

Becoming a Naturalist: Using Our Senses to Explore

For Younger Students, K-2

Group Size May Vary

Field Time May Vary

Any Season

Summary:

Students walk a short trail in small groups. Students develop a t-chart in their nature journal for what they “think” (one column) they may find and compare it to what they “found” (second column) on their nature walk. Along the way, they use their senses to explore what they find (such as water, plants, soil, wind, sun). As a result, students discuss why senses are important tools for discovery and how naturalists use them every day.

Performance Objectives:

After completing this activity, students define the traits and behaviors of a naturalist in their own words and are able to demonstrate using senses to discover nature.

Materials Needed:

- Plants with unique smells (prairie sage/bergamot/yarrow)
- Plants with unique textures (milkweed seeds/thimbleweed/Indian grass)
- Pieces of construction paper of different colors
- Animal pelts, shells, antlers (for indoor learning stations)

Background Information

During this field investigation, our intent is not to fill students with facts, but to guide them to making and owning their own discoveries. By making the opportunity for discovery possible through direct interaction between each child’s senses and the environment, we are focusing on unfolding real experiences. Open-ended activities and questions with learning driven by student inquiry are encouraged.

In her book *The Sense of Wonder*, Rachel Carson wrote, “I sincerely believe that for the child, and for the parent seeking to guide him, it is not half so important to know as to feel. If facts are the seeds that later produce knowledge and wisdom, then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow. The years of early childhood are the time to prepare the soil.”

Procedure:

Introduction

- Lead students in “Getting in the Moment” right after they exit the bus, before entering the building.
- Volunteer: Introduce yourself and Sherburne NWR. Explain your role in working with the students.
- Volunteer Explain that during your time together, students will be going on a hike outside to explore.
- Volunteer: Guide students to use naturalist characteristics/expectations while discovering. Naturalists are/do: respectful (leave no trace), stay behind the leader, ask lots of questions (curious/inquisitive), calm and quiet.
- Volunteer: Explain the purpose of the program. “Today, we will be exploring this beautiful home for animals! Did you bring your toolbox with you?” Look inquisitively at the teacher and ask the teacher, “Where are their tools?” Then look at the kids again, this time closely. “Oops, now I see- they already have them! Their tools are their senses!”
- Teacher: What kind of things do they expect to see/hear/smell/touch outside? Have students set up a t-chart in their nature journal with one column that says “think” and the other that says “found.”
- Teacher: Have students leave nature journals in the classroom; invite them to line up and get ready to go outside.

Listening:

- Invite kids to stay still and listen for sounds.
- Introduce them to the “bar of silence” to get them to be quiet for longer periods of time.
- Reinforce getting in the moment.
- How many different sounds can they hear? “Close your eyes, quietly listen, and count on your fingers. What kinds of sounds are they? Who made them? What do they sound like? (Shrill, loud, soft, quiet, bubbly). If the sounds are animal sounds, why are the animals making sounds?”

Seeing:

- Choose one item in particular. How might they describe the appearance of it to someone who had never seen it before? (Round, fluffy, pointed, curly, tall, medium-sized, short, thin, thick) Look at the sky - how many different colors do they see? Is the light in the sky bright or dark? Is it day time or night time? Different shades of one color? There may be an opportunity to introduce new colors such as magenta, chartreuse, or violet.
- Leave the observation site and begin hiking. Do they think they can use their sight to find every color of the rainbow outside? (Can use colored construction paper pieces as prompts.)

Touching: [ASK BEFORE YOU TOUCH—WATCH OUT FOR POISON IVY! ENSURE THAT ALL ADULTS CAN ID IT!!]

- Ask kids if they would believe that there are things so soft in nature that they would want to sleep on them? Pull out milkweed seeds and allow them to touch the tufts of the seed. Explain that old settlers used to use them to stuff their pillows. Invite them to touch plants and see if they can find one as soft as milkweed. If they can, share it with a buddy or an adult.
- Then ask them if they can find something that is the opposite of soft. Is there something hard or rough? If they find something, leave it there and show it to an adult.
- Can they find a plant that feels soft? Scratchy? Fuzzy? Prickly? Smooth?
- As you move toward an open area, ask them to feel the wind and sun. Can they feel the sun and wind on their cheeks? Is the air warm, cool, or cold? Which way is the wind blowing to and from? How can they tell? (Wind moving plants or water.) Is the wind blowing hard, soft, fast, or slow?
- How wet or dry is the soil? Lie down if possible – how does it feel? Hard or soft? Warm, cool, or cold? [BEWARE OF POISON IVY!]

Smelling:

- Once you reach the prairie, stop suddenly and begin to sniff and smell. Ask them if they smell something, too.
- Invite kids to rub and smell the leaves around them. Do all of the plants smell the same? Rub leaves and seed heads to find out. What do they smell like? (pizza, peppermint, lemon)
- Explain that Native Americans used these same smells to make their meals and teas.

