



# CINCINNATI ZOO & BOTANICAL GARDEN



## Indiana Academic Standards Addressed By Zoo Program

### GUIDED TOUR — ADAPTATIONS (K-6<sup>th</sup> & Advanced Life Science)

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.

Indiana Science Standards addressed by this program:

#### GRADES K-6<sup>th</sup>

#### **Standard 1:** The Nature of Science and Technology

*Scientific Inquiry*

Kindergarten

K.1.1

Raise questions about the natural world.

1<sup>st</sup> Grade

1.1.2

Investigate and make observations to seek answers to questions about the world, such as “in what ways do animals move?”

*The Scientific Enterprise*

1<sup>st</sup> Grade

1.1.3

Recognize that and demonstrate how people can learn much about plants and animals by observing them closely over a period of time. Recognize also that care must be taken to know the needs of living things and how to provide for them.

*Technology and Science*

5<sup>th</sup> Grade

5.1.6

Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

#### **Standard 4:** The Living Environment

*Diversity of Life*

Kindergarten

K.4.1

Give examples of plants and animals.

K.4.2

Observe plants and animals, describing how they are alike and how they are different in the way they look and in the things they do.

2<sup>nd</sup> Grade

2.4.1

Observe and identify different external features of plants and animals and describe how these features help them live in different environments.

3<sup>rd</sup> Grade

3.4.1

Demonstrate that a great variety of living things can be sorted into groups in many ways using various features, such as how they look, where they live, and how they act, to decide which things belong to which group.

6<sup>th</sup> Grade

- 6.4.3 Describe some of the great variety of body plans and internal structures animals and plants have that contribute to their being able to make or find food and reproduce.

*Interdependence of Life*

1<sup>st</sup> Grade

- 1.4.3 Observe and explain that animals eat plants or other animals for food.

- 1.4.4 Explain that most living things need water, food, and air.

2<sup>nd</sup> Grade

- 2.4.2 Observe that and describe how animals may use plants, or even other animals, for shelter and nesting.

- 2.4.3 Observe and explain that plants and animals both need to take in water, animals need to take in food and plants need light.

- 2.4.4 Recognize and explain that living things are found almost everywhere in the world and that there are somewhat different kinds in different places.

*Interdependence of Life and Evolution*

3<sup>rd</sup> Grade

- 3.4.5 Give examples of some kinds of organisms that have completely disappeared and explain how these organisms were similar to some organisms living today.

4<sup>th</sup> Grade

- 4.4.3 Observe and describe that organisms interact with one another in various ways, such as providing food, pollination, and seed dispersal.

6<sup>th</sup> Grade

- 6.4.8 Explain that in all environments, such as freshwater, marine, forest, desert, grassland, mountain, and others, organisms with similar needs may compete with one another for resources, including food, space, water, air, and shelter. Note that in any environment, the growth and survival of organisms depend on the physical conditions.

*Human Identity*

3<sup>rd</sup> Grade

- 3.4.6 Explain that people need water, food, air, waste removal, and a particular range of temperatures, just as other animals do.

4<sup>th</sup> Grade

- 4.4.7 Describe that human beings have made tools and machines, such as x-rays, microscopes, and computers, to sense and do things that they could not otherwise sense at all, or as quickly or as well.

**Standard 6: Common Themes**

*Models and Scale*

Kindergarten

- K.6.1 Describe an object by saying how it is similar to or different from another object.

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**ADVANCED LIFE SCIENCE: ANIMALS (L) STANDARDS**

**Standard: Animal Genetics and The Environment**

*Evolution*

- AS.4.14 Compare and contrast adaptations of animals for survival in different environmental conditions.