

## Winter Adaptations - December 2008 Classroom Reader

### Winter Adaptations

There are many different ways for animals to prepare for and handle the cold winter months that are approaching. Some gather food; some hibernate or brumate; and still others just leave town!



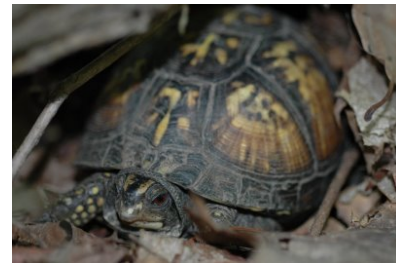
Chances are you have seen the squirrels, chipmunks and other mammals in your neighborhood busily gathering acorns, pecans, seeds and other items on which they dine. Both of these animals are hoarders, meaning that they stash food reserves throughout their territories. While they cannot remember each and every place they have hidden their snacks, they often locate food caches by smell. This means that they are often eating their neighbors' stockpile as well as their own!

Reptiles and amphibians in Georgia brumate, which is the reptile equivalent of hibernation. They slow down their bodies, but can still respond to outside stimuli, albeit not as quickly.

Snakes, turtles and lizards all start increasing their food intake in the late summer and early fall. They need these food reserves to carry them through the cold months when they aren't out hunting or foraging.

Eastern box turtles will use their strong front claws to scrape hollows under logs, brush piles, buildings or other protective areas so they can stay out of the cold.

Recent studies by the Savannah River Ecology Lab have shown that eastern box turtles pick brumation sites within 10-15' of the previous year!



The broad-winged hawk, which is the smallest hawk in Georgia, has a diet that consists primarily of insects. In fact, more than 65% of their prey is grasshoppers, crickets and other bugs, with the remainder made up of lizards, amphibians, birds and small mammals. Because the bulk of their diet isn't active during the winter months, these hawks migrate in flocks every fall to Central and South America where the insects are plentiful. Late spring, they begin their return flights to Georgia where they will spend the summer.

So, when you are snuggled under the blankets staying warm, just think about your neighborhood animals and how they are handling the cold, too!

### Teacher Resources

Are you ready to spice up your curriculum? Check out these websites to find out more about how animals survive the cold winter months!

### **NPR – Studies Reveal Mechanisms of Monarch Migration**

<http://www.npr.org/templates/story/story.php?storyId=18024428>

The monarch is just one of many animals that migrate in the winter. This article discusses the science behind why/how these animals are able to achieve this amazing feat! Great background information for teachers and older students.

### **Hibernation, Migration, and Adaptation**

<http://www.lmsd.org/staff/elemtech/hibernationetc/hibermigradapt.htm>

This website, developed by a Pennsylvania school system, contains great links to sites that will help you and your students understand all about the many different adaptations of nature to survive the winter.

### **Reading List**

Bancroft, Henrietta. Animals in Winter (Let's Read-and-Find-Out Science series).

Brightly colored drawings bring the text to life in this realistic portrayal of mammals, birds, and butterflies in their natural habitats. There are some easy practical suggestions for helping animals in winter. (Ages 3-7)

Crossingham, John and Kalman, Bobbie. What Is Hibernation? (Science of Living Things)

Hibernation is one of nature's greatest miracles, allowing animals to sleep through periods of extreme cold (and heat). (Ages 6-12)

Berger, Melvin, Berger, Gilda, and Harrison, Susan J. What Do Animals Do in Winter?: How Animals Survive the Cold

This book explains how a variety of animals survive harsh winter weather. Migration and hibernation are discussed, as well as other survival techniques such as hiding and changing color. (Ages 6-9)

Heinrich, Bernd. Winter World: The Ingenuity of Animal Survival

The ways animals cope during cold winter months are highlighted in this new title from award-winning author, Bernd Heinrich. (High School)