

# Romp in the Swamp



Amphibians like toads and frogs may like to spend some of their time on land but they **MUST** breed and develop into adults in the water.

## The Approach

Billy utilizes comprehensive sensory integration through song, dance, audience participation and a multi-dimensional backdrop to introduce scientific concepts related to the food chain/ food web, while discussing the ecology of the wetlands and its benefits for humans, wildlife and water quality.

As Billy B sings about alligators, muskrats, dragonflies and hoot owls students learn about predator/prey relationships, the interdependency of plants and animals, insect life cycles, photosynthesis, and water quality issues.

## The Objective

Students will comprehend the process by which the food chain functions as a chain of energy passing from one life form to another and many other related ecological concepts.

Older students will take a deeper excursion into the swamp and gain knowledge of biological indicators for water quality and much more.



## The Result

Billy B is a true performer. He held the audience the entire time and kept them involved. To me that is a great talent. It was fun to learn with him because his performance was so dynamic. He really changed his show to adapt to the different age levels.

*PTA Representative*

## Suggested Pre-Performance Activities

Discuss the following concepts with students:

1. Swamps, marshes, and bogs are all wetlands. Wetlands are areas that have some standing water during some part of every year and in most cases, this standing water is shallow.
2. Wetlands are important places for wildlife, both local and migratory.
3. Wetlands provide an important habitat, where many food chains are formed.

## Romp in the Swamp in the Classroom

### Vocabulary Words

#### Grades K-2

**amphibian** - a cold-blooded vertebrate that spends some time on land but must breed and develop into an adult in water. Frogs, salamanders, and toads are amphibians.

**decompose** - to break down organic matter from a complex to a simpler form, mainly through the action of fungi and bacteria.

**fertilizer** - an organic or synthetic substance usually added to or spread onto soil to increase its ability to support plant growth.

**food chain** - a hierarchy of different living things, each of which feeds on the one below.

**habitat** - the natural conditions and environment in which a plant or animal lives, e.g. forest, desert, or wetlands.

**marsh** - an area of low-lying waterlogged land, often beside water, that is poorly drained and liable to flood, difficult to cross on foot, and unfit for agriculture or building.

**peat** - a compacted deposit of partially decomposed organic debris, usually saturated with water.

**predator** - a carnivorous animal that hunts, kills, and eats other animals in order to survive, or any other organism that behaves in a similar manner.

**prey** - an animal or animals caught, killed, and eaten by another animal as food.

**reptile** - an air-breathing cold-blooded egg-laying vertebrate with an outer covering of scales or plates and a bony skeleton, e.g. the crocodile, tortoise, snake, or lizard.

**rot** - to be broken down by the action of bacteria or fungi.

**swamp** - an area of land, usually fairly large, that is always wet and is overgrown with various shrubs and trees.



#### Grades 3-6

In addition to the above vocabulary, students in grades 3-6 will also gain knowledge of the following terms:

**algae** - a photosynthetic organism of a group that lives mainly in water and includes the seaweeds. Algae differ from plants in not having true leaves, roots, or stems.

**bog** - an area of wet marshy ground, largely consisting of accumulated decomposing plant material. It supports vegetation such as cranberries and moss and may ultimately turn into peat.

**carnivore** - an animal that eats other animals.

**cattails** - a tall, slender marsh plant. Flowers: brown, tube-shaped, in furry spikes.

**compound eyes** - the eye that most insects and some crustaceans have, made up of several separate light-sensitive parts.

**decomposition** - to break down organic matter from a complex to a simpler form, mainly through the action of fungi and bacteria.

**ebb** - the movement of a receding tide away from the land.

**estuary** - the wide lower course of a river where the tide flows in, causing fresh and salt water to mix.

**extinct** - having no members of the species or family in existence, as is the case with many organisms known only from fossils.

**food chain** - a hierarchy of different living things, each of which feeds on the one below.

**habitat** - the natural conditions and environment in which a plant or animal lives, e.g. forest, desert, or wetlands.

**herbivore** - an animal that feeds only or mainly on grass and other plants.

**insect** - an air-breathing invertebrate animal arthropod with a body that has well-defined segments, including a head, thorax, abdomen, two antennae, three pairs of legs, and usually two sets of wings.

**instinct** - an inborn pattern of behavior characteristic of a species and shaped by biological necessities such as survival and reproduction.

**life cycle** - the series of changes of form and activity that a living organism undergoes from its beginning through its development to maturity.

