Lake Erie Nature & Science Center

WEB OF LIFE

Grades 4 – 5 | 90 Minutes

Program Overview

Description

In this program we will focus on the basic principles of ecology. Learn how living organisms depend on one another for survival and discuss how humans interact with the natural world. During many hands-on activities, students will create food chains and discover how the resources of our planet are distributed. A live animal presentation will be included in this program.

Adult chaperones recommended: 2

Content Standards

Subject	Ohio Department of Education Standards
Life Science	Changes in an organism's environment are sometimes beneficial to its survival and sometimes harmful.
Life Science	Organisms perform a variety of roles in an ecosystem. All of the processes that take place within organisms require energy.
Climate Literacy Principles	1. The Sun is the primary source of energy for Earth's climate system. 3. Life on earth depends on, is shaped by and affects climate

Vocabulary

adaptation
carnivore
consumer
decomposer
ecology
ecosystem
energy
environment
food chain
food web
herbivore
organism
omnivore
offspring
producer
resource

Books we recommend

- Animal Behavior by Joseph Midtown. World Book, 2014.
- Food Chains and Webs by Louise and Richard Spilsbury. Heinemann Library, 2004.
- Plant and Animal Adaptations by Joseph Midthun & Samuel Hiti. World Book. 2014.
- Survival and Change by Steve Parker. Heinemann Library, 2006.
- "How Wolves Change Rivers" https://www.yellowstonepark.com/things-to-do/wolf-reintroduction-changes-ecosystem

Post-Trip Activities

- Have a class discussion to brainstorm ways that humans can improve the health of ecosystems (e.g., recycling wastes, establishing rain gardens, planting native species).
- Given a list of common organisms and a description of their environmental interactions, draw a food web using arrows to illustrate the flow of energy. Have students identify the producers and consumers.
- Design and build a terrarium. Considerations for the ecosystem include the size of the container and the location to create the proper temperature, light, humidity, and organisms that will support one another.
- Create an illustration to explain the flow of energy within an ecosystem (food web, food chain) pertaining to an endangered species. ODNR-Division of Wildlife's A to Z Species Guide has photos, and information, including diet, of Ohio's wild animals https://ohiodnr.gov/discover-and-learn/animals/search-for-species

Other Resources

- Use webcams to view animals in their natural habitat or simulated environments to observe and record physical characteristics of the animals as well as behavioral traits that are taught from parent to offspring. Falcon cams and bat cams are used by the Ohio Department of Natural Resources and can be used for this study. https://www.bgsu.edu/falconcam

  https://www.clevelandmetroparks.com/about/conservation/bald-eagle-nest-livestream

  https://dickpritchettrealestate.com/southwest-florida-eagle-cam/