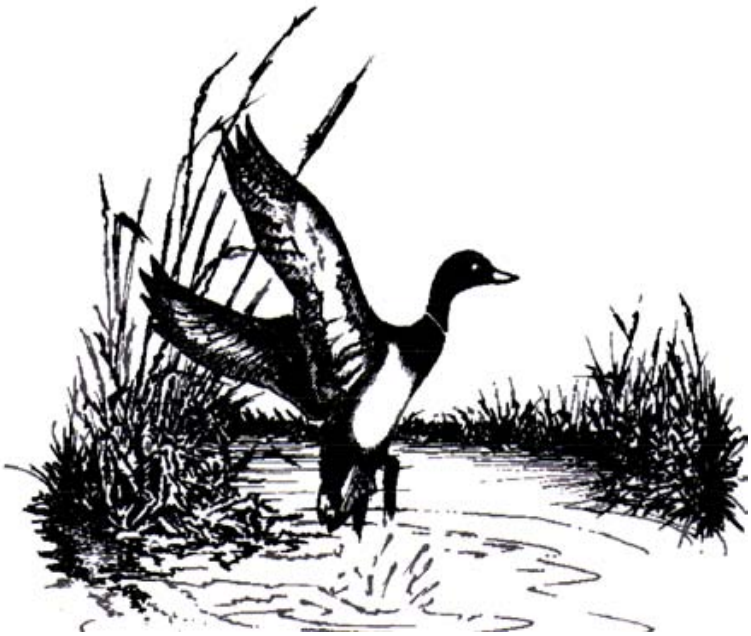
Chapter 10



Post Trip Classroom Activities

Fill in the blank

Classroom grades: 3-6

Objective
Students will learn more about Steigerwald Lake Wildlife Refuge

EALRs
Writing: 1.1.1
Communication: 1.1.1, 1.1.2, 1.3.1, 1.3.2, 3.2.1

Method
Have small groups of students write sentences that include special words (or vocabulary words) relating to the field trip. Each group, one at a time, writes a few of its sentences on the board with a _____ instead of the special word. The other groups try to figure out the missing word to complete the sentence. Repeat this until all groups have had a chance to put their sentences on the board.

Note
The word game works best with words from the glossary.

Sharing Circle

Classroom Grades: k-6

Objective
To encourage future learning about Steigerwald Lake National Wildlife Refuge

EALRs
Communication: 1.1.1, 1.1.2, 1.2.1, 1.2.2,
2.1.1, 2.3.1, 2.3.2

Method
This is appropriate for the end of your field trip. Have the students gather in a circle and share something that they learned or observed during the field trip. This could also be done on the bus going back to school. Some sentence starters could include:
"The National Wildlife Refuge was interesting to me because_____," or "My favorite activity today was_____," or "One thing I learned today was_____."

Thinking it Over

Classroom grades: k-6

Objective
To encourage future learning about Steigerwald Lake National Wildlife Refuge

EALRs
Communication: 1.1.1, 1.1.2, 2.1.1, 2.1.2, 2.3.1, 2.3.2
Writing: 1.1.1, 1.2.1, 1.2.2, 1.3.1, 1.3.2, 2.1.1, 2.3.1, 2.3.2

Method
Describe your favorite place from today's trip. Use all your senses.

Use one word for how it looks.
_____

Use two words for how it smells.
_____ _____

Use three words for how it sounds.
_____ _____ _____

Use four words for color.
_____ _____
_____ _____

Use five words for how it feels.
_____ _____ _____
_____ _____

Imagine that you owned the marsh area. Tell a story about how you would use it.

Password

Classroom Grades: 3-8

Objective
To encourage future learning about Steigerwald Lake National Wildlife Refuge

EALRs
Communication: 1.1.1, 1.1.2, 1.2.1, 1.2.2

Method
Have two students stand with their backs to the chalkboard. The special word is written on the board and the class gives the two players one word clues, one person at a time, that will help the students discover what the special word is. When the password is guessed, start again with two new players.

Service Learning in the Environment

If every school in the country would do one service project it would change the world.

Classroom Grades: k-8

Objective
Students will be able to:
• identify problems and come up with solutions by making a plan, taking action and
• reflecting on the outcome
• learn the value of civic responsibility by actively participating in the community

Materials
Varies, depending on project

Background
Service learning helps students think outside of the classroom and take a look at real world issues. Kids are creative thinkers. As a class, brainstorm different environmental projects (see "Ideas for Service Learning"). Review the list together and discuss feasibility of the projects. Eliminate those that (realistically) would be too difficult to accomplish within your timeframe. Have students write down their top 3 choices and come back tomorrow with a proposal for one of them. If students are allowed to choose their own project, they will take ownership and be more invested in the results.
After students have selected a project, they can begin the learning process. It should be divided into five steps:

Research: What do I need to know about the problem before I begin?
Goal: What do I want to accomplish?
Planning: What steps do I need to take to meet my goal?
Action: Do it!
Reflection: What did I learn from each step of the process?

