

THE NATURE OF WINTER

Wonders of Wintertime

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Teacher's Guide

Winter Program: The Nature of Winter

Grade level: Preschool – Eighth Grade

Field Trip Length: 1.25 – 2 hours

INTRODUCTION

Sparkling snow, icy twigs, bare trees, cold Earth, scurrying squirrels, and beautiful birds all remind us that there are many wonders of wintertime awaiting discovery! Within the cold winds, snow and ice, inside trees, and just under the Earth's surface, nature is busily working away and offering us the opportunity to uncover the special secrets of the season of winter in central Illinois. Winter is such an interesting time to explore the changes outdoors, encouraging focused observation abilities. Studies will include learning more about simple survival skills in winter conditions, how animals and plants prepare for and live through the winter months, the physical properties of snow, ice, and cold weather conditions, and the peace and beauty of winter.

OBJECTIVES:

1. To identify strategies that help plants and animals survive in winter at Lincoln Memorial Garden.
2. To become familiar with the concept of winter adaptations, especially those of winter bird residents who frequent our bird feeding stations.
3. To better understand how to practice simple winter survival skills and enhance one's enjoyment of the winter season.
4. To strengthen sensorial education in the outdoors and to gain an appreciation of the beauty and uniqueness of nature in the winter season

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

Learning Area	Goal	Standard	Benchmark
Language Arts	4	A	1a, 1b, 1c, 1d
		B	1b
Mathematics	7	A	1d
Science	11	A	1c, 1d

	12	A	1a, 1b
		E	1b
Physical Development	19	C	1

SUGGESTIONS FOR PRETRIP ACTIVITIES

1. Ask children to make a list of things they do, wear, and eat **ONLY** in winter. Lead a discussion as to why these items are special for the winter season of cold and less light.
2. Use the list generated by the students in the prior activity to create a class poem about wintertime in Illinois. Ask each student to illustrate their contribution to the winter poem and use the illustrations as a border for the class collective winter poetry activity. This can be published in the class newsletter or written on large poster board for a wall hanging.
3. Research what native animals do in the winter. Create a list of native Illinois animals from insects, fish, amphibians, reptiles, birds, and mammals. Ask each child to choose an animal to research how and why the animal is able to use a particular winter adaptive survival technique. (Example: some animals migrate, hibernate, change colors, overwinter, etc.) Ask the students to write and illustrate a story about the year-round lives of the animal they chose. In younger classes, complete the research together as a class and find examples of invertebrates and vertebrates with very different adaptations.

DESCRIPTION OF LINCOLN MEMORIAL GARDEN FIELD TRIP

Sharpen your senses and discover the splendor of the natural world in winter. Search for animal tracks, homes, and signs. Explore native ecosystems and make astute observations of winter's changes in the landscape. View the many birds who are permanent residents in Illinois and discover how and why they remain here instead of migrating south. Walk the trails and learn how to identify native trees by their buds and bark. Listen to the quiet after a new fallen snow and experience the peace of winter hikes at Lincoln Memorial Garden. **The Nature of Winter** is a field trip to Lincoln Memorial Garden that heightens students' awareness of the distinct changes of our natural environment in the colder, darker days and deepens appreciation for nature during the winter season.

The field trip will begin with a brief introduction to Lincoln Memorial Garden in the Discovery Room of the Nature Center. A naturalist will lead a discussion about the history of the Garden, how to use our senses to learn more about nature in winter, the importance of correct dress for the winter weather, and the expectations for all visitors who walk the trails of the Garden.

The school group will be divided into small groups of 10 – 12 children. During our naturalist-led walk, the group will explore the woodland, wetland, and prairie ecosystems of the Garden. We will conclude the hike by returning to the warmth of the Discovery Room in the Nature Center. Students will be able to explore exhibits and hands-on activities to learn more about the natural world of central Illinois. **Remember to dress for the weather!**

SUGGESTIONS FOR POST TRIP ACTIVITIES

1. After viewing the many birds that frequent the feeding stations at Lincoln Memorial Garden, ask children to bring in milk cartons, pine cones, grapefruits or oranges to construct bird feeders. Review food preferences of Illinois resident birds and make a variety of feeders to meet the needs of the diverse birds that beautify our winter skies.
2. Gather pictures of birds found in the area during the winter season. Make a chart with the pictures and graph the feathered visitors to the new birdfeeders by: species, food eaten, song or call, reaction to people or other birds, other observations.
3. Locate an animal track identification book and determine what other animals are visiting the feeding station during other times of the day.
4. Read any of the books included in the Resource List at the end of the Teacher's Guide.
5. Develop a "Snowflake Study" with several choices of activities. Put pieces of black construction paper in the freezer. On a snowy day, ask the children to take the pieces outside and catch snowflakes. They can use magnifying glasses to see the structure of the snowflakes more clearly. Ask students to sketch their observations. Make a simple art project with pipe cleaners and beads. Use three pipe cleaners glued together as the basic form

- of the snowflake. Then, have the children place beads on the wire in a symmetrical shape and order.
6. Make a matching activity with pictures of native Illinois animals and their tracks. Use a good animal track identification guide for reference. Younger children could play a concentration game that matches animal with track imprint cards. Older children could have a worksheet page that requires matching pictures of the animal and the track. In the Discovery Room in the nature Center, we have painted the tracks on the floor with stencils. When children follow the tracks, they lead to a picture of the animal on the wall or cabinet door.

RESOURCE LIST FOR THE NATURE OF WINTER: Wonders of Wintertime

- Bancroft, Henrietta. *Animals in Winter*. HarperCollins, Publishers. 1997
- Castaldo, Nancy F. *Winter Play Day*. Chicago Review Press, Inc. 2001
- Drake, Jan & Love, Ann. *Kids' Winter Handbook*. Kids Can Press, Ltd. 1996
- Glasser, Linda. *It's Winter*. Millbrook Press. 2002
- Paulsen, Gary. *Brian's Winter*. Bantam Double Day Dell Press. 1996
- Sams II, Carl R. & Stoick, Jean. *Stranger in the Woods*. Carl Sams II, Photography, Inc. 2000
- Selsam, Millicent E. *Big Tracks, Little Tracks: Following Animal Prints*. HarperCollins, Publishers. 1958, 1995
- Stokes, Donald W. *A Guide to Nature in Winter*. Little, Brown, & company. 1976
- Van Laan, Nancy. *When Winter Comes*. Simon & Schuster, Inc. 2000

Wilder, Laura Ingalls. *The Long Winter*. HarperCollins, Publishers. 1940,
1968

Youngpeter, John M. *Winter Science Activities*. Holiday House, Inc.
1966