

Coping with Cold



Objective:

Students will learn about the winter survival strategies of New England animals.

Grade Level: K-3

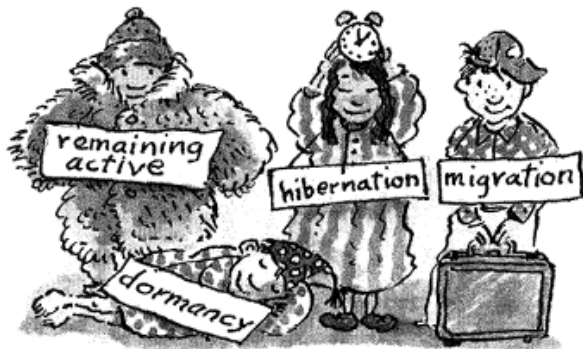
Groupings: Entire class

Materials: Set of cards listing the four winter adaptations (hibernation, migration, dormancy, remaining active) with string for hanging cards around students' necks; props to represent these adaptations such as an alarm clock (set for spring), a suitcase, a bathrobe, and a warm winter coat; *MOUSEKIN'S WOODLAND SLEEPERS* by Edna Miller (Simon & Schuster, 1970); and pictures of animals or animal puppets.

Time Allotment: 30 minutes

Directions:

1. Discuss with the class the season of winter and how it affects people. What changes do the students and their families make in their dress, food, homes, vehicles?
2. What about animals? How do they adapt to winter? Do they make similar changes in their coats, food, homes, and ways of travel? Using the students' ideas, highlight the following four winter survival strategies: **hibernation, migration, dormancy and remaining active.** (See *New England Mammals in Winter*, page 147 - 48.)
3. Choose four students to be the experts on the four strategies. Call them up one at a time and hang a winter adaptation sign around their neck. Assign props to each student to symbolize or define the winter adaptation. For example, an alarm clock "set for spring" can represent hibernation, a suitcase for migration, a bathrobe for dormancy, and a warm winter coat for remaining active.



4. Explain that you will be reading *MOUSEKIN'S WOODLAND SLEEPERS*, a story about how different animals adapt to winter. Challenge the students to discover what winter survival strategies the various animals in the story are using. Stop throughout the story to ask the students how the animals described are adapting to winter.
5. Have the four winter survival strategy experts stand in the front of the class. Pass out pictures of animals or animal puppets to the rest of the students. Have each student decide which strategy their animal uses to adapt to winter. When you

Extension:

a. Adapt *MOUSEKIN'S WOODLAND SLEEPERS* by Edna Miller (Simon & Schuster, 1970) into a big book. Shorten the story so it contains only the animals' winter activities.

b. Look into where some common birds go in the winter. Trace their migration routes on world maps and calculate the distance travelled.

c. Certain active animals such as the snowshoe hare, short-tailed weasel, and ermine, change color in winter. Discuss with your class the benefits of camouflage.

d. Involve your class in researching more about hibernating mammals. How long do they hibernate? What are some unique physical changes the animals experience? To dispell a common myth, have the students compare their findings to the winter activities of a bear.

e. During the winter thaws, look for signs that some common dormant animals are out and about (tracks, droppings, food, homes, etc.).

Directions: (continued)

say "Go," each student hands his or her picture to the expert wearing the sign that matches the animal's winter survival strategy.

6. Review their choices. Add more information as needed and use the Miller story for reference.



HIBERNATION HAPPENINGS

Bears are animals that everyone thinks of as hibernators, but in fact bears don't really hibernate. In their dens in winter, bears become dormant, entering a deep but intermittent sleep. Occasionally on warm winter days they may wake, leave their dens, and range about. True hibernation, by contrast, is an almost death-like state characterized by profound physical changes. Unlike the body functions of a dormant animal, a hibernator's metabolism slows greatly. A woodchuck's body temperature drops to about 37° Fahrenheit, and its heart rate drops to as slow as three or four beats per minute. True hibernation, a radical energy-saving adaptation, is practiced in New England by only three types of animals: the woodchuck, several species of bat, and two kinds of jumping mice.