

Wetland Plants

Lesson Author: Ashley Schnitker

School or Agency: Just use St. Anne Wetland Education Outreach Project

Grade Level(s): 9-12

Science Topic: Plants-form and function

Summary: Students will research the various Divisions of plants and complete the worksheet prior to going into the field. In the field, students will try to classify the plants at the wetlands in terms of life cycles and reproductive mode. They will learn about niches and how plants interact.

Core Content: Life sciences. KY: SC-09-3.4.3

Objectives: Students will be able to identify plants by Division based on life cycles and reproductive modes. They will also be able to describe how plants interact with one another in order to fulfill a specific niche.

Materials: Assignment, hand lens.

Procedures: Take students into the field to look for mosses, ferns, worts, equisetum, angiosperms and gymnosperms. Based on reproductive modes, structure and vascularization, ask students to infer where they would expect to find these plants throughout the ecosystem. Ferns, mosses, worts and equisetum would probably be found near the water due to primitive vascularization (or lack thereof) and, in the case of mosses, flagellated sperm. Look for seeds of angiosperms and gymnosperms and discuss the means by which they may be dispersed. Wind? animals? Water?

Discuss the concept of niches. The plants of the wetland are mostly adapted to hydric (moist) soils. This can cause plants to work together, separately, or against one another. Mutualisms, commensalisms, and parasitism occurs in every ecosystem. Have students walk

through the wetland and forest and look for interactions among plants. They can complete the handout while observing interactions.

Another way plants interact is through competition. Sunlight, water, and soil nutrients are limited in nearly every temperate forest. Ask students to look at the spacing of plants. Compare the primary growth forest and secondary growth forests. Why are the understories so different? Do they think the composition and dominance of certain plants vary as the year goes on (think of spring wildflowers, winter and fall)? Competition causes the plants to grow the way they do to utilize as many resources as possible in the time consistent with maximum resource availability.

Assessment Techniques: Assignment-(see handouts)

Handouts: (see attached)

Name: _____

Wetland Symbiosis Assignment

Determine whether each relationship is an example of mutualism, commensalism or parasitism. Explain why.

Mutualism: Interactions in which both parties benefit

Parasitism: An interaction in which one party benefits while another is negatively affected

Commensalism: An interaction in which neither party benefits or is negatively affected

- 1) Flower/ Pollinator:

- 2) Virginia creeper (vine)/ Beech tree:

- 3) Lichen/ Maple tree:

- 4) Tick/ Deer:

- 5) Shelf fungi/Buckeye tree:

Name: _____

Pre-Field Trip Assignment

Fill in the chart below.

DIVISION	MODE OF REPRODUCTION	MODE(S) OF SEED DISPERSAL	EXAMPLES THAT MAY BE FOUND AT THE WETLAND

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