**LESSON TWO** 

# The Explorer's Hunt

Objective: For students to identify adaptations of wetland animals

### LEARNING OUTCOMES

- Students can observe and describe wetland adaptations of live animals.
- Students can design an effective sign to communicate important information to the public about a wetland animal.
- Students can explain why certain animals use selected microhabitats in a marsh.

### **ZOO-VISIT PREPARATION**

- **a.** In advance of your visit, contact the education office at your zoo, aquarium, or nature center for advice on planning a route to the exhibits of wetland habitats and animals. You may choose to have your students participate in the planning.
- **b.** Arrange for parents to join you on your Zoo Visit.
- **c.** Share your itinerary with the parents that will be joining you and ensure that they understand the planned activities.

**Note:** Depending on time constraints and the exhibits available at your zoo, you might want to do Zoo Activity I, Zoo Activity II, Zoo Activity III, or all of the above. Make sure to consult the

appropriate Materials section for each Zoo Activity.

**Zoo Activity I: Wetland Explorer's Hunt** 

### **VOCABULARY**

broad transparent webbed streamlined

### **MATERIALS**

Wetland Explorer's Hunt activity sheet (1 per student), pencils, clipboards (optional)

### **PROCEDURE**

- 1. Before going to the zoo... Have your itinerary ready and explain to the students that they will be observing animals that live in wetlands. On the chalkboard, write a list of the animals you are going to see.
- 2. Instruct the students to choose several animals from the list on the board. Hold up the *Wetland Explorer's Hunt* activity sheet and briefly explain that they will need to look at their animals and record information in the boxes. Instruct the class that they can either use the code on the activity sheet or fill in the full answers in words.
- 3. At the zoo... Hand out a copy of the *Wetland Explorer's Hunt* activity sheet (and a clipboard) to each student. Have students study their chosen animals in the exhibits and fill out their sheets. They should be able to find many of the answers on the signs at





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each animal exhibit.

### 4. Once you return from the zoo...

Review the *Wetland Explorer's Hunt* activity sheet answers with the students. Then write the following questions on the chalkboard:

- How many different types of wetland exhibits did you visit?
- How did you decide which type of wetland the zoo exhibit represented?
- How does the body covering of the animals you observed help them survive?
- Explain how each of the wetland adaptations you circled helps the animal in its wetland habitat.

Zoo Activity II: Redesign a Zoo Sign

### **VOCABULARY**

interactive

interpretive

### **MATERIALS**

notebooks, pencils, oak tag, colored pencils or crayons; camera and film, preferably instant (optional)

### **PROCEDURE**

1. At the zoo... This Zoo Activity is designed to have students think critically about how a zoo would present a wetland animal to the public in a creative, interesting way. Have the students choose one exhibit sign to redesign. First they should choose their animal exhibit. Give the class a choice of exhibits to visit, keeping in mind the number of

chaperones available. Once at their selected exhibit, students should look carefully at all of the exhibit signs for that animal to obtain as much information as they can. Then, if there is more than one sign at the exhibit, students should select one of the signs to redesign. They should study and think critically about all aspects of the actual sign at the exhibit, including: words, photographs, illustrations, colors, and other features. If possible, take a picture of the sign for future reference. If a camera is unavailable, have the students sketch and take notes about their sign.

### 2. Once you return from the zoo...

Students can redesign their signs as homework. How would they make sure to convey all the interesting and important information to the public in a brief, engaging way? Would they use photographs or other pictures? Moving parts? Would they use small letters or big letters? Which colors? Would it be interactive? You can conduct a contest with student judges and display the signs on a bulletin board in the classroom.

