

This tip sheet will assist you in using SQUISH, the student booklet, on your wetland field trip. The field trip covers activities 10 to 13 in the teacher's guide. Refer to the supplementary CD for more information to prepare for the field trip.

Copy the 16 pages back to back and staple sheets together to make a booklet or have each student place their sheets into a duotang.



**Tip# 1** - You may decide to have each student keep the booklet in a Ziploc plastic bag, with a pencil and some cardboard to use as a solid backing to write on. The bag will keep everything dry and in one place.

**Tip #2** - Feel free to take a booklet for yourself and make notes on the pages for your use while on the field trip.

## SQUISH! A Walk in a Wetland: Page by Page Teacher Tips

### Cover Page

Have students record their name and school. Colour and add wetland wildlife drawings to the cover.

### Page 2: Name, Date and Time

Record the name of the wetland you visited, the date of the visit and time of day of the visit. Discuss why time may be an interesting thing to record.

### Page 3: Ecosystem

This activity does not correspond directly to an activity in the teacher's guide. An ecosystem is a place with living and non-living things. Have students complete this page throughout the field trip; stop and record the living and non-living things they see. (Include things that were once alive, like leaves, in the living column. Non-living things include rocks or water.) Discuss the differences between living and non-living and why they are both important. Living things can be used to construct food chains or food webs back in the classroom.

### Page 4: Wetland Soils

This activity corresponds to **Activity 10, Investigating Wetland Soils**, in the teacher's guide. Students will dig a small hole near the water's surface, further upland and another closer to vegetation. Complete this activity as instructed in the teacher's guide and refer to background information.

### **Page 5: Landforms**

This activity does not directly correspond to the teacher's guide. Students will stand in one spot and observe the land around them. Symbols are already provided on the bottom of the page and if desired, students can make up their own symbols. You can use this page anywhere you choose in the wetland. It would work well to complete this section after completing the Wetlands Soils activity on page 4.

### **Page 6: Textures**

This activity does not directly correspond to an activity in the teacher's guide. Students can complete this activity when you are in a treed area. This activity enables students to see the differences in leaf and/or bark design and structure. Encourage students to find and use at least two different leaves and/or bark examples for their rubbings. Students can make rubbings that match the following shapes: square, circle, oval and rectangle. Bring along a field guide to identify the trees in the area.

### **Page 7: Investigating Aquatic Plants**

This activity corresponds to **Activity 11, Investigating Aquatic Plants**, in the teacher's guide. This activity covered submerged, emergent and floating plants as detailed in the teacher's guide. Students should be working with their buddy.

### **Page 8: Investigating Aquatic Invertebrates**

This activity corresponds to **Activity 12, Investigating Aquatic Invertebrates**, in the teacher's guide. Review the instructions to capture, observe and release aquatic invertebrates which are detailed in the booklet. Complete this activity as instructed in the teacher's guide. A specimen holding tank is a white container with wetland water to hold the insects in for observation.

### **Page 9: Wetland Observations**

This activity corresponds to **Activity 13, Assessing Wetland Health**, in the teacher's guide. Complete this activity as instructed in the teacher's guide. Do they hear sounds and see the impacts of people. Listening is important and makes up 70 per cent of birdwatching. What sounds are close? Farther away? Made by wildlife? Humans? Nature? Discuss what makes up a healthy ecosystem? Do the students think they are visiting a healthy or unhealthy wetland? What factors helped them decide? Please note that there are many factors that biologists use to assess the health of a wetland ecosystem. Refer to the teacher background.

### **Page 10: Adaptations**

This activity does not directly correspond to the teacher's guide. Have students complete this page if you have time. It's a good place to think about the beaver, moose, frog and duck while being right there in their habitat. Work in animal groups and make a list of adaptations.

### **Page 11: Diversity**

This activity does not directly correspond to the teacher's guide. Use this activity to encourage students to think about the smaller plants and animals that have wetland habitat. Students will be looking under logs and in leaf litter so a useful tool would be to have magnifying hand lenses for the students. Review proper behaviour for looking under logs. Roll log over carefully and place back exactly as it was originally found. No log should be left overturned; there are critters under there that you are temporarily going to take a peek at.

### **Page 12: Seasonal Changes**

This activity does not directly correspond to the teacher's guide. You can complete this activity at the wetland during the time of year you visited, complete the remaining seasons back in the classroom, during another visit to the wetland, or during the existing wetland field trip through a discussion with students. Have students draw today and speculate what it will look like in another season. Discuss the implications of seasonal changes on plants and animals.

### **Page 13: How does a MARSH compare to a BOG?**

This activity does not directly correspond to the teacher's guide. You can complete this activity during your field trip or back in the classroom. Be sure to identify what type of wetland you visited. If you visited a marsh, have students find out information on marshes and bogs to complete this activity. If you are not able to visit both a bog and a marsh, there is information on the Wetlands: Webbed Feet Not Required poster back to help with comparison.

### **Page 14: Map**

This activity does not directly correspond to the teacher's guide. Complete this activity when you think your students have a good understanding of the wetland they are visiting and can draw a good representation of the area. Have students draw the path they travelled.

