



BARBARA J. MAPP
FOUNDATION

Lesson Plan for Wildlife Education Field Trip Program

Grades: K-2

Subjects: Science

Curriculum Standards:

Kindergarten

Embedded Inquiry

GLE 0007.Inq.3 Explain the data from an investigation.

0007.Inq.3 Communicate understanding of simple data using age-appropriate vocabulary.

0007.Inq.4 Collect, discuss, and communicate findings from a variety of investigations.

Standard 3: Flow of Matter and Energy

GLE 0007.3.1 Recognize that living things require water, food, and air.

0007.3.1 Observe plants and animals and make records of their similarities and differences.

Standard 5: Biodiversity and Change

GLE 0007.5.1 Compare the basic features of plants and animals.

0007.5.2 Create a mural of an ecosystem and compare the characteristics of animals and plants within that environment (potential post-visit activity/assessment).

0007.5.3 Match pictures of animal and plant characteristics needed for survival to appropriate environments (potential post-visit activity/assessment).



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First Grade

Embedded Inquiry

GLE 0107.Inq.3 Explain the data from an investigation.

0107.Inq.3 Communicate understanding of simple data using age-appropriate vocabulary.

0107.Inq.4 Collect, discuss, and communicate findings from a variety of investigations.

Standard 3: Flow of Matter and Energy

GLE 0107.3.1 Recognize that plants and animals are living things that grow and change over time.

0107.3.2 Describe what plants and animals need in order to grow and remain healthy.

Standard 4: Heredity

GLE 0107.4.1 Observe and illustrate the life cycle of animals.

0107.4.1 Observe, describe, and record the life cycle of a particular animal.

Standard 5: Biodiversity and Change

GLE 0107.5.1 Investigate how plants and animals can be grouped according to their habitats.

0107.5.1 Observe plants and animals on the school grounds and group them according to where they are found.

0107.5.2 Create a chart of different habitats and match animals to specific locations (potential post-visit activity/assessment).



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Second Grade

Embedded Inquiry

GLE 0207.Inq.3 Explain the data from an investigation.

0207.Inq.3 Communicate understanding of simple data using age appropriate vocabulary.

0207.Inq.4 Collect, discuss, and communicate findings from a variety of investigations.

Standard 2: Interdependence

GLE 0207.2.1 Investigate the habitats of different kinds of local plants and animals.

GLE 0207.2.2 Investigate living things found in different places.

GLE 0207.2.3 Identify basic ways that plants and animals depend on each other.

0207.2.1 Draw or use pictures of a local environment to label the plants and animals.

0207.2.2 Investigate ways that plants and animals depend on each other.

0207.2.3 Construct a flow chart that demonstrates how plants, animals, and the environment interact to provide basic life requirements (potential post-visit activity/assessment).

Standard 3: Flow of Matter and Energy

GLE 0207.3.1 Recognize that animals eat plants or other animals for food.

0207.3.1 Describe the habitat of a particular organism based on its food, water, and air requirements.

0207.3.2 Design a model of a habitat for an organism in which all of its needs would be met (potential post-visit activity/assessment).

Standard 4: Heredity

GLE 0207.4.1 Compare the life cycles of various organisms.

0207.4.1 Compare and contrast the life cycles of different organisms such as a chicken, butterfly, meal worm, frog, or human.



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Standard 5: Biodiversity and Change

GLE 0207.5.1 Investigate the relationship between an animal's characteristics and the features of the environment where it lives.

0207.5.1 Compare and contrast the characteristics of organisms from two different environments.

207.5.2 Infer the characteristics needed by an organism to survive in a particular environment.

Overview:

During a guided tour of the Glen Leven landscape, students will engage with plants and wildlife, will learn about relationships between living and non-living things, and will participate in activities that will highlight the importance of healthy ecosystems.

Goals:

Students will learn how an ecosystem functions, how living and non-living things are interconnected, and about the roles that plants and animals play in an ecosystem.

