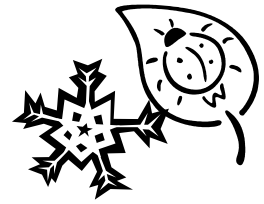


Kindergarten Winter Nature Walk: One-Page Summary



This walk has different themes and activities, do in any order to avoid crowding among the groups.

This is a summary. Please read the walk guide for complete information.

- Looking at **seasonal changes**....sit on the wall and use your senses to describe changes:
 - Close your eyes and feel the wind and hear the wind, what other sounds?
 - Feel the air, how is different from autumn?
 - Do you hear different sounds?
 - What do you see on the ground? Can you still dig in the earth?
- Check out the **snow**...find a spot with snow, dig some out and put some on dark paper. Examine it with the lens--can you see crystals? Talk about what you see. Are there other types of snow? What's snow made of? Let some snow melt in their hands—just a bit so hands don't get soaked. Let some snow melt on the paper. Talk about different kinds of snow and ice—some is more slippery than others or heavier or prettier.
- What happens to the **animals** in winter? Are there any in the school yard? How do we know?
 - You may be lucky and see some birds. Where do the birds find food? Look for bird feeders. Also the birds find seeds on plants.
 - We can look for tracks: we've seen dog tracks frozen into the sand adjacent to the playground. Fox tracks are slightly different--fox live near the baseball field. See the tracking sheet.
 - There are often deer tracks just to the right of the small bridge in the meadow behind the playground. The deer have been eating buds on plants along the stream.
 - Rabbit tracks can often be seen along the edge of the meadow.
- What about the **plants**? What happened to them?
 - Are they still alive? Some are not, but they may have left seeds. The "seedy" plants are scarce. Depending on weather, you may be able to see seeds in weeds along the wall or just over the bridge in the meadow. If the weather is iffy, don't bother crossing the bridge.
 - Some of the bigger plants (trees) are just sleeping or dormant. They are alive, but resting until they have a growth spurt in spring, you can look at their buds—talk about how buds are different. Have children find trees that interest them and mark by tying blue tape on a branch. In the spring, we can look at how that branch has changed. You can do this for any trees. The guide mentions specific trees on page 11, but these are no longer accessible.

Page 10 suggests an exercise of writing down changes since fall. This can be done orally.

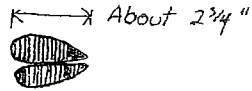
A Beginner's Alphabet of Winter Tracks & Signs

FOOT PRINTS

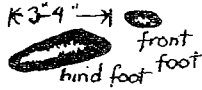
SCAT

TRACKS

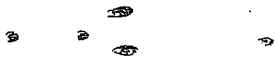
OTHER SIGNS & NOTES



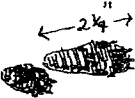
WHITE-TAILED DEER



COTTONTAIL RABBIT



"Ground jumpers" usually put feet down one after the other



GRAY SQUIRREL



Black walnut opened by gray squirrel.

Jumping animals which live in trees usually use front feet together.



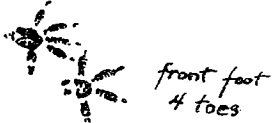
RED SQUIRREL



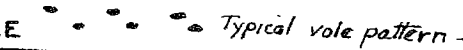
Opened by red squirrel.

Front feet tend to be together.

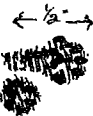
photo → feeding station



MEADOW MOUSE or VOLE

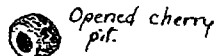


Pattern of vole burrow under snow.



DEER MOUSE

leaps



Sometimes toe and/or tail marks show.

slow run

5 toes, front & back



SHREW tail dragging

much variety

← 1-2 1/2" →

← 2-3" →



Dog family - fox, coyote, wolf & dog - toe nails show. 4 toes, front feet larger than rear.

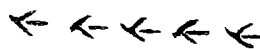
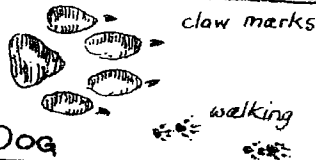
Fox

running

walking



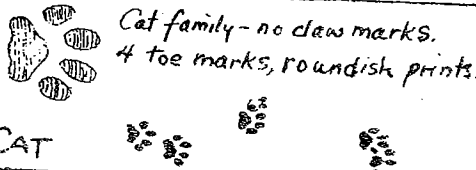
DOG



PHEASANT



CAT



Cat family - no claw marks. 4 toe marks, roundish prints.