### **Page 15: I Wonder Why...**

This activity does not directly correspond to the teacher's guide. Have students complete this reflection activity at the end of the field trip, either before departing or when back in the classroom. Ask students where they would go to research their questions. Encourage them to find their answers and report back to the class.

### **Page 16: Notes**

Have students use this page for any questions you want them to think about while on the trip. It may also be used as a journal page where you encourage each of them to find a quiet spot to sit and do some writing for more than 10 minutes. Tell them to get "soaked up" in the wetland ecosystem, become part of their surroundings.

# SQUISH!

## A Walk in a Wetland



Name \_\_\_\_\_

School \_\_\_\_\_



Name of the wetland we visited:

---

Date of our visit:

---

Time of day:

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# Ecosystem

An ecosystem is a place with all of its living and non-living things.  
List the living and non-living things in this wetland ecosystem.

Living	Non-Living

- Circle the living things in your list that are producers.
- Draw a box around the living things in your list that are consumers.
- Place a checkmark by the living things in your list that are ✓ decomposers.

**Producers** are living things that make food.

**Consumers** are living things that get their food by eating other living things.

**Decomposers** are living things that get their food from dead matter.





# Wetland Soils

Following these instructions:

1. Use a shovel and dig a small hole near the water's edge. Move the soil from the hole into your container.
2. Dig another small hole farther from the water and closer to some plants and move the soil into your container.
3. What do you see? What are the differences or similarities in the two types of soil? Write down all of your observations.

<b>Soil from Water's Edge</b>	<b>Soil from Plant's Edge</b>

**Examine the wetland soil and write down your observations.**

## **Soil Characteristics:**

**Smell** (Sulphurous like eggs?)

**Color** (green, brown, black, grey)

**Texture** (muddy, sandy, wet, slimy, crumbly, mushy, solid)

**Invertebrates** (Describe any that are in the soil.)

**Visible water** (Is it present?)





# Landforms

Stand in one spot and observe the land around you. As you look in four different directions, what do you see?

Draw a sketch of the landscape you see in each direction.

North	East
West	South

## Key

Coniferous tree (needles) 	Deciduous tree (leaves) 	Bushes/shrubs 
Low ground cover 	Hills 	Water 





# Textures

Make four rubbings of wetland textures.  
Try leaves and tree bark.

A large, simple cross-shaped grid consisting of a vertical line and a horizontal line intersecting at the center. This grid is intended for students to draw or record their texture rubbings.



# Investigating Aquatic Plants

## Categories of Common Aquatic Plants

1. Submerged - underwater (e.g. pondweed)
2. Emergent - partially underwater and partially on top of water (e.g. cattails)
3. Floating - on top of water (e.g. duckweed)

With your buddy, walk safely around the wetland and try to identify the three categories of aquatic plants. Make notes about each plant you find. Sketch each plant in the boxes below.

<b>Submerged</b>	<b>Emergent</b>	<b>Floating</b>





# Investigating Aquatic Invertebrates

Follow these instructions to capture, observe and release aquatic invertebrates.

1. In groups of three or four, have one person hold the net, one to fill the container with water, and one to hold the specimen identification key. Keep leaves and mud out of the container of water.
2. To capture invertebrates, the student with the net will stand near the edge of the water carefully. Slowly lower the net into the water and scoop up small creatures or invertebrates you may see swimming around. You won't find any invertebrates if you splash in the water or scoop up mud.
3. When you have invertebrates in the net, quickly put them CAREFULLY into the specimen holding container and observe what you found. Try to identify the specimen(s) using the identification key.
4. Record all of your observations into the chart below, along with the name of the invertebrate(s).

<b>Specimen 1</b>	<b>Specimen 2</b>	<b>Specimen 3</b>	<b>Specimen 4</b>	<b>Specimen 5</b>





# Wetland Observations

Wetland wildlife includes all plants, animals and insects. Use your senses and record your wildlife observations.



Sounds



Signs



Touch

One sign of a healthy wetland ecosystem is a variety of plants and animals. Another one is that the water is clean from pollution.

Indicators of a **healthy** wetland ecosystem include:

- Duckweed is present
- Riparian area is lush
- 
- 

Indicators of an **unhealthy** wetland ecosystem include:

- A lot of blue-green algae is present
- Riparian area is tramped or not in good condition
- 
- 



List more of your observations.





# Adaptations

Adaptations are features that help a living thing survive in its environment.

What adaptations do these animals have that help them survive to a wetland?

Beaver 	Moose 	Frog 	Duck 





# Diversity

A wetland is habitat for many different kinds of plants and animals. Some of the most interesting habitats are around and under rotting logs or under the leaf litter on the ground.

How many different types of plants and animals do you see under the log or under the leaf litter? Describe what you find in the leaf litter or under a log.