Ideas for Service Learning
1. Determine how much trash your school generates and challenge students and staff to reduce the amount every month for the school year.
2. Decorate bins or buckets for classrooms to place recyclables. Put one in every classroom.
3. Adopt an area to keep clean by picking up trash.
4. Paint a mural with an environmental emphasis to educate others.
5. Decorate grocery bags with environmental slogans (Like trees?? Recycle Paper, Don't litter; keep our community clean) and distribute at a local grocery store.
6. Develop a plan to conserve water and electricity at home. Do it.
7. Make compost from school food waste by using worms in bins. Use the compost in a school garden or give it to neighbors.
8. Find a local environmental issue that your community is facing and do something to make a positive difference.
9. Plant trees at a park or next to a stream to create shade, oxygen and beauty.

10. Monitor the water quality of a nearby stream or creek. Write a letter to the City Council or Editor of the local newspaper suggesting what citizens can do to help improve the water quality.
11. Research drought resistant plants for your area and water conservation tips. Make brochures to distribute to neighbors.
12. Plan a school wide recycling program. Make a power point presentation to take to different classrooms showing students how easy it is and the benefits. Do it.
13. Assign a specific hallway in the school to a different class to keep clean for a week or month. Have a competition to see which class does the best job.
14. Write poetry about taking care of the environment in different languages and compile it into a book to give to others.

Discussion
1. What did you learn?
2. What did you accomplish?
3. What were your feelings, fears, joys?
4. Would you do it again? Why?
5. How could you improve it?

References
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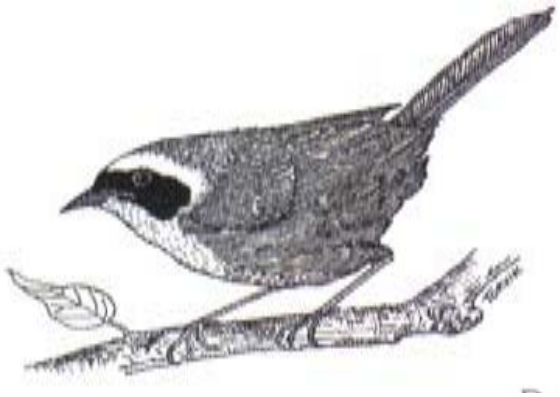
More Field Trip Follow-Up Activities

Classroom Grades: k-12

Objective
To enrich and expand upon the lessons learnt at Steigerwald Lake National Wildlife Refuge.

EALRs
Communication: 2.1.1-3, 2.2.1-3, 2.3.1-3, 2.4.1-3, 2.5.1-3
Writing: 1.1.1-3, 1.2.1-3, 1.3.1-3, 2.1.1-3, 2.2.1-3, 2.3.1-3, 3.1.1-3, 3.2.1-3, 3.3.1-3, 3.4.1-3, 3.5.1-3
Art: 3.1.1-3, 3.2.1-3

1. Organize a Parents' Night where the students report on their field trip. Have them narrate a slide show or tell stories of what they did and learned.
2. Write letters or send drawings to elected officials or newspapers describing the trip, impressions, and importance of the refuge.
3. Write and read a story to the class. An example might be a first-person account of the life of a Canada goose.
4. Do research reports on marsh-related topics.
5. Do nature walks or scavenger hunts around your own school.
6. Recycle classroom trash, glass, paper, aluminum, etc.
7. Design art projects and murals; draw a map or build a model of an animal you saw.



Common Yellowthroat

Glossary

Adaptation. An adjustment to environmental conditions; a modification of an organism or its parts that helps that plant or animal survive.
Aerate. To supply with or add air.
Algae. Tiny, non seed-bearing aquatic plants; chlorophyll is often masked by a brown or red pigment.
Anadromous. In reference to fish, species that spend part of their life in freshwater and part in saltwater.
Avian. Of, relating to, or derived from birds.
Aquatic. Growing in, living in, or frequenting water.
Biodegradable. Capable of being broken down to simple compounds, especially into harmless products, by the action of microorganisms.
Biodiversity. The variety of life and its processes, including the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur.
Bird Banding. Attachment of identification tags to individual birds to help scientists understand bird population dynamics and migration routes.
Brackish. Somewhat salty but less salty than sea water.
Carnivore. A flesh-eating animal or plant.
Community. A group of plant and animal populations living in a prescribed area or physical habitat.
Conservation. Controlling the use of and protecting natural resources.
Consumer. An organism that eats other organisms or organic matter.
Decomposer. An organism (such as bacteria or fungi) that returns components of organic matter to the environment by feeding on and breaking down dead plants and animals.
Delineate. To draw boundaries (e.g., to delineate wetlands).
Dependence. The state of requiring something outside of oneself for individual survival.
Detritus. Decaying bits of plant and/or animal remains (resembles gooey mud sometimes).
Diurnal. Active or occurring in the daytime.
Ecology. The study of the interrelationship of organisms and their environments.
Ecosystem. A system made up of a community of living things and the physical and chemical environment with which they interact.
Emergent Vegetation. Aquatic vegetation rooted underwater but growing above the surface of the water.
Endangered Species. A species that is in danger of extinction throughout all or a significant portion of its range.
Endangered Species Act. A 1966 federal law designed to prevent species from passing into extinction.
Endemic. Describing a population or species that is native to or limited to a certain region.
Estuary. A body of water or water passage where tidal salt water is diluted by fresh water.
Extinct Species. An animal or plant species that has died out everywhere in the world.

