wildlife may not be observed readily, but leave signs and clues that they were around. Tracks, fur, feathers, droppings, and places where they were feeding are clues as to what animals were around. Predict when wildlife may be more abundant or what season might be best to see wildlife. Don't forget about plants as they are the basis for the food chain. Look for leaf patterns to determine different species of plants.
2. Have students select a species of local wildlife on which to report. Included should be information on habitat, food preferences, behaviors, family life, etc. Step it up a notch and have students select a wildlife species from another part of the world OR a species that is endangered. Challenge students to protect that species -- what would they need to do? Some species need certain food, some are migratory... so many things to consider!
3. Use iNaturalist to help identify species of plants, animals, and fungi that you come across. Take data such as the time of day it was observed, the habitat it was using, if an animal -- what behavior it was doing, the date visited, the temperature, and the weather. If a plant, is it in just budding, in flower, are seeds/fruits forming?

ONLINE RESOURCES FOR TEACHERS AND STUDENTS

Click the link below to find additional online resources for teachers and students. These websites are recommended by our Museum Educators and provide additional content information and some fun, interactive activities to share with your class.

Wildlife | Cleveland Museum of Natural History

CMNH Educators regularly review these links for quality. Web addresses often change so please notify us if any links have issues.

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