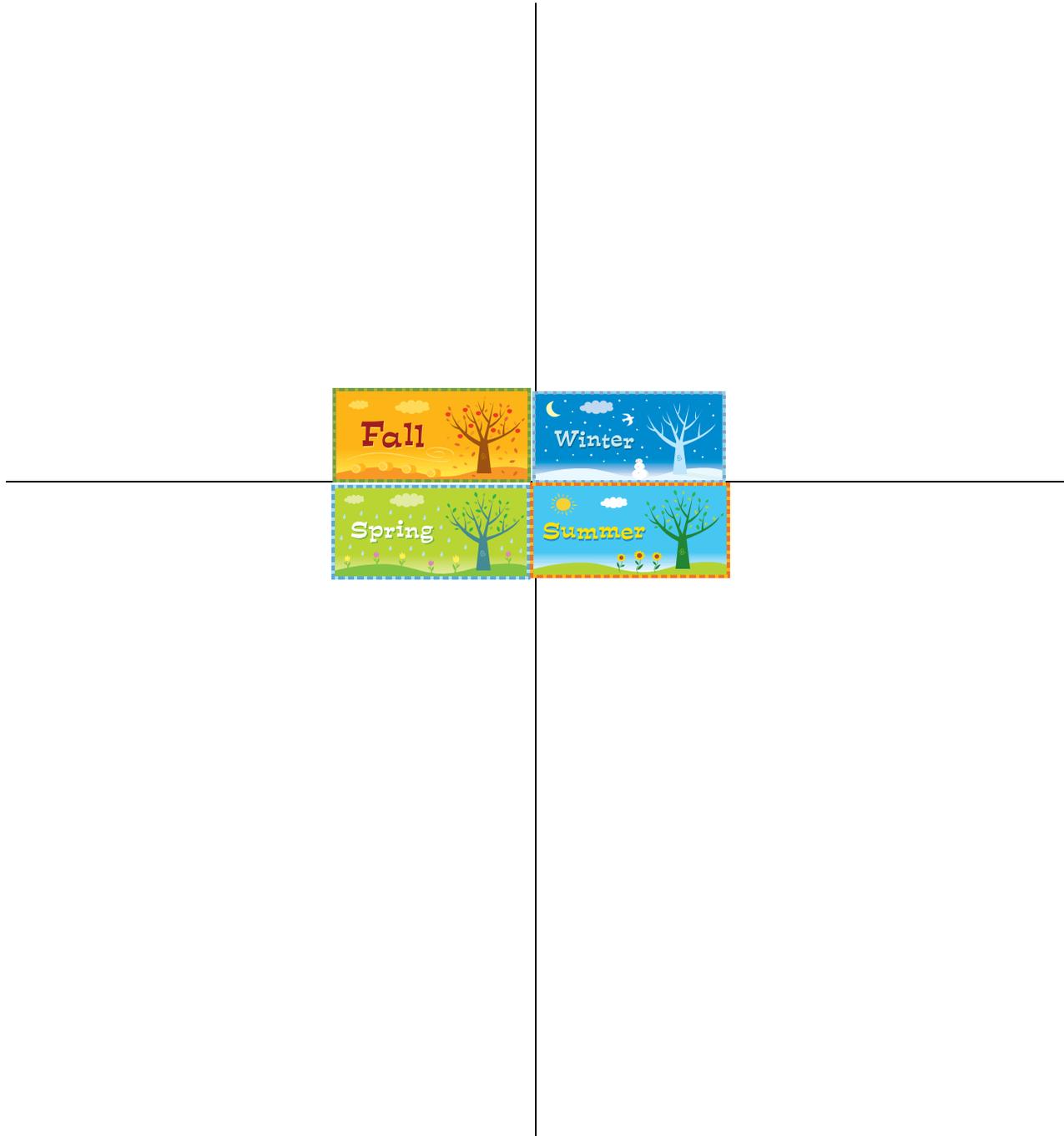


When you have finished looking under the log, CAREFULLY return the log exactly to the position in which you found it.





# Seasonal Changes



In which season are you visiting the park? Circle that season and draw a picture of what you see around you.

Draw pictures of what you think the same place will be like in the other three seasons.





# What's the difference between a MARSH and a BOG?

Marsh	Bog
<input type="checkbox"/> Coniferous trees (needles)	<input type="checkbox"/> Coniferous trees (needles)
<input type="checkbox"/> Deciduous trees (leaves)	<input type="checkbox"/> Deciduous trees (leaves)
<input type="checkbox"/> Cattails	<input type="checkbox"/> Cattails
<input type="checkbox"/> Moss	<input type="checkbox"/> Moss
<input type="checkbox"/> Open Water	<input type="checkbox"/> Open Water
<input type="checkbox"/> Floating plants	<input type="checkbox"/> Floating plants
<input type="checkbox"/> Shrubs	<input type="checkbox"/> Shrubs
<input type="checkbox"/> Grasses	<input type="checkbox"/> Grasses
Other things I see:	Other things I see:





# Map

Make a map of the wetland you are visiting in the space below. Try to draw what you see and where you have explored! Try to include signs of human disturbances and conservation actions!

A large, empty rectangular box with a thin black border, intended for drawing a map of a wetland. In the bottom-left corner of this box, there is a compass rose with the letter 'N' above it, indicating North.



# I Wonder Why ...

Were you curious about anything that you saw on your walk today?



Write your own questions by completing the phrase, "I wonder why ..."

I wonder why ...

Find someone who can answer your questions?





# Notes

