Saint John's Outdoor University Field Trip Overview

Plants

Objective: Students will explore plants in three different habitats (prairie, wetland, forest) and how the plants obtain their basic needs (space, water, nutrients, air, sunlight) within each type of habitat. Through different levels of observation, students will determine which basic need is hardest to find in each habitat, and how plant adaptations help overcome that difficulty.

Field Activities:
Plant Survival Relay: Students will review the basic needs of a plant (space, water, nutrients, sunlight, air) through a relay race. Students will gather the needs of a plant in a specific habitat in order to survive. Students will also discuss how some basic needs are harder for plants to find in different habitats.
Prairie Exploration: Students' observations of prairie plants will include collection of plant parts and use of tools to dissect the plant parts. Students will also examine the adaptations prairie plants have to obtain their basic needs, including long roots, hairy and/or thin leaves, and growing in clumps to maximize water intake.
Wetland Exploration: Students' observations of wetland plants will include collection of plant parts from the water and use of tools to take a closer look at plant parts. Students will also examine the adaptations wetland plants have to maximize air intake, including waxy leaves, roots and stem spaces, and shallow roots.
Forest Exploration: Students' observation of forest plants will include using their senses to explore the layers of a forest (herb, shrub, understory, and canopy) with a scavenger hunt and interactive rhyme. Students will also discuss how forest plants grow in layers to maximize sunlight.

Nature Explorer Connections: All students have the ability to be nature explorers. Nature explorers **respect** the natural world, **observe** using their senses, and **wonder** by asking questions about their observations.
Respect – Ways we will demonstrate respect:
- What lives in nature, stays in nature. We will not take anything home with us.
- Only plants identified by Outdoor U staff will be collected for observation.
- Collection will be deliberate – we won't take all plants from one area and we will return them to nature when we are finished.

Observe – Observational activities included during field trip:
- Student questions from their observations will be written down throughout field trip and brought back to classroom to seek answers.
- Observation games will be included throughout the field trip.

Wonder – Questions that may be discussed:
- What are plants' basic needs?
- Which basic need is hardest to find in each habitat (prairie, wetland, forest)?
- How do you tell the difference between a prairie plant and a wetland plant?
- What would happen if a prairie plant was planted in a wetland area?
- How are plant adaptations connected to the habitat the plant grows in?
- What is the most important basic need for a plant to obtain, in your opinion?

Minnesota K-12 Academic Standards addressed and focused on during activities:

Strand	Code	Benchmark
SCIENCE		
1. The Nature of Science and Engineering	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.
4. Life Science	2.4.2.1.1	Recognize that plants need space, water, nutrients and air, and that they fulfill these needs in different ways.