STARLING



REMEMBER. Tracks are variable and depend on the weather and ground con-

KINDERGARTEN NATURE WALKS

Kindergarten Walks usually last 30 minutes and are based on:

1. Environmental Awareness

Sensory exploration/ Sense of wonder
 Discover/ Joy of learning
 Sharing the excitement
 Experiencing nature's rhythms and cycles



2. Developing attitudes of respect toward

The environment
 Each other
 Themselves as learners

3. Observation of plants and animals sharing their schoolyard

Look, listen, smell, and touch to explore their schoolyard
 Make comparisons, note similarities and differences
 Make connections and note interactions
 Examine plant parts
 Observe and share observations of seasonal changes
 Discover how plants grow and change with the seasons

A major challenge is helping young children learn how to behave on a Nature Walk, how to focus, observe, wonder, and thereby enjoy exploring, discovering, learning and sharing.

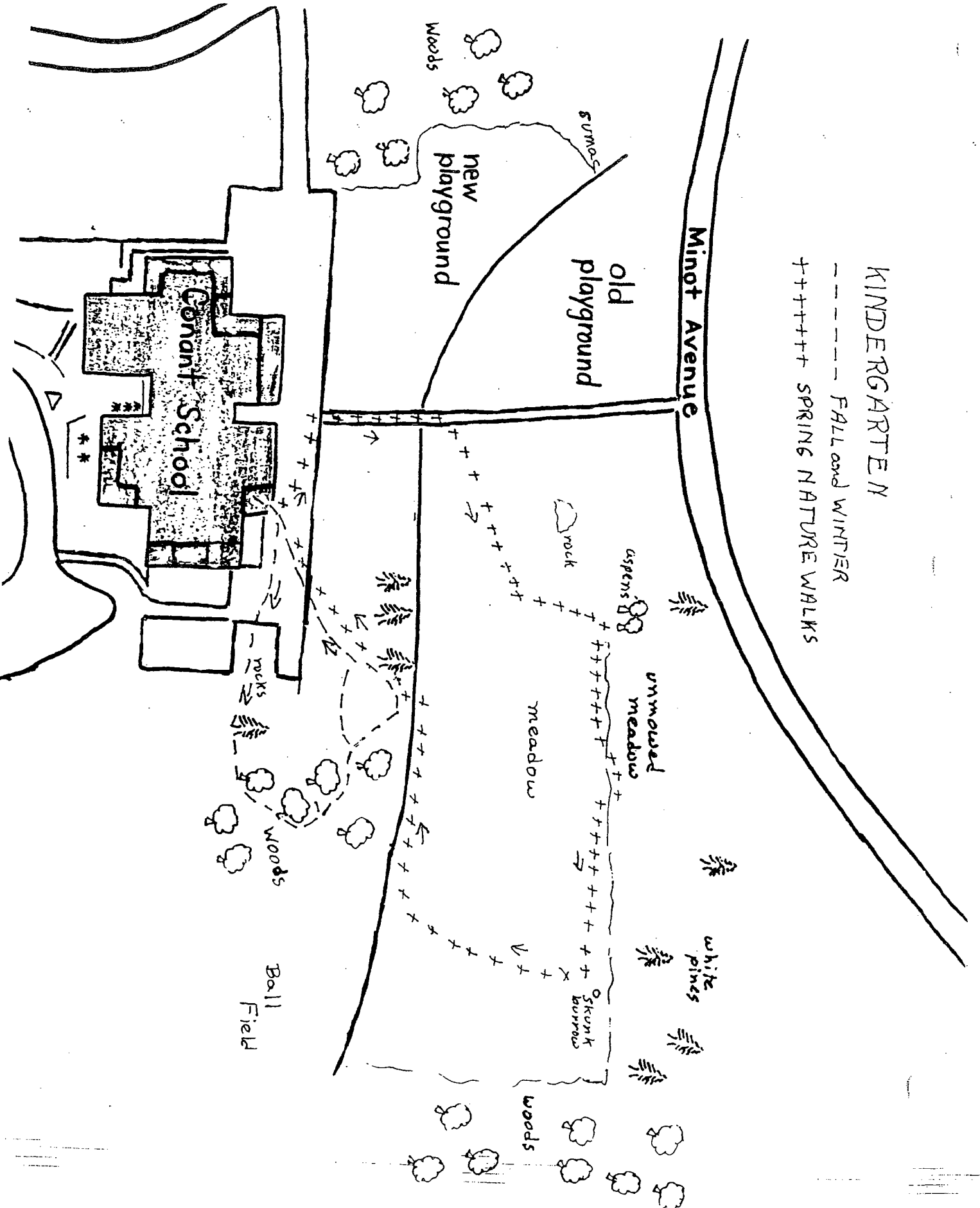
Remember your main goal is that children enjoy discovering and learning from their own observations, not specific science content. Be willing to:

