



# Wetland Webs

Adapted from *Project CEED* and  
BTNEP/LSU AgCenter: *Wetland Functions, Values and Economic Resources*

## Focus/Overview

This activity can be used to introduce the concept of food web. It can also be used to review the concepts learned.

## Learning Objective

The learner will...

- create a physical representation of a wetland food web and identify the importance of each component of the web.

## Louisiana Grade Level Expectations (Science)

2: GLE-46	Illustrate and describe a simple food chain located within an ecosystem (SE-E-A2).
4: GLE 71	Describe and explain food chains/webs and the directional flow of energy in various ecosystems (e.g. construct a model, drawing, diagram, graphic organizer) (SE-E-A2).
5: GLE 23	Construct food chains that could be found in ponds, marshes, oceans, forests, or meadows (LS-M-C2).

## Materials List

- Large index cards
- Hole punch
- Markers
- List of wetland organisms
- Books about wetland wildlife
- A collection of photographs of wetland wildlife from magazines, etc.
- Five balls of different colored yarn

## Background Information

Food webs introduce students to scientific terms like producers, herbivores, omnivores, carnivores, detritivores and scavengers. Using wetland organisms to create food webs, help students understand their own habitat and how the biotic, or living, factors in an ecosystem are dependent upon one another.

## Procedure

- One value of wetlands is providing a rich habitat for wildlife. Wetlands are one of the most productive habitats on earth in terms of the variety and amount of organisms they can support. Only the rain forest is more productive than a marsh!
- Wetlands have a great many organisms that live within their boundaries. Here is a list of organisms that live in the wetland of Barataria-Terrebonne. Display **Wetland Webs Organisms List (Blackline Master 1)**. The list is divided into six groups. Look at the first group, the **producers**. What do they all have in common? (They are all plants). How do plants get their food? (They make their own food using sunlight, water and carbon dioxide, by the process of photosynthesis.)
- What about the next group, the **herbivore or primary consumers**. Do they have anything in common? (All are animals.) What about the **carnivore** group. What do they have in common? (They all eat animals.) What do **omnivores** eat? (They eat both plants and animals.) What do **scavengers** eat? (They eat dead animals.) What do **detritivores** eat? (They eat decaying plant material.)
- Detritivores often get overlooked, but in the marsh and swamp ecosystems, they are very important. They live on dead and decaying plant material called detritus. In the marsh dead and decaying

## BTNEP Connection

Living Resources

## Grade Level

2, 4, 5

## Duration

45 minutes

## Subject Area

science

## Setting

classroom

## Extension Areas

art

## Vocabulary

producers, herbivores, omnivores, carnivores, scavengers, detritivores

## Original Sources

Adapted from *Project CEED* and "Wetland Webs" in BTNEP/LSU AgCenter: *Wetland Functions, Values and Economic Resources*, Activity 4.



[www.btnep.org](http://www.btnep.org)

marsh grass makes up a very large part of the food supply at the beginning of the food chain. A lot of energy is locked up in the dead material and the detritivore's job is to break the materials down by converting the energy to a form that can be used further along the food chain.

5. Divide the class into six groups and assign each group to one of the groups of organisms. Each person in the group should choose their favorite organism from the list and make at least one organism card. On the card, write the name of the organism and what that particular organism eats. Then students should draw a picture of the animal or plant on the card – or students can glue a picture of the animal or plant on the card. Pass out large index cards and markers.
6. When you have finished your organism card, punch two holes in the top edge and thread a piece of yarn through it so it can be hung around the neck. Have students line up in parallel rows in the following order (from front to back).  
**producers, herbivores, omnivores, carnivores, scavengers, detritivores**
7. I (the teacher) represent the sun – the source of all energy on Earth. I will pass a ball of yarn to each of the producers. (Pass out the five balls of different colored yarn.) Each producer must then choose an herbivore or omnivore who would feed on it and pass the ball of yarn to them (they hold loosely to the thread). This represents passing the energy along the food chain. Now each herbivore and omnivore must find a carnivore. Pass them the ball of yarn, holding onto the thread. If one of the organisms cannot find an "eater" to eat them, hand the ball of yarn to a scavenger or the detritivore.
8. Can some organisms eat more than one kind of organisms in the web? (Yes.) Can some organisms be eaten by more than one organism in the web? (Yes.) What about the scavengers and the detritivores? (The scavengers and detritivores can actually feed at any level, but for the sake of simplicity they can come last in the food chains. Discuss with the students how the producers can directly feed the detritivores. Also, you can choose to bring in the decomposers, which have the job of breaking down the dead plant material and making it more accessible to the detritivores.)
9. What would happen to the food web if there were fewer plants? (There would not be as many animals, since there would be less available food.) What would happen if there were no scavengers? (We'd have no way of getting rid of dead animals.)
10. What would happen if this wetland was drained? Which organisms would disappear from the food web? Could this affect people? What might happen if there was an oil or chemical spill? What does this activity tell us about the value of wetland food webs to people?

## Blackline Master

### 1. Wetland Webs Organism List

## Assessment

- Check to see if students understand who to pass the ball of yarn to next.
- Monitor their answers to the questions in Steps 9 and 10.

## Extension

### The Arts:

Have students create dioramas of a chosen habitat. The dioramas can be made in a large shoe box. The dioramas can be accompanied by a written description of the habitat, the organisms that live there, and its functions and values within the Barataria-Terrebonne ecosystem.

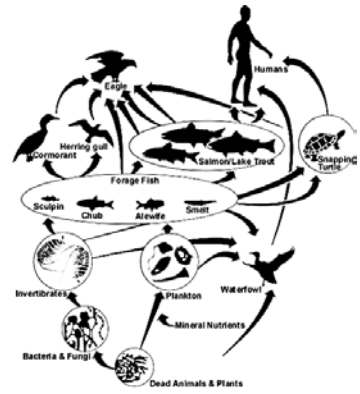
## Resources

### Tradebooks:

- Kalman, Bobbie D. 1998. **What are Food Chains and Webs?** Crabtree Publishing Company. 32pp.  
*A simple introduction to food chains and webs, featuring both herbivores and carnivores and discussing energy, food production, and decomposition in various ecosystems. Age Range: 7 to 8.*
- Lauber, Patricia. 1994. **Who Eats What? Food Chains and Food Webs.** HarperCollins Publishers. 32 pp.  
*An award-winning author and artist explain how every link in a food chain is important because each living thing depends on others for survival. Age Range: 5 to 9. Outstanding Science Trade Books for Children 1996.*

### CDs

**Louisiana Wetland Functions and Values** CD developed by LSU AgCenter's Extension Service, the U.S. Geological Survey's National Wetlands Research Center and the LA Department of Natural Resources. To receive a copy, contact DNR (800/ 267-4019) or visit <http://www.lacoast.gov>.



## Wetland Webs Organism Lists

<p><b><u>PRODUCERS</u></b>  smooth cord grass  wire grass  bulltongue  giant cutgrass  cattail  three cornered  grass  phytoplankton  alligator weed  duck weed</p>	<p><b><u>HERBIVORES</u></b>  lubber  grasshoppers  nutria  deer  swamp rabbit</p>	<p><b><u>OMNIVORES</u></b>  opossum  raccoon  humans  coot (Poule d'eau)</p>
<p><b><u>CARNIVORES</u></b>  golden silk spider  alligator  redfish  leopard frog  cottonmouth snake  great egret  ibis</p>	<p><b><u>DETRITIVORES</u></b>  amphipods  fungi  shrimp  crawfish</p>	<p><b><u>SCAVENGERS</u></b>  turkey vulture  crawfish  shrimp  blue crab  house fly</p>