TEACHER GUIDE

Neighborhood Wildlife: Live Animals (6th Grade-8th Grade)

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

- Observe live common species of wildlife that may be found throughout the state, highlighting mammals, birds and reptiles
- Classify major groups of vertebrate animals (fish, amphibians, reptiles, birds and mammals) based on characteristics
- Discuss the behaviors and interactions of wildlife as they relate to the ecosystem and may include; adaptations, habitat preferences, migration, predator-prey relationships, hibernation, or reproduction
- 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

GRADE 7
Science: Life Science – Cycles of Matter and Flow of Energy

- Matter is transferred continuously between one organism to another and between organisms and their physical environments
- In any particular biome, the number, growth and survival of organisms and populations depend on biotic and abiotic factors

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GRADE 8
Science: Life Science – Species and Reproduction

- Reproduction is necessary for the continuation of every species
- Diversity of species occurs through gradual processes over many generations. Fossil records provide evidence that changes have occurred in number and types of species
- The characteristics of an organism are a result of inherited traits received from parent(s)

BEFORE YOUR PROGRAM & HOW TO PREPARE FOR YOUR VISIT

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 – a physical or behavioral change that helps an organism survive in its habitat

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

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carnivore – an animal that eats and processes meat

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)

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 – an animal that feeds on and processes plants

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, and processes, both plants and meat

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ornithologist – a scientist who studies birds

reptile – an ectothermic, vertebrate animal with scaly skin, and lays eggs with soft or leathery shells

terrestrial – living on land

vertebrates – animals with backbones

zoologist – a scientist who studies animals

EXTENSION ACTIVITIES

1. Use the outdoor space available to you to bring attention to the world of nature outside your classroom. Build a BioCube. See https://www.cmnh.org/learn/protectcle. 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, 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 https://www.inaturalist.org/ 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.

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

Cleveland Museum of Natural History http://www.cmnh.org

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EDUCATOR RESOURCE CENTER (ERC)

Educator Resource Center
CLEVELAND MUSEUM OF NATURAL HISTORY
Celebrating 30 years of supporting science education

The Educator Resource Center is dedicated to providing teachers with the classroom resources and professional development they need to create dynamic, enriching, and inquiry-based experiences for their students.

Contact the ERC at 216-231-2075 for information on individual or school membership.

Visit the Museum's ERC website for more information https://www.cmnh.org/ERC

MATERIALS FOR LOAN

With close to 100 dioramas and over 130 thematic teaching kits, our lending library has the materials you need to make science come alive for your students.

If you're interested in additional resources be sure to check out the following ERC materials or browse ERC materials online at https://cmnherc.myturn.com/library/

EDUCATOR PROFESSIONAL DEVELOPMENT

Get connected to trending teaching methods, best practices in science education, and hot topics in current scientific research.

To learn more visit https://www.cmnh.org/learn/educator-resource-center/educator-workshops

Email inquiries to erc@cmnh.org.

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