Motion (Not a sense, but also a way to explore!):

- Suggest that they find an animal that moves and watch how it moves - insects, spiders, birds (woodpeckers, eagles, chickadees), chipmunks, squirrels, turtles.
- Then sing, “Let’s All Move like the Animals Do!” (“Let’s all move like the animals do! The crickets jump, and we can, too! Jump! Jump! Jump!” And then repeat with a different animal and action.)

“Let’s move like animals move...

Crickets jump and we can, too.

Birds fly and we can, too.

Chipmunks dig and we can, too.

Snakes slither and we can, too...”

- They might also describe the appearance of the animal (rounded, soft, pointed, curly, moving forward, sideways, or backward, tall, medium-sized, small, quick, slow, fluttery).
- How does this animal spend the fall? The winter? The summer? The spring? Which stage of its life cycle is taking place in [CURRENT SEASON]?

Wrap-up

- Teacher: Ask students to reflect on the lesson. Can they name all five of their senses? When did they use their ears? What did they touch? What did they see? What did they smell?
- Teacher: Ask students to open their nature journals to the t-chart. As a class, discuss things that they found outside in nature today. Have students write at least 2 words and draw 2 pictures in the column under “found.”
- Volunteer: Thank students and teachers for their time. Give teachers color sheets/certificates for students.
- Volunteer: Remind them that if they ever want to explore with their senses again they can do it in their own backyard or they can come to Sherburne NWR for FREE to explore any day from dawn to dusk.

2009 Minnesota Academic Standards in Science

Grade 2

2. 1. The Nature of Science and Engineering:

1. The Practice of Science

2. Scientific inquiry is a set of interrelated processes incorporating multiple approaches that are used to pose questions about the natural world and investigate phenomena.

2.1.1.2.1 Raise questions about the natural world and seek answers by making careful observations, noting what happens when you interact with an object, and sharing the answers with others.

2.2 Physical Science:

1. Matter

1. Objects can be described in terms of the materials they are made of and their physical properties.

2.2.1.1.1 Describe objects in terms of color, size, shape, weight, texture, flexibility, strength and the types of materials in the object.

2.2 Physical Science

2. Motion

1. The motion of an object can be described by a change in its position over time.

2.2.2.1.1 Describe an object's change in position relative to other objects or a background. For example: Forward, backward, going up, going down.

2.4 Life Science

1. Structure and Function of Living Systems

1. Living things are diverse with many different observable characteristics.

2.4.1.1.1 Describe and sort plants into groups in many ways, according to their physical characteristics and behaviors.

Grade 1

1. The Nature of Science and Engineering

1. The Practice of Science

1. Scientists work as individuals and in groups to investigate the natural world, emphasizing evidence and communicating with others.

1.1.1.1.1 When asked "How do you know?" students support their answer with observations. For example: Use observations to tell why a squirrel is a living thing.

1.1.1.1.2 Recognize that describing things as accurately as possible is important in science because it enables people to compare their observations with those of others.

4. Life Science

1. Structure and Function of Living Systems

1. Living things are diverse with many different observable characteristics.

1.4.1.1.1 Describe and sort animals into groups in many ways, according to their physical characteristics and behaviors.

Kindergarten

1. The Nature of Science and Engineering

1. The Practice of Science

2. Scientific inquiry is a set of interrelated processes used to pose questions about the natural world and investigate phenomena.

0.1.1.2.1 Use observations to develop an accurate description of a natural phenomenon and compare one's observations and descriptions with those of others.

2. Physical Science

1. Matter

1. Objects can be described in terms of the materials they are made of and their physical properties.

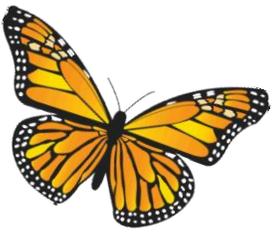
0.2.1.1.1 Sort objects in terms of color, size, shape, and texture, and communicate reasoning for the sorting system.

4. Life Science

1. Structure and Function of Living Systems

1. Living things are diverse with many different observable characteristics.

0.4.1.1.1 Observe and compare plants and animals.



I Am a Naturalist!

Using Our Senses to Explore Nature

Names: _____ Date: _____

<p>SEE (Colors, shapes, patterns, sizes, wildlife)</p>	<p>HEAR (Birds, frogs, wind, insects)</p>
<p>TOUCH (Hard, soft, waxy, smooth, prickly)</p>	<p>SMELL (Plants, trees, soil, air)</p>
<p>WEATHER</p> <ul style="list-style-type: none">• Air Temperature: _____• Soil Temperature: _____• Wind Speed/Direction: _____• Sky: _____• Words to describe today's weather:	<p>WONDER - Amazing!</p>