

## FIELD GUIDE TO THE RETENTION PONDS GAMMON PLACE, MADISON, WI

As part of our study of aquatic environments this year, we visited the retention ponds to collect, identify, draw, classify, and map them and their organisms. These activities have formed the basis for further study of classification attributes, geographic and geologic impacts, organism and environmental interactions and interdependence, sampling, and population. Now we are ready to pull together our information into a guide for others to follow. We are creating a field guide to the retention ponds.

We have used many field guides this year as well--ponds, insects, birds, fishes, plants, etc. Although different, these field guides have many common characteristics. We will draw on those commonalities to develop our own guide to the ponds.

A field guide is just that, a guide for others to follow so that they can know our field site as well as possible. To accomplish this, we must take the reader through many of our experiences second-hand and develop their knowledge of ponds and organisms generally and our pond and organisms specifically. In the process, we will compile a summary of all our learning about aquatic environments. You may find that you have to consult additional sources to complete the guide. List your sources.

### **DIRECTIONS**

You and your small group are responsible for completing a field guide to the retention ponds that has all of the following:

#### **I. Table of contents**

#### **II. Introduction**

- A. About this book
- B. How to use this book
- C. The world of ponds
  - 1. what are they (definition)
  - 2. types of ponds
  - 3. commonalities

#### **III. Energy cycle**

- A. nitrogen cycle
- B. food chains
- C. producers, consumers, and decomposers

#### **IV. Water**

- A. Layers of the water column: animals
- B. Layers of the water column: plants
- C. Water characteristics--if you lived in water
  - 1. adaptations: plants
    - a. location
    - b. color, size, shape
    - c. reproduction and growth
  - 2. adaptations: animal
    - a. locomotion
    - b. eating
    - c. mating and nesting

- d. senses
    - e. color, size, shape
    - f. defense
    - g. life cycle (stages)
    - h. location
  - 3. ebb and flow of volume and area
- D. Water cycle and sources
- E. Water chemistry: daily and seasonal
  - 1. tests
  - 2. temperature
  - 3. light
  - 4. nutrients
  - 5. DO, pH, salinity, nitrate, nitrite, etc.

**V. Substrate**

**VI. How to see, collect, and identify organisms (plants, animals, etc.)**

**VII. Pond map**

- A. Description
  - 1. location
  - 2. conditions
  - 3. water source(s)
  - 4. biotic index of health
- B. Drawing
  - 1. size (area) and shape
  - 2. depth and volume
  - 3. location of plants and animals
  - 4. key

**VIII. Pond critters**

- A. Name: common and scientific
- B. Classification: family
- C. Location: edge/border, surface film, open water, bottom
- D. Picture
- E. Description
  - 1. size, shape, color
  - 2. life cycle
  - 3. locomotion
  - 4. predator/prey
- F. Population: sampling and abundance

**IX. Pond plants**

- A. Name: common and scientific
- B. Classification
- C. Picture
- D. Description
  - 1. size, shape, color
  - 2. life cycle
  - 3. location
- E. Population: sampling and abundance

**X. Sources**  
**XI. Index**

This is a large-scale, complex project with many individual pieces. Having an action plan and due dates are a must:

1. Meet with your group and assign the following roles:
  - a. Director:
    1. call meetings
    2. set tasks and due dates: who does what and by when
    3. fill in for absent group members
    4. organize each day's group and individual tasks: what will we do today?
    5. group contact person to teacher
  - b. Tracker:
    1. track individual and daily progress toward completion
    2. check on individual's progress on assigned tasks
    3. keep individuals and group on task
    3. inform director of progress toward goals
  - c. Secretary
    1. keep a list of all tasks assigned and completed
    2. keep all completed tasks together safe and neat
2. Organize your group and the assignment into logical pieces.
3. Divide up the various tasks among your group members, so that everyone is working on a specific set of goals with specific due dates.
4. Assign one person with responsibility for the completed pieces of the document.
5. Inform the teacher if individuals are not accomplishing their jobs.
6. Be sure that you begin with a rough draft. Once you have finished your rough draft, review it for accuracy and completeness.
7. The final copy is typed. We will be going to the computer lab to accomplish this portion of the assignment. However, you must be ready to input all of your work at that time and complete it during the time available.
8. Assemble your final document.
9. Number the pages.
10. Add a front cover with a title, illustration, and authors' names.
11. Add a back cover with about the author(s) paragraphs.
12. Bind the entire document neatly.
13. Turn it in on the date due.

**ASSESSMENT**

You and your group will be evaluated on all of the following:

1. **Contributions of group and individual members**
  - a. task focus and time use
  - b. collaboration and cooperation
  - c. accomplishment of assigned tasks
  - d. effort

**2. Information**

- a. amount
- b. accuracy
- c. sources

**3. Graphics**

- a. drawing
- b. scale (measurement and proportion)
- c. accuracy and detail
- d. neatness
- e. color and texture
- f. labeling

**4. Writing**

- a. ideas and content
- b. organization
- c. voice
- d. word choice
- e. sentence fluency
- g. conventions

**5. Product**

- a. appearance
- b. neatness
- c. readability
- d. timeliness