

FOREST AND FLOWERS

Wonderful Illinois Woodlands

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Teacher's Guide

Spring: Forests and Flowers

Grade Level: Fifth – Sixth Grades

Program Length: 2 hours

INTRODUCTION

Long before the trees open their buds or the last snow melts, the forest floor is teeming with signs of spring. With the warmer breezes of March, tiny wildflowers poke their green shoots through the leaf layer of the forest floor and grow rapidly. They take advantage of the unobstructed sunlight. During the field trip, **Forest and Flowers**, we shall do the same! We'll look up to the treetops and down to the Carpets of wildflowers as we observe the many interrelationships of Illinois native woodland ecology. With changes emerging every day as the Earth warms, spring is such an exciting time to study the flora and fauna of Illinois.

OBJECTIVES

1. To observe many different Illinois spring native wildflowers and discover their importance in the forest ecosystem.
2. To recognize and name plant parts and functions, including flowers.
3. To introduce wildflower adaptations to attract pollinators.
4. To observe and study the interrelationships between the forest layers and plant and animals in a woodland ecosystem.
5. To appreciate the beauty and intricacy of blooming beauties in our natural world as spring returns to Illinois.

THIS PROGRAM HAS THE POTENTIAL TO MEET THE FOLLOWING ILLINOIS LEARNING STANDARDS:

Learning Area	Goal	Standard	Benchmark
Language Arts	4	A	1a, 1b, 2a, 2b
Language Arts	4	B	1b, 2b
Mathematics	6	D	1
Science	11	A	1a, 1b, 2a, 2b
Science	12	A	1a 1b, 2a, 2b

Science	12	B	1a, 1b, 2a, 2b
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SUGGESTIONS FOR PRETRIP ACTIVITIES

1. Ask a local florist to donate leftover fading flowers to your classroom. With magnifying glasses, closely examine the parts of the flower – pistil, stamens, sepals, petals, leaves, and stem. Compare and contrast different flowers. Carefully, with a scalpel or razor blade, show the students how to dissect a pistil and look inside.
2. After close examination of flower parts, ask students to choose a favorite flower to recreate through art. Allow the children to choose among different mediums to express their favorite flower.
3. Introduce pollination and flower reproduction to students by looking for pollen on stamens of flowers in the schoolyard or neighborhood. If there are no flowers nearby, find pictures and photos to show adaptations of flower structures to attract pollinators. (Example: colored petals attract most insects, tubular flowers attract butterflies and hummingbirds, stinky smelling flowers attract flies and beetles, etc.) If flowers can be pollinated by wind, they often have insignificant small flowers like the maple and oak tree flowers.
4. Encourage creativity and ask students to design their own flower. Ask students to take in consideration the type of pollinator that would be attracted. This is a good activity to help students to understand the concepts of adaptation in nature.

DESCRIPTION OF LINCOLN MEMORIAL GARDEN FIELD TRIP

The field trip will begin with a brief introduction to Lincoln Memorial Garden in one of the Council Rings of the Garden. A naturalist will lead a discussion about the history of the Garden, the expectations of visitors to the Garden and an overview of the forest layers of a woodland community to be observing during the hike.

The students will be divided into small groups of 10 – 12 children. During the naturalist-led hike, the students will walk the Garden's trails to explore the forest layers of our native woodland community and contrast them with the sun openings of the native prairie community. We'll look up to the canopy and learn to identify trees by their buds and leaves and all the way down to the forest floor to learn more about the woodland wildflowers that carpet the land as spring unfolds. There will be food chains and food webs to notice as we look and listen for the animals that live in and near the trees and shrubs. Plant adaptations will reveal themselves as we see, smell, feel, and perhaps even taste new growth after a winter season of dormancy.

SUGGESTIONS FOR POST TRIP ACTIVITIES

1. Design an art project that encourages reusing materials that would otherwise go into the trash. (Tie the lesson into the 3 Rs of reducing, reusing, recycling to distinguish between recycling and reusing materials). The art project could be a poster of a woodland community or a miniature woodland community presented as a diorama in a shoebox or other small box. Encourage students to add animals to show both flora and fauna of the native Illinois forest.
2. Investigate seeds by examining all kinds of seeds with differences in size, shape, and color. Ask students to bring in packets of garden seeds, seeds collected from natural areas that aren't protected from collecting practices, and even tubers, and bulbs. Compare and contrast the reproductive adaptations of so many different seeds. Since the function of flowers is to produce seeds, remember to discuss pollination and the importance of flowers to be designed to attract pollinators. Lead a discussion – Why are seeds so important? What seeds are commonly eaten? Why do people believe that saving heirloom seeds is an important practice?
3. Introduce a nutrition lesson that gives the students a chance to eat many different kinds of seeds, as well as, flowers. Some edible flowers include violets, dandelions, broccoli, cauliflower, nasturtiums.

4. Study plant families to explore differences and similarities between the many kinds of flowers. Reference *Plant Families* by Carol Lerner or any good field guide for wildflowers to help with classification. Classify by color, shape, number of petals, or other groupings. Ask the children either individually or in small groups to develop simple plant keys to classify spring woodland flowers. After students create their own simple plant classification keys, share with them an example of a basic plant kingdom classification chart.
5. Create a woodland wildflower garden on the school grounds, if possible. Ask the students to research the best choices of flowers for the space available on the school campus. Invite a landscape architect to speak with the class and demonstrate to draw a garden design plan.

RESOURCE LIST FOR FOREST AND FLOWERS: Wonderful Woodland Spring

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Caduto, Michael and Bruchac, Joseph. *Keepers of Life: Native American Plant Stories*. Fulcrum Publishing Co. 1994

Casper, Julie Kerr. *Forest: More Than Just Trees*. Natural Resources Publications. 2000

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Heller, Ruth. *The Reason for a Flower*. Penguin Puffin Books. 1983

Kennedy, Paul E. *American Wildflowers Coloring Book*. Dover Publications, Inc. 1971

Lerner, Carol. *Flowers of a Woodland Spring*. Wm. Morrow & Co. 1979

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- Mohnlenbrock, Robert. *Spring Woodland Wildflowers of Illinois*. University of Illinois Press. 1992
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