Follow the children's interests and the unexpected discovery
 Be flexible and focus on one or two concepts/activities instead of the three or four you planned
 Don't stay out too long
 Be enthusiastic and have fun
 Communicate with the teacher



KINDERGARTEN

----- FALL and WINTER
 ++++++ SPRING NATURE WALKS



KINDERGARTEN WINTER NATURE WALK

Schedule this walk in early February, before vacation.

Objectives:

Look, smell, listen, and touch to explore their winter schoolyard

Observe and describe different types of snow and ice

Observe and share observations of seasonal changes in winter

Discover what happens to plants in winter

Mark tree buds for observation of seasonal changes in spring

Enjoy exploring and discovering

Optional: Collect seeds to plant in classroom



Before going out.

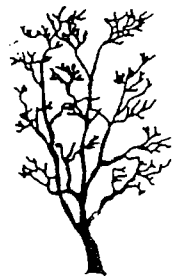
The teacher should encourage children to think about their fall walk. What did they discover? Look at the chart of things they saw, smelled, touched, and heard on their fall walk, and at the drawings or murals they made.

What do they expect to discover now? Have them make reasoned predictions. How will the schoolyard have changed? Will colors be the same? Smells? Sounds? How will the ground feel? Why do they think so? Remind children that scientists always have a reason when they make a prediction. For example, will they find rain puddles on the ground? Or ice? Why? Does water stay liquid when it gets very cold? How do they make ice cubes?

What do they think is happening to plants in winter? What about roots? Stems? Leaves? Flowers? Seeds? What has changed for plants? It's cold. Water is frozen and plants can't use frozen water. There isn't much sunlight. Do children think those changes have affected plants? How?

If possible go out when there has been a fresh snowfall, but at the very least go out when there is snow on the ground.

Winter walks are always shorter than spring and fall ones. Don't stay out longer than the comfort level of the children. Be sure children are dressed appropriately



Materials:

Hand lenses (one per student)
 Squares of black paper (one per student)
 Clipboard, paper and pencil
 Trowel
 Plastic bag if teacher wants seeds to plant
 Blue surveyors tape to mark trees



1. Visit the same area. Have children stand under the pine trees with their eyes closed and listen. What do they hear? How are the sounds different? What about the smells? Look around. What has changed? Encourage children to recall how this area looked last fall. Have the colors changed? What did they find and feel as they explored the ground last fall? Why are they standing instead of sitting? Look at the snow and/or ice. What is underneath the snow? Take the trowel and dig around to see what they find. Can they dig into the ground or is it too hard? Why? Suggest writing the changes they see, hear, smell, and feel on the clipboard.

2. Move along the woods trail and out to the playground as you did last fall. Notice the snow as you walk. If conditions are right you may find animal tracks or signs of animal shelter in the woods; if you are lucky enjoy any of these unexpected discoveries. Otherwise focus on observations of seasonal changes.

What is the biggest change from last summer and fall? That's right, it's cold! Is the sun as warm? How about the air? Are there any rain puddles? Why not?

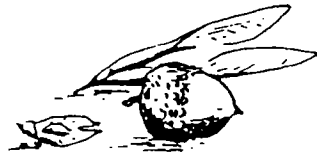
3. Out on the playground observe where there is snow and where it has melted, as well as where it has turned to ice. Refer to the handout on snow for ideas. Use the trowel to dig in a snow bank and observe the different layers of snow. The Eskimos have 12 different words to describe snow. Have children use words to describe the different kinds of snow they find -- soft and fluffy, wet and sticks together, hard and crunchy.