Fauna. Animals, especially of a region or period.
Fledge. To rear until ready for flight or independent activity.

Flora. Plants, especially of a region or period.

Flyway. A route taken by migratory birds during their flights between breeding grounds in the north and wintering grounds in the south.
Freshwater Habitat. An area where standing freshwater exists year-round in most conditions.
Food Chain. A sequence of living organisms in an ecological community in which members of one level feed on those in the level below them and in turn are eaten by those in the level above them.
Food Pyramid. Demonstrates the loss of energy between different levels of consumers of a food chain.

Food Web. The totality of interrelated food chains in an ecological community.

Habitat. The place or type of site where a plant or animal naturally or normally lives, often characterized by a dominant plant form or physical characteristic (the stream habitat, the forest habitat).

Herbivore. An organism that eats living plants or their parts.

Hydrology. The study of water and its properties.

Impoundment. A basin created by the construction of dikes. Water control structures are usually installed in the dikes to allow for the impoundments to be drained of or filled with water.
Inference. The use of logic or even guesses to interpret or explain observations.

Interdependence. Within biological communities, the state of species depending upon each other, often to the extent that if one is lost other cannot exist.
Invertebrate. An animal without a backbone or spinal column.
Magnetic Field. The portion of space near a magnetic body.

Mate. Either member of a breeding pair of animals.

Micro climate. The essentially uniform local climate of a small site or habitat.

Migration. The act of moving (usually seasonally) from one locality to another for feeding or breeding purposes.
Molt. To shed hair, feathers, shell, horns, or an outer layer periodically.
MPD. Miles per day.

Nocturnal. Active or occurring at night.

Nutrients. The raw materials necessary for continuing life processes.

Omnivore. An organism that eats both plant and animal material.
Organism. A living thing.
Pacific Flyway. A route in the western United States, extending from Alaska to Mexico, taken by migratory birds during their flights between breeding grounds in the north and wintering grounds in the south.
Pollution. Contamination of the environment, especially with human-

made wastes.

Predator. An animal (rarely a plant) that captures and eats animals for food.

Prey. An animal killed for food.

Producer. An organism capable of producing food by combining inorganic materials, as in photosynthesis.

Rare Species. A species that has a small number of individuals and/or has a limited distribution. A rare species may or may not be endangered or threatened.

Riparian. On or near the banks of a river or other flowing body of water; usually refers to vegetation.

Riverine. Relating to or resembling a river; located on or inhabiting the banks of a river.

Scat. An animal fecal dropping.

Scavenger. An organism that feeds habitually on refuse or carrion.

Scientific Observation. Descriptions of what we actually see, hear, feel, taste, or smell.

Slough. A slow moving backwater which is (or has historically been) connected to a river; a stagnant swamp, marsh, bog, or pond, especially as part of an inlet or backwater.

Species. One population of organisms, all the members of which are able to breed amongst themselves and produce fertile offspring.

Submergent Vegetation. Aquatic vegetation growing underwater.

Threatened Species. A species whose numbers are low or declining. A threatened species is not in immediate danger of extinction, but is likely to become endangered if it is not protected.

Understory. An underlying layer of low vegetation in a forested area.

Upland. Ground elevated above the lowlands, marshlands, or rivers.

Vegetative Community. A group of plant populations living in a prescribed area or physical habitat; it may refer to one or to all of the plant species within a given area.

Wetlands. Areas that, at least periodically, have waterlogged soils, support plants adapted to wet soil, and are submerged in water. Bogs, freshwater and saltwater marshes, and freshwater and saltwater swamps are examples of wetlands.

Woodland Habitat. Typically, a habitat with trees, shrubs, and a ground layer of vegetation.

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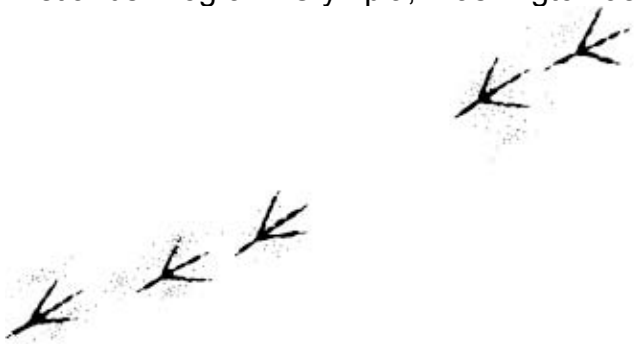
Additional Resources

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