**litter** - discarded waste materials that have been carelessly left on the ground, especially in a public place or outdoors.

**marsh** - an area of low-lying waterlogged land, often beside water, that is poorly drained and prone to flood.

**maternal** - an instinct for nurturing and protection of offspring.

**nutrients** - a substance that provides nourishment, e.g. the minerals that a plant takes from the soil or the constituents in food that keep a human body healthy and help it to grow.

**omnivore** - an animal that will feed on any type or many different types of food, including both plants and animals.

**process** - a series of natural occurrences that produce change or development.

**rotting** - in the process of being broken down by the action of bacteria or fungi.

**swamp** - A seasonally flooded bottomland with more woody plants than a marsh.

**wetlands** - a marsh, swamp, or other area of land where the soil near the surface is saturated or covered with water, especially one that forms a habitat for wildlife.

## Post Performance Activities

Review the following concepts:

1. Any given plant or animal directly affects other living things. For example:

numerous cattails → many muskrats → a family of minks

or

limited cattails →one family of muskrats →no minks.

2. With students in grades 3-6, discuss the important role wetlands play in water quality and flood control.

**WRITING ACTIVITIES:**

Have the students draw a picture of their interpretation of marsh life, then write an explanation of their drawing.

**SCIENTIFIC ACTIVITIES:**

Review the actual connections between animals and their habitat. For example, a frog's need for a large insect population and dense foliage for shelter. Continue investigating this dynamic with snakes, mosquitoes, muskrats, otters, cattails, etc. With older students review location, wildlife, and possible community benefit from any local wetlands.

**LISTENING ACTIVITIES:**

1. Visit a marsh and try to identify sounds.
2. Listen to a recording of "**Romp in the Swamp.**"

**DRAMA ACTIVITIES:**

Role play a day in the life of any marsh organism using the information the children have learned from the show.

## Teacher Resources

Billy B's CD entitled "Romp in the Swamp" contains fourteen original loaded with funny and interesting facts about swamp animals and their wetlands habitat. Alligators, ducks, snapping turtles, and muskrats co-star with cattails and other marsh grasses in the daily struggle for coexistence and survival in the swamp. Preview and/or purchase this energetic and captivating CD at <http://billybproductions.com/>. Click on Store, Purchase CD's, then *Romp in the Swamp*.

**READING MATERIALS:**

(K-3) with teacher guidance

1. *Crabs* by Herbert S. Zim
2. *Swamps* by Delia Goetz

(4-6)

1. *Estuaries: Where Rivers Meet the Sea* by Laurence Pringle
2. *Junior Science Book of Pond Life* by Alexander L. Crosby
3. *The Life of the Marsh* by William Niering
4. *Dragonflies and Damselflies* by Mary Gusler Phillips

# National Science Education Standards

*Romp in the Swamp* conveys connections to the following standards:

## **Physical Sciences**

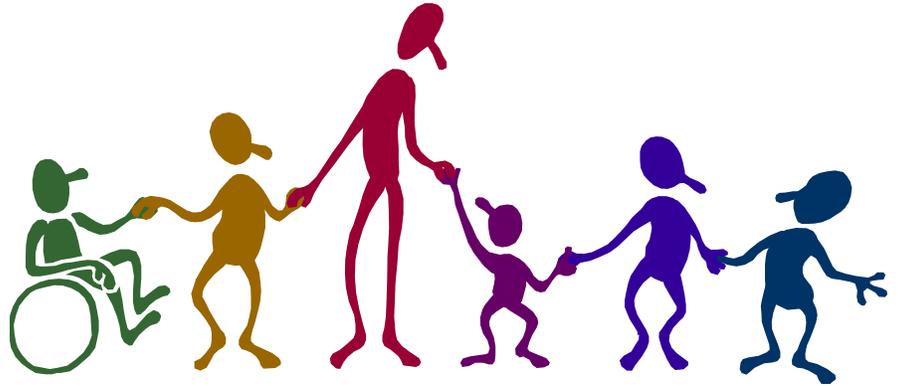
- \_ Transfer of energy

## **Life Sciences**

- \_ Characteristics of organisms
- \_ Life cycles of organisms
- \_ Organisms and environments
- \_ Structure and function in living systems
- \_ Populations and ecosystems

## **Personal and Social Perspectives**

- \_ Types of resources
- \_ Changes in environments
- \_ Populations, resources, and environments
- \_ Characteristics and changes in populations



National Research Council. *National Science Education Standards*. Washington, D.C.: National Academy Press, 1996.