Encourage children to put snow and/or ice crystals on black squares of paper and look at the crystals with hand lenses. Write down children's descriptions of snow and ice, and also of the crystals they observe with hand lenses. (If you are lucky enough to be out during a snow storm take 9 by 12 black construction paper and catch the snow flakes as they fall. This is especially successful if the paper is cold.)

4. How has the freezing cold weather affected plants? Remember how they dug into the ground to find roots? Where are those roots now? The roots of many plants sleep in the frozen ground all winter. Scientists say that trees and many small plants become "dormant" in the winter, sleeping under a blanket of snow until it gets warm again.

But remember all those seeds we found last fall? What happens when we plant a seed? It grows to become a brand new plant! Some plants die in the fall when it gets cold, leaving seeds behind. Can they find any seeds? Has anything happened to all those seeds they found in the fall? Fallen to the ground? Blown away? Eaten? (If the teacher agrees, bring in some seeds to plant and see what happens. Collect a lot both in variety and quantity, as some will not germinate. For your information, wildflower, weed and tree seeds must go through a period of freezing or they will not germinate, hence we could not collect seeds to plant on the fall walk.)



5. Look at the tips of the tree branches. What do they see? Do all the buds on a tree look the same? How about buds on a different tree? Especially look at an aspen, a maple, a white pine, and the pussy willow which is by the big rock. What do children think will happen to the buds? Suggest marking these four trees with blue plastic tape so they can watch and see what happens in the spring. (Other grades will be marking trees with green or orange tape.)





6. How about animals including themselves? How do we handle winter weather? We have warm buildings to go into and heavy jackets, boots, hats, and mittens to wear. Ask children how wild animals survive winter. They will be able to tell you that some animals hibernate all winter and many birds fly south where they can be warm. But many birds and other animals live in their schoolyard all winter. How do animals living outdoors survive? Where can they find food and water? How do they keep warm? Encourage children to talk about their bird feeders and how they help by putting out bird seed. Do children have bird feeders at home? Be sure to keep the feeders full, the birds count on them!

7. If the children aren't too cold, add to their list on the clipboard what they discovered on their winter walk, and what they enjoyed the most. As they did in the fall have children hold up their hands like a camera, focus, and take a pretend picture of the schoolyard in winter. Have each child describe at least four things in their pretend snapshot. If they are too cold, go back inside and write on the clipboard in the warmth of the building. This a good chance to note that birds and other animals don't have a warm building but must find shelter outdoors.

8. Return to the classroom.



Back in the classroom:

Have all the groups share and write down what they saw, heard, smelled, and felt on this winter walk; compare with observations made on their fall trip and save to compare with spring walks.

Have children draw a picture or as a class make a seasonal mural of their schoolyard in winter to compare with the fall drawings or mural. Talk about changes in colors. Think about their pretend snapshots.

If seeds were collected, plant them and remember to keep them watered. Remind children to keep an eye on the trees they marked as warmer weather comes.

As always Environmental Aides should communicate with the teacher how the walk went, what was especially interesting to children. It is important that these walks be integrated into classroom learning and that children continue to feel that their observations and ideas have value in the learning process.

SNOW

1. Eskimos have 12 different words to describe snow. How many different kinds of snow can you find? Can children make up names to describe the different kinds of snow?
2. Layers of snow
Look at layers: How do they look, feel?
 Note colors, textures.

Measure temperature at top and bottom of snow drift.
3. Note places where there isn't snow. Why?
Examples: around tree trunks
 under evergreens
 on blacktop
 on running brook
4. Where is there snow besides on the ground? Why?
Examples: tree trunks
 tree branches
 leaves
5. Look at snow on roofs of buildings. Note layers.
Why do icicles form on buildings more than on tree branches?
6. How are ice and snow related?
Can you make ice from snow?
Can you make water from snow?
Can you make snow from ice or water?
7. Why is some snow good for snowballs and other snow just falls apart?
Does a cupful of snow always weigh the same?
Are some snowfalls heavier to shovel than others? Why?
8. Can you walk on top of snow sometimes but sink in other times? Why?



Books for activities and other questions:

Nature with Children of all ages, Edith Sisson, Massachusetts Audubon, 1982.

Snow Stompers, Davis Webster, Natural History Press, 1968.

KINDERGARTEN

--- FALL and WINTER

+++++ SPRING NATURE WALKS

