

Sweetbriar Nature Center's
Animal Interviews (Grades K-4)

NYS Elementary Science Core Curriculum Alignment

Standard 4 The Living Environment

Key Idea 3: Individual organisms and species change over time.

Performance Indicator 3.1 *Describe how the structures of plants and animals complement the environment of the plant or animal.*

3.1a Each animal has different structures that serve different functions in growth, survival, and reproduction.

- wings, legs, or fins enable some animals to seek shelter and escape predators
- the mouth, including teeth, jaws, and tongue, enables some animals to eat and drink
- eyes, nose, ears, tongue, and skin of some animals enable the animals to sense their surroundings
- claws, shells, spines, feathers, fur, scales, and color of body covering enable some animals to protect themselves from predators and other environmental conditions, or enable them to obtain food
- some animals have parts that are used to produce sounds and smells to help the animal meet its needs
- the characteristics of some animals change as seasonal conditions change (e.g., fur grows and is shed to help regulate body heat; body fat is a form of stored energy and it changes as the seasons change)

3.1c In order to survive in their environment, plants and animals must be adapted to that environment.

- animal adaptations include coloration for warning or attraction, camouflage, defense mechanisms, movement, hibernation, and migration

Key Idea 4: The continuity of life is sustained through reproduction and development.

Performance Indicator 4.1 *Describe the major stages in the life cycles of selected plants and animals*

4.1a Plants and animals have life cycles. These may include beginning of a live, development into an adult, reproduction as an adult, and eventually death.

4.1e Each generation of animals goes through changes in form from young to adult. This completed sequence of changes in form is called a life cycle. Some insects change from egg to larva to pupa to adult.

4.1f Each kind of animal goes through its own stages of growth and development

during its life span.

Key Idea 5: Organisms maintain a dynamic equilibrium that sustains life.

Performance Indicator 5.1 *Describe basic life functions of common living specimens (e.g., guppies, mealworms, gerbils)*

5.1a All living things grow, take in nutrients, breathe, reproduce, and eliminate waste.

5.1b An organism's external physical features can enable it to carry out life functions in its particular environment.

Performance Indicator 5.2 *Describe some survival behaviors of common living specimens.*

5.2b Animals respond to change in their environment, (e.g., perspiration, heart rate, breathing rate, eye blinking, shivering, and salivating).

5.2c Senses can provide essential information (regarding danger, food, mates, etc.) to animals about their environment.

5.2d Some animals, including humans, move from place to place to meet their needs.

5.2e Particular animal characteristics are influenced by changing environmental conditions including: fat storage in winter, coat thickness in winter, camouflage, shedding of fur.

5.2f Some animal behaviors are influenced by environmental conditions. These behaviors may include: nest building, hibernating, hunting, migrating and communicating.

5.2g The health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat and sunlight.

Key Idea 6: Plants and animals depend on each other and their physical environment.

Performance Indicator 6.1. *Describe how plants and animals, including humans, depend upon each other and the nonliving environment*

6.1a Green plants are producers because they provide the basic food supply for themselves and animals

6.1b All animals depend on plants. Some animals (predators) eat other animals (prey).

Standard 6 Interconnectedness: Common Themes

Key Idea 1: Systems Thinking

Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions.

- identify common things that can be considered to be systems (e.g., a plant, a transportation system, human beings)

Key Idea 2: Models

Models are simplified representations of objects, structures, or systems, used in analysis, explanation, or design.

- discover that a model of something is different from the real thing but can be used to study the real thing

Key Idea 4: Equilibrium and Stability

Equilibrium is a state of stability due either to a lack of changes (static equilibrium) or a balance between opposing forces (dynamic equilibrium).

- observe that things change in some ways and stay the same in some ways
- recognize that things can change in different ways such as size, weight, color, and movement. Some small changes can be detected by taking measurements