# **Zoo Activity III: Marsh Characters Game**

### **VOCABULARY**

bask microhabita secluded

### **MATERIALS**

Introducing the Marsh Characters activity sheet (1 per student), construction paper, colored pencils or crayons, clipboards (optional)

### **PROCEDURE**

1. At the zoo... The Marsh Characters



Water Lily

Game helps students understand that a wetland habitat is a mosaic of distinct microhabitats and encourages them to think about which microhabitats would meet different animals' needs. To play the Marsh Characters Game, you need to visit a freshwater marsh. This can be at the zoo or any other accessible marsh. Your students will draw a map of the marsh and then try to figure out which microhabitats the different animals would use.

**2.** First explain to your students what a microhabitat is. Explain that different animals and plants are found in different **micro-**(small) habitats according to their requirements. Microhabitats are smaller are as within a habitat that provide special conditions; the special conditions might be shelter, moisture, dark, light - anything that is concentrated in a specific place within a larger habitat. For example, a floating log could provide a turtle with an ideal microhabitat for basking in the sun. For different animals, a desirable microhabitat might be: a grass stem, the bark of a tree, underground, or on a lily pad – as long as it provides special conditions.

**3.**Next, have the students draw a map of the marsh while standing at the zoo exhibit or wetland area. Make sure the map shows a wide variety of microhabitats, such as islands, plants, sandy beach, logs, rocks, mud; reeds, and **open water**. If it is not feasible to have the students draw the map at the exhibit or wetland area, students can draw a map on the chalkboard back in the classroom from memory or notes.

**4.**Hand out copies of the *Introducing the* Marsh Characters activity sheet. If students draw their maps at the marsh and time permits, you may wish to do this step at the marsh. Alternatively, you can continue in the classroom. The students' task is to figure out which microhabitat would be appropriate for each Marsh Character and then draw each Character in the appropriate place on the map. (If students are uncomfortable drawing the animals, suggest they write in each Marsh Character's name in the appropriate spot.) Some animals may be found in more than one area – have the students offer their justifications.

**Answers for the Marsh Characters Game** Harry the Heron fishes in the shallow water, where he can easily spot the minnows he likes to eat.

**Melvin the Muskrat** needs to harvest the surrounding reeds and other grasses in order to build a cozy nest.

Belinda the Bullfrog would lay her eggs near the shoreline in the shallow water, since this is where many aquatic plants grow.

Mac the Mink could hunt for larger fish in the middle of the marsh, or he might even hunt ducks, especially young ones.

**Tammy the Turtle** would need some logs or rocks to climb onto in order to bask in the sun.



Dragonfly



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**Dino the Dragonfly** would fly out over the open water in a display to attract a mate.

Martha the Mallard Duck might nest on an island in the marsh where there is less chance of a predator creeping up and attacking her or stealing her eggs.

**Sydney the Snake** could search for minnows and other creatures in the shallow water, taking care to avoid Harry, who would eat him in a minute.

Mink

HABITAT ECOLOGY LEARNING PROGRAM



# Wetland Explorer's Hunt

**EXECTION** Selvent and the wetland exhibit. Observe your animals and the exhibit signs carefully to figure out more about each wetland animal and its habitat. Fill in the five categories for each animal. Either use the key letters or numbers to record your answers or fill in the entire words. You can have more than one answer in each box

ANIMAL NAME:	
TYPES OF PLANTS $G = \sigma rasses$	
T = trees O = other (explain)	
TYPE OF WETLAND	
SM = salt marsh	
MS = mangrove swamp	
FS = freshwater swamp	
β = bog O = other (explain)	
BODY COVERING	
Sc = scales	
Fe = feathers	
Fr = fur	
Ms = moist skin Sh = shell	
ADAPTATIONS FOR FEEDING	
1 = special beak	
2 = webbed reet 3 = long logs	
4 = long toes	
5 = ability to swim	
6 = streamlined body O = other (explain)	
OTHER WETLAND	
ADALIAIONS 1 = broad tail	
$\hat{z} = \text{oil in feathers/fur}$	
3 = special color	
4 = eyes on top of head $5 = $ nostrils on top of head	
O = other (explain)	