

## Field Notebook Lesson Plan

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School or Agency: St. Anne's Wetland Education Outreach Project

Grade Level(s): 5-12

Science Topic: Note-taking in the field.

Summary: The students will be required to answer questions, take notes about relevant information given to them on the tour, and make observations about the wetlands in their own personal field journal, then use their notes to write an essay detailing their thoughts about the trip and experience in the wetlands upon returning to the classroom.

Core Content: Science as Inquiry. More specifically: understanding the abilities necessary to do scientific inquiry and observation.

Objectives: This activity should enable students to better identify questions that can be answered through scientific observation and investigations. It encourages students to seek more information, discover new objects, and take initiative when it comes to note-taking in the field. This activity should encourage the asking and answering of questions as part of scientific inquiry, and emphasize that the results of scientific inquiry emerge from different types of investigations, observations, and communication among scientists. The students should be able to identify, observe, and (roughly) measure biotic and abiotic components of the wetlands.

Materials: Notebooks for each student, pencils.

### Procedures:

1. Prepare a variety of relevant questions to ask the students while at the wetlands. These can be questions like: Why do you think wetlands are so important? What makes a wetland ecosystem different than a grassland/forest/marine/dessert ecosystem? Do you think there is a living thing associated with the wetland ecosystem that is entirely independent of all other things, both biotic and abiotic? How do nonliving components in this ecosystem serve to promote the survival and growth of living organisms? What are some human actions that affect wetland ecosystems and organisms?
2. Pose these questions to the students while on the tour of the wetlands. After getting some of the students' opinions, offer some information. For example, you could tell them that wetlands are important because they provide vital rest stops for migratory birds, they're a natural filtration system, they support a vast array of wildlife, and they are extremely nutrient rich.
3. Make sure the students understand that they are to be taking notes on the information given, as well as documenting their own personal observations of the wetlands. Emphasize creativity in their observations, we want them thinking outside of the box. At each station ask them to record their favorite feature of the wetlands... what stands out to you the most at this stop? What (if any) animals do you see/hear? What kind of plants do you see? How is this part of the wetlands different from the others we've seen so far?
4. Ask the students what they think the term *wetland ecosystem* means. Have them also consider the two words individually, *wetland* and *ecosystem*. *Wetland* is a term that refers to the partial flooding of an area of land for short or long durations, in which there exists a close relationship between the water and land organisms. *Ecosystem* refers to the relationship that exists between the biotic (living) and

abiotic (nonliving) components of an environment. It might also be helpful to compare/contrast with other ecosystems such as forests, deserts, grasslands, marine, etc. Ask the students to make a list of different biotic and abiotic components that they see in their field notebooks.

5. It might be a good idea to discuss some different biogeochemical cycles; some options being the water cycle, the carbon cycle, the nitrogen cycle, the oxygen cycle, and the food chain (producers, consumers, decomposers).

*Assessment Techniques:* Upon returning to the classroom, ask the students to look through the notes they took while at the wetlands. Ask them to write an essay at home detailing their experience at the wetlands, emphasizing the need for them to include not just their feelings about the trip, but also explaining useful things they learned while there about wetland ecosystems.

*Resources:* Used information found at: [http://www.greenwing.org/dueducator/lesson\\_plans.html](http://www.greenwing.org/dueducator/lesson_plans.html)

*Extensions:* For younger grade levels, a simple discussion activity might work upon returning to the classroom. Have the students sit around in a circle and take turns discussing their favorite part of the wetlands, or the most interesting thing they learned that day.