



# Wonderful Wetland Fieldtrip

## Curriculum Connection

- *Grade 5 Science: Wetland Ecosystems SLE #1,2,3,6,8*

## Objectives

- *Students will recognize and describe one or more examples of wetland ecosystems.*
- *Students will identify some plants and animals found at a wetland site.*
- *Students will understand that all animals and plants, not just the large ones, have an important role in a wetland community.*
- *Students will identify individual and group actions that can be taken to preserve and enhance wetland habitat.*

## Lesson/Activity Duration

- 1-2 class periods or longer if desired

## Materials Needed

- 4-6 dip nets (can be sieves attached to a broom handles or something similar)
- 4-6 white plastic trays
- 4-6 ice cube trays
- 4-6 Turkey basters
- Invertebrate identification charts
- 2 plastic buckets or ice cream pails
- Magnifying glasses
- Class set of the *Wonderful Wetland Worksheet*

*\* All materials could be collected from home by students or purchased inexpensively at a dollar store.*

## Classroom Arrangement

Outdoor activity located near a local wetland area.

## Background Information

Students should have a general understanding of a wetland ecosystem, how it functions and what plants/animals are found there.

## Important Vocabulary

### Wetland Classifications

- Bog – a peat wetland that may have standing water from rain or snow.
- Fen – a peat wetland which has flowing ground water beneath the peat surface
- Marsh (slough) – non-peat areas filled with surface or groundwater.
- Swamp – areas of forest that flood seasonally.

### Plant Types

- Emergent – roots grow in the water and the plant extends above the water. Ex: Cattail, Bulrush.
- Submergent – grows completely under the water. Ex: Milfoil, Coontail
- Floating – floats on the surface of the water (can be rooted or unattached) Ex: Water Lily, Duckweed.



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- Upland – Plants that grow away from the water's edge. Ex: willow, Balsam Poplar.

## Procedure

### I. Pre – Class Activities

- Familiarize the class with the above vocabulary. Students will be expected recognize the words in the worksheets.
- Discuss the importance of wetlands and the types of wetlands that are found in Alberta.
- Discuss appropriate behaviour for a field outing to a natural area. Emphasis the role students play in being stewards of the landscape (staying on marked paths, staying out of the water to avoid disturbing plants and animals that live on the bottom, speaking in soft voices to avoid scaring animals in the area.)

### II. Wetland Field Trip Activities

#### 1 & 2) Importance of Wetlands and Wetland Types

- Take a walk around the wetland while reviewing the importance and types of wetlands found in Alberta. Have the students complete the first two sections of the Wonderful Wetlands Worksheet (the importance of wetlands and matching the wetland type with the correct name).  
e.g. Wetlands are important because they-
  - filter water
  - store Water
  - help control flooding
  - support life (i.e. provide habitat for a large number of plants and animals)
  - provide areas for recreational activities like hunting, birding, fishing, and exploring.

#### Types of Wetland (*for the purposes of this field trip*)

- **Bog**- a *peat* land that receives moisture from the precipitation only. Black spruce dominant
- **Fen**- a *peat* land that receive moisture from precipitation and groundwater. *Hint: Fens Flow!* Can also find tamarack trees.  
*Bogs and Fens typically have little or no standing water. Water is very shallow.*
- **Marsh**- Common wetland type with standing water. Has a definite shoreline. Common names include slough, pond, and prairie pothole.
- **Swamps**- wetlands where trees or shrubs grow out of standing water. In Alberta we have *thicket* swamps with small shrubs

#### 3) Wetland Plants

- In groups of 2-3, give students 10-15 minutes to identify as many plants in an area as they can. They can be grouped according to the 4 types: Emergent, Submergent, Floating, and Land plants on their worksheets. Gather the group to discuss what they found and **show** the differences between the 3 types.



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## 4) Did You Hear That?

- Encourage students to spread out and find their own space in the wetland area where they can still see you. Have them sit down and listen. They should record the sounds they hear on their worksheet. Bring the students back to a group. What sounds did they hear? Why did they hear some sounds and not others? How does human activity affect what they will hear?

## 5) Animal Evidence

- Give the students 5-10 minutes to explore a small area of the wetland. Magnifying glasses or binoculars can be given out for this activity. Explain to the students that they are trying to find wetland animals or evidence wetland animals. Did they hear evidence of animals in the previous activity? Ask the students to write down their observations under the Animal Evidence section of their worksheet. If time permits, allow the students to share some of their discoveries.

## 6) Catching Critters

- Divide the class into groups of 4 or more. Go over any safety concerns or limitations involved in searching for aquatic invertebrates. **Demonstrate** the following steps before the students attempt the activity.
  - Each group receives a set of the materials mentioned above.
  - Each group should pour about 3 cms of water into the bottom of their white tray.
  - They will use the dip nets to collect invertebrates and plant material, by dipping into the water (deeper is not better, but closer to the bottom and near plants usually works well).
  - Bring the dip net back to the tray and use the baster to suck up some water from the tray. Turn the net upside down overtop of the tray and spray the water onto the dip net, washing anything into the tray.
  - Students can then search the tray for invertebrates.
  - Once something is found, the students can use the baster to suck up the invertebrate and place it into one of the squares in the ice cube tray.
  - Now they are ready to use an aquatic invertebrate identification chart to find out what they have found. They can also use the magnifying glasses to get a better look.
  - Once they know what invertebrate is in the ice cube tray, the students should record the name and sketch a picture in the Critter section of the Wonderful Wetlands Worksheet.
  - Once the groups have identified and sketched 2 invertebrates each, ask them to carefully put back everything that came out of the wetland (invertebrates included).
  - Take time to discuss what critters students found. Discuss the specific adaptations necessary for living in an aquatic environment.

## 7) Preserving and Improving Wetlands

- Finish the fieldtrip with a review and ask the students to write down 2 things that they could do to help preserve and enhance their local wetland on their worksheet.

Name: \_\_\_\_\_

**Wonderful Wetland Worksheet**

**1) Wetlands are important because:**

- \_\_\_\_\_
- \_\_\_\_\_

**2) Wetland Types – Match the wetland type to the correct definition.**

- a. Bog \_\_\_\_\_ areas of forest that flood seasonally
- b. Fen \_\_\_\_\_ non-peat areas filled with surface or ground water
- c. Marsh \_\_\_\_\_ a peat wetland which has flowing ground beneath the peat surface
- d. Swamp \_\_\_\_\_ a peat wetland that may have standing water from rain or snow

**What type of wetland are you visiting today?** \_\_\_\_\_

**3) Wetland Plants – Write the wetland plants that you find in the correct column.**

Submergent (underwater)	Emergent (coming out of the water)	Floating (Floating on water)	Land (plants not in the water)

**4) Did You Hear *That*?**

What natural sounds do you hear?

What human-made sounds do you hear?

**5) Animal Evidence** – Examine the wetland area. Write down any evidence you find.

1. eg. muskrat ripples in the pond,	4.
2.	5.
3.	6.

Did you see any animals? Name them if you can:

**6) Finding Water Critters**

<b>Critter #1</b>	<b>Critter #2</b>
Name:	Name:
Sketch	Sketch

**7) Preserving and Improving Wetlands**

List 2 things you could do to help preserve this wetland.

1)

2)