

Saint John's Outdoor University Field Trip Overview

Environmental Changes

Objective: Students will explore and analyze environmental changes on many levels, including seasonal changes, decomposition, change over time, and plant and animal adaptation to change. Students will discuss the human impact on environmental changes in an ecosystem, along with how changes may affect the energy flow through an ecosystem.

Field Activities:

Magic Spot: This activity allows students to carefully examine a study plot, making observations and journaling, later making predictions of how abiotic factors might affect the site through the seasons. The initial examination, observations, and journaling of the site will take place at Arboretum and can be followed up with additional research in the classroom.

Camo Critters and Thicket: This activity allows students to both passively and actively investigate animal adaptation to change in the environment. Students will explore how camouflage helps animals to survive and then determine for themselves actions that allow animals to survive.

Fallen Log: This activity allows students to look more closely at decomposition and its function in the natural cycle. Students will observe and explore organisms in various stages of decomposition.

Web of Life: This activity allows the students to explore the different roles organisms have in an ecosystem (consumer, producer, decomposer) and their relationship between all the components of an ecosystem. Students will also discuss what happens to the balance of an ecosystem when it is disrupted by human impact.

Key points and themes covered in each class:

- How seasonal change will affect the biotic and abiotic factors within a specific area
- Classifying organisms as producers, consumers, and decomposers and the path of energy flow among life on earth
- How species adapt to changing conditions to the environment and the effect of their survival
- Decomposition and how matter is recycled in the natural world
- Human impact on changes in the environment

Minnesota K-12 Academic Standards addressed during activities:

Strand	Code	Benchmark
SCIENCE		
3. Earth and Space Science	5.3.1.2.1	Explain how, over time, rocks weather and combine with organic matter to form soil.
4. Life Science	5.4.1.1.1	Describe how plant and animal structures and their functions provide an advantage for survival in a given natural system.
	5.4.2.1.1	Describe a natural system in Minnesota, such as a wetland, prairie or garden, in terms of the relationships among its living and nonliving parts, as well as inputs and outputs.
	5.4.2.1.2	Explain what would happen to a system such as a wetland, prairie or garden if one of its parts were changed.
	5.4.4.1.1	Give examples of beneficial and harmful human interaction with natural systems.