



TEACHER GUIDE

Neighborhood Wildlife: Live Animals (3rd Grade-5th 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

- View at least 3 groups of live animals: mammals, birds, and reptiles
- Identify characteristics of each group of animals – mammals, birds, and reptiles
- Describe three features, traits or adaptations of animals that help them live and survive in their habitats
- Identify the roles of the animals within ecosystems

OHIO'S LEARNING STANDARDS

GRADE 3

Science: Life Science – Behavior, Growth and Changes

- Plants and animals have life cycles that are part of their adaptations for survival in their natural environments
- Organisms' physical and behavioral traits affect their ability to survive and reproduce
- Differences in inherited traits give some individuals an advantage in surviving and/or reproducing

GRADE 4

Science: Life Science – Earth's Living History

- Suitable habitats depend upon a combination of biotic & abiotic factors
- Changes in an organism's environment are sometimes beneficial to its survival and



sometimes harmful

- Fossils can be compared [to one another and] to present-day organisms according to their similarities and differences

GRADE 5

Science: Life Science – Interactions within Ecosystems

- Organisms perform a variety of roles in an ecosystem.
- All of the processes that take place within organisms require energy

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

abiotic - non-living chemical or physical parts of the environment, not derived from living organisms

adaptation – an alteration that an animal develops to help it survive

amphibian – a vertebrate animal with moist skin that produces eggs without a shell. Amphibians move between aquatic and terrestrial environments in their life cycle.

aquatic – living in the water

biologist – a person who studies plant and animal life

biotic - living components of an environment, relating to or resulting from living things

bird – an egg-laying animal with warm blood and feathers

carnivore – an animal that eats meat

consumer - an organism that feeds on plants or other animals for energy

decomposer - an organism that breaks down organic materials (Fungus, Bacteria & Invertebrates)



domestic – animals that depend on people for food and survival (dogs, cows)

ecosystem – an energy processing system involving the interactions of the living and non-living parts of the environment

extinction - the process of no longer being in existence, no living members of a group or species

feather – the outer covering of birds and some dinosaurs

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

fossil record - the history of life on our planet as documented by fossils (remains or imprints of organisms from earlier geologic time periods)

habitat – the place where an animal lives the place in which animals live, reproduce and find food, water and shelter

herbivore – an animal that feeds primarily on plants

hibernation – deep winter sleep in which the animals lives off stored fat and slows its metabolism

invertebrates – animals without backbones

mammal – a warm-blooded animal that has hair or fur and feeds its babies 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

Producer - a living organism that makes its own food from sunlight, air or soil. The base of the trophic levels

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

raptor – a bird of prey, such as a hawk or owl, that catches food with TALONS, the claws of raptors

terrestrial – living on land

trophic level - feeding relationships among organisms in a food web/chain. Each of several hierarchical levels in an ecosystem, comprising organisms that share the same function in the food chain and the same nutritional relationship to the primary sources of energy




vertebrates – animals with backbones

wild – surviving with their own skills, instincts and experience

zoologist – a person who studies animals

EXTENSION ACTIVITIES

1. Use the outdoor spaces available to you to bring attention to the world of nature outside your classroom. Take a nature walk and record your observations.
 - Do this at different seasons of the year. Do you observe things that are similar? Different?
 - **Look for examples of the different ecosystem roles in a nearby natural area: producer, consumer, decomposer.**
 - **Look for examples of the different trophic levels as you explore - which level has the highest representation? Which level has the least amount of representation?**
 - **As you walk, look for evidence of human-environment interactions. What are those interactions and would they be beneficial or harmful to the plants and animals living in/around those spaces?**
2. Show photos of native Ohio animals and of non-native animals. Name and discuss the ones children are familiar with and introduce those they may not know. **Encourage students to choose an unfamiliar native Ohio plant or animal to learn more about. What role does it serve in Ohio habitats/ecosystems? How have human actions influenced this organism's ability to survive and thrive?**
3. **Create a class life list: Scientists often track the different plants and animals they see as they move through their day to document the variety of life where they are.** Compile a **life** list of different species **students** observe around school and/or home. The list may include vertebrate and invertebrates. Take data such as the time of day it was observed, the habitat it was using, what behavior it was doing, the date visited, the temperature, the weather, etc. **If possible, take pictures of the organisms students see & share those observations on iNaturalist.**
4. Set up a bird feeder outdoors and observe the different birds or other animals using the feeder. Do some animals/birds dominate the feeder and chase others away? Are there different behaviors between male and female? Over a period of days try changing the type(s) of seed(s) or other foods (ex. Sunflower seed, millet or suet). Predict whether or not the same animals use the food or different ones. **Track the birds that you see visiting your feeders & submit your findings to eBird. You can also register your feeder with Cornell Lab of Ornithology's Project FeederWatch and participate in an international citizen science project.**

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5. Some wildlife may not be observed readily, but leave signs and clues that they were around. Explore tracks, fur, feathers, droppings, and places where they **animals may have been** feeding for clues as to what animals were around.
 6. Draw or take photographs of the plants that are growing in the area that wildlife may or have used. Are the plants bitten? Are there holes in leaves? **Can you determine what type of animal was eating or using the plant material from the type of damage left behind? Share with students evidence of boring insects, galls, leaves that have been nibbled, etc. What clues do these pieces of evidence reveal about the animals living in this area?**

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>

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.



THE CLEVELAND MUSEUM OF NATURAL HISTORY

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