Activities:

ECOSYSTEM LESSON

- Ecosystems are the plants and animals interacting with their non-living environments (weather, Earth, Sun, soil, atmosphere). An ecosystem's development depends on the energy that moves in and out of that system. Ecosystems are everywhere - a garden can be an ecosystem, and so is a river near your home.
- Students will learn that Glen Leven Farm is an ecosystem. When people still lived here at Glen Leven they were part of that ecosystem. They ate plants and animals and drank the water.
- Students will describe an ecosystem and give examples. How are we as humans connected to our own ecosystem?

○ **Habitat Web Activity**

- This activity illustrates the interconnection of all living things. Students will have the opportunity to think about the many different interactions within an ecosystem. This is an important concept to learn in order to understand more complex issues, such as the effects of drought, exotic species, pesticides, and habitat loss.
- During the Habitat Web activity, students will have a chance to create a web of connections between many different living and nonliving things found in a habitat.
- What happens to an ecosystem if organisms die out or a non-living element is altered?
- After the Habitat Web Activity, students will be given a scavenger hunt that they will fill out throughout their time at Glen Leven Farm.

DECOMPOSERS & PRODUCERS



- Students will learn about decomposers and producers in Glen Leven Farm's Education Garden.
- Students will discuss and understand why decomposers are important.
- Students will learn that soil doesn't just happen. It is the result of hundreds of years of activity that takes place above and beneath its surface.
- Students will see decomposers at work in the Worm Bin.

- Plants make up the biggest group within an ecosystem because they are the natural food producers for everyone. They are called producers because they produce their own food. They also produce all of the food that animals, including people, eat. Students will learn about the plants and food grown at Glen Leven Farm.
- Students will discuss and understand the importance of pollinators. Plants need pollinators to grow and produce food. The plant then uses the pollen to produce a fruit or seed. Many plants cannot reproduce without pollen carried to them by foraging pollinators.
- Students will engage with a beekeeper and see a honey bee demonstration.

PRIMARY & SECONDARY CONSUMERS

- Students will learn that animals that consume only plants are the primary consumers (herbivores). Secondary consumers eat primary consumers. They can be either carnivores (meat eaters) or omnivores (both plant and meat eaters).
- Students will learn that there are many primary and secondary consumers - they are second only to plants in the number of species that are supported by their existence.
- Students will discuss the importance of available food, water, shelter, and space. Students will be asked how we can all help wild animals by making sure they have access to the habitat they need.
- Students will discuss how we can tell if an animal has been in our backyard.
 - **Footprint Activity**
 - There are three P's of animal tracks: print, pattern, and placement. Print refers to an individual footprint's size and details. Pattern reveals how the animal is moving (walking, hopping, etc.). Placement is where the tracks are found. By looking at all three things, students can form a hypothesis about which animal made the tracks.
 - **First P: Print.** Each student will trace his/her own shoe on a sheet of paper and make a rubbing of the sole. The student will place one of his/her shoes in the middle of the circle. The rubbings will then be passed out randomly. Ask the students to find the shoe that matches the rubbing they hold. Afterward, the students will compare their footprints to those of animals. Explain that animals have unique footprints, too (size, shape, claws versus no claws, number of toes, and so on).

- **Second P:** Pattern. How do the students' rubbings differ? Explain that this is called pattern. Point out the tracks on the Track Activity Mat. Can they guess which is which?
- **Third P:** Placement. Explain that "placement" refers to where you find animal tracks. Placement helps you figure out what kind of animal tracks you are looking at because most animals favor certain habitats over others.
- The students will discuss the types of wild animals that could have homes in their backyards.



PREDATORS (Carnivores)

- Students will take a short walk to visit the miniature donkeys and cattle.
- Students will learn why the donkeys are on the property - to protect the cattle (Herbivores/Primary Consumers) from coyotes (Predators/Carnivores). This predator/prey relationship is important to the ecosystem.
- Students will be encouraged to think of other predator/prey duos besides cows and coyotes and discuss. Examples include: wolf/elk, grizzly bear/salmon, or owl/mouse.
- Students will be asked to consider what would happen if there were no predators in a place with many prey.



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Students will return to the house after they have visited all four stations for a wrap up. Educators will be given take home sheets of activities for students to do at home or in the classroom.