



Ohio Academic Standards Addressed By Zoo Program

GUIDED TOUR—ADAPTATIONS (K-12)

Program description:

Discover how nature works. Search for clues to discover how plants and animals survive in the wild. Observe the physical and behavioral characteristics that define a species and its role within an ecosystem.

Ohio Science Standards addressed by this program, organized by grade band and then standard:

GRADES K-2

Standard: Life Sciences

Benchmark A: Discover that there are living things, non-living things and pretend things, and describe the basic needs of living things (organisms).

Indicators:

Kindergarten

2. Discover that stories (e.g., cartoons, movies, comics) sometimes give plants and animals characteristics they really do not have (e.g., talking flowers).

Grade 1

1. Explore that organisms, including people, have basic needs which include air, water, food, living space and shelter.
4. Investigate that animals eat plants and/or other animals for food and may also use plants or other animals for shelter and nesting.

Grade 2

1. Explain that animals, including people, need air, water, food, living space and shelter; plants need air, water and nutrients (e.g., minerals), living space and light to survive.
5. Explain that food is a basic need of plants and animals (e.g., plants need sunlight to make food and to grow, animals eat plants and/or other animals for food, food chain) and is important because it is a source of energy (e.g., energy used to play, ride bicycles, read, etc.).

Benchmark B: Explain how organisms function and interact with their physical environment.

Indicators:

Kindergarten

5. Investigate observable features of plants and animals that help them live in different kinds of places.
6. Investigate the habitats of many different kinds of local plants and animals and some of the ways in which animals depend on plants and each other in our community.

Grade 1

3. Explore that humans and other animals have body parts that help to seek, find and take in food when they are hungry (e.g., sharp teeth, flat teeth, good nose and sharp vision).
5. Recognize that seasonal changes can influence the health, survival or activities of organisms.

Grade 2

2. Identify that there are many distinct environments that support different kinds of organisms.

6. Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).

Standard: Scientific Inquiry

Benchmark A: Ask a testable question.

Indicators:

Kindergarten

1. Ask “what if” questions.
2. Explore and pursue student-generated “what if” questions.

Grade 1

1. Ask “what if” questions.
2. Explore and pursue student-generated “what happens when” questions.

Standard: Scientific Ways of Knowing

Benchmark B: Recognize the importance of respect for all living things.

Indicators:

Kindergarten

3. Interact with living things and the environment in ways that promote respect.

GRADES 3-5

Standard: Life Sciences

Benchmark A: Differentiate between the life cycles of different plants and animals.

Indicators:

Grade 4

5. Describe how organisms interact with one another in various ways (e.g., many plants depend on animals for carrying pollen or dispersing seeds)

Benchmark B: Analyze plant and animal structures and functions needed for survival and describe the flow of energy through a system that all organisms use to survive.

Indicators:

Grade 3

2. Relate animal structures to their specific survival functions (e.g., obtaining food, escaping or hiding from enemies).

Grade 4

2. Relate plant structures to their specific functions (e.g., growth, survival and reproduction).

Grade 5

3. Trace the organization of simple food chains and food webs (e.g., producers, herbivores, carnivores, omnivores and decomposers).

GRADES 6-8

Standard: Life Sciences

Benchmark B: Describe the characteristics of an organism in terms of a combination of inherited traits and recognize reproduction as a characteristic of living organism essential to the continuation of the species.

Indicators:

Grade 6

4. Recognize that an individual organism does not live forever; therefore reproduction is necessary for the continuation of every species and traits are passed on to the next generation through reproduction.

Benchmark C: Explain how energy entering the ecosystems as sunlight supports the life of organisms through photosynthesis and the transfer of energy through the interactions of organisms and the environment.

Indicators:

Grade 6

8. Describe how organisms may interact with one another.

Grade 7

2. Investigate how organisms or populations may interact with one another through symbiotic relationships and how some species have become so adapted to each other that neither could survive without the other (e.g., predator-prey, parasitism, mutualism and commensalisms).

GRADES 9-10

Standard: Life Sciences

Benchmark F: Explain the structure and function of ecosystems and relate how ecosystems change over time.

Indicators:

Grade 10

15. Explain how living things interact with biotic and abiotic components of the environment (e.g., predation, competition, natural disasters and weather).

GRADES 11-12

Standard: Life Sciences

Benchmark E: Explain the interconnectedness of the components of a natural system.

Indicators

Grade 12

7. Relate diversity and adaptations to structures and functions of living organisms at various levels of organization.